A
Systems Analysis
& Design
Reader

By:
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Dedication

I dedicate this Systems analysis & design reader to my Mom. She is my inspiration in keeping my heads up to do what I am supposed to do. And special thanks to our Professor, Sir Paul Pajo, who have given us, students, the chance to push ourselves harder to do what we can't do. He have taught us well, gave us a different kind of teaching style, and triggered us to do our very first "book', the Systems analysis and design Reader.

Preface

Sysanal is the first major subject that I had attended in Information Management. I learned a lot in this course. Before, my thoughts about the information management is all about coding and applying the new high technological based information to your work and that is it. I never thought that systems analysis is this complicated. Systems analysis is not all about coding all the requested informations. It is you who will code what you will need, that will help other people.

I first encountered the Use case, which I think is the basic foundation of becoming an Analyst and a Programmer. I gained a lot of knowledge about starting a startups of companies. I get to see the real business in information management. And how greatly it will affect the whole world.

The Book Reviews:

Book Review #1

Book: System Development Case Studies by M. Gordon Hunter

Book Review Chapter 1: Initial Investigation:

In starting a system there are procedures you have to follow to create an effective project. There are two things you have to identify, the problems and the opportunity. In identifying the problem you have to know: the user complaints, Management Concerns, scout, surveys, audits, performance trends. In Identifying the opportunities you have: Integration of business area, Strategic advantage and new regulation.

Then the initial investigation should happen after identifying the first steps. In the investigation, there are policies that should be observed: Information system Policy alternatives, the steering committee, and the project team.

Before starting a system a serious preparations must be made to avoid unnecessary usage of money, wasted efforts of the people and time.

Book Review #2

Book: Systems analysis and Design

Author: Kenneth E. Kendall and Julie E.Kendall

"The Introduction of Systems development Life Cycle"

I learned that every system has a cycling path in its existence. There are seven phases that a system follows: **Analysis, Design, Developing, Implementing, testing, deployment, And Maintenance**.

The First step is Analysis. It will show the weakness and strength of the current system. The second step is Design. After the analysis, the analyst will tell what are the necessary improvements or changes that will be needed to do for the current system. Then the third step is developing of the codes, or Coding of the program itself. The programmer will code design that is proposed in the second phase. The fourth is implementing. After the coding is done, the program will then try to operate if the coded program is operational. The Fifth is QA and testing. The programmers will check if there will be fatal errors or "bugs" found in the coded program. The sixth phase is the deployment. The programmers will release the programs that are created to replace or to support the existing system. The last phase is the Maintenance. This phase is said to have longest process time among the other six phases. This phase includes the evaluation of the programmed system, the patching of updates of the current system or the disposal of the current system.

Book Review #3

Book: Systems analysis and Design

Author: Kenneth E. Kendall and Julie E.Kendall

<center>"Benchmarking"</center>

The 4 types of Benchmarking:

1. Internal Benchmarking
2. Competitive
3. World Class operations
4. Activity Type

The Internal Benchmarking is looking up a re-useable System within the system to perform better and to produce better operating systems.

The competitive benchmarking is studying the system of another company and to reorganize it's appearance but having the same idea. You copy their idea but, you won't copy as it is. You may only copy what you know about them. And in the process, you make yourself a unique system out of their system.

The World Class operations lets you use other systems coming from a different industry that may have the same problem in your systems. You look into their processes and try to apply theirs to yours if possible. For example, you have computer shop, you will then try to look for a different industry that has the same problem with your computer shop. Sample problem: the ventilation of an area, try to look into a ventilation of an air-conditioned classroom, you may find that some classrooms are of the same size of your shop. Use their ventilation method, remodel it and apply it as needed in your computer shop.

In the Activity Type, you use the three different methods of benchmarking according to its functions as needed.

Case Studies

(Founders at Work)

CASE STUDY: Paypal and Hotmail

From the articles about the founding of these successful Projects, I noticed that their success started from scratch and scraps that eventually became big and progressive and up to now, being used by everyone. Starting from security management to Paypal; and from Javasoft to a web-based email account, Hotmail, theses founders were just ordinary men given with a simple situation, coming up with an extraordinary answers that provided people help that they wanted. And in these articles, they mentioned that having partners or such is like having a big step ahead of you, because you can not handle all this pressures by yourself, you will need partner/s that will help and support when you're in trouble. And also, I read from the articles that you must trust your experiences and ideas when tackling with the investors, for they will lower the value of your project, and if you know your projects well, you can turn the event around and it will be you to decide whatever the value of your project will be.

I'm amazed in their characteristics that even though they are down and in a critical situation, they don't worry about it and it seemed like there won't be any problem in their way, for they are ready for anything that will come in their way.

CASE STUDY: the Founding of Apple Computer

Steve Wozniak, the founder of apple computer, is a very unique person that can make a very complicated machine transform into a very simple machine, like computers. He transformed a very spacious computer into a desktop. He has done extra ordinary well in optimising the computer parts to develop a whole new revolution of computers. Given in his situation, a very simple man whose only wish is to have own a computer for himself, that he has lack of money to buy a computer, he bought himself very cheap parts of computer and assembled it and finished it and in the making, he gave other people the opportunity to have a very cheap but powerful computer for themselves.

 In his words, "I have to do this. I just have to have this", it made me feel like everything is possible, because he was just self-motivated to do something he wanted to do. Everyone has this "self-motivation" part, but not everyone can come up with the very same idea at the end. I mean, if you want this specific thing, you should have this specific thing at the end, not like other people, if they had something that has a very similar feature, they settle for it and be satisfied with it, and stops the motivation in them, but in Steve's case, he built this "specific thing" for himself by himself and improve it and never stopped there and continued improving his creation until he became satisfied.

 The trait I personally idolize is his undying perseverance in hunting every part of his computer. He didn't buy computer parts as package, he bought it piece by piece, and he practically bought the part whose price is lower for he only got enough money to buy the cheap parts.

 I was stunned after reading the article about him (Wozniak) designing a computer that he has never done before. He just said that he had done it before, but only in his mind. Wow! What an incredible mind he has! With the team he has, not all of them have gone to college, but they were all addicted to computer and technology. That was the only thing they have in common and that made them worked together. And maybe, they are not sure if their computer would be successful, and just do what they have to do to find out what will happen next in their computer, if it will be working or not.

At the last part of the article, he (Wozniak) sold his computers to 40 of his employees, choosing between apple employees over the rich investors. He sold it to them to create an opportunity that they too can make money out of it instead of the investor who already has the money. Steve doesn't have a lot of money to start with, but he didn't need that much money for himself. At one time, his partner (Jobs) cheat their income so that Jobs can have more money than him, Wozniak didn't get angry about it and just thought that Jobs just probably needed the money and that's why he had done that. Wozniak is this person who don't think money as important as anyone, he just need money if he has to, but he don't think money as a very important thing in the world. His passion for work and "ungreediness" for money makes him a wonderful partner, leader and an inventor! And as he said, he is not made to be an entrepreneur, because an entrepreneur's life is too complicated for him that is: "everything's adjusting, everything's dynamic and you have to have an idea that will beat other entrepreneur to a punch." And for entrepreneurs money is their goal, but not for him.

