A Systems Analysis

And Design Reader

By

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Dedication

I dedicated this reader to myself for this is the first time that I have done something that can be considered as a book. Another reason is that I am really glad that I was able to create this kind of reading material. I also want to dedicate this work to my family who are always supportive on what I am doing in my studies. They always do their best to help me sustain my studies here in De La-Salle College of St. Benilde. The last one to whom I want to dedicate this book is to my class of SYSANAL. It is for the reason that they are huge factor that help me to make this reader a new accomplishment for me.

Preface

This subject SYSANAL is a course code for the subject Systems Analysis. This is a subject where different types of analysis methods are being studied. It is also where the student would know about the different functions of a system. It also includes the analysis of the systems in terms of its strength and weakness. As a part of this subject's requirement, we as students are ask to compile all our work in a form of a portfolio which is called the Systems analysis and design reader. It is compose of the case studies, book reviews and use cases that I have created for the whole term of this subject. It also includes the exercises, references and the SAD final paper which will be located at the appendix.

This will be a good source of information and can be improve through the one who will read this compilation. I hope that it will be a lot of help to the one who will read it.

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CHAPTER 1: CASE STUDIES

Case study 1: PayPal

There are some things that I had learned from the establishment of the PayPal. First, every plan on your mind cannot all be executed at the same time. It is in the reason for that the needs are changing very fast and not all plans are suited for all of the needs. The second thing is that solution must always be done as early as possible if there were any problems that exist. It is for the sake of not losing many resources that can lead to the downfall of the business itself. The third one is that having the determination and focus on what you are doing will be a great help in making your plans successful. The last one that I learn in this PayPal establishment is that a co-founder is an important asset to make it easy for you to make a start-up for having a team makes the percentage of your success higher than doing only by yourself alone. You may be able to do it but it will be very tough than you ever had thought. It can also help you a lot by having other's idea which may be more appropriate than relying on your own.

Case study 2: Hotmail

In the start-up of Hotmail, I may say that there are three important things that I had learned from there experience. First is that ideas can come in different paths such in their case which is to solve their own problem and expecting also to solve other's problems which is similar to their problem. It may also because of some necessity like in their situation that they need to check their e-mail accounts but because of the firewall in the corporate intranet they can't access it. It is the time they had an idea about a web-based e-mail access. Second is that every success will always come from the hardships you had overcome in such way they overcome their problem in financing. The last thing I had learned is that communication will always pave a way for a certain opportunity which can give you a great success in such way like making a business plan.

Case study 3: Apple Computer

In this case study of the Apple Computer, there are three things that I learned the most. First is that it is always good to be optimistic in viewing things for it may be the way in achieving success in life just like on how Wozniak thinks that everything that he designs can still become better. The second one is that money is not a big hindrance in making something you want. You just have to be resourceful enough to be able to make use all of your available resources wisely. It is most likely on how Wozniak do his stuffs. He has lack in finance that's why he chooses to minimize the use of chips for him to save parts and he believes by doing so; he may reduce bugs and errors on his system. The last is that we should know to choose the better opportunity for learning to prioritize things and opportunities can give a better chance in attaining your desired goal. It is like on how Wozniak decide if he will go to leave Hewlett-Packard or not. In the end he just decides to leave or rather transfer to another division in order to focus himself in the Apple Computers.

Case study 4: Excite

There are some things which I learned from the establishment of the Excite. The first one is that it is always more favourable to work with the people you know as long as you know that those people have the capabilities in doing the job that you desire to accomplish. In Joe Kraus case, he chooses to work with his friends for the reason that his are willing and capable of doing so. The second one is that being persistent is something which is good in some situation like making a deal. In their case, they became persistent to get deal from the Netscape Company even though they already lost on the bidding. But because of their persistence, they were able to get back the deal from Netscape which they thought they may never get. The last one is that being careful on planning things can make you understand on how a certain business works and on how are you going to scale your business base on what have you understand on planning process. In their situation, they only slow their company in hiring for they are not so sure if what they are doing will be a huge thing in the future time but alt least in the end, they make it a huge one.

Case study 5: Software Arts

In the start-up of Software Arts, I may say that there are things that I can consider I learned the most. First is that ideas for one's project may come in the very needs of a person in a particular situation like in the case of Dan Bricklin in which he needs a tool in order to organize his stuffs in, that word processing cannot do. Second is secrecy is often important in times that you have an idea which is new to other people. It like what Dan and his companions have done. They carefully secret their idea for they were afraid that some companies may knew it and be able to credited on that thing. The last is that having companions will always help you a lot in making projects. In the establishment of Software Arts, Bricklin has his own companion which is Bob Frankston that helps him all throughout the whole project. In doing so, they became successful in making the Software Arts available to many people and have benefited in using it.

Case study 6: Lotus Development

Lotus started when Mitchell Kapor and Eric Rosenfeld built a statistics and graphic product on Apple II which was called Tiny Troll. It was created in the time when he was in the New England Apple Tree, an Apple II user group. At that time, VisiCalc is also being developed by Bricklin and Frankston. In 1979, VisiCalc authors attend to the meeting of the Apple II user group where Kapor had co-founded and that was the time he first saw the VisiCalc. He was introduced to the publishers of VisiCalc and they said that they would like to make the Tiny Troll a companion product of VisiCalc. Kapor had agreed to that and on the time of 1980, he decided to move out of California without finishing his program. He worked for Personal Software and there he finishes rewriting his Tiny Troll which eventually was called VisiPlot. When Kapor met the Venture Capitalist, he felt that he was marginalized and moved aside. So, he decided to return to Boston and finish the product as he had promised.

Now that he is free again on what to do next, he decided to do something for the IBM PC which was recently released in that year of 1981. It is for the reason that he wanted to create software or an application that is optimized for capabilities of that certain kind of PC. That software was a spreadsheet that integrates graphics, better user interface and allows the user for customization and programming. It was called Lotus 1-2-3. This product was released in 1983, almost two years after the released of IBM PC where there product is specially made for. It is created by Kapor and Jonathan Sachs, the person hired by Kapor and the one who originally architected and implemented the original version of 1-2-3. Its name may be influence by the ideas in a set that gave 1-2-3 its character and eventually make it a second-generation product. This software or product surpassed the VisiCalc. It is for some reasons. First is that it is made to optimized the 16-bit character architecture of the Intel 808X, the processor used in the IBM PC, which makes it faster in term of creating bigger spreadsheets for it optimized the 640K memory of the IBM PC which is ten times bigger than that of the Apple that only has 64K of memory size. Another advantage is that their product was the first spreadsheet to be able to use the so-called "natural order of recalculation". It is for the reason that they do have more optimized code and they also had a different recalculation algorithm which makes it faster to calculate formulas as long as the references is not circular. The last is that VisiCalc is structured for an 8-bit machine and they didn't even created a newer version that is match for a 16-bit machine such as the IBM PC. In this reason even deal with it as a spreadsheet, but if it is in a 640K memory, it will just be a kind like it is not really there and also many users that create spreadsheets that often exceeds the memory of an Apple II which was 64K, and that makes it a big problem for them for their starting memory when creating in a spreadsheet like VisiCalc was 48K. It is the reason why their programs were tiny and the user data was also tiny. We can say that it is a result of a 14 to 15 months programming and writing all of them in assembly language for its speed. Moreover, their success also starts inside the company itself where all the people are treated well and not being judge by means of their physical appearances. In

other words, underestimating a person even they don't know yet what are his capabilities. All of this success was ended in the year of 1995 where Lotus was acquired by IBM for 3.5 Billion Dollars. Even though they're bought, they still make huge money even in the end of their company. After all they create a big impact on the technology and on the business world.

The values that I learned in this start-up of the Lotus Development are; first a person must be a good observer in order to find the opportunity to make something useful that many people will benefit from it. Another is that a person must have dedication to what he/she was doing for it will be the means to create better things in life. Also a person must not judge other people for he himself also has weaknesses and appearance doesn't matter but the ability and the things they can contribute to make progress. The last is that there should always be a proper management of resources in order to sustain a company or any type of businesses you have in your life.

Case study 7: Iris Associates, Groove Networks

Groove Networks started in the fall of 1997 by Ray Ozzie, Eric Patey, Brian Lambert and his brother Jack. But before Groove had started, he had a project in the Lotus Development which was called Lotus Symphony. It is one of first suite products of the Lotus Development for their Lotus 1-2-3. He was the one who lead that team to make it possible to have a Lotus Symphony. After the Symphony was shipped, Mitch decided to fund Ray's idea instead of introducing him to other Venture Capitalists for Lotus was having good cash position. That is the time he form the Iris Associates with three other programmers in December 1984. They were the ones who develop the Lotus Notes, the first collaboration software to be widely used by the people. This was shipped in 1989 and was bought by Lotus in the year 1994.

When they have started, they first work in Ray's house and after few weeks, they moved to an office space at the Cumming Center in Beverly, Massachusetts. After a few months, a former Iris engineer named Ken Moore joined their team. The main idea on the creation of Groove Networks is to create a system that works

instantly after the download. Before Ray Ozzie started the company, he first write some founding documents describing the high-level challenges that he wants to address, the problems that they're trying to solve and the different that they need to assemble in order to accomplish their vision. After creating the founding documents for the company, they get a big open office and recruit a center team of people. Many of them were the people he had been worked with before. Then they are going to have meetings and discussions to be able to decide for what they were going to build. After that sitting with the whiteboards comes in the prototype and the prototyping and when they were confident that they can build it, then they started to hire their first fifteen to twenty people to start creating the project. In deciding the program to use they choose between Java and C++ but they ended using the C++ language for the Java language is that there would never be a stable runtime environment that is needed on all desktop PCs. They launch the Groove Networks in October of the year 2000, three years to a month when they formed the company. The first commercially available version of Groove Networks shipped on April of the year 2001. They have been able to announce a 10,000 seat deal with the GlaxoSmithKline, a major pharmaceutical company that uses Notes but saw the good chances for Groove Networks to address some of the cross-boundary collaboration needs they have in producing new products to promote. In the year 2005, they were able to sell the Groove Networks to the Microsoft and Ray Ozzie was hired to work for the Microsoft as a chief technical officer. In June 2006, he took over as the chief software architect from Bill Gates.

I have learned a couple of things in this start-up of the Groove Networks. First is that I learned that a person must respects another's skill for you will need different people in order to accomplish something that you want to do. Rather you must support other people on their skills and capabilities in order to work with them harmoniously. The Second thing that I learned is that there is no such thing like a sustainable advantage. It is for the reason that you cannot be at an advantage for others in a long time for they are also developing may be faster than that of you had expected from them. Another reason is that the only word which is continues here in this world is the word change. It means that from the economic world up to the

business and technology world changes and it includes the needs of an organization to meet their objectives better than the usual. The last thing I had learned in this start-up is that we must realize that for every thing we do or create can cause an impact on our environment and to the people who will use our creation whether it's small or huge in size.

Case study 8: Pyra Labs (Blogger.com)

Pyra Labs was started in the later part of the year 1998 by Evan Williams. But before he started the Pyra Labs, he already had started a company in Nebraska but unfortunately it was bankrupted. He went to California for he thinks that Nebraska was not the perfect place for him to be engaging in business. There he worked with O'Reilly for a few months. There he learned or rather thought himself about web development. After that, he became a developer in contract for about one year and a half. There he worked for different companies such as Intel and HP until to the point where he had decided to start a company of his own.

The idea of Pyra Labs was the personal and project information management system to help their clients organize their thing and stuffs. At that time being, his friend Meg Hourihan, who was a management consultant at that time, wants to start a company with him. He agreed to that and in the time of paying bills, it was paid by means of using the contract of Williams to other companies. They came to a point where his personal contracts were turned into the companies contract in order to pay their bills while building their product. That is how they started. Their first year was fully self-funded. They technically started in January of 1999. His friend Meg became full-time by the month of February and in the month of May; they hired their first employee who is Paul Bausch. They create an internal blog where they put their stuffs in. they called it "Stuff". It is where the center of the Pyra was formed. Paul adds something to Stuff that can make the things they post on their blog can serve as a foundation to their company's external blog. By doing this, Williams decided to turn it into their product and thought it would be a cool idea. And they decided to make it

into a product for they don't have enough resources for two products. It continued for a long time until on the month of July in 1999 when they finally launched Pyra and it got a pretty good reception from the people. They also launch another application called Blogger and launch it while Meg was not around. At first it is not appealing the user needs to have website and must have knowledge on FTP to use it. But in the later part of launching, it is now being use by the people but they didn't see any business in Blogger. They have some debates on what to do if it is the Blogger or their real product and in the end, making revision on Blogger in November is what happened which make it better for the people to use. They became a little bit famous and are able to have an adviser who was Jerry Michalski and he became helpful to them. They start to raise money and O'Reilly invested on them. They were able to raise $500,000 dollars and after they decided on Blogger and develop it. They redesign Blogger which makes it great with the help of Derek Powazek, the creator of orange "B". In the time that they lack money for hardware, they use the Blogger to seek help and they were able to fund $17,000 for the servers. By that time, Meg decided to leave and everybody else also leaves. Even he was left alone, Blogger still continues to run and can still raise money. He receives some help from Dan Bricklin to save his company. Through this help he was able to survive and be able to launch the Blogger Pro, the paid version of Blogger, and it was able to make money. By the year 2002, Google came on the scene where Google wants to buy them and by the year 2004, Pyra Labs became Google's first acquisition.

I learned in this start-up that we must sometimes believe in ourselves if we know that what we are doing is right and can benefit us. Another is that we must have a clear perception on what you want to do for this will help us bring our success. Finally never give up as long as there is still a chance to recover for a business will only fail if the owner itself will be the first one to give up.

Case study 9: Yahoo

Yahoo is a collection of links to research papers when it started in 1994. It was maintained by Jerry Yang and David Filo, both Stanford Grad Students. They

consider turning Yahoo into a start-up and that is the time when Tim Brady became involved for he was the person asked by Yang and Filo to make the business plan for it.

It started on the PhD theses of David and Jerry. It is for the reason that all of their technical papers that they need to locate were online. So, what they did is to create a big list for them to be able to track those technical papers. It not only spread in the Electrical Engineering (EE) community in Stanford, but on all the EE graduate programs. What they did is to add categories that they were interested in. That is why all of the EE related stuffs on the Web and some other small list but there is no big deal there yet. In other words, both of them went from the graduate work to adding different websites to their list for 8 hours a day. They are just lucky that their thesis advisor is not around that is why there is no person to look for them in their thesis making. They continue adding websites in their list for 8 hours a day in 8 months. This might not happened if their advisor is around during that time.

The time of their momentum came in the time of October 1994 to January of the next year where the traffic increased 10 times in just a couple of months. It is also where all of a sudden the venture capitalists recognized what they are doing. So they got a lot of calls from different companies like AOL, Microsoft and LA Times convincing them to join their company. That is when they started to think about their project as a business and not as a hobby. They also entertained money and have decided to not sell their project to anyone instead they make it as their own business but they don't have any business plans yet. Because of this they ask Tim to make one for them so that they can use it as they go on their VC visits. They were fortunate that in February 1995, many companies demand on them for their immediate need. To solve this problem he turned the business plan as a project to pass two classes and be able to graduate. In March 1995 they were already four in numbers including a friend of Dave who is Donald Lobo. Their main idea is by advertising for it was famous on that time but there are no search engines or directories selling advertisements. Yahoo's coming out party was a booth in an electronics show down in San Jose in March 1995. They are the only internet company in that show. Their started it in the

graduate desk of Jerry and David and also some in Jerry's apartment. After a couple of weeks after the show, they were able to found an office space in Mountain View and Sequoia was there VC who gives them $1 million which was a lot of money on that time. There they started to do some things in order to raise money and also they had a CEO search for 6 months until they had gotten one who is Tim Koogle. Within those 6 months, they were able to be linked in the directory of the Netscape browser and be able to steady the business until they brought in Koogle. Yahoo became great except for one thing which is search. In order to have the search capability, they partnered to different companies like Google, AltaVista, and Inktomi. By doing this, they were able to have search but they do it invisible to the users. In sometime, Stanford tells them to leave for they are starting to bog down the Stanford pipes. In this point, they were hosted by Netscape and they were allowed to use the office for 30 or 60 days. They were also able to make the Reuters online for in that time the CNN is already is online. Like other sites they also had problems when it comes to pornography but they were able to handle it by removing all their links to those kinds of sites. They also got into debate about the interface versus speed for it took them 8 years to clarify this argument. The good thing in this start-up is that there was no single point that they came into their mind for them to quit.

I learned in this start-up that always straight up your thoughts so that you will always perform at your best level and knowing your capabilities to make your assignments in good place.

Case study 10: Research in Motion

Research in motion was started by Mike Lazaridis with Doug when they were high school. It is because that there school has the state-of-the-art technology in terms of electronics which is a result from a donation of an industrialist. By that time there was a division between honor roll students and the shop students. They have tried to correct it but eventually it just became a culture. At first Mike didn't realize how big the wireless connection could be for he has too many things to do like going to school

and to the shop and after school going back again to the shop hoping to finish his homework on time to work on what he wants to do.

Mike and Doug learn to use computers on their own. It sometime in the late 70's where computers are still punch card systems. They learn to how to build gates, how to build recent memory circuits, how to build registers and how to wire them all together and sequence them in a clock. In other words, they learned the very fundamentals of computer. All these things make a big difference as time pass by. It is when their electronics teacher who was also the president of local amateur television that tells them that they must not be caught up with computers for it's going to be the person that puts wireless technology and computers together that's going to a make a big difference. Mike didn't understand what did their teacher told them but he knew that their teacher understood that computers gave them two basic things. One is the ability to send information ambiguously and another is that it allows them to control the RF process and make it more efficient.

When their in the university again in the early 80's, the University of Waterloo had a massive computer system. It was a large IBM mainframe system that was the centerpiece of their campus. It is located in a massive room which they called the Red room, the name they got in a science fiction movie. There are terminals in all classrooms that were around the mezzanine area. There they convert their punch cards into video terminals. In short, it is another transition. Also on that time, they already had been using email to submit their assignments. There were many technologies in there school that the students are being train into using such as Watlan (Waterloo Local Area Network Project). In his later years, he is already been doing some programming contract work just trying to pay his way. There was a recession in 1984 were many graduates can't jobs. This is where someone told him that if he believes too much, then why didn't he start a company? He takes it literally and started a company a few weeks after he went out of school. He started the company a month away before his graduation and get so busy that he had to take a leave of absence. He also bought a computer system in their school when it was put up for surplus. He bid for it about $400 or $600. He put it in their office and uses it to make their big

contract. They also got projects with General Motors and the National Film Board and Kodak that led to the Emmy Award and Technical Oscar. They started RIM together with the $600,000 contract with the General Motors. They first do what the General Motors are trying to finish. They create it using the knowledge he acquired in the University and the help of the IBM PC. They had applied for a grant in the Canadian Government for them to survive and to lessen their expense. Their biggest turning point is when they recognize the wireless data technology that they were able to write software to the Mobitex as needed by the Cantel, which are now Rogers. They also worked with SPAR Aerospace. They created the Blackberry which creates a big change on how the organizations operate. At last in 1997, they were able to release the RIM and make their company one of the most admired ones in Canada.

I learn in this start-up that having a proper education is really a big deal in making something that can create a great change in the world of business. Another is that having knowledge on what you are doing may also help in achieving your goal.

Case study 11: Marimba

Marimba was founded by Arthur van Hoff who was a part of the Java development team at Sun Microsystems before doing a start-up with Jonathan Payne, Sami Shaio, and Kim Polese who was Java's product manager. The first thing they did is to find an office space for them to work onto. They had a hard time finding but fortunately they were able to find one on California Avenue in Palo Alto. They just bought some second hand metal desk for $25 each. They started funding the company by putting a little bit of money. He thought it was $25000 each. They just use a law in which they just not take payment until they get funded. They spent $1400 in order to equip their entire office.

They started a company even they have no idea of what they are going to build. But they got n idea by means of having your first idea just to start something and then you figure out what is wrong and eventually you will have your second idea which is the better and important one. When they left Sun, they talk to Scott McNealy and told him that they want to do a start-up that's why their leaving. Fortunately, no

one stop them instead Scott wish them for a good luck. Their team had wanted to build was a user interface builder. They spent their first months building this user interface and a group of guys from a small start-up visited them and showed their product which is pretty the same as what they were doing but they were acquired by Netscape on the following week after their visit to Arthur's office. Netscape turned this product to IFC (Internet Foundation Class). But eventually it was turned into the JFC or Swing, which is the Java toolkit. They tried not to tell anyone of what they were doing for they had absolutely no clue and they didn't want to let on.

After that, they focused on software distribution for the system they help build at Sun was not scaling well for real applications. By doing this, they came up with the idea for subscription-based software wherein instead you buy software, you just subscribe to it and you get automatic updates. But this kind of thing is become popular only in this time. By the time they announced that they were doing software distribution, Point Cast had been released, which had some similarities on what they were doing. It became a problem for them for they had a hard time explaining to the people why they weren't a push company. The press had really been a great help to them to make inroads to companies for nobody knows what they were doing. But it also works for their disadvantage for they always need to re-educate the people on what they were up to in a particular moment. And also because their company had a female CEO that the media is like focusing on her so much that their product was left behind. They try to stop her but she ignored it. Even so, Kim was a good CEO in the start-up phase but as it grows, she became ineffective. When she was replaced by John Olsen, it became completely different for he already experience on how to handle people and to make decisions. Their big turning point is when they did a first release of their software that they hired and fired people and had their first lawsuit filed. They also had some hard time such as when they lack to value their people and make them feel happy. But this problem was resolved but it may be too late for many of them had already left the company. They have a good term in their VC's for they think that a VC will not invest in them if they don't believe on their abilities. In the

end their turned from a consumer software distribution/push technology company into an enterprise software distribution company which bought them a lot more money.

I learn in this start-up that managing a company in its starting phase is very different as you manage a company when it is getting larger for you must have the skills to manage your people and must have the experience in making decisions. Another is that a company is not charge for its failure but on its success for no one sues a person or a company who is a failure.

Case study 12: Gmail

Gmail was started by Paul Buchheit, who was an employee of Google. His first work is on the Google Groups, which is not the same but related. After some time, this Google Groups became mostly wrapped up. That is the time he was ask to create some type of email or personalization product. It was a non-specific product contract. They said it is interesting part and Paul is also excited to do it.

He started out with the use of some of the Groups code for the reason that he was familiar to it. After a day, he was able to finish the first version of Gmail with the help of the Groups code he had used but this thing only searches their email. He releases it to Googlers and people and they found it useful and it started its progress from there. After that he created a prototype with the same concept as the AdSense, a content-targeted ad. He was able to finish it in less than a day. Then many people try hard to make it a real product. In short, he created two groundbreaking things for Google.

As his work on Gmail, it is mostly by himself until another person joined him who was Sanjeev Singh. Then another person came in who was Jing Lim. Their development was slow for they could not be full-time on doing Gmail. In that time, people were still uncertain about the whole thing that they want to create something different to as an email. Even so, they still make it to launch the Gmail and people were able to be satisfied with it. It is for the reason that it is design in the perspective of the user that if there's any problem, they will analyze it and try to create solution to

make it better for the users. They released the Gmail with a dozen of employers but later on increased their number into 23 people.

This project became a great achievement of Google even that it is controversial internally for people were uncomfortable with the things that were new to them. It is also exciting for the reason that on how the people will respond on the Gmail. By this project, Paul, even he is not a founder, can be considered as a person who did greater things more than that of the real founders.

In this start-up I learned that it is an advantage of starting a start-up within a company for it can lessen your worries like funding and product testing. It is like how they did on Gmail to make it tested internally before releasing it. Another is that it is better if you are going to wait for the opportunity rather than rushing a project even though it might fail. It is for the reason that when you're at the opportunity, it is not hard to introduce new things that can create an impact to the people. The last thing is that doing something that is interesting can always makes other people join to what is that you are doing like the Gmail that is started by a single person and was release by 12people.

Case study 13: WebTV

The WebTV was started by Steve Perlman. He started not as it is but as a system which had a video on the screen, images that moves around and other video resources. You can also manipulate things such as you can pause, rewind and fast forward. There is only one problem which is that they couldn't release it for the reason that there wasn't enough content to operate the system. In other words, they can create the contents but there were no device created to receive it. Even the project was not release; there are many offshoots that came from that project. Like the QuickTime which took the video compensation technology, develop it, reduce it to a software algorithm and turn it into a product.

He works at the General Magic on a PDA on a half-time and on the other half, he works on how to make inexpensive delivery system for the interactive TV. As he reaches is last year of work in General Magic, they had also wanted to do video stuff

and that is where the MagicTV was created. He work there for full time to build the interactive system but unfortunately they shut it down for the reason that they had financial difficulties. After that he realized that he can now start a company and founded the Catapult Entertainment together with 3 people. They are the ones which create the modem for Sega and Nintendo Video games. It enables to modify the execution of the game. They were able to do it in 6 months for they had a deadline. He stayed there for a year and later leaves the company.

As he leaves the company, he tries to think on what he wants to do next. After sometime, he decided to establish the WebTV. He starts working first in April 1995 when he did the business plan and also having some companions to help him. They did it from April to July of the year 1995. They also got money from Marvin, a wealthy financer in Hollywood, and also be able to convince the Pac Bell, a phone company, to bring a T1 line in there office. They were 3 people in total who co-founded the WebTV namely: Steve Perlman, Bruce Leak and Phil Goldman. Unfortunately, Phil died because of heart attack.

They also make a partnership with Sony and Philips but they need to wait for 1 year for Sony has to be exclusive for a year. They were able to raise money for about $1.5 million dollars. They were able to introduce the product in July of 1996. After a year Sony and Philips sold the first WebTV in public. In the year 1997, WebTV was acquired by Microsoft for over $500 million and now it was called MSNTV.

I learned in this start-up that people cannot be contented in just having a goal to be achieved and still wanting for more. Another is that many people are afraid of risking their money for something new for it has a greater chance of failing. Lastly, is that interesting ideas don't come in just one blink. It has to be acquired through the experience of a person.