CASE STUDY: Joe Kraus' Excite

After college, Joe Kraus and his friends formed a group that will do business of any kind. They all thought of ideas, but each other's ideas were all nonsense, until one of the member, Graham, suggested that they'd do cd-roms and other technological systems. Everybody got their nerves and agreed to it. And so on, this is the start of their business..

Starting up a business with a group of your friends, is really fun and you won't worry about anything like trust and cooperation because you have been with each other longer than anybody else, and that is why you're friends, because you liked them. Like in their startup, they started by contributing $3000 each for the investment of their business. It's a good thing that everyone is cooperating and willing to work as a group. But there are still disadvantages in the group, like in this article, they say, "You can't fire your friends, but you can fire your managers." You will have biased opinions in making decisions, and of course, you will tend to favor on your friends side. And in some point, even if your friend is wrong you can't do anything to fire him, but just understand and let him realize his mistakes, which will be of too much effort rather than just firing normal partners.

The very exciting part in this article is the part when they have to win in the bid for the Netscape buttons. They only got $1million in the bank and they are going to bid for $3million to win it. Their reason was, Netscape has the answer to their business and if they could win it, they can raise the 3 million and pay for it and be big. But in the auction, they lost the bidding. Someone threw a larger price, but the competition for bidding never stopped there. Vinod Khosla acted like their adviser to take follow up and play with the MCI, the winner of the Netscape buttons, to convince that they should get the buttons and fortunately, MCI failed to pay the Netscape, and they were chosen as the second option to take the opportunity and thus, they got the Netscape buttons. Their persistence gave them the chance to take what supposed to be given to others but is rightfully for them. And in this experience, they developed this "Persistence" and acted if they are getting denied at proposals, in their mind, the actual challenge is just beginning! And the goal is to let others agree to what they have to offer. In reality, persistence never

really worked well for everyone and not everyone has this very long patience to keep up and try to win them with what they want. But as you win in the "persistence challenge" you will go into a whole new level of opportunity, as the article says, "opportunity creates opportunity." When you are in this position and win in a persistent way, you create a new road that will provide new chances that not everyone gets. It's the prize of the persistent person, to see a whole new idea in a whole new manner.

And another quote, "Success is 50 percent luck and 50 percent preparedness for the upcoming luck." Business is not how well you build it up; it's how well you ride the waves of the opportunities that are coming. You must be flexible with making decisions to give spaces for the opportunities that will pop out even in the least expected situations. And another lesson I learned here on how to improve very rapidly is to tell a company that you will be the next big thing in the coming year, and as they believe as to what you have just said, you will then try to attain that "crazy goal" into a reality that will boost your performance to make your goal happen.

Case Study: Tim Brady's Yahoo

After reading this article, I felt disappointed in Tim Brady's decision in leaving the school for an uncertain work. It was few months left before he gets a degree and then he blew it. For me, I think it's not practical. But look at the bright side, he succeed and surpassed the obstacles. But still, if it was me, I would have finished my degree then, move on to the next level. I admire his strong belief in his work and in his team that he chose them over years of studying for him to get his first degree. And in the end, became a successful man.

In Yahoo's early startup, Yahoo was already being bought by larger companies. I don't understand why they didn't sell it and rebuild a better startup of their former yahoo. They were only beginning and they can redo everything and improve it so easily because they have the idea on it. Is it because other companies will do it and do better than them? Or, is it that they just don't like the idea of being sold to others. Or is it that the price offered were too small. Whatever it is, the fact that they never sold yahoo to others was a really stunning matter. They did not sell themselves to other larger companies, but instead, they chose to be in the competition to be with other big companies. Their founder, Jerry and Dave, were great leaders, they envisioned a big future for Yahoo, even though the odds of them succeeding were low. They were very optimistic in a sense that even though they don't have any strategies from the start, but they believed that they will be going to be very big in the future. They believed in their work and they believed that they can do it themselves and that they can stand against all odds.

Also when they were acquiring web-based mails, they missed this opportunity of having the Number 1 email provider at that time, Hotmail, which they had negotiated already and they never thought that hotmail would make it big in the industry. Realizing their mistakes, they found another email provider, Rocketmail, the Number 2 at that time. They made it work and not far from there, Yahoo's mail became bigger than the Hotmail.

Their creativity in their ideas were very awesome that, even though they were using lower quality sources, they can rebuild it and make a better outcome that can compete with top level programs.

While Yahoo was already running on servers, they were never greedy to their costumers; they linked the sites of their competitor if they don't the have enough information that will answer to the costumers' needs. They were very humble in a sense that they advertised their competitor's links because they don't have these specific information needed by the costumer and that their competitors have them; their goal was not to own their costumers, but to help them in any ways possible. They became more popular and people get to use them more often than any search site because their service was more on costumer-centered and not income-centered.

Case Study: Mike Lazaridis' Research in Motion

Just like Yahoo's Tim Brady, Mike Lazaridis also left school and started doing startups. Is there a trend that if you want to be successful, you have to leave school and start on startups?

What get my attention about Mike's article were his visions and faith; "You have to believe that someday it's going to happen, and it has value, and you can actually accomplish it in an economic way." He created an out of this world ideas that lead to the evolution of electronic gadgets that everyone is using right now. Mike specialized in transforming electronic materials to a different level of electronic development. He learned basic fundamentals of computer related materials in his high school time only as a hobby. And later on, applied what he learned and produced different electronic applications that gave way to the introduction of wireless technology. He tried to combine things and experimented on anything he wanted to build and fortunately became successful and created a beautiful and helpful masterpiece.

Case Study: Paul Buccheit's Gmail

His startup was very different from the early startups I read in the book. He made a startup inside a company. I thought startups are not possible to be made inside a company, and startups are there to make new companies. I think, his style in startup is more reliable, because while inside a company, he will have sufficient resources that he will use while doing startups. He will not have problems regarding funds and equipments. The pressure of being money emptied is gone, because your company is there to back you up, and so, you can work more confidently and your outputs can be better. And if working inside a company, you can do more accurate evaluation in your project, because people working inside the company can be testers of the program and you can improve your work faster, because they can talk to you directly, plus, if you have more testers, you'll have more comments, you will know how to adapt your system to the needs of its future users.