Case study 14: TiVo

Mike Ramsay, one of the TiVo founders, came in the United States in his mid-20 for he will work in HP. He joins HP right after his schooling. He studied in Scotland and had an opportunity to come in US together with HP and later on decided to stay there with his wife. He had a great career there on HP and was kind of moved on from there. It was early from the start of microcomputer revolution where Mike was involved in chip designing. He left HP in the early of '80s and went to a start-up company which is the Convergent Technologies. This is where he had learned the difference between the start-up in Scotland and in America.

Mike had a couple of periods when he was still in HP and in his second period is the time where he met up Jim. They were building a team inside the company and hired some other people which include Jim and Tom Jermoluk, who went on to run @Home. After a year, he was recruited at SGI, which was composed of a hundred people. As he join in SGI, he told T.J., Jim and others to also join and they did but they ended up being in the different departments of SGI. As him companion Jim became a world-class technologist in his own specialization, Mike on the other hand became interested on what a person can do with entertainment space through the help of computers. It is for the reason that he sees computer applications as boring. After sometime, Jim left SGI after doing the Full Service Network, a video-on-demand system, and decided to start a company. Meanwhile, Mike also happens to left SGI and it happens that they got along with each other and ending up becoming partners in establishing a company. They think of working in using computing technologies in home entertainment. After a while they create a presentation in it and after that they came in NEA and other places to sell it. Unfortunately, they were rejected for their capital was big and because they were also a service company. Only 2 people didn't oppose to them who were Stewart Alsop of NEA and Geoff Yang of Redpoint.

As they were given money, they bought a server and this server is the reason for having changes in their plan. Their original idea was the home server network stuff but as they discover the killer apps in their server, they forgot the network thing and concentrate to the DVR which they called PVR, something like personalized

television. They thought it was a cool idea but as they look underneath, they discover how difficult it is. Even though they still be able to manage it and still clicked on it. Then they came back to their VCs and tell them about their new idea. After that, they start hiring people and are able to have a good-size team 6 months after they started.

TiVo was successfully launched at the end of March in the year 1999. This period became the Blue Moon Event. It was also declared as a holiday in their company until now to make it special. It makes the people be able to manipulate the live T.V. shows according to their wish.

I learned in this start-up that people can make something that looks like impossible only if the one who creates it has the determination to do so. Another is that everything that people wants can be achieve by just knowing the details on how he can achieve that goal he wants. Lastly, all people can create good things if they just know how to balance the situation and opportunity.

Case study 15: ViaWeb

Viaweb is founded by Paul Graham together with his friend Robert Morris (Rtm). But before Paul started Viaweb, he already had a start-up which is called Artix. It is like an online art gallery but it is scrapped for many artists were still wanted to stay on the traditional way of displaying their artwork.

After that, he decided to create something that people would actually want. That is why they realized that if they can create software that can generate sites for galleries; they will just be a cart away from creating online stores. People also seem to want online stores. So they decided just to create software for building online stores.

At first, they had no funding. It is just Paul and Rtm working in an apartment owned by Rtm. It was in the middle of the summer where they did the first prototype. The unusual thing in Viaweb is that it works over the Web. It is where its came from. In short, it is a web-based application. They plan it to be software to be used in a desktop to create a website then upload it in a server. But they had an idea that they should make it run then the user controls it by clicking on the links on the web page. This idea happens to be something new to them which came to them at the when the

hackers used a program called X Windows. It is where you could use a program that was running on some remote machine, but it would be drawing stuffs on your screen. Another is the idea of X terminal or xterm in which a computer only did nothing but run the X Windows. That is why they thought that a web-based application at first was using a browser as xterm. He came up in the idea that they can try to make software run on a server and decided to try it.

They had a main breakthrough when their friend Julian gave them $10,000. It is also the time when they got Trevor Blackwell, who was the smartest computer science student in the grad school of Rtm, to work on it. After that, Paul and Robert start working in the apartment for Robert's housemate was away. They work in a 24-hour schedule. Paul writes new codes during night and sends it to Rtm's email then Rtm will just write the code for his part. They had another turning point when they release their first demo in the early of August 1995. After that, still they wrote a lot of software to put distance to any potential competitors. In October or November, they went to New York to do some demos for some investors and they were able to get $100,000. After that, they still wrote more software and by December, they started to get some customers. They release Viaweb in the beginning of 1996. Many users liked Viaweb for it was user-friendly and because of the appearance of the site which is good-looking. In June 1998, Viaweb was acquired by Yahoo and was renamed as Yahoo Store.

I learned in this start-up that it is important to consider the users on what you are going to build for it will be the users the one to judge your work at the end. I also learned that working with person you know really helps a lot for it is not hard to trust a person whom you know better than other people that you just met and working with.

Case study 16: del.icio.us

A collaborative bookmarking site called del.icio.us was founded by Joshua Schachter. He started in 1998 where he created a website called Memepool. It is a kind of an editor with reader submission. It has a link which enables the users to send some links and people would email them some stuff they see in the Web. He pile all

of these and as time pass by, he had all these links. By 2001, he had a text file filled with 20,000 links in which he couldn't find anything anymore. He tries to make some tags to it but he still couldn't do it. That's why he created a sort of a next generation of that text file which he called Muxway in 2001. It is a lot similar to del.icio.us but it is only for a single person but the actual website is still visible to other people. He found it interest when he discovered that people were subscribing to his bookmarks. He also did other projects along the way like GeoURL which is also alike to del.icio.us but different in few keys which make it fails.

In 2003 he started creating del.icio.us, a multiplayer version of Muxway. It is for the reason that he wanted to create something that is in between Memepool and Muxway. He released it in December of 2003. By 2004, he still kept working on it and started to get push but at the end of 2004, he manages to have 30,000 users. As his group in Morgan Stanley starts to come apart, he must think quickly for it will be better if he can do something in a short period of time. That is why he decided to leave Morgan Stanley and concentrate on del.icio.us for it is growing fast. At first, he wants to sell it as venture to VC's but in the end he decided to make del.icio.us a bookmarking service company. He also works for full-time after leaving their group at Morgan Stanley. He is lucky that his companions in Morgan Stanley are supportive to him. He makes it a company in the year 2005. As a company, they were the first to use tagging. It became a success for it starts as a product not a venture. He was able to have Union Square and Amazon as his VC. In December of 2005, Yahoo acquired del.icio.us for an amount thought to be about $30 million.

In this start-up, I learned that being overcapitalized can be a big factor towards failure for it will make some general ills on being overcapitalized. Another is that I learned that having a start-up on your own requires a good use of freedom. In other words, freedom should be accompanied by responsibility for in this freedom relies the success and failure of a start-up. The last is that it is better to reduce what you are working as possible so that it would be easier to analyze and it will be also easier to understand the component of what you are building if it is reduce to as little as possible.

Case study 17: ONElist, Bloglines

ONElist was started by Mark Fletcher, a senior software engineer for Suns Microsystems. It became eGroups after it was by Yahoo in June of 2000. He left at the acquisition in September at the same year. After that, he had a vacation for he doesn't have any vacation in work for a long time. In that time, it came to be solving a problem of his and started a company called Trustic. It is an anti-spam company but it didn't go so far. While starting that, he was doing something on the side which later became Bloglines. He had a 100 sites and he visit it everyday just to check if there is something new there. He figured out a solution on this and it is the RSS. There were a few desktop-based programs that can be downloaded but these are not applicable to him he uses several computers a day. That's why he created something like those in his side while he is doing this spam thing. Then he realized that this anti-spam business to be boring as compare to Bloglines which is working for him only. That is why he also decided to put it out which happened in June 2003. It started to have some coverage so he recognizes that he has to put effort in it. So he brought his friends and does some marketing and they started from that point.

They hired people who are the core group of ONElist but he is the only full-time worker until September of 2004. It was a self-funding work and he was able to use only $200,000 which was small for a start-up. He also used the same company and lawyer that he had in ONElist. The people who were not working full-time were working for the stock so it means that he is not the only stock holder of the company. They also had their turning point when they went online in late of June 2003. They had a press coverage almost immediately and they can tell the press many stuffs which actually users only uses a little only of it. At all times, he didn't take VC to support his start-up for he felt that he doesn't have to until they used the $4 million that they raised from CMGI and Bertelsmann Ventures. These VC's want to replace Mark as a CEO and he agreed to it for they bring a new CEO which led to the acquisition of Bloglines. The Bloglines was acquired by Ask Jeeves in February of 2005.

I learned in this start-up that not all start-ups need a huge amount for funding like the Bloglines which only had a little funding compared to other start-ups. Another is that start-ups can come in just an instant of ideas in which is has to deal with a persons needs to make living easier like what Mark Fletcher did in most of his start-ups. It was just for his self purposes but later became available to other people.

Case study 18: Craigslist

Craigslist was founded by Craig Newmark. In 1994, he was working with computer security and other stuffs at Charles Schwab. But what he really contributes was telling the people about the internet and on how the equity brokerage business will work someday. As he saw a lot of people helping other people out, he felt that he must also do something. That's why in early 1995, he start sending notices of what he think are cool events to his friends. It is mostly arts and technology events. It work out pretty well and they called it "Craig's List". As time passed, they suggested to other things like jobs or things.

In the middle of 1995, the CC listing broke and he has to make a formal name for it. He was supposed to call it "SFEvents," but he decided to just call it Craigslist for many people calls it in that name and it will symbolize the being personal of the stuff.

In the late of 1995, he decided to make the Craigslist from being an email listing to online service. Their traffic has always been slow but sure. Their growth was slow but steady. He runs the Craigslist depending on his available time in his apartment. He tries to run Craigslist to be non-profit at first but it failed. He spent a couple of months until he decided to make Craigslist into a real company in the mid of 1998.

The investors started to offer them money in 1999 but they decided to hold it fast for they just made a specific decision based on their specific values and they followed it through. Even they hold the offered money; they were still able to make money to cover their cost.

Many companies tried to buy them but they politely refused to it. Even though eBay had purchased a 25 percent stake of the company from a former Craigslist employee in the year 2004, Craigslist still remains to be a private company and now continues to expand in having sites for over 300 cities worldwide.

I learned in this start-up that a not all start-up will just end to be acquired by a huge company that has interest on it for it can continue to develop and become a stable company without being acquired.

Case study 19: Flickr

Caterina Fake started a company called Ludicorp with his husband Stewart Butterfiel two days after their honeymoon. The one who suggested this thing was Stewart. Both of them were doing web development at the time Stewart had this idea of making some type of transnational web development company which became the Ludicorp. The name of the company came from the Latin word "Ludus", which means "play". It is for the reason that they were building a massively multiplayer online game which is called Game Neverending. It is a little web-based and unusual for massively multiplayer game. Neopets was one of the inspirations for the Game Neverending. It is a game where you have pets in which you take care of. You can buy gifts and give toys to your pets. The interesting about this game is that you can trade things with the other players of that game. As they study this trading feature, they thought that there is something interesting in that thing.

So they begin with Stewart, Fake and Jason Classon after Jason came back a year after he worked in Boston. It was a family and relative investment in terms of funding. As they continue their work in creating the Game Neverending, they added Eric Costello, a great DHTML guru, in their group. Eric became their front-end developer. So they decided to find for a back-end developer which seems to be hard. They try to find a person in Vancouver but they failed. That's why they decided to find the developer locally.

They start working in a space wherein a friend of Fake is working but because of his job contract, he was always out of the office. So they occupied the office space

which was occupied by Fake's friend. They try to be creative for they have fewer resources in terms of money, people and materials. Flickr was a kind of side project when they in the process of building the Game Neverending and ending up to starting as a feature. It is a kind of IM in which you can show others what you are looking at. The thing that was new in Flickr is the sense of publicity that started from the blog culture.

They tried to do both Flickr and Game Neverending at the same time but because of scarcity in resources; they stop developing Game Neverending and focus in developing Flickr in July of 2004. At first, they were talking to VC's but they didn't get it. But when the time of Flickr, the time turned around for they received calls from VC's for them to invest on Flickr. When they lucked out of money, they apply for a loan from the Canadian Government but were rejected but on the second time, they were accepted. They accept little angel round but they didn't take venture capital for they were not ready for it and they felt that they don't need to. In March 2005, Flickr was acquired by Yahoo. It is the time when Flickr became extremely popular.

I learned in this start-up that many of the interesting things are commonly on the side of our priority that if we can just notice it, this can be a big money for us.

Case study 20: WAIS, Internet Archive, Alexa Internet

Brewster Kahle was the one who started WAIS (Wide Area Information Servers) while he was an employee of Thinking Machines. As a starter, he used these two things as his guidelines. First is that do your works before you spend your own money and secondly is that if you are trying to make your company think differently, and then pick your setting carefully. His idea about WAIS is to make network services stuffs. But the real thing is that if they could use a remote machine to answer questions. As they figure the idea at Thinking Machines, they also start the prototyping. He did the prototyping in his spare time. The project had involved other companies like Apple Computer, KPMG Peat Marwick and Dow Jones.

As they continue their job, Kahle realize that no one is doing the software or tools for WAIS. So he decided to leave and found a company which will do the tool for WAIS. That is where the WAIS, Inc. was born. It happened at around 1993. He also started a contract at the same time which is a bootstrap. It is like doing information system for the Prot campaign for the 1992 presidential election. Even though that Perot campaign collapses, they were still able to get their products built for they still had enough money. He had a partnership with Harry Morris and John During. They moved offices in 1994 to work with the publishers. Their company was bought by AOL in 1995 with about 35 people.

After a year, he started two organizations at the same time. One is the Alexa Internet and the other one is Internet Archive. Alexa is a profitable while the Internet Archive is non-profitable. Alexa is a navigation system for the internet. He started it with Bruce Gilliat in San Francisco. The good part of the two organizations is that all the idea collected in Alexa will be donated in Internet Archive. So over a long period, the companies come and go. At first Alexa was funded by Kahle himself with the help of Bill Dunn. But later they got a $1,000,000 for the first round and they start negotiating with the VC's. The concept of Alexa was to guide the users around the internet. Another concept is to show the related links to every page the user browse on. They got private investment by a single individual for they cannot communicate in the way that made sense to their perspective. The company was able to grow to around 30 to 40 people and they sold it to Amazon in the year 1999. After that, Kahle continues to operate the Internet Archive.

I learned in this start-up that if you are well experienced, it is already easy for a person to make start-up again and again. It is like what Kahle did. He just creates a start-up then sells it to a company who wants it then creates another one. Another is that a good cofounder is always needed to make your start-up stable in condition. Kahle is lucky that he had a good cofounder on all the start-ups he had done.

Case study 21: Adobe Systems

Adobe systems were started by Charles Geschke together with John Warnock. They were once Xerox PARC employees. Charles came in Xerox PARC in October of 1972. He wants to bring up a machine that stimulates a similar frame that of computer. When that project was done, he got involved in some programming languages and tool developing which is used to build the Star workstation. He thinks that PARC was a good place to work. But this interpretation came to an end when Charles and John were told that the project they made for Xerox that was called Interpress will just be out after 7 years. They feel that it is already old news if their product will be released after 7 years. That was when they think some ways to take their ideas and to start their own business. A person in the name of Dave Evans introduced them to Bill Hambrecht. They met will Bill and talked about their idea and luckily, Bill liked the idea and wills to support them in the condition that he will hire a consultant for them to make the business plan. After they make the business plan, they quit with their jobs started their business. They were given a loan by Bill to start their work. They eventually find the name Adobe Systems and their in business.

The first thing they do after getting in to business is to find a place to work. They got a space in Mountain View with the help of John's friend who sold commercial real estates. After that they began talking to people about hiring them to work for Adobe Systems. Two persons ask them if they can buy software for it is the one they need and not the hardware. They were Gordon Bell of Digital Equipment and Steve Jobs of Apple Computers. They both told Charles and John that if they would change their mind just call them. So what the two did is to ask Bill for an advice and Bill told them to change their business plan that focuses on the needs of the customer. After that they called back Steve and he helped them construct the proposal on how they can license him the software. They also make a deal with the Digital Equipment after they had a deal with Apple. So they start making the laser printer for Apple. They had an agreement with Apple in 1983, a year after they went into business. They had the product which was the LaserWriter released by 1985 and it lead to the creation of the "Desktop Publishing" industry. After that the desktop

publishing industry became popular to the point that the publishing and printing industry evolve from analog to digital world which is beneficial to them. They were able to build products like Adobe Illustrator as designers learn to use computers. After that they began doing the Photoshop which was release 2-3 years before the market was ready to receive it. They first introduced it to the people who know the potential of their product. For that reason, they were recognized as a leader in desktop publishing software through the products and the impact they create in the printing and publishing industry.

I learned in this start-up that it is not bad on thinking ahead of time but it is just the matter of knowing where the flow is going to be able to catch the right opportunity to create an impact on the industry.

Case study 22: Open Systems, Hummer Winblad

Open Systems was started by Ann Winblad in the year 1976. It is a year after she was chosen to build a student accounting system for a vocational school in Minnesota. But before that, she works in the Federal Reserve Bank as a consulting company. She works at the Bank in mornings and does the start-up at night even without knowing what she planned to do. She even borrow $500 to his brother for she got short in finance even exhausting all her savings. Their company was established in Torrance, California and was funded by Sequoia. By the time they were starting, it is also the time when Microsoft is starting to write Basic for kit computers. As they moved in the program writing, they need to find a language vendor for the reason that the Microsoft Basic was weak and it is not capable to be used in programming an accounting system. They worked with a language vendor that they Originally Equipment Manufactured, so they sold their product with the helped of an interpreter for them not to have contact with Microsoft's little languages. It became good for their part for there was not recoverable software business at that time. Many software vendors that started at that time have died.

The 13 months she work in FED and the 3 years that her companion had was a lot of computing experience which help them to learn some computer science

knowledge that help them save their company instead of restarting it. They had this turning point wherein they were to raise $120,000 in just one time. Another turning point is when their office in an apartment building had been in fire because of faulty wiring but luckily their computers and software are not burned in that fire. It is also serves a signal for them to now have a real office space. As their company progresses they didn't need to worry about their competitors for even there were companies that started something like accounting software, there is nobody that has a market share for it to be 100 percent available to everyone. So there is no competitive thing in that case. After six years, they sold the Open Systems for about $15 million and in 1989; she co-founded a venture firm that focuses on software which is the Hummer Winblad. She can be considered as an ordinary founder that has good and bad points. She learns all the stuffs in the work field so she may have done many poor things in the past.

I learned in this start-up that learning in the actual field is not bad but it is not always applicable for it is better to do a job with lesser mistakes. It is not bad to commit mistakes for we learn in it but not all mistakes can be tolerated for it can cost your own life. Another is that being a woman doesn't mean that you cannot be successful for everybody can achieve success for it's just the matter of determination and dedication to what you are doing.

Case study 23: 37signals

37signals didn't start as a start-up but rather as a web design shop in the year 1999. It was founded by Jason Fried. This web design shop undergoes a huge transition from a consulting in becoming a product company through the creation of Basecamp. This product happens to be created in a slow process for it happens that this is not a client project. Another reason is that they were having many client works which lessens their time to work on the Basecamp. They can't even contribute more that one-third of their time to do it. It was really created for the purpose of helping them to manage their clients work or in other words, it is an internal tool.

The creation of Basecamp was initialized by David Heinemeier Hansson together with the people in 37signals. David works in 37signals while he was finishing his bachelor's degree. David was the one do the programming while the others are the one make the design. After some time, he realizes that their company really needs a tool to help them in managing their clients work. It is seen in their creation of Basecamp where one can't see what the other is doing which make it disorganized. The idea came from the taught that blogging can be a good way of distributing information between people. So they think that it would be nice if they can apply the idea of blogging to project management. That's how they started in creating the Basecamp. It is mainly thinking at first then creating what they think is good like the blogging idea. It serves as the first part of Basecamp and it was used to create the other parts of Basecamp. After they show the first part of Basecamp to their companions in the industry, they start again to think on how they can solve their consultancy needs and as they get more feedback, they realized that it is the perfect time on how the can finish the Basecamp.

As they finish the Basecamp, it has feature in which most of the people liked. It is most likely the simplicity of the product wherein for them it's a great achievement whenever they come out with a simple model. Another is the reason that the software is build only for the very needs of the user. It means that you can't get more software than what you really need. In terms of competitors, they were not too worried of them for most of their competitors are trying to be so specific that those elements are already not needed.

Basecamp is a product wherein they don't spend much money. Even though it is a monthly service, the user doesn't need to release money when they first sign up. If they only will use it for one project, the product will be free. But when they user wants to do more than that, it is the time for them to buy the paid version that offers them to do 3 projects and a cost of $9 for file uploading per month. It is really a nice product that can be use depending on the users needs.

I learned in this case that a person doesn't need to be a founder to do something great for a company. All that a person needs is the will to create something that can make a great change in its industry.

Case study 24: ArsDigita

ArsDigita was founded by Philip Greenspun in the year 1997. It started back in the early 1980's when Philip started to create internet applications. He like multi-user application and he taught that he can connect people all over the network and it would be the best usage of the computer system. But he had a hard time building the application for anything that he had built is only working in one type of computer system. Anyway, he still wants to do it and have an opportunity when Web came out in the early 90's and beyond. He now taught that he just needs to build something that is on the server side and it will just be implemented by means of a browser where the user experience would be made. After that, he immediately told his professors of what he wanted to do, his professors just taught him to be crazy on what he wanted to do. That's why he leaves MIT for one summer. By that time, he had a driving trip in Alaska and he wants to send the letters to his family and friends he made for them. He hopes that he get interesting email from them. As he got back from his trip, he decided to stick all the emails into an HTML and scan all the photos he had and put them all in a website so that his friends can see it. After that he decided to make a public exchange into his server which later became an online community of photographers. As this community progress, Philip writes more software to make it more manageable and eventually he had a big toolkit of software create for the sake of his own purposes. Even though many web publishers try do to the same in the mid of 90's, they still cannot make it work properly. After that he started to deploy his software and gave it the name of ArsDigita Community System. Then after, big companies start to call them for they like the system. After that he decides to form a group together with his friends and have a company to do support but they failed. So they decide to rent the house of Elsa, Philip's friend, to become their office. This is where the ArsDigita get more development.

They have their turning point when they've got Levi Strauss as their customer. It paved their way to build what they need. Another turning point is when they successfully publish the Database Backed Web Sites in 1998. It gave them more customers and people who adopt their software. As they became profitable and have great people, they started to take VC money. After that, they decided to find their CEO and their VC's are the one hired a CEO for the company. That's were the conflict begin when the VCs decided to run the company and make decision on it. They even fired Philip and most of the cofounder and replace them with people who are not familiar with the business. This led to the downfall of the company and it was dissolved in the year 2002. In the period after they publish a new model for business consulting.

I learned in this start-up that too much dependence on VCs can just lead to the destruction of your company in spite of its good starting. Another is that personal needs can be a source of ideas that are also useful to other people that when develop can be a good start-up.

Case study 25: Fog Creek Software

Fog Creek Software was founded by Joel Spolsky together his friend Michael Pryor in the year 2000. When they started, they really don't know what product they want to build. It is just until when there are companies that started by people who were just fresh graduate that doesn't know anything but even got $100 million valuations. He feels that they do a lot better than those people. But what is important is his key inspiration which is Philip Greenspun of ArsDigita. As they had started in September 2000, they have three consulting client and all of their purposes. They worked on an apartment that they have got from the first day but they didn't live there. They just use it as an office space to work on their projects. At the time they started, it is also the same time when Spolsky is writing the Joel on Software when he got their three consulting clients. By the time of November 2000, the market already disappears but many don't notice it until April of the next year. Most of the firms have closed because of hemorrhage in money. In their part, they knew that they

wanted to become a software company even on the side so they build up the FogBugz, an internal bug-tracking application, which when they start selling, many people bought it. Actually it is only one of their internal products but it makes them $5000 to $10,000 a month after they start selling it. Even at this period, they never took and investment instead he used his savings to cover their expenses. They even shipped another product which was the CityDesk but it failed for some reasons. They have transferred their office in Manhattan. It was a nice place to work and it was own by Joel's grandmother. They still pay for their rent but they solely used it just for an office space.

As the FogBugz grow more and more, they even raise the price but it just make their sales double than the usual. As they released their product, it became their turning point to be more progressive. The key to their success is managing their clients properly and handling it by an appropriate person in the way that the person handling the client can gives it satisfaction in terms of using the product. In other words, their good management paved the way to their success even without the help of VC's.

I learned in this start-up that taking VC money can assure the stability of a company for they were able to be successful even without accepting investments from venture capitalist. Another is that every business makes money and can even make more if it has a good product and management which satisfies the needs of the customers.

Case study 26: TripAdvisor

TripAdvisor was started by Stephen Kaufer together with Langley Steinert, Nick Shanny and Thomas Palka. The idea of TripAdvisor comes from the wife of Stephen who is Caroline in the time they are trying to find a vacation place for themselves. They started from a travel agent, who recommend an island and some resort as a vacation place. He thought that they can find more through the use of internet. And as a result, he had found many websites that help him book a reservation in a hotel, but the problem is that nothing that would tell them if that hotel is good.

Finally, he found a chat room where he was told that the island recommended to him was not a safe place to be. After that he realized that internet was really helpful. So what they did was to switch to a new travel agent which recommend them a different island and when he try to find it in the internet, he found out that the hotel there is not good enough to their standards. At that point, he spends a few days on those searches to find about the true information on the hotel and not the advertisements of it. His wife suggested that they can build something that will serve as a search engine to find what you really are looking for in terms of travel. At first, this idea was on standby for he was employed at that time so he can't put some time to do it. This was until in the late 1999 were he started to form a group that he had worked with before and leaving what he is doing now. He was able to assemble four co-founders and also able to get their first round of funding by the year 2000.