 I'm beginning to like the ideas of startups. They are formed from ideas that think about the future use. Like in this article, Paul thinks that his startup is way too far from his present time, and which in fact is true. His startups are being used today, and maybe even the future, his startups will be changed but his ideas are still there. And the idea of doing something different is what startups are all about, it is not to work to improve the traditional system, and it is to create a better system that will surpass the older system with a huge step forward. The resistance of Paul's thought to the comment of his co-workers, that he should no do "adsense" is also what makes him so marvelous. Everyone is saying that he should not work on that and it's a waste of time. Even Paul has doubted his ideas, but his persistence and curiosity gave him the will to finish it and to be successful in it. While everyone doubted his project, he continued working on it and made everybody believe that they were wrong, and made them proud of him.

Case Study: Paul Graham's ViaWeb

In their early stage of writing codes, they improvised their desktop software so that they need not use windows to write their codes, that they practically never wanted to do. They didn't want to learn coding in windows because maybe they thought it would make their life more complicated. I liked the fact that they came with the same output but with a different input. They thought of a different way that is best suited to them, and that they can work better if they will use the programs they are comfortable using. Maybe if they did learn windows coding, they might come up with a different version of output, which is not exactly what they are supposed to do. They might end up with a better program, or maybe not. Who knows what could happen?

 When they are writing codes for their viaweb, Robert became reluctant and impatient and Paul had to convinced him to still help him. It's fortunate for them that their prides did not collide and that they still continued working together, until they hired another good programmer that will help them and to provide a better companion other being two of them together. If it wasn't for their trust in each other that still continued to work together. Their friendship was so strong that they pulled themselves together and continued working through their biggest problems. It's very comfortable to work like that, if you are working with a trustworthy friend feels like you can do anything and you can be satisfied with your work even if it fails or not. The good side is, whether you failed, you will still have the passion to work on it all over again until you succeed. Unlike if you are doing solo, or not working with someone you are comfortable with, the possibility is that you lose your composure and you'll lose interest in doing your work.

 All three of them are pure programmers, their combination is a superb results of the grouping of three very great programmers, the only thing missing is that they lacked the idea of business, they had no background on the business world and on how to raise money from their products. They are hardworking people, they tried to raise money by calling the potential costumers and do sales talk. They acquire some costumers, but they are still not yet successful in their sales career. Until they got Fred Egan as their COO, which raised them in the business world and gave them the edged to be a great company.

They began raising money after they acquired him. And it seems like that their company had just reborned to be a more competitive company.

Case Study: Mark Fletcher's ONElist & Bloglines

I liked his idea on: "Solve a problem that you have. First and foremost, and chances are, other people are having the same problems. I think it's very practical to say, and realizing it makes it a basic problem solution to anything. For example, if you are having technical problems, in a technical world, almost everything is linked up, and so, if you solve a basic problem, it may come up to solving the whole problem itself. And maybe at the same time, some systems are having the same problems; they might as well end up with the same solution.

I like his company team, for they all don't need that much money from the start, and it seems that, they are just working on it for fun and for the technological change, and for their passion in technology. It gives a boost of performance and confidence in the whole team, because there's no pressure in failing. Of course there is pressure on that, but there will be a big possibility that it will not fail, because their thinking will be optimistic, because all of them thinks of it as passion, and even if they'll fail on the first or second try, they will try and try until they are satisfied with their work.

Their users, for them, are the most important part of their project. Their users control their path, because they are not focused on consumer-based Internet companies. And the engineering of their plan was actually very simple but very effective, which was, take all the costumer's suggestion and feedback, and give them what they want, and as a result, you make a very unique program that everybody will like. And the advantages for you is that, you won't have to take a huge amount of time of thinking what you should add in your program, because your costumers are already doing that for you. In the end, you are making your costumers happy by giving them what they ask, and you, are making money out of their thoughts and ideas because you have made a very beautiful product that suits your costumers.

I learned from him, that startups should be as CHEAP as possible. Because if spend a lot of money coming from the investors, and that you should fail, you will have a big problem regarding the money you got from your investors. Whereas, if you only use the

minimal amount of money, there is no big deal in keeping track of your money loss, and you can still afford to pay for it.

Case Study: Craig Newmark's Craiglist

Just like other startups, they have this "give and take" relationship with their users, which I think is very effective in every startup. You give costumers what they ask, and the costumer in return, will give feedbacks and suggestions for you to improve and to evaluate your product. The advantages are that you can think forward on how to do their suggestions and that can results to more improvement of your product, and in the long run, it can evolve into a new product, closer to what the costumers really wanted to use. But the disadvantages are, too many suggestion are not all good. These evaluations and suggestions needed to be sort out, before applying and planning, which can be very time-consuming and needed to have a lot of effort to deal with. And too many suggestions can lead to confusion, whether you think, there are possible ways to come up with different results with different impacts affecting the real target.

I like the idea of Craig's team, whenever encountered by "bad people", the spammers, hackers, the invaders in his site; they simply face them and try to block them, until these "bad people" got tired of being blocked. Not long after that, these "bad people" were transformed, and turned to him, apologizing to them; and that they want to be part of their team. Craig's team accepted them, and in return, they gave them (Craig's Team) the loyalty they wanted, and helped in improving their system. As their previous, spammers, hackers, of their system, they know very well how to improve the systems defenses to eliminate the future spammers and hackers of their system.

Their biggest value in their company was their immeasurable Moral Compass. They do things the right way. They do things which they think will do well and help others out, and not take advantage of other people. This is their biggest asset in the company. Others users are becoming loyal to them because they know they can trust their site, and that this company will provide all the things they want. And as a result, they didn't lose users and clients; instead their users grew bigger as they improve their service to the people.

Their foundations as a startup were like a bomb ready to explode. They were slowly ticking away from explosion, and as it explode, their impacts reach a wide area. They are

running in 170 cities, and they easily convinced everyone that their tools are very reliable, very affordable, and very effective and that they can trust them. In the case study, they were compared to the tortoise running the race against the hare; they are the tortoise that was said to be slow in advancing, but in the end, will reach the top and win the race. They definitely finished the race, but they not just finish it, they took the hare along with them to finish the race. In reality, they come across people that criticized them and tried to interrupt their progress, and as they moved on, these people changed their attitudes towards them, and became an ally to them, which helped a lot in making faster improvement to their system.

Case Study: Catarina Fake's Flickr

Partnering with your wife or husband in starting up a business has no major effects on the outcome. There may be small parts of advantages and disadvantages of having you partner part of your business, and it will somehow affect your relations in the business, but it will be depending on how you two will run the company. It is advisable that you partner with someone who is close to you and that you can talk opinions about the business thoroughly with each other. It can be a great team in the company that partners will married couples or lovers, because both will together to strengthen their bond and addition to that, will also help the progress of the company, because the partners are working hard to accomplish their target.
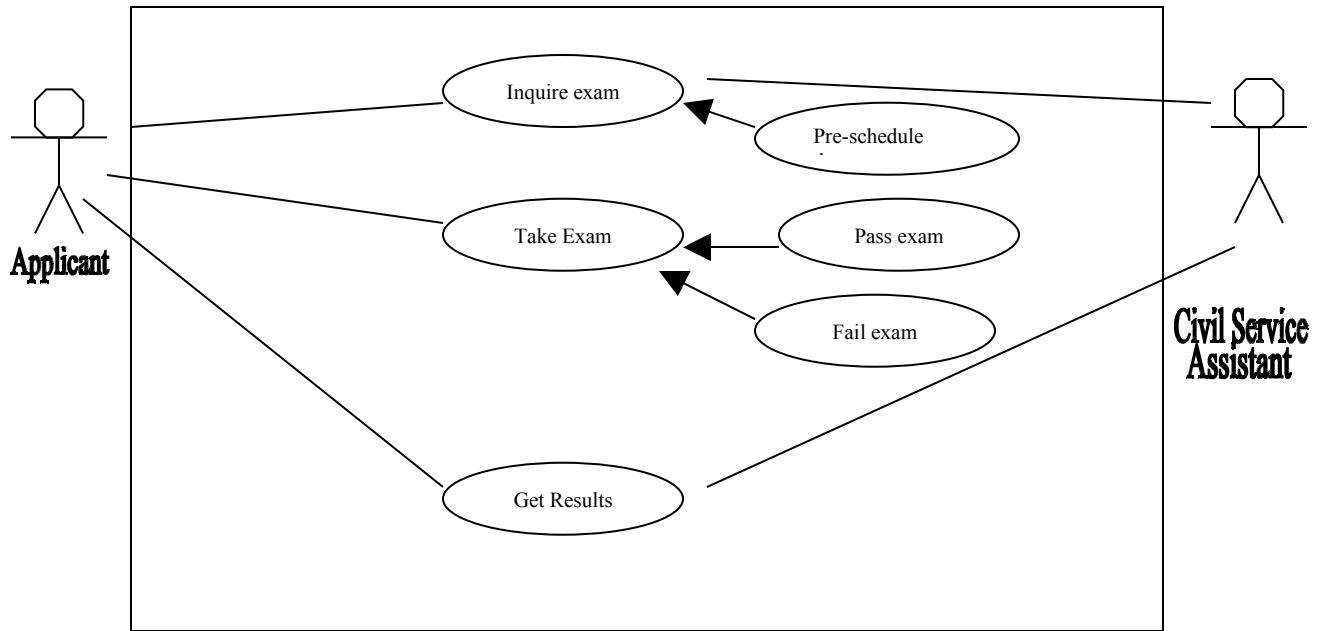
They tried to do two startups at the same time, Neverending game and the Flickr. The good thing is that, whenever any of the fails, the other will break through. The bad thins is that, when the two startups collide in schedules, efforts and money, and then nothing will be successful. In their story, their first priority was the Neverending game, because they thought that it has something that is very addictive and very easy to handle and very sticky to the users. But their Flickr, showed a higher sign of progress and acquired a huge amount of users. They stepped up their priority in Flickr, because they though Flickr will be more successful than Neverending game. They shifted from Neverending to Flickr and they got a big success. Their effort in Neverending was not useless; they can feature it in the software of Flickr and combine the two programs together, which can result to a larger community of users.

Their Flickr are the Photo-sharing based program. The technology when Flickr was released was really well timed, because cameras on phones have been abundantly available, and the Flickr became an almost "News Breakout" for it shows pictures of the things that happen accidentally. They became popular for their fast uploads and repostings and a very easy user access to people. And as the Internet grow, they ride the waves of improvement, because they was part of the Internet revolution, which is very reliable in their business industry.

And as a female technologist, Catarina faced the world with the "pride" of being a woman. She encountered problems regarding sexisms, but still, she lived it up to their expectations. She was an ideal woman for the technology, she stated that women have more passion in regards to doing their work and doing it for they love it more than any men can.

USE CASES

Use Case: How to take Civil Service Exam

Inquire exam

Pre-schedule

Applicant

Take Exam

Pass exam

Fail exam

Civil Service
Assistant

Get Results

Use Case Narrative

Identification summary:

Title: Take Civil service exam
Summary: this use case allows the applicant to take the civil service exam.
Actors: Applicant, civil service assistant

Flow of events

Pre-conditions
1. Office of Civil Service should be open.
2. Office opens at 8 a.m. to 12 p.m. and 1 p.m. – 5 p.m., Mondays to Fridays.
3. Applicant should be Filipino citizen.

Main Success Scenarios:
1. Applicant enters the civil service center.
2. He inquires the assistant on how to take the exam.
3. He submits requirement forms.
4. Pre-schedule the exam, and whether the applicant should take sub-professional or professional kind of exam.
5. The applicant takes the test.
6. The applicant gets the results and passed the exam.

Alternative Sequences:
1. The applicant arrives early
    a. Wait for the office to be opened.
2. The Applicant did not complete all the requirement forms
    a. Leave the office and get all the necessary forms.
3. The applicant takes the exam, but failed to pass.
    a. Re-take the test after a year.

Error Sequences:
1. The Applicant goes to the center on Sunday.
    a. use case fail
2. The applicant is an American citizen.

Post-conditions:
1. The applicant gained experience on how to take the test, if he shall fail, he has something to review.