They started their company in an old software company owned by Kaufer's late wife. They gave the TripAdvisor a free rent, T1, and other materials they have which were not being used for first 10 months. They just have 15 people as they started working in that office. Their target was to gather information about anything related to travel. They try different approaches in doing this and ending up having a database containing the documents they have indexed and establishing in a Website that was called TripAdvisor. They have release the site in October of 2000. Their first client was Expedia and thru that, they learn how to make money out of what they build that became their turning point.

In terms of competitors, they don't worry too much for they don't have direct competitors. They just problem about the usage of their stuff where the clients doesn't want to pay on them instead pay on those branded content sites instead of them. As a whole, TripAdvisor was a success even in the end they were acquired for about $200 million by Barry Diller's InterActiveCorp (IAC).

I learned in this start-up that not all start-ups can be for technological or personal purposes. It may also be for amusement and information gathering just as what TripAdvisor has done. Another thing is that honesty always creates a credibility to a person or business in a way that if you are honest on the information you give, it

will always create a sense of being a trustworthy person or business to others and to your clients.

Case study 27: Hot or Not

Hot or Not was founded by James Hong together with his friend Jim Young. They started when they have the idea that people can post their pictures into a system and then other people can see it and they can also rate it from 1 to 10. At that time, James and his brother were working in Website that was called XMethods. It was the first directory of publicly available web services. They visualize their idea as that their client would use the web service, get a picture, and have it randomly popping up in the screen ant different times of the day and the client can give rating from 1 to 10 whether the girl she saw on the screen thought is hot.

That time, Jim was studying for his PhD, and James was just a fresh graduate from a business school but not yet employed. So what they did was to build it and they successfully finished it for it was not hard for them to build it at first but the later part was hard for they have to scale it. At the time of a weekend before their launching, James try to use the site and his dad asked him about it. He told his father that it was Jim's project for he was been unemployed at that time. His dad loves this site even he's already been 60 years old. That's why there are 3 persons who have used it before it was launch.

They launch the site on a Monday at around 2p.m. He sends email to his friends so that they can see it and at the end of the day, they got 40,000 hits. Actually it got spread on its own. They had a time wherein they've got a problem on cost of scaling the project but luckily they were able to still survive. Another thing is that they had a problem about nude pictures being sent to the site but they have solved it by creating a community of moderators and it's open to the public. They also had a problem on how are they going to make money out of that thing and what they did was to eventually charged their "Meet" system for $6 per month. This meet system was added to the site because they think that they must create something to allow people to meet with each other without the interference of the porn people.

Many company offer them money be acquired but they still resist to it and continue to be a stand-alone company. As a whole, it was a success for James and Jim to have their website to have a count of about 13 billion votes as of July 2006.

I learned in this start-up that new things can easily catch the attention of the users for new things can mean new experience and eventually new learning and insights for them. Another is that all people in a start-up must always be ready to face challenges in order to improve or somehow make their product stable.

Case study 28: Tickle

Tickle, which was first called Emode, was founded by James Currier. At first, he was introduced to the digital media earlier before there was internet. By that time, he got worked in many digital media company. He was also in a business school at that time when he thinks of the famous media companies at that time like Broadcast.com and iVillage. He thought of them as if they were just trying to put old media experience online and it doesn't make any sense. Another is the Spinner.com which was got sold for about $340 million and he thought of it as a crazy thing. It is for the reason that he thought that the internet would come up its own media form which is a user-generated and is completely different from what they see on the other mediums. It was at one night when he was taking a Myers-Briggs corporate personality test which was administrated to the Harvard Business School students. After they have gotten the result, it became the talk of their community for about two weeks and he thought that if there would be a media like that to be talked for two weeks and above, it would be a powerful one. It id for the reason that he believed that internet can allow a person to have media experiences and it would taking in a lot of different forms. It will also be powerful in the sense that people love talking about themselves and about the people they know. He also thought of it as a good foundation in the media business.

Now that he has the idea, he started by knowing what product could actually do what he wants and also started talking to peoples about it to get their ideas. It is already obvious that he could start a huge media company on the back of his deeds

but many people that he ask still misunderstands what he was trying to do for many people at that time where amaze on the success of media companies like Broadcast.com and iVillage that if you go against it, they will hate it. Another challenge to him is that people are searching for confident points in which when you have gone through it, it will attract people on what he is doing. After that, he start talking to VCs to have funding and as he attract this VCs, he can also attract other people and he just need to strike the igniting point of his process which is the receiving of term sheet form the VCs. Another igniting point in his process is when he launches his trouble test. When he puts anxiety tests, no one visit the site but when he make fun of the test such as what kind of dog breed you want, in just 8 days, there were a million people trying to enter the site that is why he need to plug his server in a T3 connection because the server gets down every 10 minutes because many people wants to visit it. As he gets the traffic, he is now confident to tell the VCs that he can now earn money.

In terms of competitors, they were worried when iVillage try to copy them but they eventually failed for they had a difficulty in making their people work properly. They became successful until the time they were acquired by Monster for about $100 million and after that he founded Ooga Labs, which was a digital media studio that creates consumer-generated Internet application.

I learned in this start-up that not all funny things can't do something great just like in Tickle where when James change the subject to something funny, the people are now wanting to visit the site compare in having anxiety tests. Another is that there is always improvement on all kinds of stuff even in the media business together integrated in the line of the internet world which became a great change to the Internet world.

Case study 29: Firefox

Firefox was created by Blake Ross and Dave Hyatt. Ross personally started it in the year 2000 as an open source where everyone can work on it. It was the time when he started working closely with the Netscape team because they were basing

their product on the Mozilla where he and Hyatt are working at. He was helping to fix bugs and eventually he was invited for a summer job in the Netscape which for him is a cool first job. So what happened was for him to work in Netscape on his first summer. After that, he started working in his home and as he return to Netscape on the next summer, things just had gotten worst. The Netscape market kept going down further and further. As a result, things got to be more desperate as AOL demand for more revenue from the browser. It is for the reason that they want that their investment could be return. So the Netscape browser became just something to drive people to Netscape.com. It became a mess for the culture didn't focus on the users. It became painful for him to work there.

What Ross did was to start a new project called Phoenix. It was supposed to be an allusion to the legendary bird that is reborn from its own ashes. They are pertaining here to their project being reborn in the ashes of Netscape. There were some people that got involved in this project namely David Hyatt, Joe Hewitt, Brian Ryner, Asa Dotzler and Ross himself. That Phoenix is actually a junction of the Mozilla code base that they controlled. They basically close the access code for they wanted to do what they thought was the right thing. They were given more support by Mozilla itself and that's how they began. They had gotten to a couple of name changes because of trademark issues. First is from Phoenix to Firebird because of the Phoenix Technologies had also some kind of web browser. Second is from Firebird to Firefox because there was an open source database called Firebird. So in the end, they named it Firefox. They first develop it in Netscape then one of them was David who left to go on Apple and work with Safari, Apple's web browser. Their team is always changing because of their base which is Mozilla that has many developers but in the end all people who work in Mozilla now are working on Firefox. They had their turning point when they release their first version in which indicates that Mozilla is now uprooting from its main body and now creating its own normal product. They didn't have difficulty in getting users but they have difficulty in getting their target audience but it is solve when Mozilla became an independent entity in which the

culture shift out and they have to cater more users. They didn't worry on threats for they measure their success on the users and not on the competitors.

The Phoenix was release in the year 2002 and the Firefox 1.0 which is the first version of Firefox was release by 2004. It was a successful project for it was fast, simple and easy to use. That's why it dominates among technical users and it cut the overpowering share of internet explorer in the market. By 2005, Ross took a leave in his school to initiate a new start-up with Joe Hewitt, who is a co-developer of Firefox, which they named Parakey.

I learned in these start-ups that if a people are always open to new ideas, it will always lead in creating a new product that is much likely be a better than the old one. Another thing that I learn is that a start-up can begin from the remnants of a certain system just as how Firefox had started from the ashes of Netscape.

Case study 30: Six Apart

Six Apart was founded by Mena Trott together with her husband Ben Trott. It started at the blog created by Mena which was called Dollarshot. It was created at about April of 2001. At that time, she was at job and doesn't feel contented of she had done. As her blog became popular, she became involved more and more of what people are doing. When their company closed and she was nothing to do, she thought that they can make a blogging tool and release it as a donationware and see where it goes. As they became more involved, they also aim for higher one and realizing that starting a company is not impossible. So what they did is to start thinking about a web design company but it is somewhat overpowering for they even don't have any idea of what they are going to build. It is just an accident when they release the Movable Type that easily became popular and eventually this thing became a full-time job. This thing is also the one that forced them to become a company for having customers on their day one. At the time that they talked to the VCs, they realized that they should solve problems to be funded by the VCs. But at that time, there was a huge demand on what they were doing and Movable Type is becoming more and more popular. By July 2002, they decided to do something that they would earn in doing. It

was the TypePad. At the same time, they form the LLC before they get funding. This project was done in their apartment in Richmond. It takes them 8 months to finish the product. They never required VC money for they were afraid to be like the companies that died because of taking money. They just have known the use of VC money when they met Joi Ito who later became their CEO. As time passed by, they grow the company and are able to acquire a few companies in between.

They became a real-time company and as a result, they transformed from LLC into a C Corporation. They build new software for TypePad because they know that more people were coming to blog but they were less experience users. That's why the new software for TypePad to have a service that can be use by all people. They didn't even plan on transferring code from TypePad to Movable Type for the reason that the users of the two products are differentiated from one another. They didn't worry too much on competitors for they enter the field without knowing that they were creating a market. In terms of pressure, they also had when they launch the TypePad and there were paying customers. It seems that there is no future in it. They realized that they should just know on what they must prioritize first.

They were able to get funding from Joi Ito's Neoteny by April of 2003 and they were able to launched another product which was the Fox (formerly known as Comet) in the year 2006. It was a hosted blogging platform with social networking components.

I learned in this start-up that blog publishing can be related into business in the way that it can help you promote something new. Another is that all people have the ability to do something great. They should just know to do what is really the important thing to be accomplished.

Case study 31: Lycos

Lycos was founded by Bob Davis in the year 1995. It started in 1994 when a brilliant computer scientist in Carnegie Mellon University, whose name was Michael Mauldin, invented the technology which was a search engine. It was a research project and the result of a federal research grant. Michael Mauldin who is also called

Fuzzy doesn't want to be a business person in a profitable entity. So what he did is to work with CMU's Tech Transfer Office to sell his technology. He was lucky that CMGI bought the 80 percent of the company and the 20 percent remain in the ownership of Fuzzy and CMU have 10 each.

By that time David was the Vice-President of sales of an old company the sell memory for IBM mainframes. He wasn't happy in his job until on time Dan Nova of CGMI called him to check out on how he was trying to put a deal together with the CMU. If he get is right, he wouldn't have a CEO. So David volunteered to be the CEO and it happened. He became the CEO of the company but the problem is that the technology exists but there were no employees, customers and product. So what they did first is to get the core team and to understand what they were doing to have a living. They also have to make their presence in Pittsburgh where their technology group was even they where based at Boston for it is required in their agreement with the CMU. They were able to hire their first few technical engineers out of the CMU for it is a premier computer science institution such as Fuzzy's student assistant and a worker in their data labs. They were able to get 300 employees in Pittsburgh and some of their engineering operations were also there. They experience a difficulty in management for they were apart in location and it became an additional burden for the company. They also other problems that they face like getting and servicing customers, understanding their business, finding an office space and scaling the company. These problems are only few among their many problems in their first 9 months.

They haven't gone to have turning points in their start-up for every obstacle that they overcome, there is always a new one waiting for them. Another reason is about their changing environment and the issues that their company faces like the staffing. Lycos became popular after a few years but in its early stage, no one knows about it. They were able to get the traffic in a big way such as having advertisement, press and telling their relatives about it and after 18 months, they were able to roll their wheels in the road of business. In terms of competitors they worried about Microsoft and Yahoo. It is for the reason that Microsoft might as well go into the

online world. For Yahoo, it is for the reason that it has a larger audience than that of Lycos so they were trying their best to catch up with them. Even so, they were able to manage their problems by developing a business plan. This helps them to define their work, expand the company and established partnerships. It helps them to improve their visibility and increase their revenue. They were able to grow 200-300 percent every year and it is a very hard thing to do but they were still able to make it until they were acquired by Terra Networks for $5.4 billion which represented a return on VC investment of about 300,000 percent.

I learned in this start-up the importance of determining your work to be able to do the things that were necessary for the company. Another is that there are also companies that spend a lot in order to promote their product and not only relying in the spread of word from the people who first engage themselves with the product.

Case study 32: Alliant Computer Systems, Shareholder.com

Alliant Computer Systems was founded by Ron Gruner together with Craig Mundie and Rich McAndrew in 1982. It started when Ron was working in Data General in 1969. He had a background in computer designing which really help him in his work in Data General. Data general was really entrepreneurial type of company that helps him understand the entrepreneurial environment. He left the company in the spring of 1982 and started the Alliant Computer System. Their goal was to create high-performance computer systems that would surpass the Digital's Vax line of machine. Their machine is using a parallel processing technology that is about 50 percent more powerful than the Digital's largest Vax. For their project was hardware, they had to raise a lot of money. So what they did is the traditional approach of raising money through venture capitalist. They brought in their former boss who is Carl Carmen and his partner, Jesse Aweida, the founder of Storage Technology Corporation, because they know the VC community very well and might help them in raising money. They were able to put in a couple of hundred thousand to help Ron and others get launched and spend some time to create their business plan on how to commercialize the parallel processing technology. They contacted Kleiner Perkins, a

premier venture capital firm at that time, to tell him that they had an interesting idea but they were not ready to talk about it now but they would talk about it in about 6 months. Fortunately, they receive a good response from them that it is fine if they cannot talk about it now. So what they did is to draft the business plan and show it to them about 4 months after they had contacted Kleiner Perkins. As they talk about the business plan, the VCs in that meeting who were John Doerr, Frank Caufield, Brook Byers and Tom Perkins liked the idea for they could illustrate analogies from those computer systems. In the end, they were able to raise money for about $4.7 million which was a big money for the first round of financing. They were also introduce to Bill Hambrecht and Vernock and by the time they closed their grouping of VCs and start to set up the board, they raised 3 additional rounds with their investors for a total of $30 million.

They were able to announce the initial product in the summer of 1985. It take them 3 years to finish their product for they spent half a year in raising money and 2 1/2 years to build the system. They were able to earn $5 million in their first year and able to increase their revenue at about $30 million on their second year. They grow very fast that they reached the point that they earn almost half a million dollars. It was about $450 to $475 million in their market valuation. But they had hit the wall at one point. It is when they were late on one of their next generation of computers. It affected them for it is hardware that they built, so they must be at the top always for them to maintain their market share. Another is that the market of workstation is disappearing as the personal computers were getting faster and faster all the time. That was when their market dried up, so their revenues also turn down. They try to still save the company in a slower method that the VCs still want to manage a living dead company. It means that they are growing but not generating impressive returns. Ron thinks that this strategy was wrong. So what he did is to leave the company and that leave of him also leave many bad things for the company. He left the company unhealthy and heading in a wrong path. The strategy that the VCs had done badly failed and it cost the company to be bankrupt a year after Ron left the company.

By the time Alliant Computer System was bankrupted, Ron was also in the stage of knowing what he would do next. He realized that he still want to be in an entrepreneurial type of business. He had some standards in his mind which were very clear to him and it that he wanted to build a business with recurring revenue stream.

He thinks of the good idea on what he is doing next and coming up with something related to shareholders. It is because that he view the business as an area of shareholder communications. He thought that the medium and small shareholders are being ignored. So he thought of building a technology to reach out and communicate with the shareholder whether they were in major, middle and small level of shareholders.

So he started doing the shareholder communications thing and he got the concept on his friend who was a programmer and have done a project for Boston Phoenix which was a personal ad voicemail system. So he thought that it would be a great idea if it can be applied to companies. He builds this Shareholder Direct service and was funded by a small group of his friends and business associates. He was able to raised $276,000 and became profitable by the summer of 1994. He also added a website feature for this service which is the shareholder.com and it became good for their business. In terms of competitor, they considered one which was the CCBN. This company was funded by Thomson Financial. Even there were investments offered to them by VCs, they just turn it down and continue to grow organically as they wanted it to go on. There were many offerings to them but they accept the offering of NASDAQ for they think it is the best strategy because they know that their business will be use as a foundation for establishing their corporate services. So they were acquired by NASDAQ by February of 2006.

I learned in this start-up that the key to success can only be summarizing into one word. It is persistence because you cannot be successful in just doing a thing once. It must be done more than twice to get things right. Another is that starting a new business doesn't require a person to relate it in the first business he/she had if there is for you can start a business which is totally the opposite of the first thing you may have done.

CHAPTER 2: BOOK REVIEWS

Book review 1

Book: Systems Analysis and Design and the Transition to Objects
Author: Sandra Donaldson Dewitz
Reference number: QA 76.9 S88 D47 1996

Chapter: Chapter 1
Quote: "A set of related components that work together in a particular environment to

perform whatever functions are required to achieve the system's objective."
Review:

In this chapter of the book, the concept of system development is being emphasized. It is starting from the definition of a system which is a set of related components that work together in a common environment to perform the required functions to achieve its goal. It also the same goes for the information system which is systems that takes in data from its environment and process it to produce information. The information system can be manual or automated. When it is manually operated, it only relies on human intelligence alone to manipulate data and produce information. On the other hand, automated information system it needs different components such as people, process or procedure, data, software and hardware. In system development, the convenient way of making it is by using object oriented paradigm. It uses object class which can be people, things, places or transactions that share common attributes and does a common function. These object classes always have attributes, which describe the class features, and methods, which indicates the action that the object can perform. In an object class, there is a so-called object instance or instance only which is a specific person, thing, process, or place. In other words, it is a member of an object class. In the process of system development the system life cycle separates the life of a system into two parts. It is the development and production. When the system moves from development phase to production phase, the turning point is called conversion. In developing systems there is a term called system approach which is the

problem-solving method which breaks up the plan into smaller parts, putting design on each small parts and combining them again into a complete system. System approach has 2 major activities which is the system analysis and system design. System analysis deals with the studying of an existing system in order to create a new one which is more appropriate for the needs of the people. In system design, it is where they reassemble the functions identified in the analysis. In system development, there are two paradigms use. These are the traditional system development (TSD) paradigm and the object-oriented system development paradigm (OOSD). In the TSD, it analyzes the system to know the function that it should execute. On the other hand, the OOSD, the system is decomposed into object and manipulate these objects to identify its function and relation to other objects in the system.

Book review 2

Book: A Structured Approach to Systems Development
Author: Gary Heap, John Stanway and Alfie Windsor
Reference number: QA 76.9 S88 H42 1992

Chapter: Chapter 4
Quote: "Allows a rationalization of all the Procedures at a corporate level."
Review:

In this chapter, the stages of the project life cycle are being defined for these are necessary on having a successful completion of a certain project. They are divided into four phases. The first is the support phase. In this phase, it provides the procurement and installation of hardware, software, and networking components of the whole configuration. It also provides the definition and maintenance of all the live systems environments. The second is the construction phase. In this phase is the actual production of the code and comprehensive documentation for the system. It also includes the full system testing where the system is test as an integrated whole system built for the first time. The third is the delivery phase where in it undergoes different test to prove the recovery capacities, data conversion and cleansing

requirements of the system. The last is the maintenance phase. This is where it provides ensuring that the system is properly monitored and maintain after the delivery. It also provides the periodic system review for its expansion and revisions.

Book review 3

Book: Systems Analysis and Design Third Edition
Author: Kenneth E. Kendall, Julie E. Kendall
Reference number: QA 76.9 S88 K45 1995

Chapter: Chapter 2 Understanding Organizational Style and its Impact on

Information Systems

Quote: "A large system that is composed of interrelated and interdependent

components working for predefined goal/goals".

Review:

Organizations are huge system that is composing of interrelated components that are called subsystems. These subsystems are the ones which are serving in a particular function such as departments and divisions. Common functions of these subsystems include production, finance, marketing, and management. All of these subsystems are being integrated by means of different processes to perform as a whole organization. In other words subsystems are also important when studying an organization as a system and on how they function.

All systems and its subsystems are always interrelated and interdependent to each other. It means that every component in a system is important that if one of these components were changed or eliminated, the rest of the system are also affected. All systems also have its boundaries which separated the system from its environment. These boundaries do exist for the system do its work efficiently and effectively. If these boundaries become too careless, the control on the performance may be affected and later be weakened. Feed back is another important thing in every system. For it is a form of control where the feedback helps the organization create new specific inputs in order make better outputs. The environment of a system can affect its stability of producing the desirable outputs. There are different kinds of environment in which the

system is involved. First is the physical environment where the organization is physically located. It may be characterize through its population and demographic profile. It includes the education and the average income on that certain place which can be factors that affect the system. The second one is the economic environment which includes the competitors which affect the organization. The last is the political environment which is controlled by the national and local governments. These environments may changed and it can be planned but it is often cannot be controlled by the organization itself. Openness and Closedness in an organization is important where there is no organization that is completely open or close. Openness means that there is a free flow of information within the organization that it is fine when someone gets the information at the time when the project is in its beginning for there are only few restrictions. In contrast closedness means that there are many restrictions like rules and regulations for the access of certain information.

There are different systems perspectives depending on the one looking at it. For example, a production sees the production as the center of the system and others as interrelated components. On other hand, the marketing manager sees the marketing department as the center of the system and driven by the other components. These perspectives can cause problems if the manager overemphasizes their function over the broad needs of the whole system other than only one subsystem or components.

Management in an organization has three wide levels. These are operational management, middle management and the strategic management. Operation management is the foundation of the other two levels of management. It is where decisions are made for a certain predicted outcome when the decisions and rules are implemented properly. The middle management is on the second position or can be considered as the intermediate level. This is where short-term goals are create and control the decision for the productive use of resources in order to achieve the organizational objective. The last is the strategic management which is the third level or position wherein the managers look at the organization in the future which can guide the operation and the middle in making decisions for the future time.

The foundation of information system in the environment of the organization can make it possible to realize that there are plenty of factors that are important and must be considered when analyzing system requirements and designing and implementing an information system.

Book review 4

Book: Information Engineering: Strategic Systems Development
Author: Clive Finkelstein
Reference number: QA 76.9 S88 F55 1992

Chapter: Chapter 7: Information Engineering Projects
Quote: "Definitions of the stages in analysis indicate a relationship between goals and
    objectives and data models."
Review:

Every system development always has its analysis as its first process for in this phase is where the study of an existing system and figuring out the new system requirements to be implied on new system to be build. The Analysis Phase moves through four main stages. These stages are the following: Project Scope, Strategic Modeling, Tactical Modeling, and Operational Modeling.

The Project Scope stage creates and establishes the goals and boundaries for the project. It identifies the directions for the project area based the plans and statement of the direction stated on the management questionnaires. It provides foundation for the strategic, tactical and operational modeling.

The Strategic Modeling stage is the process where the senior mangers identifies the strategic data, data of interest to senior management level, of a certain strategic project area or project area, a part of an organization administered by the senior managers. This is also the stage where all the strategic data are represented in a strategic data model that contains high-level strategic unit of interest to the senior management of a project area. These models may also contain strategic attributes for the achievement of strategic goals.

The Tactical Modeling stage is the process of identifying the tactical data, a data of interest in the middle management level, with the middle managers of a tactical project area or tactical area, an area of an organization administered by the middle managers. This stage is also where tactical data are represented in tactical data models which contain a lower-level of tactical interest to the middle management of a certain tactical area.

The Operational Modeling stage is the process of identifying operational data, data of interest to the managers and to the staff at the operational level of a tactical area, at operational levels. In this stage, operational data are shown in operational data models which contain a non-key attributes of interest to the staff at the operational level. These attributes refer to as the operational attributes which can also contain the attributes that measure the achievements of both tactical and day-to-day objectives. In the operational models, process modeling is generally applied for the detailed processing of the given operational data. It can also be use in a tactical or a strategic model for defined processing details of the received tactical or strategic data.

The progressive application of the modeling results into a top-down development where several tactic models are develop from a single strategic models while a number of operational models are created from each of those formulated tactical models that are created through a strategic model. It also shows the expansion of strategic models to tactical and then to operational models.

Book review 5

Book: Information Engineering: Strategic Systems Development
Author: Clive Finkelstein
Reference number: QA 76.9 S88 F55 1992

Chapter: Chapter 6: Implementing Process Models
Quote: "Document the flow of data."
Review:

Process modeling gains procedural logic from a data model. In structured analysis, it uses data flow diagrams to document logic. Data Flow Diagrams is used to document the movement of data in an organization. It can also be used as a

conjunction with a data model to symbolize processing of data. In a data flow diagram, external entities are represented by squares. Processes are represented by ellipses and data stores are represented by rectangles.

A data flow, moving from one process to another, corresponds to the implementation order of a procedure and point out an access path through the data model. DFD data consistency happens when a data often flow through processes to ensure any redundant versions are kept consistent and updated.

A DFD illustrates the flow of data, not a conditional logic. It is for the reason that the logic is locked inside each DFD process and is expressed by structured analysis as mini-specs, or pseudocode. In contrast, this conditional logic is clearly shown in a procedure map by means of conditional execution paths. A procedure map contains certain details similar to a data flow diagram and also can be use to represent DFD's. Conditional logic is shown as part of the procedure map and can be converted directly to a pseudocode. Thus, a procedure map can represent both DFD and mini-specs. Moreover, the use of DFD and procedure map can be derived from a data map.

A procedure map represents access path through a data map. In the access path of a procedure map, we can call it as a general-to-specific for its starts with the principal entity down to the hierarchal entities. It can also be called a novice processing strategy. But there are alternatives like the specific-to-general wherein the operator moves directly to detail processing without passing on the intermediate steps. It can also refer to an expert processing strategy.

Procedures are use to build more complex process procedures from a number of generic ones. It can also refer to the levelling of procedure which is called high-level procedures. It provides abstraction similar to as DFD's.