Use Case Diagram on how to get a Student's Permit in LTO Office

Applicant

Fill-up Application Form

Get Application Form

Submit Application Form

LTO Officer

Pay Processing Fees

Get Receipt

Input Information

Have your Picture Taken

Sign on the signing device

Get Student's Permit
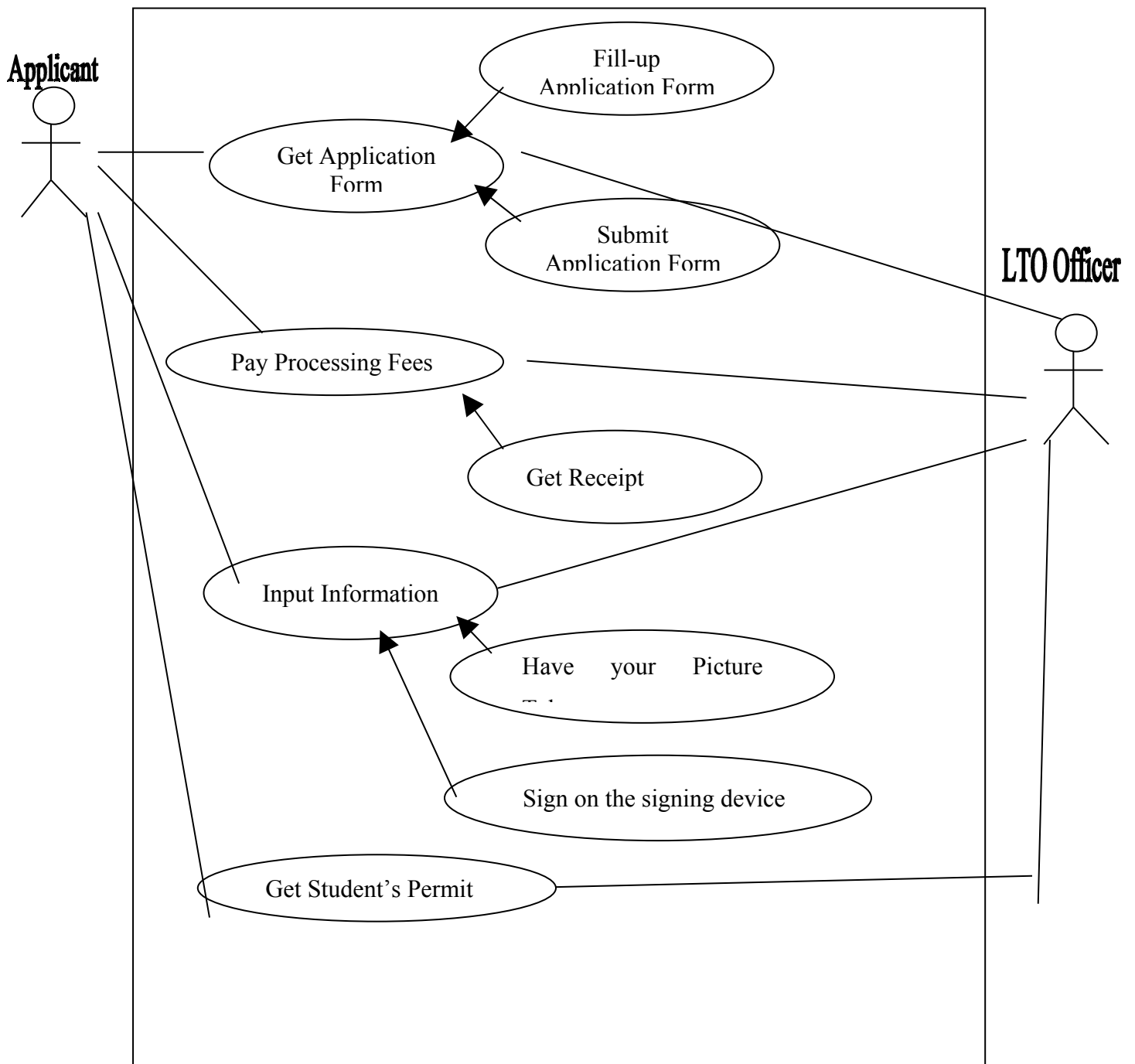
Use Case Narrative

Identification Summary
 Title: Application for Student's Permit
 Summary: This use case allows the applicant to get a student's permit in the LTO
 office manually.
 Actors: Applicant; LTO Officer
 Creation date: ??? Date of Update: ???
 Version: ??? Revision: ???

Field of Event
 Preconditions:
  1. Applicants should be atleast 17 years old.
  2. LTO office should be open.
 Main Success Scenarios:
  1. Applicant gets the application form.
  2. He fills the form and submits it to the officer in charge.
  3. He pays the processing fees
  4. He gets his picture taken and has him sign on the signing device.
  5. He gets his student's permit and leave.
 Alternative Sequences:
  1. Applicant don't have enough requirements
   1.1 a He don't have Birth Certificate
   1.1 b He returns home, and gets his certificate.
   1.1 c Go #3.

   1.2 a He don't have Tin number
   1.2 b He presents his Birth Certificate on the BIR beside the LTO
   office and receives his Tin Number.
   1.3 c Go #3
  2. Applicant not wearing the Proper attire in the picture taking Scenario
   2.1 He borrows any collared shirt or polo to someone or goes home
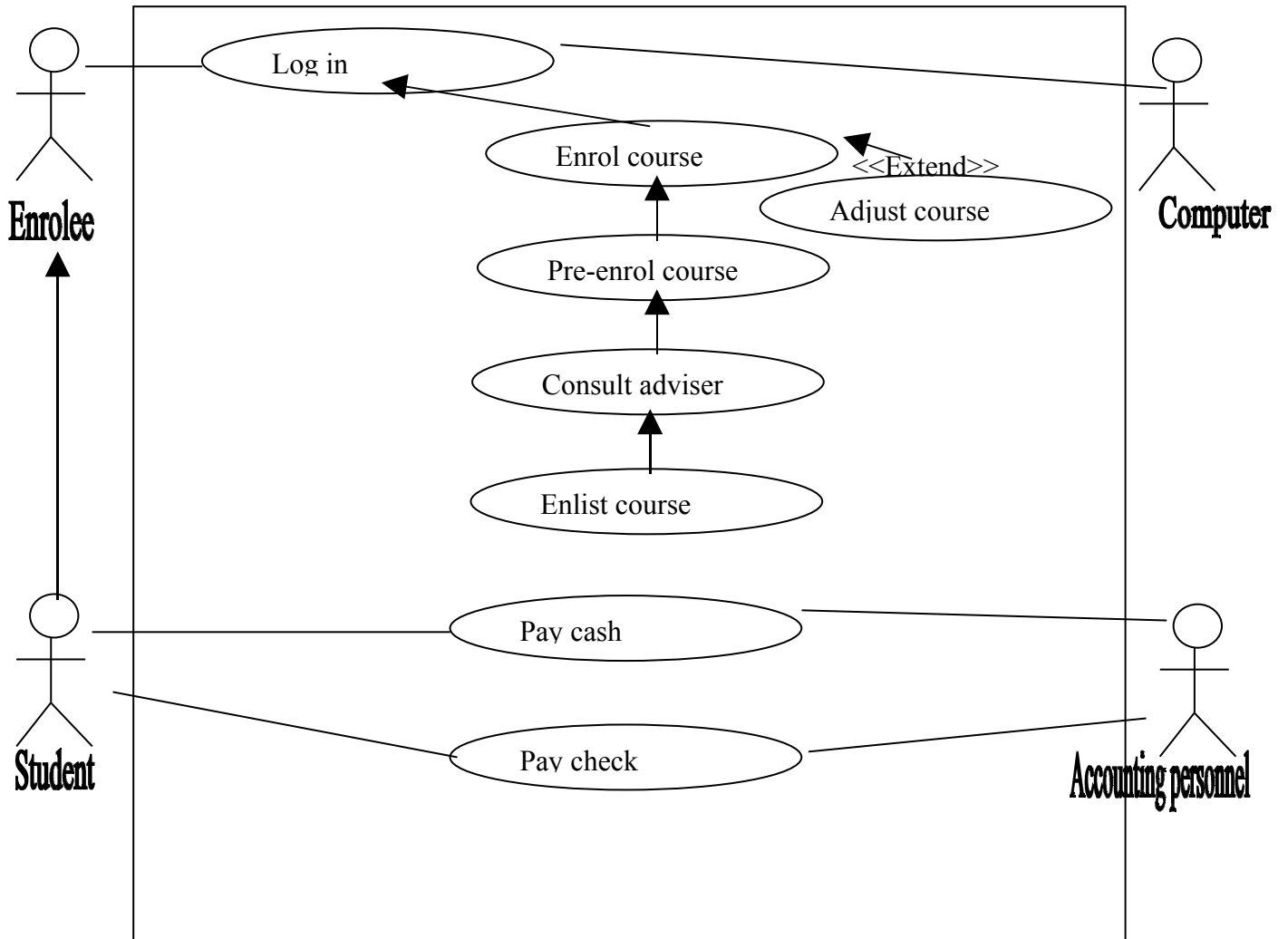   and change.
   2.2 Go #5
 Error Sequences:
  1. Go to LTO office on Sundays
   1.1 No Government Office on Sundays
   1.2 Use Case Fail