Process modeling can give us many benefits. First is that it can make the users or the I.T. professionals develop procedure maps. Secondly, it makes the procedure map be able to show the visual program logic. Thirdly, it derived procedure map directly from a data map in which common logic modules can be identified. It can also help to achieve high development productivity by using high-level procedures which shows the access path through data maps. Lastly, translations can easily be

done for the reason that procedure maps can be translated directly into a pseudocode and also to program statements. These translations can be manual or automatic.

As a conclusion DFD and procedure map are derived from a data map for the reason that a data map includes logic that is explicitly present in a procedure map but implicitly present in a DFD which both can be converted into a pseudocode or a program statement.

Book review 6

Book: Information Engineering: Strategic Systems Development
Author: Clive Finkelstein
Reference number: QA 76.9 S88 F55 1992

Chapter: Chapter 4: Business Normalization
Quote: "There are some rules to be followed."
Review:

Normalization is a process wherein the things are turn into a more normal state. In normalization, there are two types of approach that are use to achieve it. These are the traditional and business normalization. In this chapter, it focuses on the business normalization than the traditional.

Business normalization is an approach use by people who have no computer knowledge but have business expertise. In this kind of approach to normalization, there are some rules that are to be followed. These rules refer to as the business normal form. There are a total of five business normal forms.

The first business normal form identifies and removes repeating groups to a different entity. This entity take the primary key attributes from the original entity and from the repeating groups. It may later be renamed according to its final attribute content after the completion of the business normalization.

The second business normal form removes attributes, which are fractionally dependent on the primary key and also dependent on one or more key attributes, to another entity. The primary key of this entity is also the primary key of the entity in which it is uniquely placed, along with all the additional keys on which the attribute is completely dependent.

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The third business normal form removes the attributes, which are not dependent on the primary key, to a different entity where they are completely dependent on the primary of the entity they were placed.

The fourth business normal form removes attributes, which are dependent on the value of the primary key or may be optional, to a minor entity where they depend completely on the value of the primary key where it is required that they exist in that entity.

The fifth business normal form exist as a structural entity if the recursive association between the event of the secondary entities or if the recursive association between the event of their principal entity exist.

These business normal forms serve as a further cross-check on the accuracy of the data definition. It also helps identify similarities between entities.

Book review 7

Book: Information Engineering: Strategic Systems Development
Author: Clive Finkelstein
Reference number: QA 76.9 S88 F55 1992

Chapter: Chapter 18: Operational Modeling
Quote: "The existing system is used as the starting point."
Review:

Strategic and tactical modeling uses a top-down approach base on strategic directions for the future. In operational modeling, it addresses a particular system or group of system, and can use a top-down, a bottom-up or a sideways-in approach to data modeling.

Top-down modeling is continued to be used in strategic and tactical modeling, developing both the tactical map and entity list to operational detail for priority systems based on the defined data needed for the future. This modeling is suited for systems that doesn't exist today, or which need some changes which are important from their present approach. It occurs when different management levels participate as separate project groups for strategic, tactical, and operational modeling in a project.

Sideways-in data modeling is applied when the same project team participates in every strategic, tactical and operational modeling stage in a project, in rotation. It is also applied when each of the modeling stages focuses on the same organizational level, and when the level of data detail increases.

Bottoms-up modeling is applied when source documents, reports, file or database formats, and other documentation means is used. It is used by the department staff when the senior managers and the functional area experts are not partaking in the activity. In this situation, the existing system is used to be the starting point.

Data evolution is always included upon the progress in every stages of modeling wherein the data content expands. It shows in a sense that every entity in a strategic model can be used as a fundamental data needed on both tactical and operational models.

The modeling will be used in the project plan develop from the data model analysis. After that, it will undergo normalization for the additional entities and associations to be defined. As the operational modeling of each entity reaches its completion, the physical definition of attributes are also completed and will now be ready to be used in the physical data base preparation in software tool implementation.

Book review 8

Book: Systems Analysis and Design 6th edition
Author: Kendall & Kendall
Reference number: QA 76.9 S88 K45 2005

Chapter: Chapter 7: Using Data Flow Diagram
Quote: "The System Analyst must know the flow of data in an organization."
Review:

System analyst tries to understand the information needed of the users. To do this, they need to know the data flow in an organization. Even though that interviewing can provide information about the system, they still need a visual representation to be able to sort itself out this information in a good way. This can be

done by using a Data Flow Diagram (DFD). This diagram only uses four symbols in which can put together all the data processes of the whole organization.

Using a DFD, there are four advantages it can give in terms of explaining the way data move through a certain system compare to a narrative explanation. First is that there is a freedom from committing to the technical implementation of the system too early. Second is that there will be a further understanding of the interrelatedness of systems and subsystems. The third is that there will be communication in the current system knowledge to the users and the definition of the Analysis in a proposed system to determine the necessary data and processes.

In a DFD, there are four symbols that are use to determine the data flow. These are the following; Double Square, an arrow, a rounded rectangle and an open-ended rectangle. The double square represents an external entity which sends and receives data through the system. The arrow represents the movement of data from one point to another with the arrow's head pointing towards the direction the data flow going to its destination. The rounded rectangle represents the presence of the transforming process. These processes always indicate the conversion of data. Therefore, the label of the data that enters the process is always different to the label of the data that comes out after the process. The last symbol is the open-ended rectangle. It is a rectangle drawn with two parallel lines that are closed by a short line on the left but remains open ended on the right side. It represents the data storage.

There are things to be considered when partitioning DFD. It includes whether the procedures are done by different user group, processes execute at the same time, processes that perform similar task, group processes that can be integrated for efficiency, processes that can be combined into one program for the consistency of the data or processes that may be partitioned into different programs for security purposes.

Book review 9

Book: Systems Analysis and Design 6th edition
Author: Kendall & Kendall
Reference number: QA 76.9 S88 K45 2005

Chapter: Chapter 4: Information Gathering: Interactive Methods
Quote: "Uses communication skills to gather information."
Review:

        The interactive method of gathering information uses communication skills in order to have the needed information for the system's improvement. In this method, there are three processes that can be use. These are interviewing, joint application design (JAD), and surveying through questionnaires. They may have differentiation but still there foundation is still the communication skills.

        In using the interviewing process, the analyst must listen to the opinion, goals and some informal processes that the decision makers are talking about. It is a planned question-and-answer dialogue between two persons. The analyst can use interview to build relationship with the client, to observe the office and to collect information for the system requirements. It may be somewhat done through email, but it is always better to do it personally and not electronically for there are certain information that cannot be acquired in using email as a medium for interviewing.

        There are five steps that must be taken in planning for an interview. They are as follows: Read the background material of an organization and the interviewee, to establish objectives, decide whom to interview, prepare the interviewee and decide on the type and structure of the questions to be ask. These steps can really help the interviewer to gather the necessary information for the system requirements. There are two types of questions in interviewing. These are the open-ended and closed questions. Open-ended are questions that leave response option to the interviewee while closed questions limits the possible option on the interviewee. In terms of structure, there are three types that the interviewer can choose from. These are the pyramid, funnel and diamond. Pyramid structure starts from detailed to general question which is the opposite of funnel that starts from general to specific questions. The diamond structure starts from specific and in the middle turn to general and closes with specific questions. The only thing is that it takes too long to conduct if using the diamond type.

        Another process is the joint application design (JAD). It can be used if the analyst wants to save time and the cost on the personal interviews. This process is

done in a group setting and it allows the analyst to gather information for requirement analysis and design the user interface jointly. It is just the matter of careful assessment on the specific culture of an organization whether the analyst must use JAD as an alternative method.

The last is using questionnaires or also called surveys. In this process, the gathering of data is injected in the characteristics and behavior of the key people in the organization. This method is effective if the people in the organization are separately working in their fields. After the objectives of the questionnaire are met, it can now proceed in choosing the type of questions whether open-ended or closed. The selection of words to be used is also important and must be reflecting the organization's language. Consistent control on questionnaires must also be considered for it can help achieve better response rate from the people who will answer it. The last important thing to consider is the ordering and grouping of the questions for it will be a great help to the people who will answer it for them to understand the questionnaire.

Book review 10

Book: Systems Analysis and Design 6th edition
Author: Kendall & Kendall
Reference number: QA 76.9 S88 K45 2005

Chapter: Chapter 5: Information Gathering: Unobtrusive Methods
Quote: "Can be considered as insufficient when used alone."
Review:

The unobtrusive method of gathering information is a way to gather information that can be considered as insufficient when used alone. It must be used with at least one or more interactive methods for it to be effective. This method includes sampling, investigation and observing a decision maker's behavior.

The process wherein there is a systematic selection of representative element of a certain population is called sampling. When the selected representative elements are examined, the analyst can get useful information about the population as a whole. In sampling, an analyst must decide on these two key issues. One is for the analyst to

select and study a document generated in an organization and which the analyst must attention into. The second one is the effect of the proposed information in the employees of the organization. These are the two purposes that must be fulfilled to be able to used sampling in gathering information. Sampling as a method of gathering information is used to reduce cost, to speed up data gathering, to improve effectiveness and to reduce biases.

There are steps to be followed by the system analyst to create a good sample. First is to know that there is a need for determining a population. Second is to decide on the type of sample to be used. Third is to decide on the size of the sample or the measurements needed for the sample. Lastly is for the analyst to plan on the data that is to be gathered. These steps can be a big help to make the sample better.

Another method is the investigation wherein there is a need for discovery and data analysis. It is important to do this method when the analyst tries to understand the organization and its information requirements. It includes the analysis of both quantitative and qualitative data. Both of these are important for these are persuasive message which can give impact to the organization when it was changed.

The last method is the observation of the decision maker's behavior wherein the analyst can gather data and insight through observing on what is really happening. In this kind of method, the behavior of the decision maker can be describe with the use of an analyst's playscript which monitor the major activities of the player involved.

In observing the decision maker's behavior, the analyst must include the observation of the player's environment. One way is to use the Structure Observation of the Environment. These includes the observation in the office location, placement of the decision maker's desk, stationary office equipment, props, external information sources, office lighting and color and the decision maker's clothing. Through this method, the analyst can better understand how the decision maker does his/her work.

Book review 11

Book: Modern Systems Analysis and Design 4th edition
Author: Jeffrey A. Hoffer, Joey F. George & Joseph S. Valacich
Reference number: QA 76.9 S88 H64 2005

Chapter: Chapter 4: Identifying and Selecting Systems Development Projects
Quote: "Project identification and selection is the review on the projects that the

organization could undertake."
Review:

In the first step of SDLC (System Development Life Cycle) is the project identification and selection. This is where the organization identifies and reviews all the projects that the organization could undertake. This step consists of three main activities. These are identifying potential development projects, classifying and ranking projects, and selecting projects for development. In doing the three activities, there are many options in doing the three main activities. It is often done by the top management, a diverse steering committee, business units together with functional managers, or the development group.

In identifying the potential development projects, the strengths and weaknesses of a certain project are being point out to know what characteristic of the project will be integrated on the proposed project for different people are doing the process as stated in the first paragraph. That is why there are factors to consider before declaring that the certain product is a potential one. These factors include the project cost, duration, difficulty and risk.

The next activity is the classification of the potential projects. This process focuses on reviewing the relative advantage of the potential projects. All the potential projects are evaluated according to a wide range of criteria such as its value chain analysis, alignment with the business strategy, potential benefits of the project, the resource availability and requirements for the project and its risks.

The last activity is the selecting of the IS (Information System) development projects. This is where the actual selection of project for further development is done.

This project selection is the process where both short and long term projects are considered and selecting the project that is most likely be able to achieve the business objectives. There are also factors to consider in the project selection. These are the perceived needs of the organization, existing system and current projects, resource availability, evaluation criteria, current business conditions and the point of view of the decision makers.

In terms of the project quality identification, it can be improve if the decisions are guided by corporate strategic planning and information systems planning. Corporate strategic planning is the process of identifying the mission, objectives and strategies of an organization. The essential thing in this process is the selecting of a competitive strategy that states how the organization plans to accomplish its objectives. Information systems planning on the other hand are the ordered means of reviewing the information needs of an organization and defining the system and database that will best suffice those needs. It is done through a top-down process that considers the outside forces that might affect the systems' performance. It evaluates the present inventory of the system and the desired state of the organization together with the system in the future. It also determines the projects needed to change the system to meet the future needs of the organization.

Book review 12

Book: Modern Systems Analysis and Design 4th edition
Author: Jeffrey A. Hoffer, Joey F. George & Joseph S. Valacich
Reference number: QA 76.9 S88 H64 2005

Chapter: Chapter 10: Designing Databases
Quote: "A collection of data."
Review:

A database is a structured collection of data which is managed to meet the needs of a community of users. They are designed usually parallel with the user interface designs. In designing a database, a system analyst must know the theoretical database design for the application. This is usually specified in a class diagram or in an entity-relationship (E-R) diagram. Another thing that the analyst must know is the

data requirements for the system interface. Therefore, designing a database is a mixture of top-down and bottom-up processes because the top-down processes is determined by the entity-relationship or class diagram and the bottom-up process is determined by the specific requirements in the system interface. Aside from the data requirements, the analyst must also know the physical data characteristics, the frequency of use of the system and the capacity of the database technologies to be use in the system.

In terms of getting the needed information in the E-R or in the class diagram, it is important transformed the diagram into a normalized relation to know the normalization method to be applied in the diagram. An example is an entity in the diagram that could become a relation and the group-to-group relationship could also become a relation of a different type depending on their correspondent relation. These methods can help the analyst to specify on how to add other keys to the relation in representing one-to-many relationships.

There are separate sets of the normalized relation that are combined in the process of view integration in order to make a joint logical database design. The outcome of the merging is a comprehensive, normalized set of relations for the application. In merging, the analyst must consider the issues between the nonkeys during the view integration process.

The fields in the physical database design represent the attributes of relation in the logical database design. These fields must have data type the same as the other potentially characteristics like coding method to simplify the storage of business data, a default value, range control and its null value control. In order to do it, a storage format is followed by considering 4 objectives. These are to minimize space, to represent all possible values in the field, to improve data reliability for the field and to support the desired data manipulations on the field. In contrast with the normalized relation, they have properties of well-structured. So their table design must meet their two objectives which are the efficiency use of the storage and the processing speed.

Book: Modern Systems Analysis and Design 4th edition
Author: Jeffrey A. Hoffer, Joey F. George & Joseph S. Valacich
Reference number: QA 76.9 S88 H64 2005

Chapter: Chapter 11: Designing Forms and Reports
Quote: "Primary product of information systems."
Review:

Forms and Reports are the primary product of information systems. Forms are business documents that contain some predefined data and can be included in some areas where additional data are to be filled in. An example of a form is commonly based on one database record. Reports on the other hand are also business document but it only contains predefined data. It is a reflexive document that is exclusively for reading or viewing. An example of a report commonly has data from many different records or transactions.

In an organization, it is important to have a good quality of business processes for it will determine their success. A key in having a good quality of business process is to have the right information to the right people, in a right arrangement at the right time. This is where the goal of designing forms and reports focuses on. The complexity in this process arrives from the huge variety of information-formatting options available to the designers.

There are specific guidelines in designing forms and reports. These guidelines include the use of titles, layout of fields, navigation between pages or screens, format of text and numeric data, use of color, highlighting of data, proper use and layout of tables and graphs, avoidance of prejudice display of information and achievement of usable forms and reports.

The designing of forms and reports are done through prototyping procedures. After creating the design, it can now stand alone or to be integrated in an actual working systems. The purpose of this is to show the users on how the form and report will look like when the system is already been implemented. The output of this activity is the establishment of a requirement document where the characteristic of the users, tasks, system and the environment are summarize together with the form and

report design. The performance testing and usability reviews may also be included in the design specification of the system.

The objective of designing forms and reports is usability. Usability means that the users can easily use the forms and reports quickly, accurately, and with a high level of satisfaction. In other words, it is the ability of the forms and reports to be used properly by different users. For the forms and reports to become usable, its design must be consistent, efficient, trivial, well prepared, and flexible. These characteristics can be attain by using and following the guidelines in designing forms and reports such as the use of highlighting and color, and the display of text, list and other graphic items like charts and tables.

Book review 14

Book: Modern Systems Analysis and Design 4th edition
Author: Jeffrey A. Hoffer, Joey F. George & Joseph S. Valacich
Reference number: QA 76.9 S88 H64 2005

Chapter: Chapter 12: Designing Interfaces and Dialogues
Quote: "Defining the manner in which the humans and computer exchange
     information."
Review:

The interface and dialogue design is a process of defining the manner in which humans and computers are exchanging information. It is important to know the characteristics of different interaction method (command language, menu, form, object, natural language) and devices (mouse, keyboard, touch screen, graphic tablet). It is for the reason that there is no single interaction style or device that is appropriate for all situations. It is because that every interaction style and devices have their own strength and weaknesses. It is also because of the characteristics of the intended users, the task being performed and other different technical and environmental factors in making design plans.

Designing interfaces and dialogues are a little similar as designing forms and reports. It is for the reason that the techniques in structuring and manipulating the data

entry are provided by the guidelines for feedback, prompts and errors. Another reason is that every thing that is simple and well organize help function in a system could help inform the proper use of the system.

If in designing forms and reports have guidelines to be followed, so as the designing of human-computer dialogue. These guidelines includes consistency, allowing the use of shortcuts, providing feedback and closure on tasks, handling errors, allowing operations reversal, giving a sense of control to users, and ease of navigation.

There are also issues when it comes to interface and dialogue designing. It is describe in the perspective of designing graphical user interfaces. This issue includes the need to follow the standards in order to provide the capabilities of modality, resizing, and moving, maximizing and minimizing windows and to offer a system menu choice.

The goal of designing good interface and dialogue is to build highly usable human-computer interfaces. As many development environments provides faster prototyping tools for the design of interfaces and dialogues and also as many comply with common interface standards, the difficulty of building a usable interface decreases. Though, there is still a need for understanding of the concepts in order to succeed in building a usable interface.

CHAPTER 3: USE CASES

Barangay Clearance

Barangay Clearance System
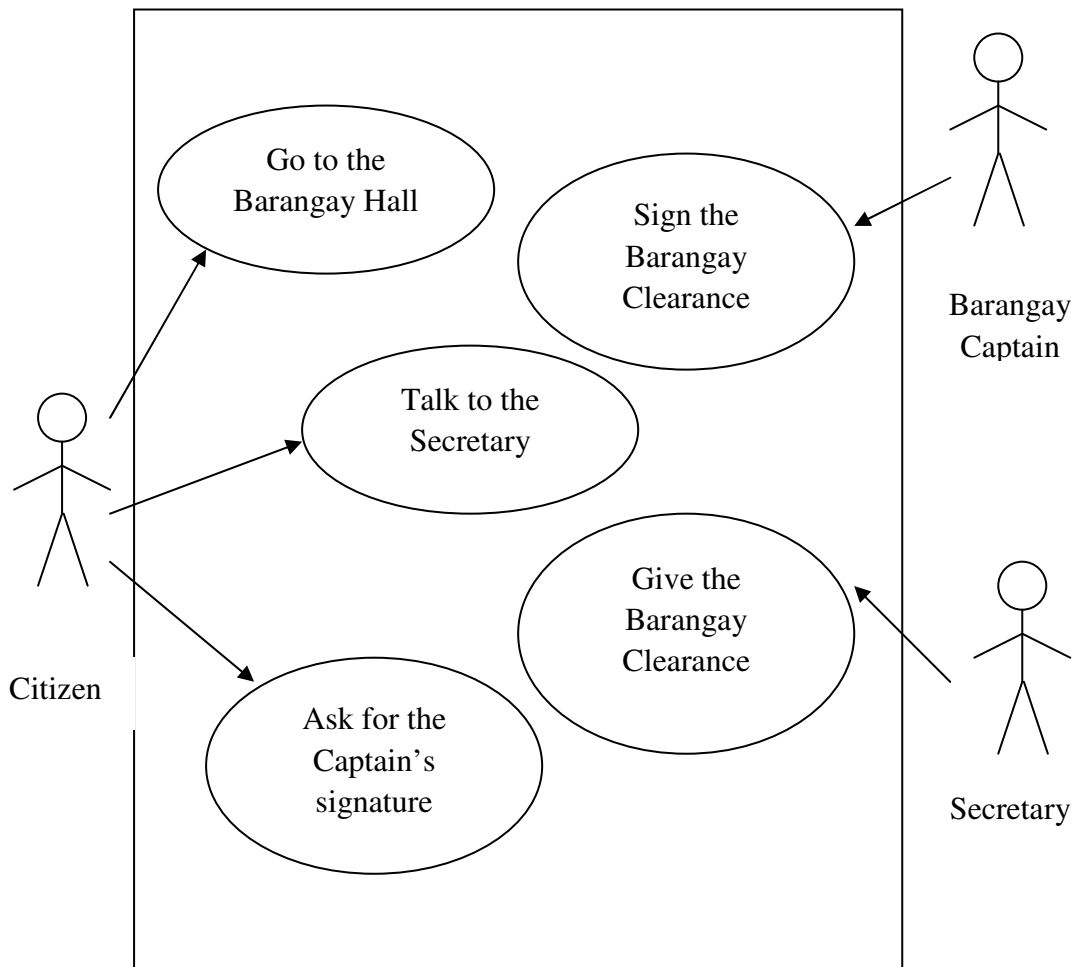
- Identification Summary

  Title: Getting a Barangay Clearance

  Summary: This use case allows a citizen to get a Barangay clearance.

  Actors: Enrolee, Cashier

  Creation Date: June 11, 2008

  Version: 1.0

  Person-in-charge: Alberto Nel R. Mateo

- Flow of Events

  Preconditions:

  1. The citizen must be a legal citizen of the barangay where he/she is getting a clearance.

  2. The citizen must be 17 yrs. old and above.

  Main Success Scenario:

  1. The citizen goes to the Barangay hall.

  2. The citizen goes to the secretary to get the clearance with his/her name and address on the paper.

  3. The citizen goes to the barangay captain for the signature of the barangay clearance.

  Alternative Sequences

  1. The citizen gets a sedula first before getting a barangay clearance.

  Error Sequences

  1. The barangay hall is close on the time the citizen went there.

  2. The barangay captain is not in the office.

  Post Conditions

  1. The citizen will now be including on the list to be provided by a police clearance.

- User Interface Requirements

  - The input/output needed in the enrolment must be:

    - Clearance Form

- Non-Functional Requirements

  - Transaction Time: The transaction must be at least being done in 3 minutes.

  - Availability: The office must always be available on weekdays.

  - Integrity: The form must be neat.

BIR TIN Number

Bureau of Internal Revenue Office

Applicant

Pay Taxes

Apply for TIN Number

Get BIR Forms

BIR Personel
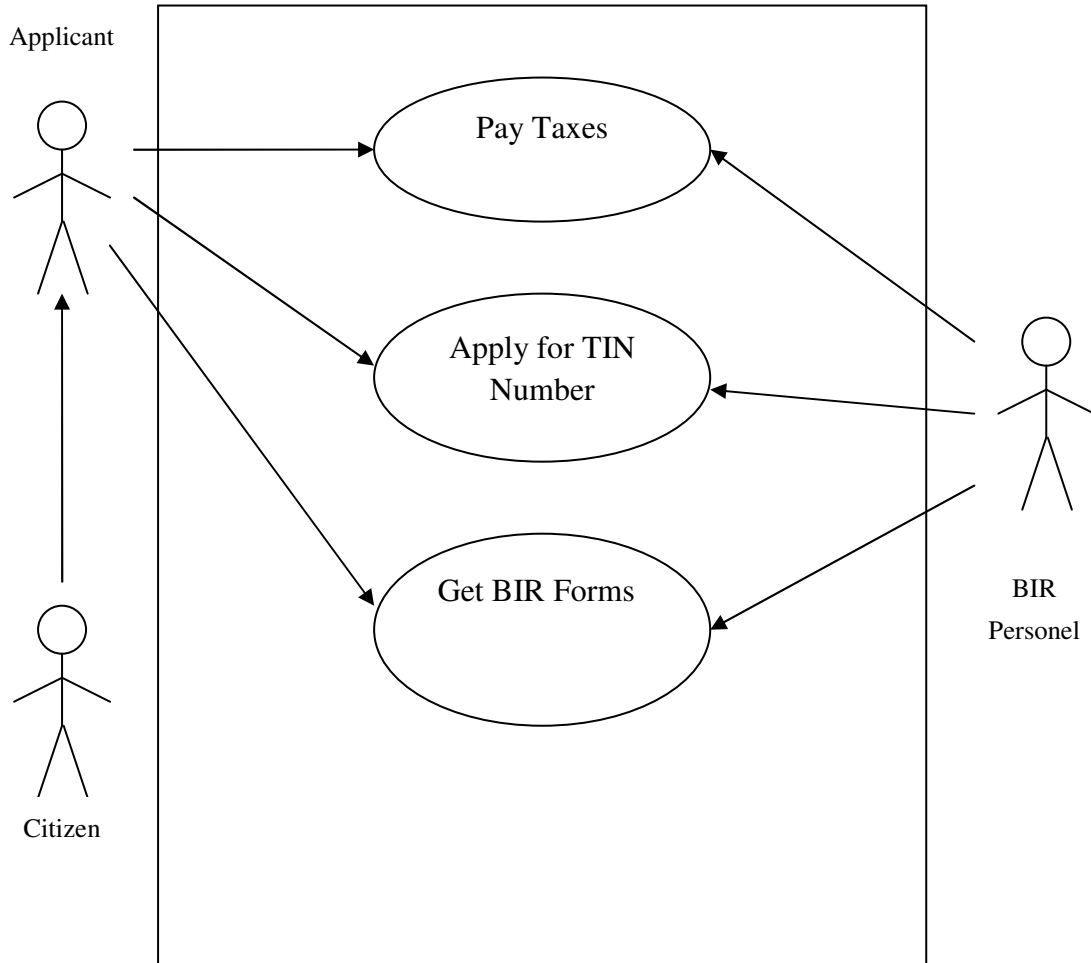
Citizen

- Identification Summary

  Title: Apply for TIN number

  Summary: This use case allows a citizen to apply for a TIN number.

  Actors: Applicant, LTO officer

  Creation Date: July 10, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The applicant should have a job.

  2. The office must be open.

  3. The applicant must have the needed requirements

  Main Success Scenario:

  1. The applicant goes to the Revenue District Office where his place of

  residence is located.

  2. The applicant request for Tax Form BIR Form 1904 from the BIR

  Personnel.

  3. The BIR Personnel gives the applicant a Form 1904.

  4. The applicant completes all the requirements and Form 1904.

  5. The applicant submits all the requirements and the accomplished Form 1904

  to the BIR Personnel.

  6. The BIR Personnel verifies the completion of the applicant's requirements

  and Form 1904.

  7. The BIR Personnel processes the transaction.

  8. The BIR Personnel gives the applicant his TIN.

  9. Applicant goes home.

  Alternative Sequences

  1. From 0

      1.1 The applicant applies for a TIN number through the BIR website.

  Error Sequences

1. From 0

    1.1 The office is closed when the applicant arrives to apply for a TIN number.

    1.2 Use case fails.

2. From 4

    2.1 The applicant fails to complete the needed requirements.

    2.2 Use case fails.

Post Conditions

1. The applicant can now be able to transact with the Government Offices.

2. The applicant is now a registered taxpayer of the Philippine Republic.

- User Interface Requirements

  - The input/output needed in the enrolment must be:

    - Application form 1904

    - 1 valid Identification document

    - Barangay Clearance

    - Taxpayer Identification Number (TIN)

- Non-Functional Requirements

  - Response Time: The transaction should be finish at 1 hour as maximum time.

  - Availability: The office must be open on the time of transaction especially every weekday.

Note: BIR form 1904 = Application for Registration for One-Time Taxpayer and Persons Registering under E.O. 98 (Securing a TIN to be able to transact with any Government Office). Source: http://www.bir.gov.ph/birforms/birforms.htm

BIR TIN: 120-940-845

E-purse

E-Purse System

CSB I.D.
Holder

Give I.D.

Receive
Payment

Release
Receipt

Give Amount

Release
Identification
Card

Cashier

Process
Transaction

Student/
Teacher
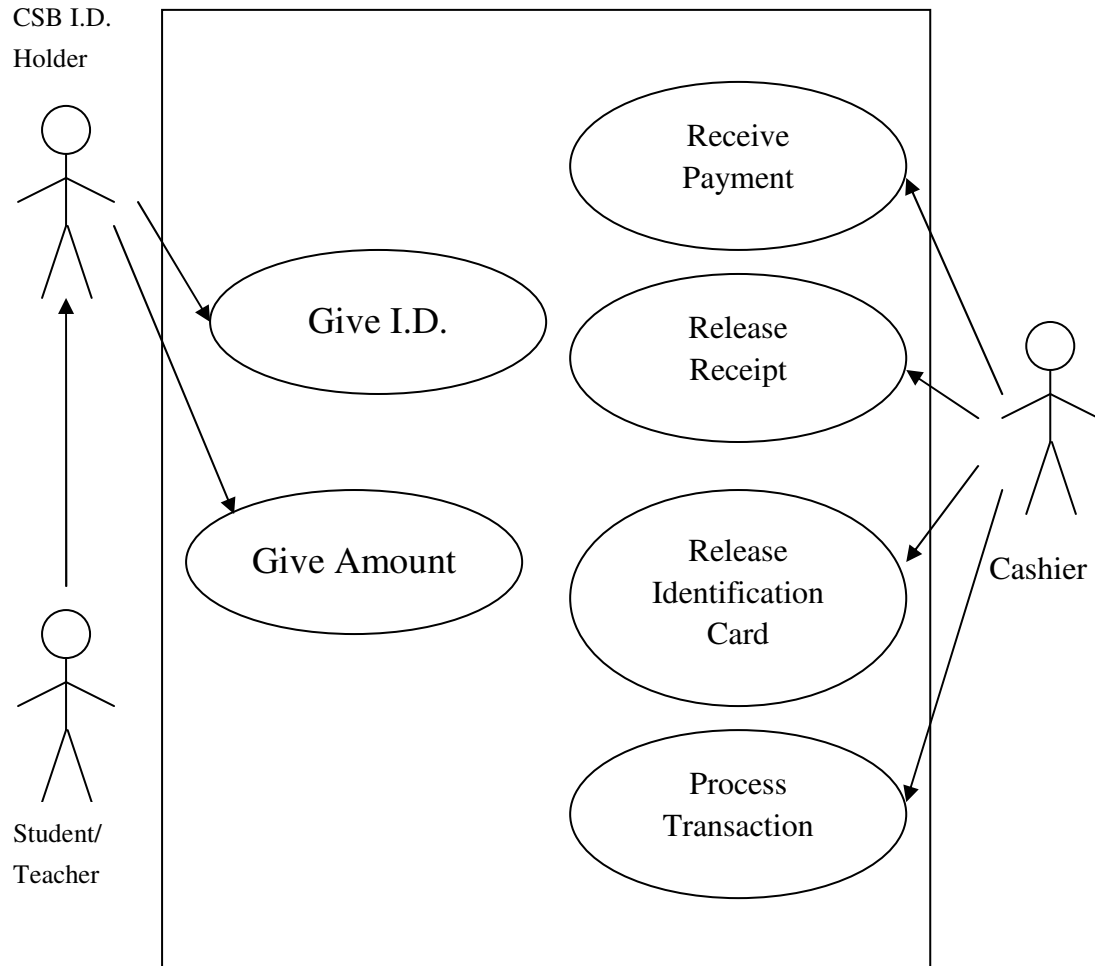
- Identification Summary

  Title: I.D. use as E-Purse

  Summary: This use case allow CSB I.D. Holders to use their I.D. as E-Purse

  Actors: CSB I.D. Holder, Cashier

  Creation Date: June 19, 2008

  Version: 1.0

  Person-in-charge: Alberto Nel R. Mateo

- Flow of Events

  Preconditions:

  1. The I.D. holder must be a student or teacher of CSB.

  2. The I.D. holder must have a validated I.D.

  3. The I.D. holder must have money.

  4. The accounting office must be open.

  Main Success Scenario:

  1. The I.D. holder goes to the accounting office.

  2. The I.D. holder goes to window 2 to ask for E-Purse activation and to give his/her I.D.

  3. The I.D. holder goes to window 1 to give the amount desired for the E-Purse.

  4. The I.D. holder waits for the release of the receipt and the I.D.

  5. The I.D. holder gets the receipt and I.D.

  Alternative Sequences

  1. The I.D. holder gives higher amount for the E-Purse.

  Error Sequences

  1. The accounting office is close on the time the I.D. holder went there.

  2. The I.D. is not validated.

  3. The I.D. holder has no money.

  Post Conditions

  1. The I.D. holder can now use his/her I.D. for E-Purse.

- User Interface Requirements

  - The input/output needed in the enrolment must be:

    - I.D.

    - Receipt

    - Money

- Non-Functional Requirements

  - Transaction Time: The transaction must be at least being done in 3 minutes.

  - Availability: The office must always be available on weekdays.

  - Integrity: The I.D. must be in right condition.

Emerald Insight
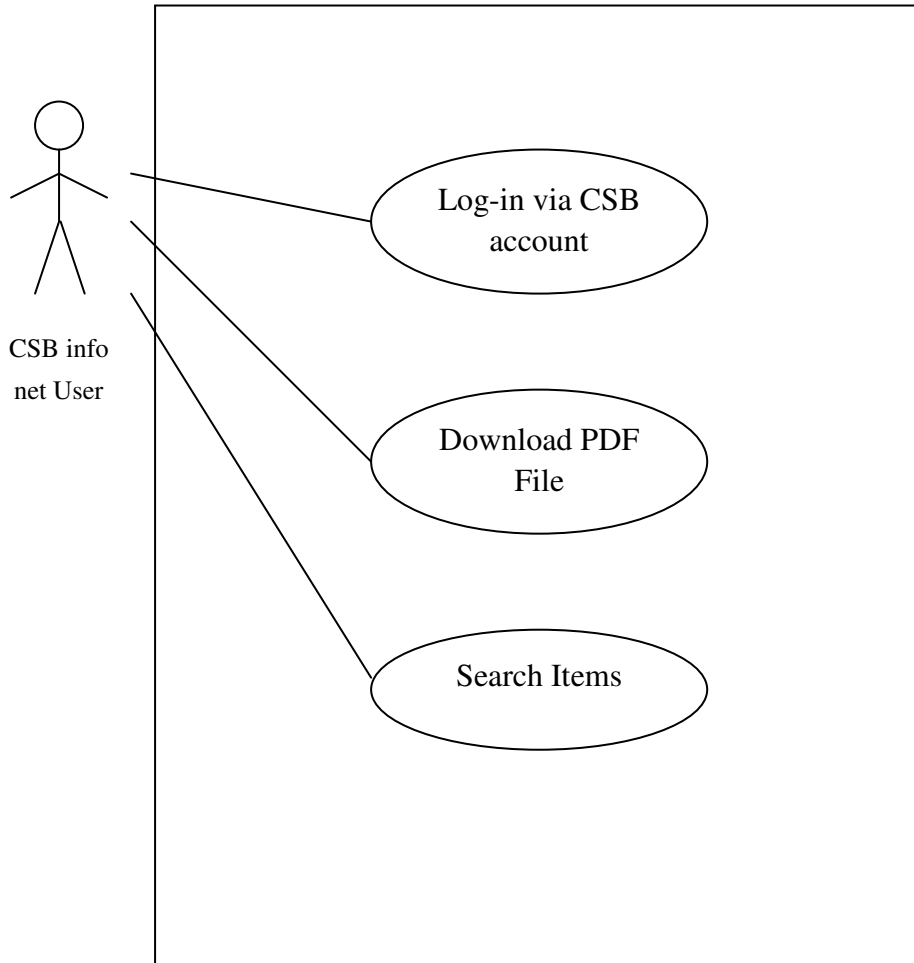
- Identification Summary

  Title: Download PDF File

  Summary: This use case allows a CSB info net user to download a PDF file from Emerald Insight

  Actors: CSB info net User

  Creation Date: August 13, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The user should have a CSB info net account.

  2. The user must Login to his/her CSB info net account.

  Main Success Scenario:

  1. The user clicks the library search button from the Library drop-down menu.

  2. The user clicks the basic search tab.

  3. The user fills in the search that he/she needs.

  4. The user clicks the checkbox of the Emerald Journals

  5. The user clicks the search button.

  6. The user clicks the topic which is the most relevant from his/her search.

  7. The user clicks the view PDF on the document assessment menu.

  8. The user clicks the save button on the PDF toolbar.

  9. The user browses for the location to where the file must be saved.

  10. The user clicks the save button.

  11. The user is now able to download a PDF file from Emerald insight.

  Alternative Sequences

  1. From 5

     1.1 The user clicks on the topic which is not really relevant to his/her search.

     1.2 Go back to 7

2. From 1

    2.1 The user clicks on the advance search tab.

    2.2 Go back to 3

Error Sequences

1. From 0

    1.1 The web site is down.

    1.2 Use case fails.

2. From 0

    2.1 There is no internet connection.

    2.2 Use case fails.

Post Conditions

1. The user now has PDF file from the Emerald Insight.

- User Interface Requirements

  - The input/output needed in the enrolment must be:
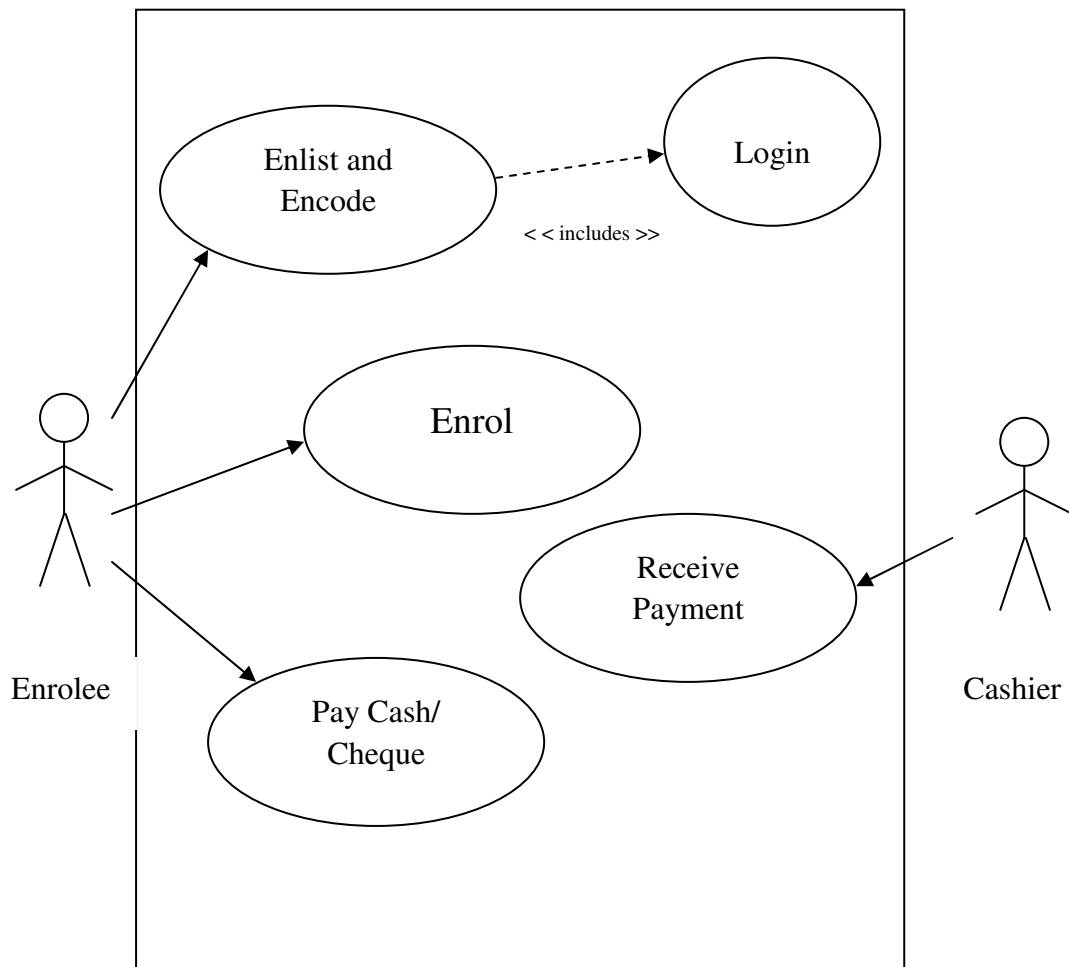
    - Email address

    - Internet connection

- Non-Functional Requirements

  - Response Time: The response time must be at least 2 minutes.

  - Availability: The website must always be available. There should also be an

        internet connection in the computer to access the website.

Enrolment System of CSB

Enrolment

System

- Identification Summary

  Title: Enrolling

  Summary: This use case allows an enrolee to enrol by paying on the accounting office.

  Actors: Enrolee, Cashier

  Creation Date: June 4, 2008

  Version: 1.0

  Person-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The enrolee must have money.

  2. The accounting office must be open.

  Main Success Scenario:

  1. The student falls in line.

  2. The student pays on the cashier window and waits for his/her receipt.

  3. The student gets his/her receipt together with his/her enrolment form approved.

  Alternative Sequences

  1. The student decides to enrol on the next day.

  2. The student pays through cheque.

  Error Sequences

  1. The office is close on the time the student enrolled.

  2. The receipt machine is not working.

  Post Conditions

  1. The number of enrolees increased.

  2. The money in the cashier's office increased.

- User Interface Requirements

  - The input/output needed in the enrolment must be:

    - Money

    - Receipt

    - Enrolment Form

- Non-Functional Requirements

  - Transaction Time: The transaction must be at least being done in 3 minutes.

  - Availability: The office must always be available on weekdays.

  - Integrity: The receipt must be accurate.

Friendfeed

friendfeed.com

Log-in

Invite Friends

User

Add a Photo
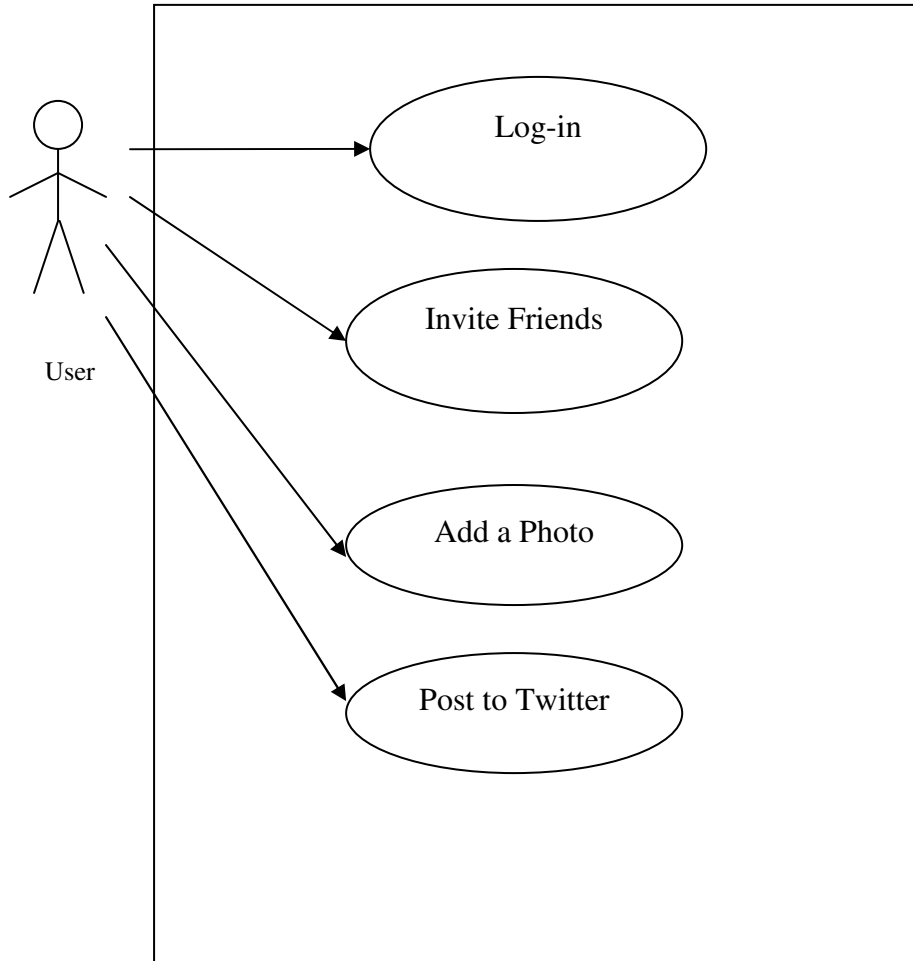
Post to Twitter

- Identification Summary

  Title: Post to Twitter

  Summary: This use case allows a friendfeed user to see what he/she posted to his/her twitter account.

  Actors: twitter User

  Creation Date: August 5, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The user should have email address.

  2. The user must have an account in twitter and in friendfeed.

  3. The user must Login.

  Main Success Scenario:

  1. The user clicks the account setting on the homepage.

  2. The user clicks on the add/edit services.

  3. The user clicks the twitter icon on the menu.

  4. The user fills in the username.

  5. The user clicks the import twitter button.

  6. The user goes to twitter.com.

  7. The user must post something on his/her twitter account.

  8. The user waits for the confirmation of the post message.

  9. The user goes back to friendfeed.com to confirm if he/she was notified for posting something on his/her twitter.

  10. After confirmation, the user can now do other things in friendfeed.com.

  Alternative Sequences

  1. From 0

     1.1 The user clicks the friend tab on the homepage.

     1.2 The user clicks the "share something" button.

     1.3 Go to 3.

Error Sequences

1. From 0

    1.1 The web site is down.

    1.2 Use case fails.

2. From 0

    2.1 There is no internet connection.

    2.2 Use case fails.

Post Conditions

1. The user has seen what he posted on twitter in his/her friendfeed account.

- User Interface Requirements

    - The input/output needed in the enrolment must be:

        - Email address
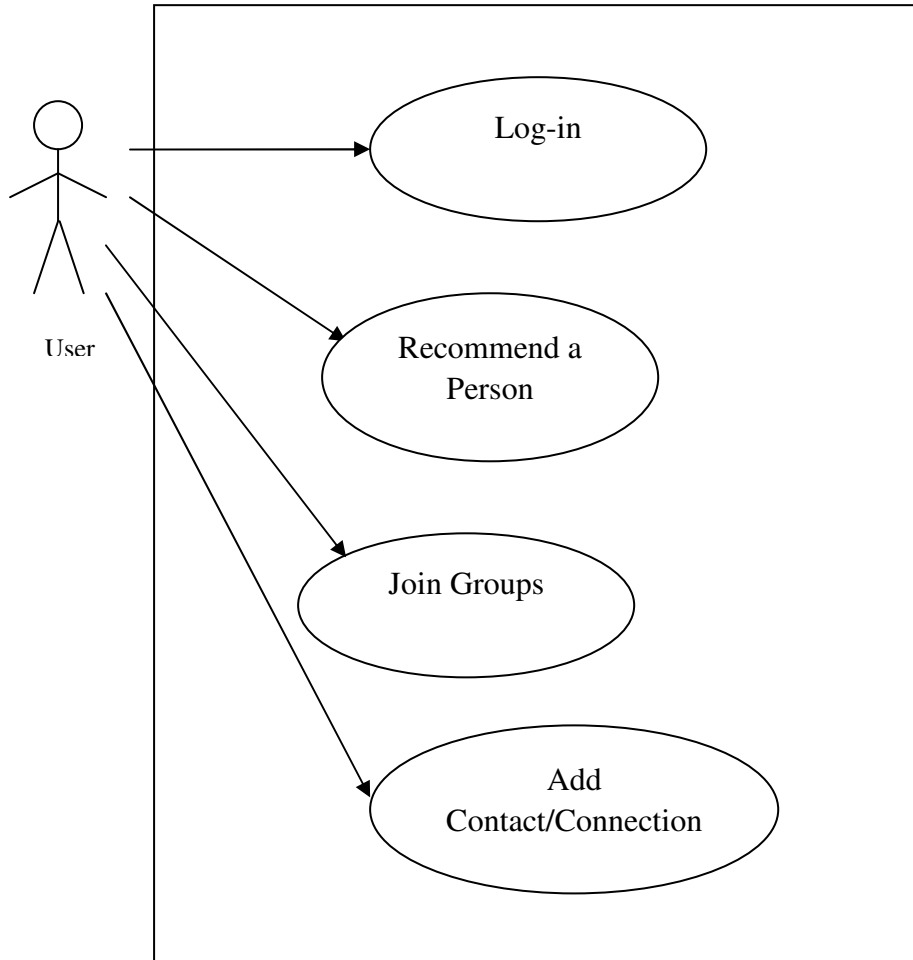
        - Internet connection

- Non-Functional Requirements

    - Response Time: The response time must be at least 3 minutes.

    - Availability: The website must always be available. There should also be an internet connection in the computer to access the website.

Linkedin

linkedin.com

- Identification Summary

  Title: Add Contact

  Summary: This use case allows a linkedin User to add a contact in his/her account.

  Actors: linkedin User

  Creation Date: July 23, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The user should have email address.

  2. The user must have an account in linkedin.

  3. The user must Login.

  Main Success Scenario:

  1. The user clicks the Contacts menu on the home page.

  2. The user clicks the add connection tab on the Contacts menu.

  3. The user fills in the first name, last name and email address of contact entry.

  4. The user clicks the send invitation button.

  5. The user waits the confirmation on whether the invitation is send or not.

  6. The user can now do other things in linkedin.com.

  Alternative Sequences

  1. From 0

     1.3 The user clicks on the Profile menu on the homepage.

     1.4 The user on the edit profile on the Profile Menu.

     1.5 The user clicks on the connection tab on the edit profile menu.

     1.4 Go back to 2.

Error Sequences

1. From 0

    1.3 The web site is down.

    1.4 Use case fails.

2. From 0

    2.1There is no internet connection.

    2.3 Use case fails.

Post Conditions

1. The user's contacts have increased.

2. The user can now send and receive recommendation from the added contact.

- User Interface Requirements

    - The input/output needed in the enrolment must be:

        - Email address

        - Internet connection

- Non-Functional Requirements

    - Response Time: The response time must be at least 2 minutes.

    - Availability: The website must always be available. There should also be an internet connection in the computer to access the website.