 Post- Conditions:
  1. Applicant gets student's permit and LTO office gets less papers
  2. Office gets service sales from the Processing fees.

Use Case Diagram of Enrolment in College of Saint Benilde

Use Case Narrative

Identification Summary
    Title: Enrolment in College of Saint Benilde
    Summary: This use case allows the students of Saint Benilde to enrol courses to be taken in the coming semester.
    Actors: Student, Enrolee, Accounting personnel
    Creation date: ???   Date of Update: ???
    Version: ???   Revision: ???

Field of Event
    Preconditions:
        1. Current date should be enrolment period.
        2. Student should be a valid Student of college of Saint Benilde.
    Main Success scenario:
        1. The Student logs in the correct username and password in the computer.
        2. The Student enlists, pre-enrols, enrols, and pays to the accounting office.
    Alternative Sequences:
        1. Incorrect username and password.
        2. Adjust courses.
    Error Sequences:
        1. Students have invalid records.
        2. Invalid course code.
    Post Conditions:
        1. Students should have EAF.

The Final Project

I. CHAPTER 1 – ORGANIZING FOR IMPROVEMENT

A. Company Background

Pockets Wine and Liquor is one of the major distributors of wine and liquor in Davao City proper. Established in June 15, 2007, Pockets Wine and Liquor has been distributing to 8 bars and restaurants in the area. It is single owned by Mrs. Annie Q. Regis, a business woman.

Pockets Wine and Liquor used to be named Pockets Merchandising and was a merchandising business which sold imported products but later on focused on distributing wines and alcohol drinks. It grew quickly and acquired many clients in its first few months, that's when Mrs. Regis decided to focus on wine and liquor distribution.

Mission

To be the most preferred distributor of wine and liquor in the City of Davao.

Vision

To be credible and known in the industry and be able to expand to other parts of the archipelago.

List of Products:

PREMIUM SCOTCH WHISKY

Chivas Regal Regular

Johnnie Red Regular

Chivas Regal 1 liter

Johnnie Blue Regular

Johnnie black regular

Johnnie Gold Regular

Johnnie black 1 liter

Johnnie Green Regular

RUM

Bacardi 151   Cruzan Bananas/Coconut

Paradise Mango Rum	Bacardi Oro white
Bacardi gold Superior	Gilbeys
Tanqueray	Bacardi Limon

REGULAR SCOTCH WHISKY

Cutty Sark	Jim Beam
J & B Rare Regular	Jack Daniel's Regular

READY TO DRINK

Vodka Ice	Corona Beer
Smirnoff Ice	Heineken
Cruiser Ice	Vodka Mudshake Choco
Vodka Cruiser B.Berry	Vodka Cruiser R.Berry

COGNAC

Hennessy V.S.O.P Regular	Remy Martin X.O Regular
Hennessy X.O Regular	Remy Martin V.S.O.P Regular
Martell V.S.O.P Regular	

VODKA

Absolut Blue Regular	Skyy Vodka
Absolut Blue 1 L	Skyy Berry
Absolut Citron Regular	Skyy Melon
Absolut Kurrant Regular	Skyy Orange
Absolut Mandarin Regular	Skyy Vanilla
Absolut Apeach Regular	Toska Vodka
Absolut Vannilla Regular	Stolichnaya

BRANDY

Carlos 1 Regular	Fundador Exclusivo Regular
Carlos 1 Liter	Fundador Gold Reserve
Fundador Regular	Fundador 1 Liter

TEQUILA

El Hombre White	Amarula tequila regular
El Hombre Gold	1800 Reposado Tequila Gold
Jose Cuervo Regular	Tequila Rose
Jose Cuervo 1 Liter	Pep Lopez
Patron Silver	

OTHERS

Soda Fina Soda

Soda Fina Toxic

CHAMPAGNE

Dom Perignon

Moet & Chando

Veuvo Cliquiot Porsandine

LIQUER

Absente	Sounthern Comport
Aliza Gold Passion	Walsh Triple Sec
Aliza Wild Passion	Walsh Grenadine
Aliza Red Passion	Walsh Cream De Menth White
Aliza Blue Passion	Walsh Cream De Menth Green
Amaretto Liquer	Walsh Cream De Cacao
Baileys Crème Regular	Walsh Cream De Bananas
Baileys Crème 1 Liter	Walsh Blue Curacao
Baileys Meant	Martini Rosso
Baileys Caramel	Martini Extra Dry
Campari	Malibu
Cointreau	Kalhua
Galliano Liquore	Jagermeister

SPARKILNG WINE

Asti Martini

Asti Cinzano

B. Statement of the Problem

The major problem that Pockets Wine and Liquor is facing is on restocking and delivering of the orders. Whenever they order from the supplier, they lose some items while it is being transported through a carrier-vessel which is deducted from them and sometimes gets lost in the stock room. And because they use pen and paper, they sometimes lose the order slips and stock inventory list.

The stock room is small and they do not have enough space for excess orders or returns from clients. It will cost them more if they get a bigger stock room and will take more employees to handle the stocks.

In delivering the orders, they want to deliver the products whenever the clients order which cost them more on gas because of having more trips in a day due to different order schedules. Sometimes, people order at the same time and they couldn't deliver to some of them right away or the same day. This is also the reason why Pockets Wine and Liquor isn't able to monopolize the area. They also sometimes lack stocks which delays the delivery of the orders.

C. Objectives of the System

Knowing that the existing system has a low technology on the stocks inventory check up, an unorganized scheduling of deliveries, resulting to have more gas and money consumptions, we are proposing:

1. Computerized Inventory system
2. More organized schedules of ordering and delivery system

A computerized Inventory system backed up by manual recording to enhance the:

- Accuracy of data recorded, stocks inventory, to attain minimal errors.