LTO

Land Transportation Office

Applicant

Register
Vehicle

Apply for
Student License

Test Smoke
Emission

LTO officer
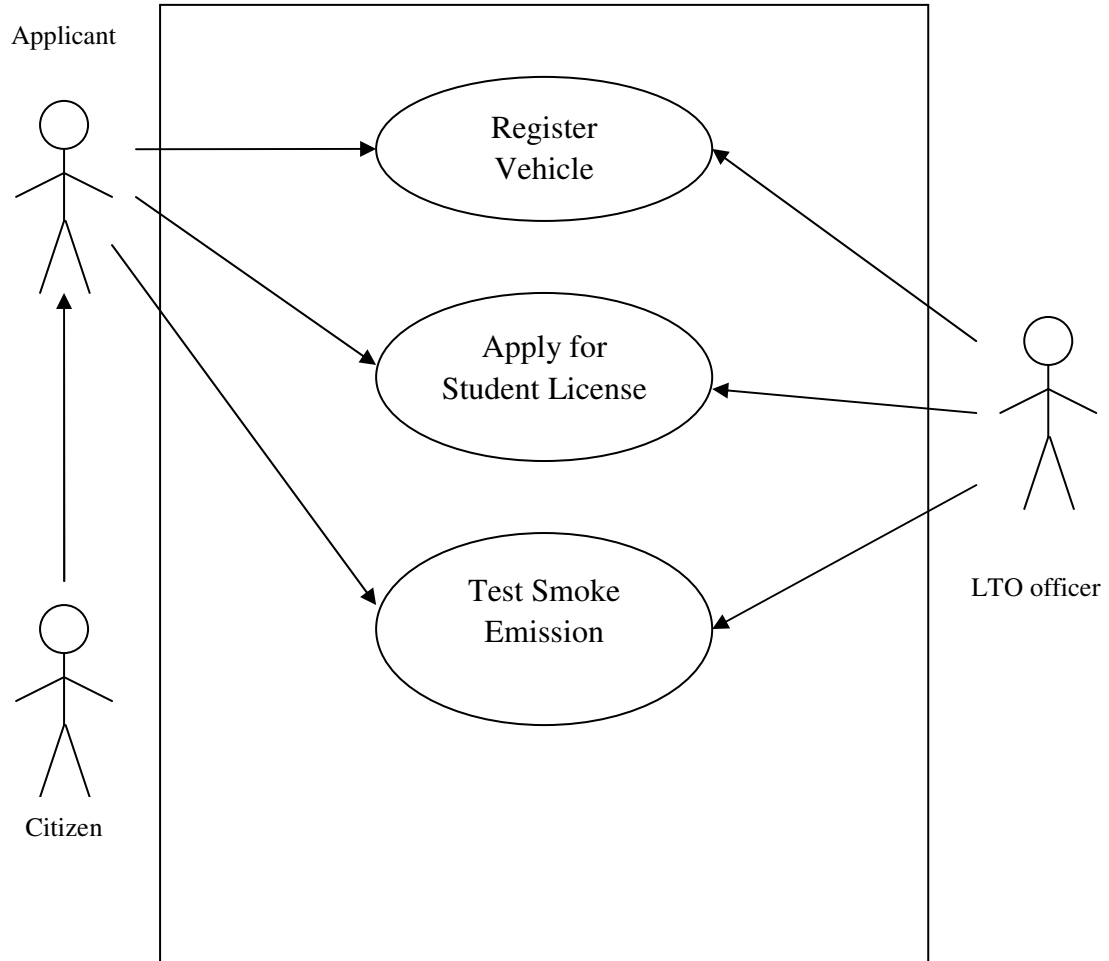
Citizen

- Identification Summary

  Title: Apply for Student License

  Summary: This use case allows a citizen to apply for a student's permit.

  Actors: Applicant, LTO officer

  Creation Date: June 26, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The applicant should be 18 yrs. old and above.

  2. The applicant should have money.

  3. The applicant must have the needed requirements

  Main Success Scenario:

  1. The applicant will go to the Land Transportation Office.

  2. The applicant will ask and get an application form from the LTO officer.

  3. The applicant pays the application fee.

  4. The applicant must accomplish the application form together with the other requirements.

  5. The desk officer confirms the complication of requirements.

  6. The applicant must undergo picture taking for the permit.

  7. The applicant will wait for the releasing of the permit.

  8. The permit and receipt is release by the LTO officer.

  9. The applicant leaves the office.

  Alternative Sequences

  1. From 6

     1.1 The applicant leaves the office and returns to get the permit and the day after the application.

     1.2 Go to 8.

Error Sequences

1. From 4

    1.1 The office is closed when the applicant returned.

    1.2 Use case fails.

2. From 6

    2.1 The applicant does not have enough money for the payment.

    2.2 Use case fails.

Post Conditions

1. The applicant can now drive at the public road under the condition in the permit.

2. The list of the student drivers had increase.

- User Interface Requirements

    - The input/output needed in the enrolment must be:

        - Application form

        - Receipt

        - Money

        - Birth Certificate

        - 1 valid I.D.

- Non-Functional Requirements

    - Response Time: The transaction should be depending on how many people are in the Land Transportation Office.

    - Availability: The office must be open on the time of transaction.

    - Integrity: The requirements must be completed accordingly.

Multiply

Multiply.com
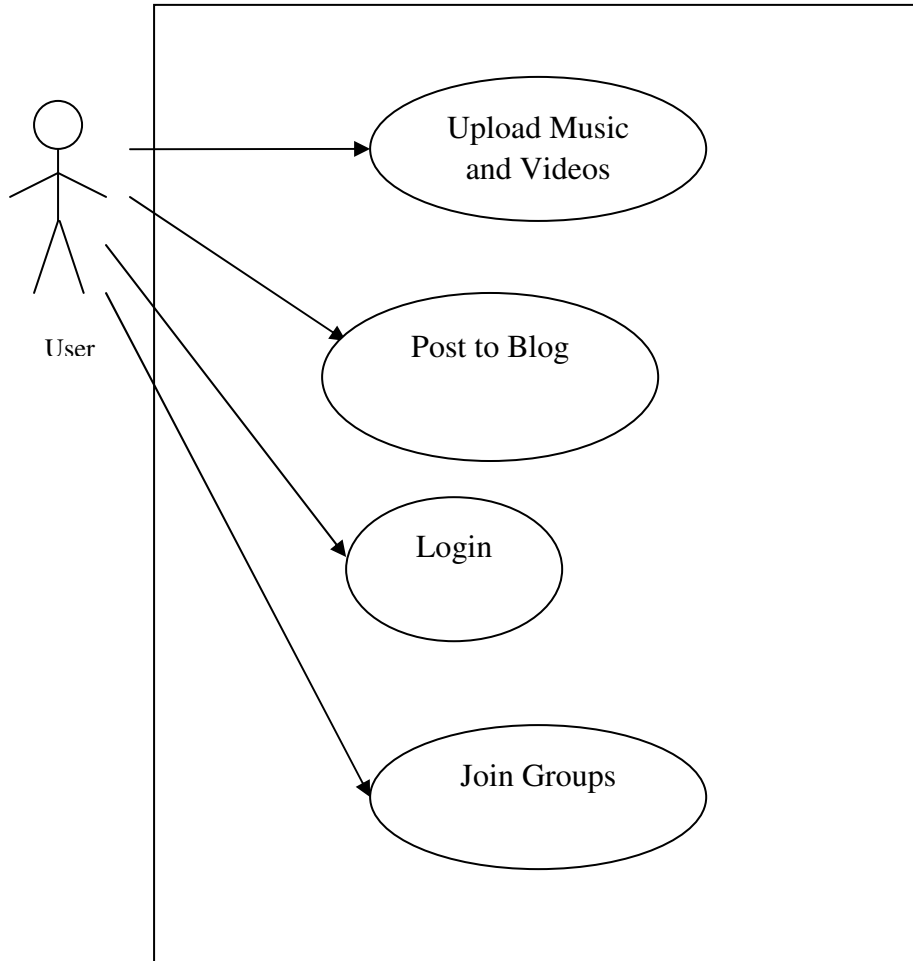
- Identification Summary

  Title: Post to Blog

  Summary: This use case allows a Multiply User to post something to his/her blog.

  Actors: Multiply User

  Creation Date: July 17, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The user should have email address.

  2. The user must have an account in Multiply.

  3. The user must Login.

  Main Success Scenario:

  1. The user log into his/her account.

  2. The user clicks the Post tab on the home page.

  3. The user clicks the blog option on the Post tab.

  4. The user fills in the title and body of blog entry.

  5. The user clicks the save and publish button.

  6. The user waits the confirmation on whether the blog is saved or not.

  7. The user can now do other things in Multiply.com.

  Alternative Sequences

  1. From 1

     1.1 The user clicks on the inbox tab

     1.2 The user on the blog logo in the Post New Content Menu.

     1.3 Go back to 4.

Error Sequences

1. From 0

   1.1 The web site is down.

   1.2 Use case fails.

2. From 0

   2.1 There is no internet connection.

   2.2 Use case fails.

Post Conditions

1. The user can now use his/her account in Multipy.com.

2. The Multiply users increases.

- User Interface Requirements

  - The input/output needed in the enrolment must be:

    - Email address

- Non-Functional Requirements

  - Response Time: The response time must depend on the length of the blog to be post.

  - Availability: The website must always be available. There should also be an internet connection in the computer to access the website.

  - Confidentiality: The confidentiality level of information in the user's account must depend according to the user's will.

Service Eligibility Exam

Civil Service Office
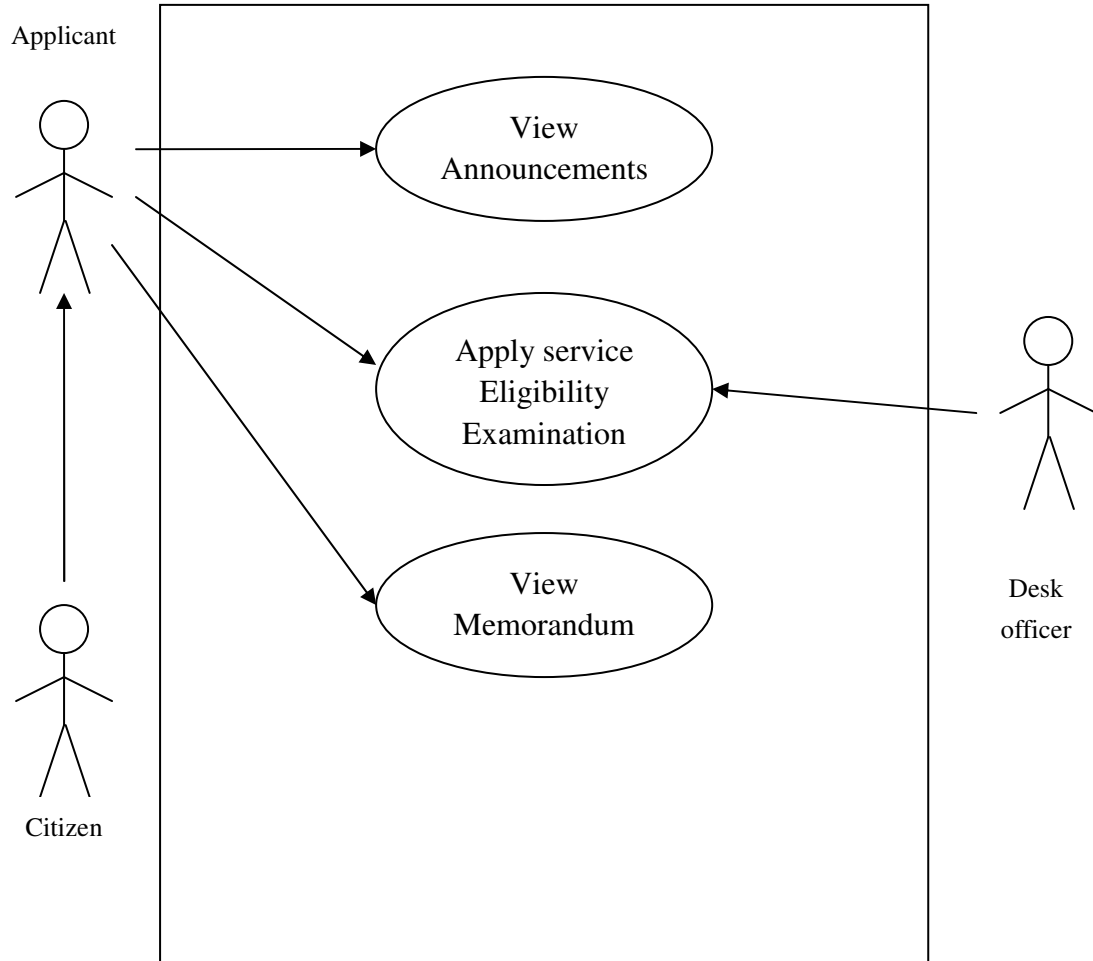
Applicant

View
Announcements

Apply service
Eligibility
Examination

View
Memorandum

Citizen

Desk
officer

- Identification Summary

  Title: I.D. use as E-Purse

  Summary: This use case allows a citizen to apply for service eligibility exam.

  Actors: Applicant, Desk officer

  Creation Date: June 26, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The applicant should be 18 yrs. Old above.

  2. The applicant should have money.

  Main Success Scenario:

  1. The applicant will go to the civil service office.

  2. The applicant will ask and get an application form from the desk officer.

  3. The applicant leaves the office.

  4. He must accomplish the needed requirements.

  5. The applicant will return to the office and pass the accomplished requirements.

  6. The desk officer confirms the complication of requirements.

  7. The applicant will pay php350 for the application fee.

  8. The receipt will be given to the applicant by the desk officer.

  9. The applicant will now leave the office.

  10. The applicant will wait for the mail confirmation from the office.

  Alternative Sequences

  1. From 7

     1.1 The applicant will receive confirmation from the office.

  2. From 1

     2.1 The applicant gets his application form by downloading from the website of the civil service office.

  Error Sequences

1. From 4

    1.1 The office is closed when the applicant returned.

    1.2 Use case fails.

2. From 6

    2.1 The applicant does not have enough money for the payment.

    2.2 Use case fails.

Post Conditions

1. The applicant can now take the service eligibility exam.

2. The list of the examiners had increase.

- User Interface Requirements

    - The input/output needed in the enrolment must be:

        - Application form

        - Receipt

        - Money

        - 4 pieces passport size ID picture

        - 1 valid I.D. card

        - Back to back photocopy of the valid I.D. card

- Non-Functional Requirements

    - Response Time: The transaction should be depending on how fast the

        applicant completed the necessary requirements.

    - Availability: The office must be open on the time of transaction.

    - Integrity: The requirements must be completed accordingly.

Slideshare

Slideshare.net
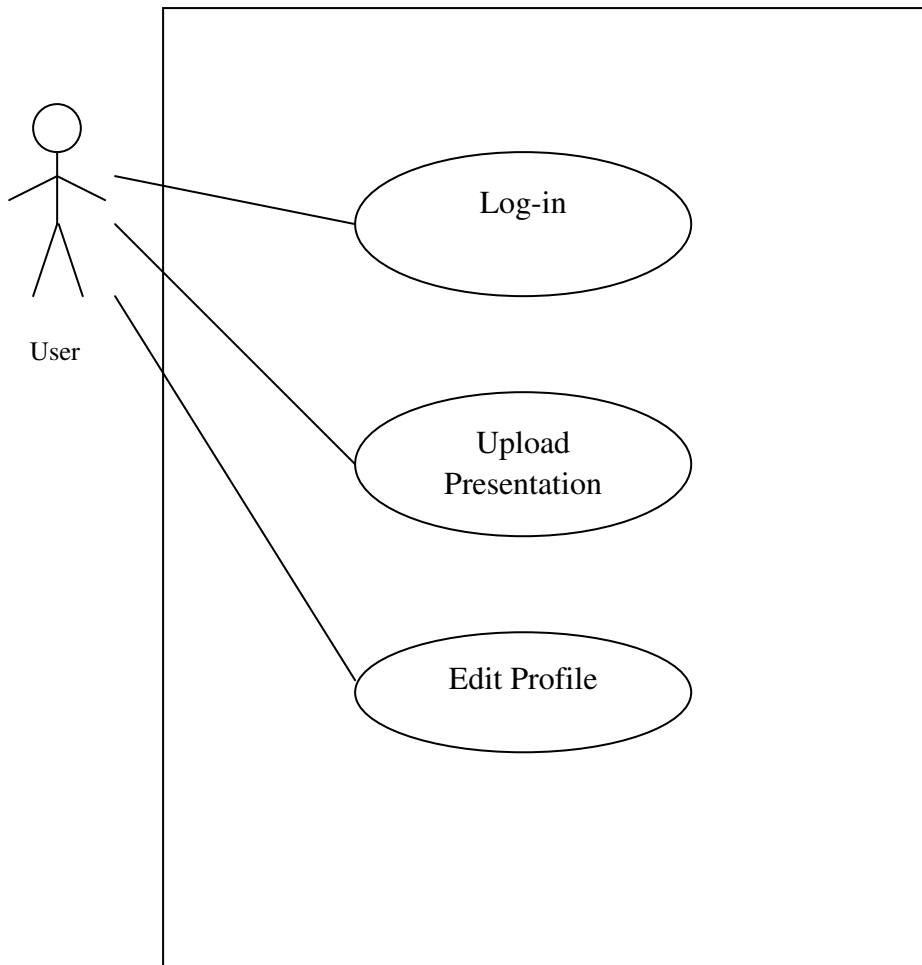
- Identification Summary

  Title: Upload Presentation

  Summary: This use case allows the slideshare user to upload a presentation in his account.

  Actors: User

  Creation Date: August 20, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The user should have a slideshare account.

  2. The user must Login to his slideshare account.

  Main Success Scenario:

  1. The user clicks the upload tab on the homepage.

  2. The user clicks the browse and select files button.

  3. The user browses and selects file/s from his computer.

  4. The user clicks the OK button to start uploading the presentation.

  5. The user fills in the details after the presentation is uploaded.

  6. The user clicks the Publish button to convert and publish the presentation in the web site.

  7. The user waits for the confirmation that the presentation is publish.

  8. The user can now do other things in slideshare after the confirmation in the publishing of the presentation that the user has uploaded.

  Alternative Sequences

  1. From 5

     1.1 The user clicks on the single upload button under the upload tab.

     1.2 The user browses and selects a file to be uploaded.

     1.3 The user fills in the information needed.

     1.4 The user clicks the upload button.

     1.5 Go back to 7.

Error Sequences

1. From 0

    1.1 The web site is down.

    1.2 Use case fails.

2. From 0

    2.1 There is no internet connection.

    2.2 Use case fails.

Post Conditions

1. The user now has a presentation in his slideshare account.

- User Interface Requirements

    - The input/output needed in the enrolment must be:

        - Email address

        - Internet connection
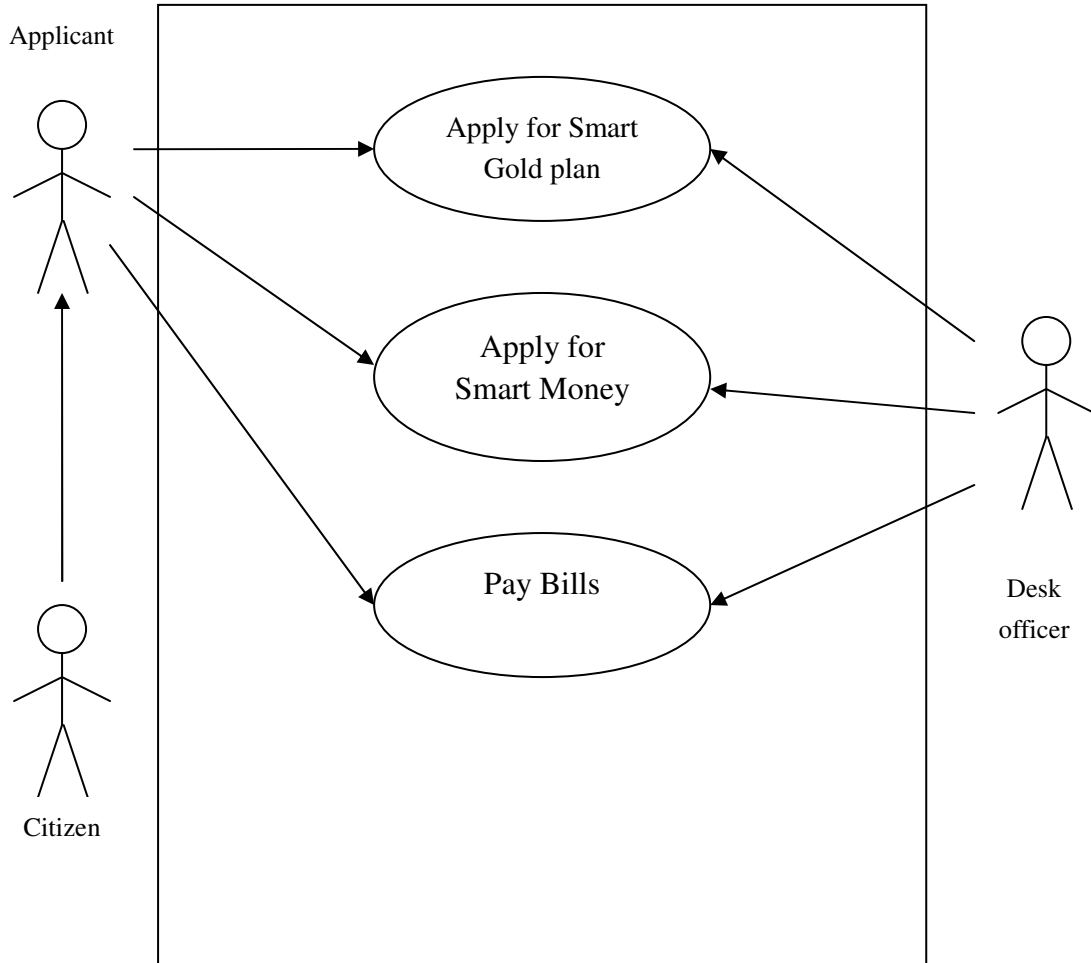
        - Presentation file

- Non-Functional Requirements

    - Response Time: The response time must be at least 3 minutes.

    - Availability: The website must always be available. There should also be an internet connection in the computer to access the website.

Smart Money

Smart Wireless Center

Applicant

Apply for Smart
Gold plan

Apply for
Smart Money

Pay Bills

Desk
officer

Citizen

- Identification Summary

  Title: Apply for Smart Money

  Summary: This use case allows a citizen to apply for a Smart Money.

  Actors: Applicant, Desk officer

  Creation Date: July 17, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The applicant should be 18 yrs. old and above.

  2. The applicant should have money at least Php30.

  3. The applicant must have the needed requirements.

  4. The applicant must have a 64k Smart sim card.

  Main Success Scenario:

  1. The applicant will go to the Smart Wireless Center.

  2. The applicant will ask and get an application form from the desk officer.

  3. The applicant pays the application fee.

  4. The applicant must accomplish the application form together with the other requirements.

  5. The desk officer confirms the complication of requirements.

  6. The applicant will wait for the releasing of the receipt.

  7. The receipt is release by the desk officer.

  8. The applicant leaves the office and waits for the mail that will be sent on the address the applicant writes on the application form.

  Alternative Sequences

  1. From 6

     1.1 The applicant waits for the release of the Smart Money Card.

     1.2 The Smart Money Card and the receipt are release by the desk officer.

     1.3 The applicant leaves the office.

Error Sequences

1. From 0

   1.1 The office is closed when the applicant returned.

   1.2 Use case fails.

2. From 2

   2.2 The applicant does not have enough money for the payment.

   2.3 Use case fails.

Post Conditions

1. The applicant can now use the Smart Money Card.

2. The Smart Money Card user increases.

- User Interface Requirements

  - The input/output needed in the enrolment must be:

    - Application form

    - Receipt

    - Money

    - 1 valid I.D.

    - Smart Money Card

    - Smart 64k sim card

- Non-Functional Requirements

  - Response Time: The response time must at least be 10 minutes.

  - Availability: The office must be open on the time of transaction.

  - Integrity: The requirements must be completed accordingly.

  - Confidentiality: The mail must be delivered in good condition to the applicant's house or information in the application form must be privately kept.

Twitter

twitter.com

Log-in

Invite Friends
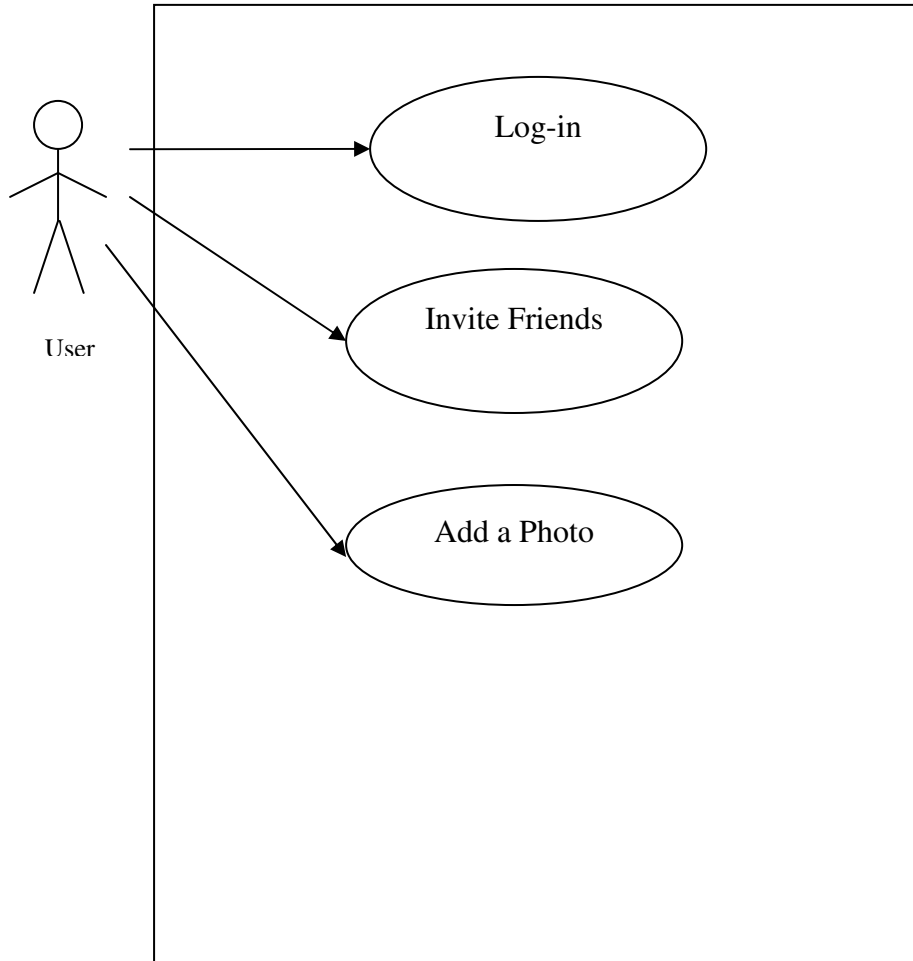
Add a Photo

User

- Identification Summary

  Title: Add a Photo

  Summary: This use case allows a twitter user to photo in his/her profile.

  Actors: twitter User

  Creation Date: July 30, 2008

  Version: 1.0

  People-in-charge: Alberto Nel R. Mateo V

- Flow of Events

  Preconditions:

  1. The user should have email address.

  2. The user must have an account in twitter.

  3. The user must Login.

  Main Success Scenario:

  1. The user clicks the "your profile" menu on the side pane of the home page.

  2. The user clicks the picture icon on the profile menu.

  3. The user browses for a picture.

  4. The user clicks the save button.

  5. The user waits the confirmation on whether the picture is saved or not.

  6. The user can now do other things in twitter.com.

  Alternative Sequences

  1. From 0

     1.1 The user clicks on the Setting menu on the homepage.

     1.2 The user on the Picture tab on the Setting Menu.

     1.3 Go back to 3.

  Error Sequences

  1. From 0

     1.1 The web site is down.

     1.2 Use case fails.

2. From 0

   2.1 There is no internet connection.

   2.2 Use case fails.

   Post Conditions

   1. The user now has a picture.

- User Interface Requirements

  - The input/output needed in the enrolment must be:

    - Email address

    - Internet connection

- Non-Functional Requirements

  - Response Time: The response time must be at least 2 minutes.

  - Availability: The website must always be available. There should also be an
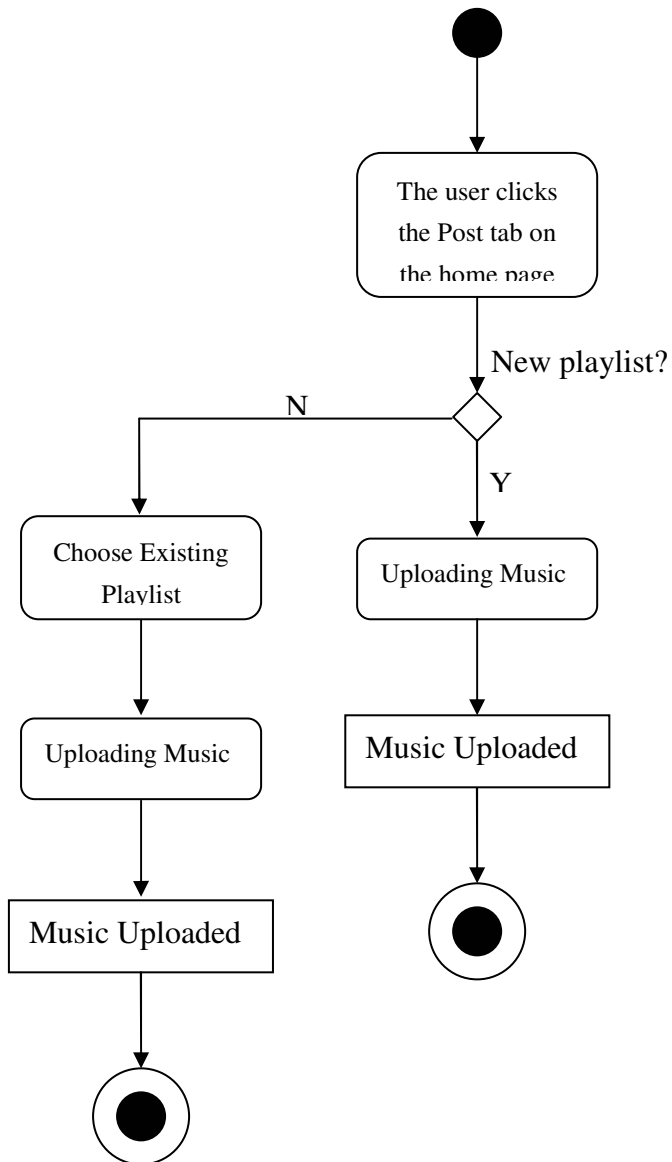
      internet connection in the computer to access the website.

APPENDIX A (EXERCISES)

Activity Diagram Exercises

Post to Blog (Multiply)

Post Music (Multiply)

The user clicks
the Post tab on
the home page

New playlist?

N

Y

Choose Existing
Playlist

Uploading Music

Uploading Music

Music Uploaded

Music Uploaded
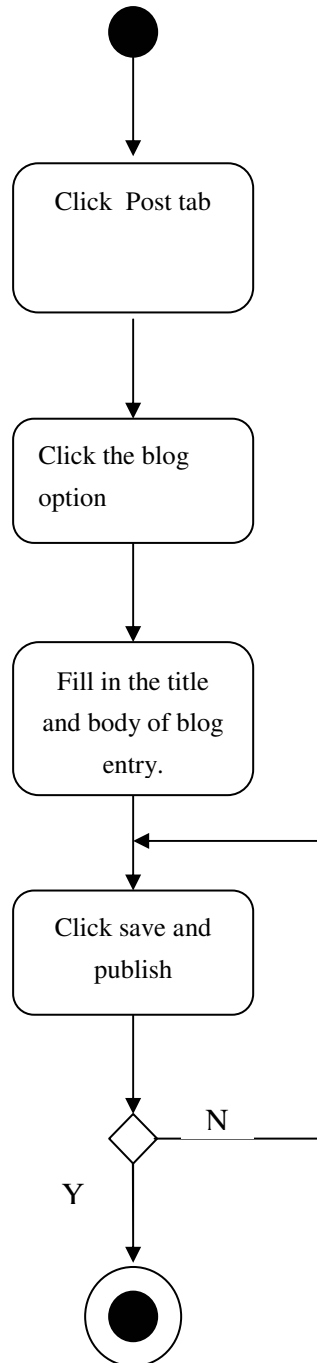
APPENDIX B (SAD PAPER)

A Systems Analysis Study on the
Sales Tracking System of
Philippine Columbian Association

Presented to the
Computer Applications Program
School of Management and Information Technology
De La Salle – College of Saint Benilde

In Partial fulfilment of the
Requirements of the subject
Systems Analysis

Submitted By:
Mateo, Alberto Nel R.
Quilala, Steven D.
Bernas, Albert T.
Briones, Krizia S.

SYSANAL O0A
August 2008

Submitted To:
Mr. Paul Pajo

Chapter 1

Company Background

The Philippine Columbian Association (PCA) is a social club, where different people of varying walks of life can meet and perform leisure and recreational activities such as playing sports, reading books, and socializing with each other.

The PCA mainly offers food and beverage, and recreational services. The Club has sports complexes for tennis, bowling, billiards, basketball, and swimming. It also has dining and bar areas. In addition, the PCA has a Library which is considered as one of the best in the Philippines among social clubs.

The PCA was founded on December 1907 by Filipinos who had studied in the United States (pensionados). They were dedicated to the promotion of friendly relations between Filipinos and foreign nationals. In the 1920s, the Club opened its membership to Filipino professionals and businessmen even though they hadn't studied in the United States.

The Club became the regular meeting place for the campaign for Philippine Independence during the late American occupation. But the club premises, first located along Taft Avenue, were destroyed during the Battle of Liberation (1945) between the Allied forces and the Japanese military. It was then rebuilt shortly after the end of World War II.

After World War II, the PCA not only resumed its activities as a recreational and athletic center, but also participated in cultural and civic activities. It was also during this time, about the 1950s, that the club library was rehabilitated.

The Club transferred to the present 2-hectare complex in April 1979 and was then formally inaugurated on December 11, 1979.

The Club is managed by a fifteen (15) member Board of Directors, all of whom are elected during the annual membership meeting on the first Monday of March of each year. The Board selects from among themselves a President, who also acts as the Chief Executive Officer, a Vice-President, a Secretary, and a Treasurer. The Board also recognizes the collective wisdom of past Club Presidents who act as Advisory Directors.

The Sales Department of the Club is in charge of the keeping track of the sales of the club's food and beverages. The Food and Beverage Department produces two receipts for each of the customers' purchases, one being the customer's copy, the other being the copy to be verified by the Sales Department (the final receipt). The Sales Department, headed by the Head Checker, verifies the validity of the receipts, before forwarding it to the Finance Department.

Statement of the Problem

The main problem concerning the Philippine Columbian Association is that their Sales Department that handles the Food and Beverage Sales doesn't have its own record of the receipts that they reference if there is inequality on the computation of their sales. It is for the reason that they submit a daily sales report to the Finance Department after the verification of receipts. Although their department does the tracking of Food and Beverage sales, they only receive one the of three Clubs' copy of the receipt and, after verifying the validity of the receipts, they forward it to the Finance Department for record checking and for creating the statement of account which is in the form of the daily sales report.

- The Head Checker is the only person that is actually doing the verification of the receipts who has no direct superior to supervise him in his receipt verification.

- The Daily Sales report is handwritten which makes it difficult to input the information into the Finance Department's inventory.

Objectives of the System

To solve the mentioned problems, we propose a computerized system that will allow the Sales Department to have their own record of the daily sales and would allow double checking for possible errors in validation in the future. It can also help them to submit their daily sales report in the Finance Department easier for this system will use the networking between the computers as a means of transferring files from different offices in PCA. The new system will allow error reduction, and improvement of management planning and control. Being a computerized system, it will also allow faster and easier processing of information in the sense that the finance department will not have difficulty in transferring the records into their inventory for the payment and be able to eliminate the delay of producing the statement of account. This allows the system to have increased speeds of activities and increased the accuracy of the daily sales report that is submitted to the finance department.

The proposed system, due to its improved information processing capabilities, will allow the following additional benefits:

- Competitive necessity

- Improved organizational planning

- Promotion of organizational learning and understanding

- Available of better information

- Faster decision-making

- Information processing efficiency

- Increased accuracy in clerical operations

Significance of the Study

      The implementation of the system will have a significant effect on both the members and the Club itself. With the system, the customers can be better assured that all of the money that they put into their purchases will be fully given to the Club and not lost due to possible violation in the organization. Also, the Sales Department can have its own valid copy of the receipts which means that information can be readily given when it is needed and in case that the Finance Department lost the copy of the Sales report, they can just ask the file from the Sales department for they had a copy of it. This also means that they can cross-reference their information with that of the Finance Department to make sure that all of the income generated is accounted for and that there is no error in the records that has been created.

      The PCA can now have its own infallible way of keeping an accurate track of its Food and Beverage sales. This ensures the maximum accounting of income, thus eliminating the possibility of corruption within the Sales Department. This helps the Club to have a more accurate record of its generated income, thus maximizing their allocation of money for their operations, improvement and other Club activities.

Scope and Limitation

      This study only deals with the tracking of Food and Beverage sales of the Philippine Columbian Association's Sales Department. It does not include the other operations of the Sales Department and the operations of the other departments under the PCA. The payments and re-evaluation of inventory are not part of the study. The design of the proposed system is also not include in the part of the study.

Definition of Terms:

- PCA – Philippine Columbian Association
- F & B – Food and beverage

Chapter 2
Overview of the existing system

The first scene that is being done by the client is when he/she sit at the lanai the waiter will give the menu and take his/her order. When he/she decided what he/she will eat he will tell the waiter what's the order. When he/she is finished eating he will call the waiter and ask him to give the receipt of his orders. The client will sign the receipt and give it to the waiter and the waiter will forward it to the diner checker. The diner checker will also sign the receipts and he will give it to the head checker. The head checker will get the yellow and white receipts for the verification of the orders.

Use-Case Diagram of the Existing System

Sales Tracking System
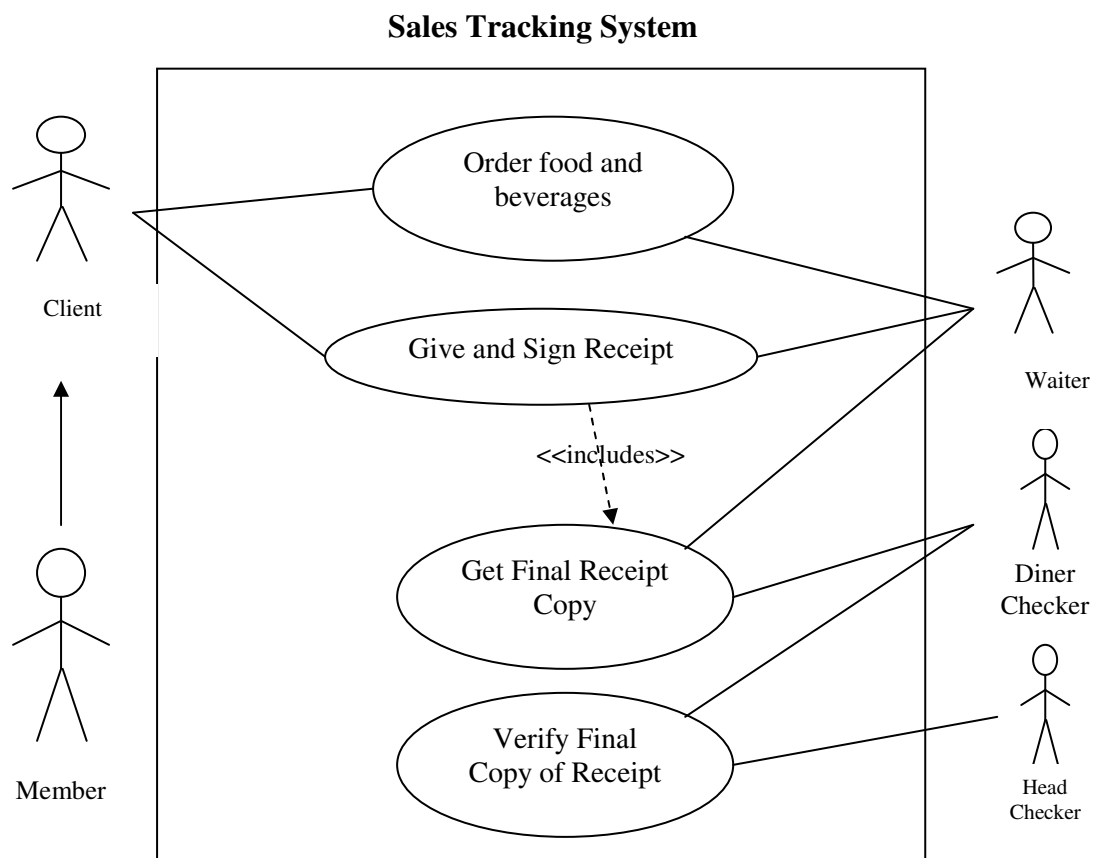
Process Walkthrough

← Order food and beverages

Give and Sign Receipt
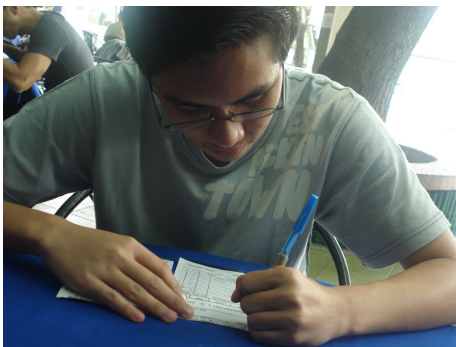
Verify Final Copy of Receipt →

Process time vs. Cycle Time (Activity Diagram)

Process Time
- The ordering time is 10 minutes.
- The eating time is 30 minutes.
- The method of getting the receipt is 3 minutes.
- The verification time is 1 minute.
- The creation of daily sales report is 1 hour.

Cycle Time
- The whole sales tracking process takes about 8 hours of work.

Use Case Narratives and Activity Diagrams of the Existing System

- Identification Summary
  Title: Order food and beverages
  Summary: This system allows the client to order food and beverages on the dining hall of the PCA.
  Actors: Client, Waiter, Checker, Kitchen personnel
  Creation Date: August 6, 2008
  Version: 1.0
  Person-in-charge: Alberto Nel R. Mateo V

- Flow of Events
  Preconditions:
  4. The client must be a member of the Philippine Columbian Association.
  5. The social club must be open.
  6. The facilities must all be available for the transaction.
  7. The Client must be in the dining section of PCA.
  Main Success Scenario:
  11. The waiter gives the menu list to the client.
  12. The waiter asks for the client's order.
  13. The client tells the waiter of his/her order/s.
  14. The order slip is given by the waiter to the kitchen personnel to prepare the food and to the checker for receipt production.
  15. The order is given to the client.
  Alternative Sequences
  2. From 3
     1.6 The food or the beverage that the client has ordered is not available.
     1.7 The client chooses another food or beverages from the menu.
     1.8 Go back to 3
  Error Sequences
  3. From 2
     1.5 The client cannot choose from the menu.
     1.6 Use case fails.
  Post Conditions
  2. The product sales of the club increases.
  3. The available supply decreases.

- User Interface Requirements
  - The input/output needed in the enrolment must be:
    - Order slip
    - Membership number

- Non-Functional Requirements
  - Response Time: The response time must be at least 20 minutes depending on the quantity of order.
  - Availability: The office must be open on the time of transaction.
  - Integrity: The order must be served properly.
 - Frequency: The process is repeated depending on how many on how many clients ask for their order.

Activity Diagram:

Client	Waiter	Diner Checker	Kitchen Personnel

- Give the menu list
- Gives his/her order
- Give order slip to diner checker and kitchen personnel
- Prepare food
- Prepare receipt
- The order is given
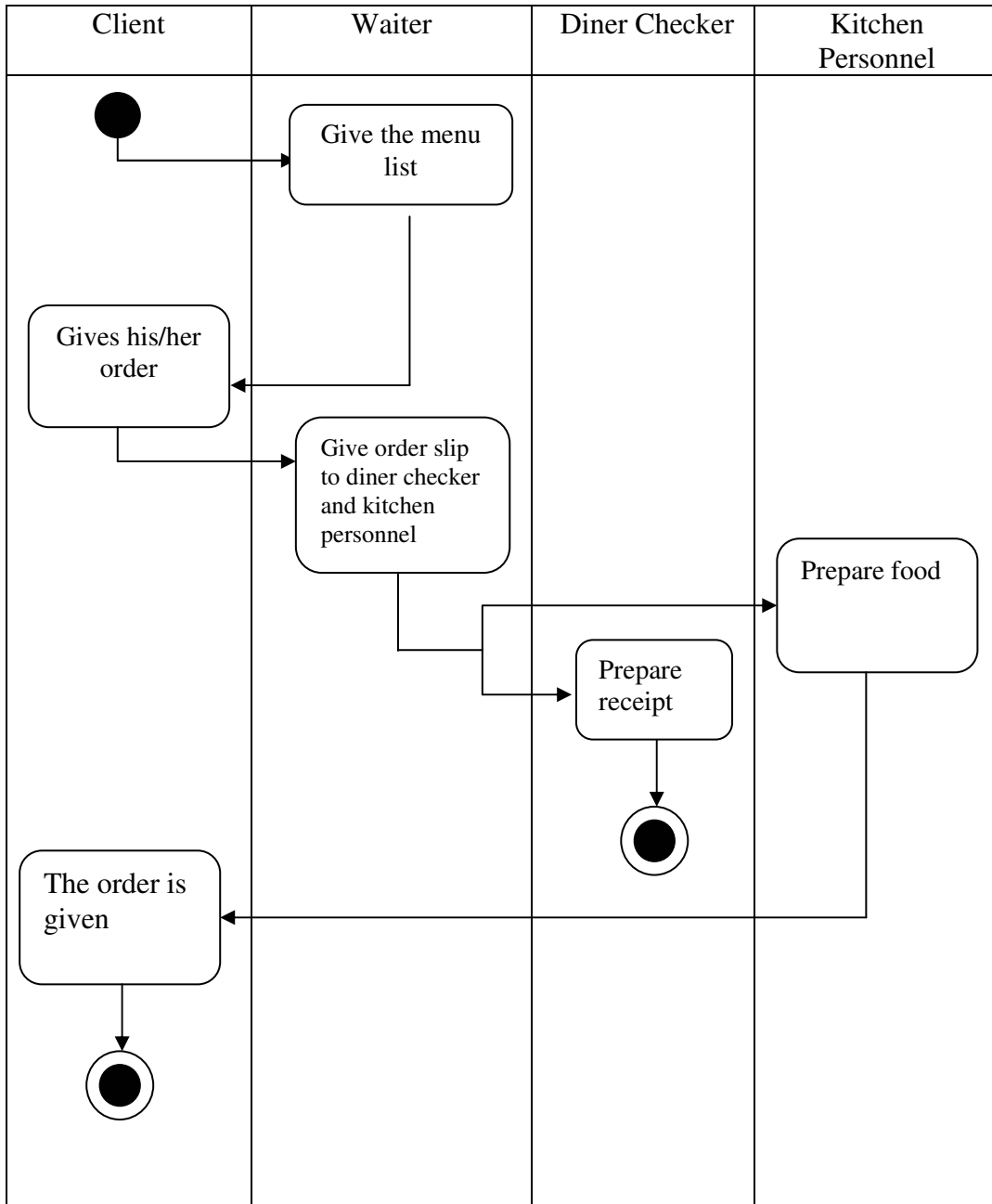
- Identification Summary
  Title: Sign receipt
  Summary: This use case allows the client to sign the receipt of his/her order.
  Actors: Client, Waiter
  Creation Date: August 6, 2008
  Version: 1.1
  People-in-charge: Albert Bernas

- Flow of Events
  Preconditions:
  1. The client has ordered his/her food.
  2. The dinning section must be open.
  Main Success Scenario:
  1. The client will ask for the receipt.
  2. The waiter will give the receipt.
  3. The client will sign the receipt.
  Alternative Sequences:
  From 1
    1.1 The Checker is the one that gives the receipt to the client.
    1.2 Go back to 3
  Error Sequences:
  From 1
    1.1The customer didn't call the waiter after eating
    1.2 Use case fails
  From 2
    2.1The waiter forgot to give the receipt to the customer
    2.2 Use case fails
  From 3
    3.1The waiter has mistakenly give the receipt to the customer
    3.2 Use case fails
  Post Conditions:
    1. The ink of the ball pen will decrease.
    2. The receipt of the dinning section will decrease.

- User Interface Requirements
  - The input/output needed in the enrolment must be:
    - Clients signature
    - Receipt
- Non-Functional Requirements
  - Response Time: The response time must be at least 30 seconds.
  - Availability: The office must be open on the time of transaction.
  - Integrity: The information in the receipt must be accurate.

Activity Diagram:
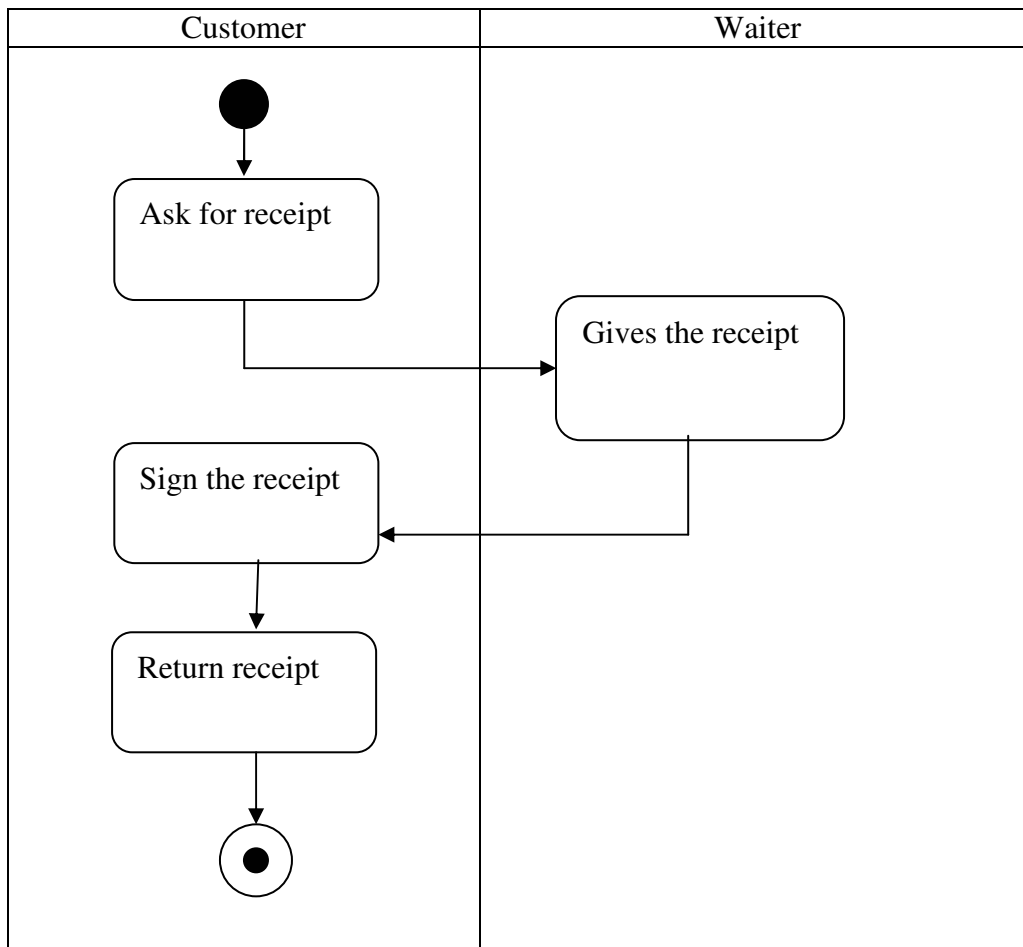
- Identification Summary
  Title: Get final receipt copy
  Summary: This system allows the diner checker to get the final receipt copy from the waiter.
  Actors: Waiter, Diner Checker
  Creation Date: August 6, 2008
  Version: 1.1
  Person-in-charge: Alberto Nel R. Mateo V

- Flow of Events
  Preconditions:
  1. The client must already sign the receipt.
  2. The facilities must all be available for the transaction.
  Main Success Scenario:
  1. The waiter gives the receipt to the diner checker.
  2. The diner checker compiles the receipt given by the waiter.
  3. The diner checker submits the receipts to the head checker.

Alternative Sequences
1. From
    1.9 The checker emergency leaves the office.
    1.10   The waiter compiles the receipt.
    1.11   The waiter submits the receipts to the head checker.

Error Sequences
1. From 0
    1.1 The receipt is lost.
    1.2 Use case fails.

Post Conditions
1. The product sales of the club increases.
2. The available supply decreases.