- Improvement of the security of the stocks, to avoid thievery. That when something is missing, it can be easily detected in the system.

- Speeds up the process of recording inventory, but to be backed up by manual inventory weekly to have a double check on the stocks.

A more organized scheduling of orders and delivery systems provides the benefits to:

- Cost-cutting due to limit of trips being done in ordering and delivery. Every week, there will be 2-day check up for making orders while checking the stocks in the inventory, and there will be 2-day delivery covering all the clients that require additional stocks. In this way, gas consumption will be lessened and less money will be wasted.

D. Significance of the Study

The significance of the study is to be able to analyze the needed system to reduce cost and make up for some uncontrollable losses. We will be focusing more on being more efficient in distributing the orders to the clients and make it systematized and to better handle the stocks at hand. Also, it will be easier to order stocks from the supplier as to be more accurate to refrain lack of supply.

The users will be the store manager and the delivery person. They won't need background in using computers because all they will do is input the orders by the clients and be able to send the orders required from the supplier. The system will handle the math and storing of item stocks.

The group should be able to understand systems analysis and be able to propose the system suites the business and be more profitable.

E. Scope and Limitations

This paper will be discussing the proposal of an Inventory Management System for Pockets Wine and Liquor which will be managing the inventory list of the products, replenishing of stocks, and order lists and delivery process only. Item tracking, pricing of the products, return and defective goods, and quality management are not included in the study.

II. CHAPTER 2- SYSTEMS ANALYSIS

A. Use Case Diagram of the Existing System
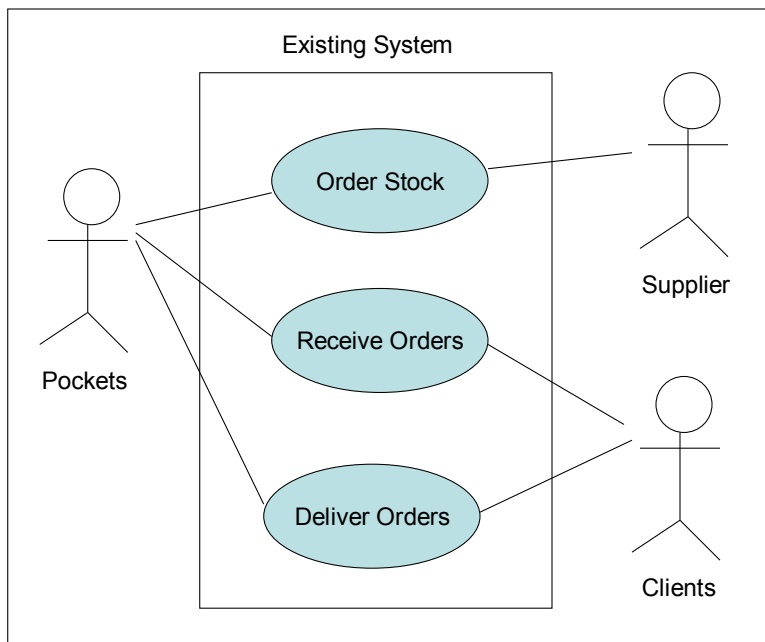
Use Case Narrative:

Identification Summary:

Title: Order stocks from the Suppliers.

Summary: this use case allows Pockets to order stocks from their supplier to replenish their inventory.

Actor: Pockets, Supplier

Flow of Events:

Pre conditions:

- Supplier's Office should be open.

- Office should have landline

- Supplier must have delivery vehicles

Main Success Scenarios:

1. Pockets call the Suppliers to orders stocks.
2. Pockets orders all the required stocks.
3. Supplier confirms the stock available.
4. Supplier prepares the stocks to be delivered.
5. Supplier Schedules the delivery.
6. Pockets and Supplier settles the delivery schedule.
7. Supplier delivers stocks.
8. Pockets add new stocks to the inventory.

Alternative Sequences:

A1 starts at point 3

Supplier has insufficient stocks to comply with the Pockets orders.

4. Supplier tells pocket about the inventory problems.
5. Pockets makes adjustment to the stocks needed

A1 goes to point 4.

A2 starts at point 6

Supplier can't deliver due to uncontrolled circumstances

6. Supplier call Pocket that delivery will be postponed.
7. Pockets adjust to the situation given.

8. Pockets and Supplier reschedules the delivery.

A2 goes to point 7.

Error Sequences:

E1 starts at point 0

Supplier Company shuts down their business

1. Pockets need to find another supplier to supply their inventory; use case fails to the existing system.

Post Condition:

- Supplier has fewer stocks
- Pockets gains more stocks

Identification Summary:

Title: Receive orders from clients.

Summary: this use case allows Pockets to have the orders of the clients to be prepared before the delivery.

Actor: Pockets, Clients

Flow Of Events:

Pre conditions:

- Pockets should have landline
- Pockets' Office should be open.

Main Success Scenarios:

1. Pockets wait for clients to call.
2. Clients call Pockets to orders wines and other beverages.
3. Pockets check their Inventory and confirm the orders.
4. Pockets Prepares the Stocks to be delivered.
5. Pockets and client Settles the Schedule of the delivery.

Alternative Sequences:

A1 starts at point 2

Pockets have insufficient stocks to accommodate Clients.

3. Pockets tells Client about the inventory problems.
4. Client makes adjustment to the stocks needed.

A1 goes to point 3.

Error Sequences:

E1 starts at point 0.

No clients called.

1. If there's no client, there will be no business; use case fails.

Post Conditions:

- Pockets has more order calls
- Pockets adds more to delivery schedules.

Identification Summary:

Title: Deliver orders to clients

Summary: this use case allows Pockets to deliver orders to the clients.

Actor: Pockets, Clients

Flow Of Events:

Pre conditions:

- Pockets should have delivery vehicle
- Delivery vehicles should be operational.

Main success scenarios:

1. Pockets check the delivery schedules.
2. Pockets double checks the items to be delivered.
3. Pockets inform customers for delivery of their orders.
4. Client confirms to Pockets.
5. Pockets deliver orders.
6. Client receives orders.

Alternative Sequences:

A1 starts at point 2.

        Items in the delivery vehicle have incorrect numbers.

        4. Pockets recount the items

        5. Pockets make additions or deductions from the orders.

        A2 goes on to point 3.

Error Sequences:

E1 starts at point 4.

        Pockets can't deliver due to uncontrolled circumstances

        5. Pockets call Clients that delivery will be postponed.

        6. Clients adjust to the situation given.

        7. Pockets and Client reschedule the delivery.

        8. Deliver order system fails.

E2 starts at point 5.

        Pockets' delivery truck had an accident.

        6. Pockets inform customer of incident.

        7. Pockets reschedule delivery.

        8. Use case fails.

Post conditions:

- Delivery vehicles have less gas and oils.

- Pockets has less inventory.