- User Interface Requirements
  - The input/output needed in the enrolment must be:
    - Order slip
    - Membership number

- Non-Functional Requirements
  - Response Time: The response time must be at least 2 minutes depending on the quantity of receipts.
  - Availability: The office must be open on the time of transaction.
  - Integrity: The receipt must have the accurate information.
  - Frequency: The process is repeated depending on how many transaction they had in the dining hall.

Activity Diagram:

Waiter	Diner Checker
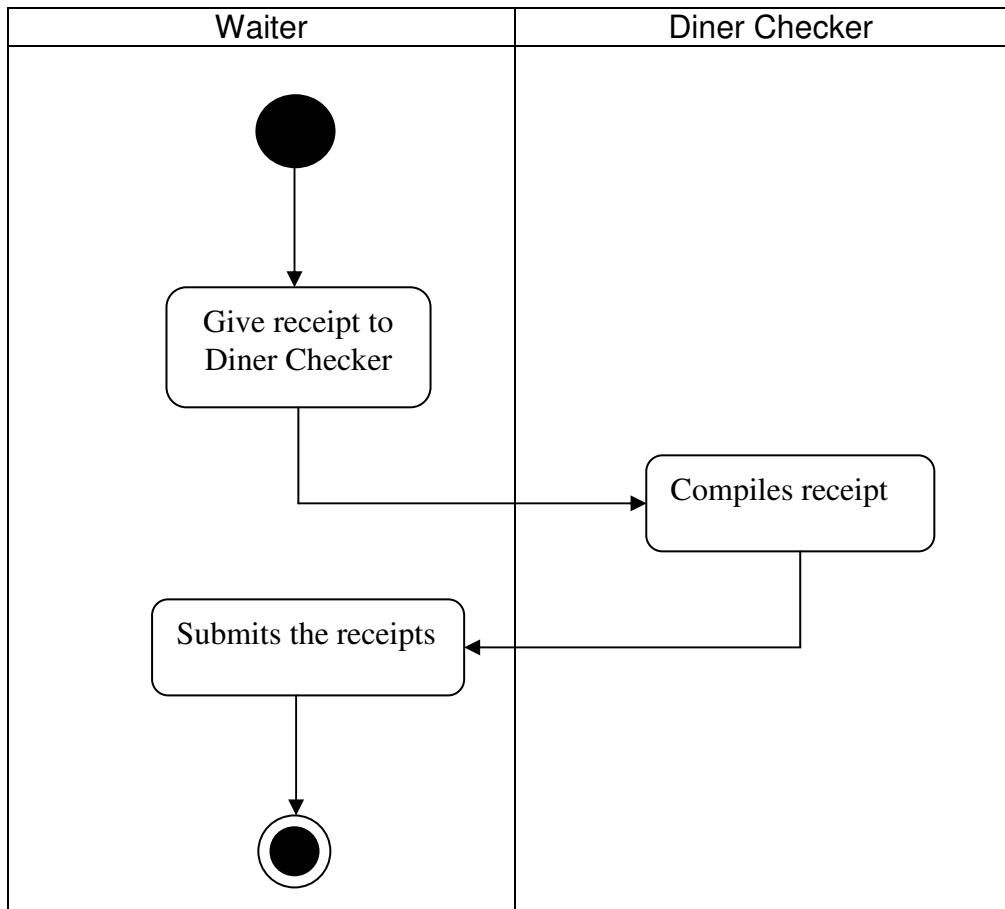
- Identification Summary
  Title: Verify Final copy of Receipt
  Summary: This system allows the head checker to verify the final copy of receipt from the diner checker.
  Actors: Diner Checker, Head checker
  Creation Date: August 6, 2008
  Version: 1.1
  Person-in-charge: Briones, Krizia S.

- Flow of Events
  Preconditions:
  1. The client must already sign the receipt.
  2. The facilities must all be available for the transaction.

  Main Success Scenario:
  1. The waiter gives the receipt to the checker.
  2. The diner checker compiles the receipt given by the waiter.
  3. The diner checker submits the receipts to the head checker.
  4. The head checker now verifies the receipts given by the diner checker.

Alternative Sequences
1. From 1
    1.2 The diner checker emergency leaves the office.
    1.3 The waiter compiles the receipt.
    1.4 The waiter submits the receipts to the head checker.

Error Sequences
1. From 0
The receipt is lost.
Use case fails.

Post Conditions
1. The product sales of the club increases.
2. The available supply decreases.
4. The verified copies of receipts increase

- User Interface Requirements
  - The input/output needed in the enrolment must be:
    - Order slip
    - Membership number

- Non-Functional Requirements
  - Response Time: The response time must be at least 3 minutes depending on the quantity of receipts.
  - Availability: The office must be open on the time of transaction.
  - Integrity: The receipt must have the accurate information.
  - Frequency: The process is repeated depending on how many transaction they had in the dining hall.

Activity Diagram:
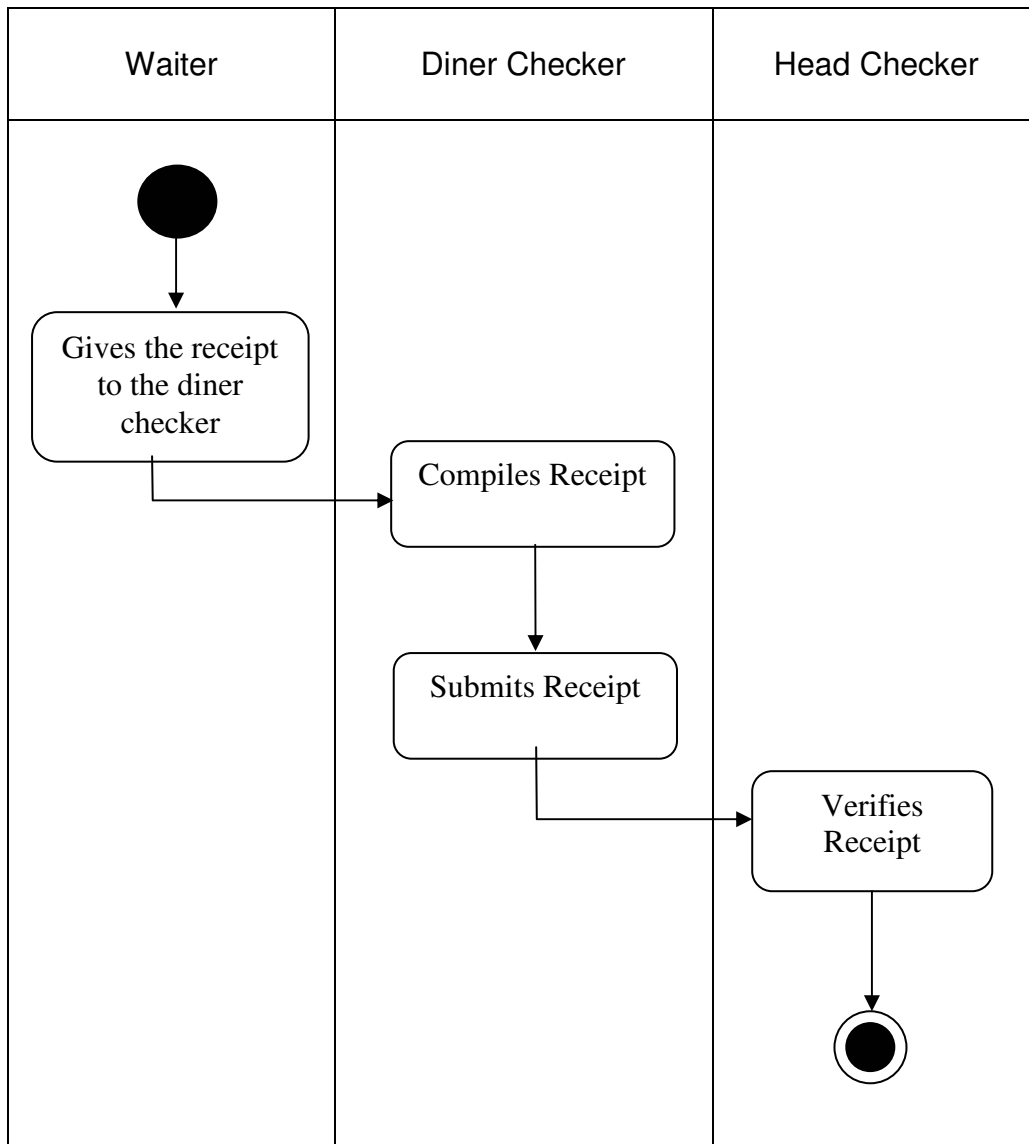
Geographical Flowchart
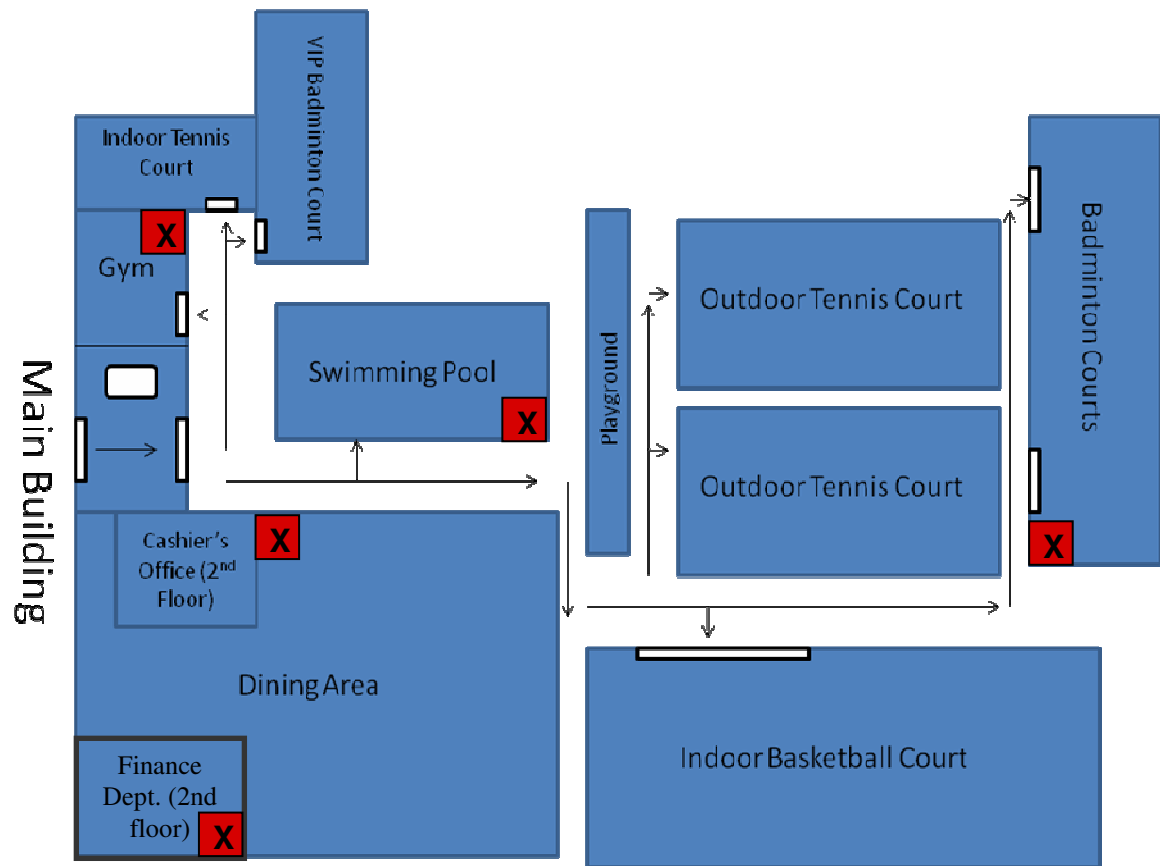

X = Computer

[Door] = Door

Chapter 3
Table of Recommendations

Problem to be addressed	Recommended change needed to improve	Activities Affected
1. The Head Checker is the only person that is actually doing the verification of the receipts who has no direct superior to supervise him in his receipt verification.	The work of the head checker must be transfer to the diner checker because the work of the head checker and the diner checker is almost the same.	Sales Tracking Operation
2. The Daily Sales report is handwritten which makes it difficult to input the information into the Finance Department's inventory.	Daily Sales report must be computerized to be able to submit files through the network.	Sales Tracking Operation and Inventory recording

Use-Case Diagram of the Proposed System

Computer System

Checker

Verify Receipt

Create Daily Sales Report

Audit income
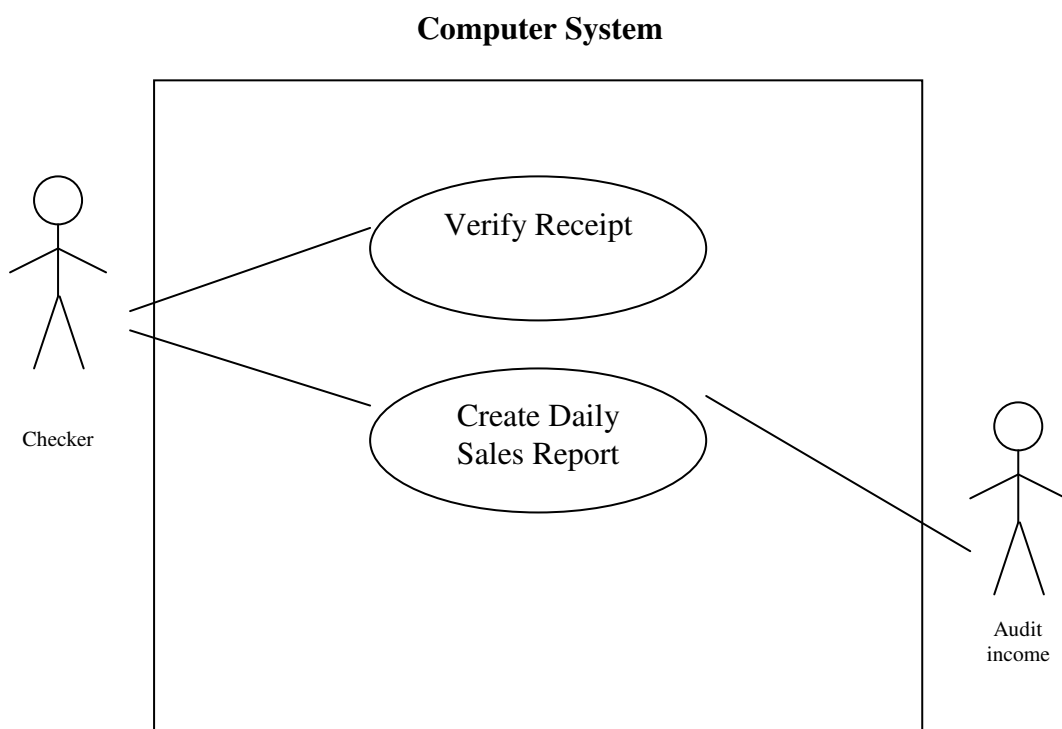
Use Case Narratives and Activity Diagrams of the Proposed System

- Identification Summary
  Title: Verification of Receipt
  Summary: This system allows the checker to verify the receipt
  Actors: Checker
  Creation Date: August 6, 2008
  Version: 1.0
  People-in-charge: Steven D. Quilala

- Flow of Events
  Preconditions:
  1. The checker must have the compiled receipts.
  2. There must be a computer available to be used.

  Main Success Scenario:
  1. The diner checker forwards the final copy of receipt to the checker.
  2. The checker will get the white receipt and the yellow receipt.
  3. The checker will compare the receipt.
  4. The checker will again compile the receipt.

  Alternative Sequences
  1. From 3
       The checker will discuss the receipt to the diner checker.
       The checker will correct the error of the diner checker.

  Error Sequences
  1. From 0
       The diner checker did not pass the receipt to the checker.
       Use case fails.

  Post Conditions
  1. The product sales of the club increases.
  2. The initial record will be created.

- User Interface Requirements
  - The input/output needed in the enrolment must be:
    - Receipt
    - Membership number

- Non-Functional Requirements
  - Response Time: The response time must be 1 min.
  - Availability: The office must be open on the time of transaction.

Activity Diagram:
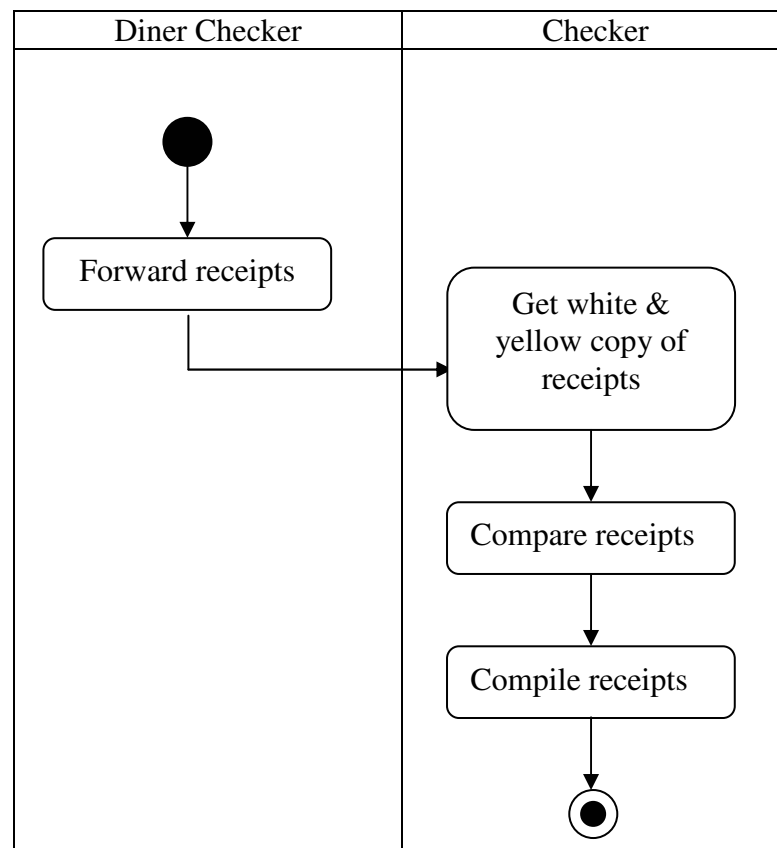
- Identification Summary
  Title: Create daily sales report
  Summary: This system allows checker to create a daily sales report.
  Actors: Checker
  Creation Date: August 6, 2008
  Version: 1.0
  People-in-charge: Steven D. Quilala

- Flow of Events
  Preconditions:
  1. The checker must have the compiled receipts.
  2. There must be a computer available to be used.
  Main Success Scenario:
  1. The checker compiles the receipts.
  2. The checker will input the details to the computer.
  3. The checker submits the inputs to the audit income.
  4. The audit income will create the daily sales report.
  Alternative Sequences
  1. From 1
       1.1 There is no available computer to be used by the audit income.
       1.2 The checker will be the one to create the daily sales report.
       1.3 The checker submit the daily sales report to the Finance Department

Error Sequences
1. From 0
   1.1 The dinner checker damages the receipts unintentionally.
    1.2 Use case fails.

Post Conditions
1. The product sales of the club increases.
2. The daily sales report will be generated.

- User Interface Requirements
  - The input/output needed in the enrolment must be:
    - Receipt
    - Membership number

- Non-Functional Requirements
  - Response Time: The response time must be 1 hour.
  - Availability: The office must be open on the time of transaction.

Activity Diagram:
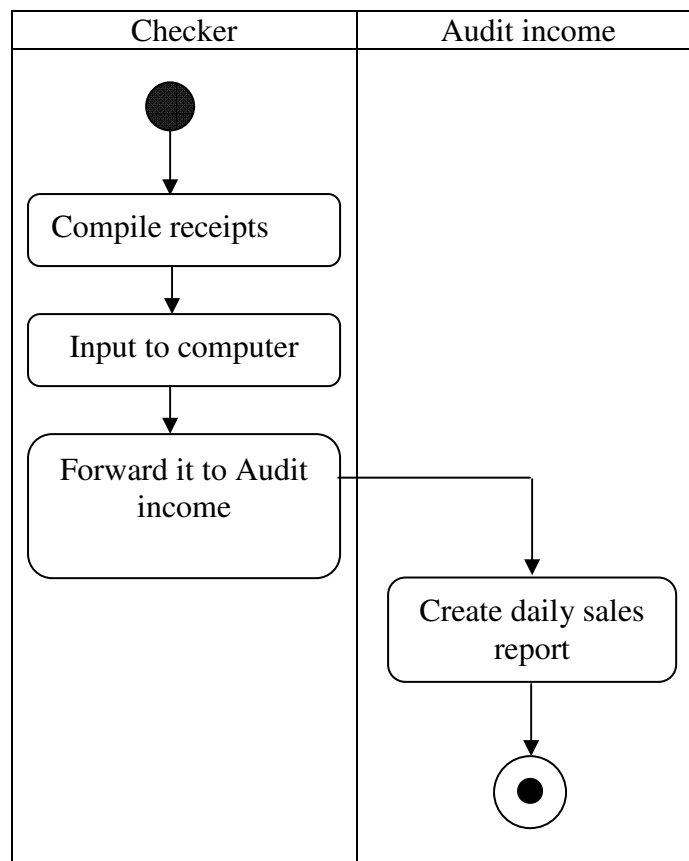
Benchmarking

The Manila Club is the oldest, private membership, social club and a non-stock, non-profit corporation in the Philippines which is located at Dalias Street Bangkal, Makati City. It has the club facilities a dining room, Business centre, Main bar, and the lounge. Manila club offers food and catering services.

Data analysis (ratings of customer's satisfaction)

Criteria	Manila Club	Philippine Columbian Association (PCA)
Food	9	8
Services	7	10
Set up	10	9
Profit	8	9
Location	8	9

Streamlining

Streamlining is the way to identify the method that can be used to create a positive change in effectiveness and efficiency that can result to the improvement of the business process. This may be a small change but its effect is big enough to improve a particular business process. It aims to make the smoothest flow of the business process with the use of minimum effort. In the case of the sales tracking process of Philippine Columbian Association, the operation can increase its speed if they will reduce the personnel that are not important in the process. An example is if they will remove the Head checker in the process actors, there will be an increase in the speed of the process for the reason that the work of the head checker which is to verify and compile the receipts can also be one by the diner checker or simply the checker. By doing this, they can maximize their time in compiling and verifying the receipt if only one person will do the work. Another example is if they will connect the computer of the diner checker to the audit income, which create the daily F & B sales report, and finance department, it can also speed-up the process by means of getting the sales input on time and giving the statement of account to the clients earlier than the usual which is one month after they consumption of products. Also by doing this, the input from the computer of the diner checker will be transferred immediately to the computer of the income audit by means of computer networking. Through this method, it will be faster for the audit income to create the F & B daily sales report which will be submitted to the Finance Department for the production of the client's monthly statement of account. Therefore the clients can pay earlier and they can reduce the problem about funding in their new projects for development. Even the efforts in implementing these changes are little less than compare into somewhat extent of developing a system, the improvement that it will make is still big enough to change the way the process works.

Root Cost Analysis

Fishbone Diagram
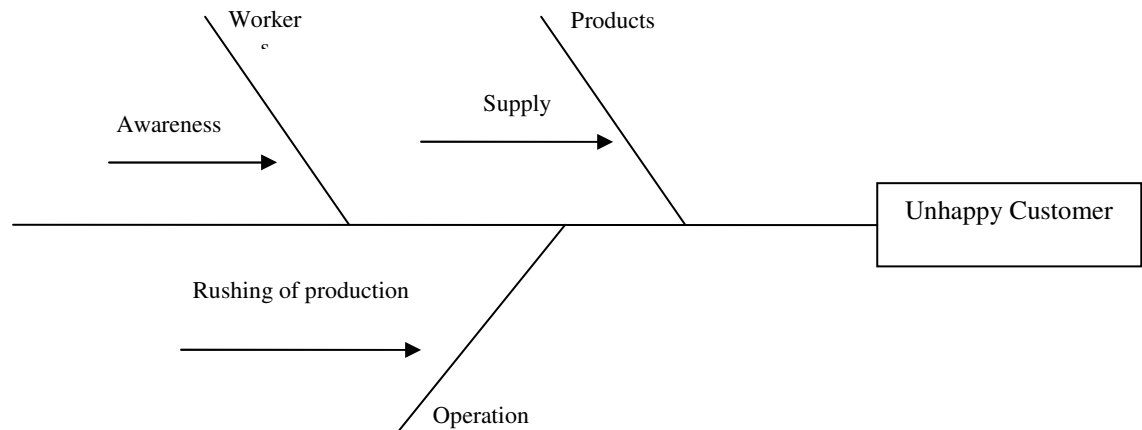
       This Diagram explains the causes why the customer is unhappy. There are 3 factors in diagram which are products, workers, and operation. In the product comes the lack of supply. In the operation is the rushing of food production and in workers is the lack of awareness in the availability of the product or food

5 Why's

1. Why is there delay in the sales tracking process
   -Because the proportion between waiters and customers are not balance.
2. Why is there an imbalance between the waiters and customers?
   -Because there are emergency absences that are occurring.
3. Why is there an emergency absences occurring?
   -Because of possible laziness on the workers.
4. Why is there a possible laziness on the workers?
   -Because they are lacking in motivation.
5. Why do they lack motivation?
   -Because no one told them that they need it.

       This analysis states that the cause of the delay of the tracking process is the lack of motivation on the workers for there is no one that told them that they need it. That is why the problem in the sales tracking system occurs in which started from the workers itself.

APPENDIX C (REFERENCES)

- http://www.amazon.com/Systems-Analysis-Design-Transition-Objects/dp/007016763X/

- http://www.amazon.com/Structured-Approach-Development-International-Engineering/dp/0077074831/

- http://www.amazon.com/Systems-Analysis-Design-Kenneth-Kendall/dp/0131454552/

- http://www.amazon.com/Information-Engineering-Strategic-Systems-Development/dp/0201509881/

- http://www.amazon.com/Modern-Systems-Analysis-Design-Student/dp/0131454617/

- http://www.amazon.com/Founders-Work-Stories-Startups-Early/dp/1590597141/

- Reference number: QA 76.9 S88 K45 1995 (URL not available)