B. Process Walkthrough

-Order Stock

1. Pockets call the Suppliers to orders stocks.

2. Pockets order all the required stocks.

3. Supplier confirms the stock available.

4. Supplier prepares the stocks to be delivered.

5. Supplier Schedules the delivery.

6. Pockets and Supplier settles the delivery schedule.

7. Supplier delivers stocks.

8. Pockets add new stocks to the inventory.

-Receive Order

1. Pockets wait for clients to call.

2. Clients call Pockets to orders wines and other beverages.

3. Pockets check their Inventory and confirm the orders.

4. Pockets Prepares the Stocks to be delivered.

5. Pockets and client Settles the Schedule of the delivery

-Deliver Order

1. Pockets check the delivery schedules.

2. Pockets inform customers for delivery of their orders.

3. Client confirms to Pockets.

4. Pockets deliver orders.

5. Client receives orders.

C. Activity Diagrams of the Existing System

Refer to Appendices.

- Order Supply (refer to A-1, A-2 with swim-lanes)

- Receive Orders (refer to A-3, A-4 with swim-lanes)

- Deliver Orders (refer to A-5, A-6 with swim-lanes)

D. Process Time vs. Cycle Time

Activities	Process Time	Cycle Time
Order Supplies	15 min.	3 days
Receive Orders	15min.	1 day
Deliver Orders	1 day	3 days
Total	1 day and 30 mins.	7 days

**E. Geographic Flowchart**

1. Pockets calls the supplier and order stocks.

2. Supplier receives order and drops the call.

Order Stocks from Supplier
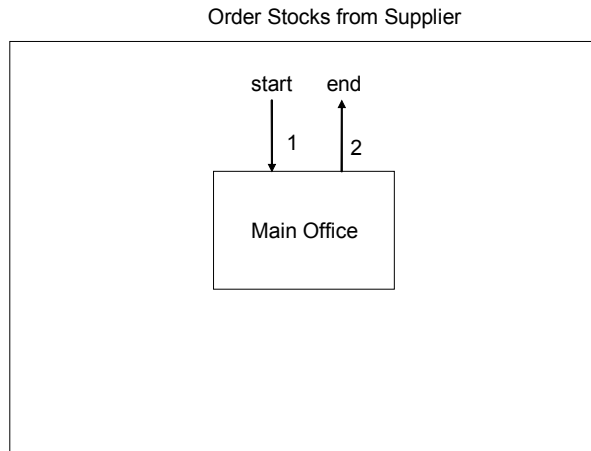
1. Pockets receive calls from clients to order.

2. Pockets check inventory and confirms the ordered made.

3. Pockets prepares the orders.

4. Pockets make the delivery schedule.

5. Clients and Pockets agrees to the schedule and drops the call.

Receive Orders from Clients
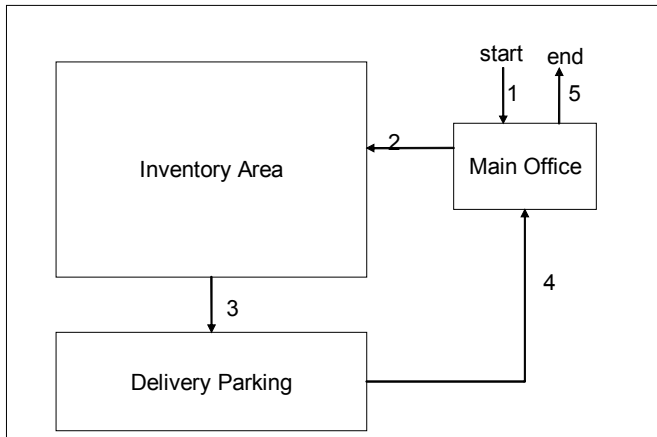
1. Pockets Check the delivery Schedule.

2. Pockets double check the Items to be delivered.

3. Delivery Truck sets out to deliver.

Deliver Orders to Clients
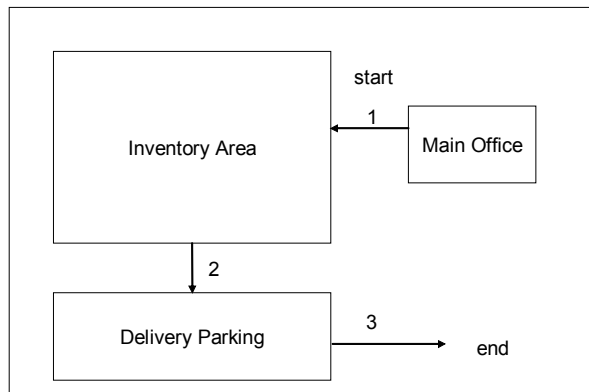
III. CHAPTER 3 – SYSTEM DESIGN

A. Table of Recommendations

Problem	Recommendation	Affected by Change
Some order slips and stock inventory lists are lost in filing cabinet.	All information about the stocks and orders made will be in a database with backup so the information won't get lost.	-Receive Orders(A-3,A-4) -Deliver Orders(A-5,A-6)
Excessive gas expenses.	The requesting and delivering of orders will be systematized and will lessen the trips to be made everyday.	-Deliver Orders(A-5,A-6)
People order at the same time so Pockets sometimes forget the orders or even miscount them when being delivered.	The system will allow the clients to order through the system and will display the requests and will automatically compute the amount of stocks left so they will save time and be more efficient in serving the clients.	-Receive Orders(A-3,A-4)
Not enough space in the stock room for excess supplies.	Stocks will be managed with the system and just have right amount of stock so they won't have too much excess stocks.	-Order Supply(A-1,A-2)

B. Benchmarking

Benchmarking

Ralph's Wine and Liquor

Ralph's Wine and Liquor is a direct competitor of our company, Pocket's Wine and Liquor, in Davao City proper. They are distributing to a number of bars and restaurants. Some of their customers are also our customers. We have parts of our systems the same as theirs regarding delivering and ordering.

Data Analysis

Process	Ralph's	Pocket's
Ordering Supplies	15 mins.	15 mins.
Receiving Orders	15 mins.	15 mins.
Delivering Orders	24 hours.	24 hours

- Cost-cutting due to limit of trips being done in ordering and delivery. Every week, there will be 2-day check up for making orders while checking the stocks in the inventory, and there will be 2-day delivery covering all the clients that require additional stocks. In this way, gas consumption will be lessened and less money will be wasted.

- Time-management will be improved. The anticipated delivery of the clients will be scheduled in advance and so, the deliveries will be organized according to areas, so it will lessen the hours of travel and the effort of the deliverer will be lessen.

C. Streamlining

Duplication Elimination

- eliminates duplication of orders. For example, if a customer has already placed his order, the system will record it and show pending orders which have not yet been delivered and the customers will be able to see it so they will know that their order is already in.

Error Proofing

- it reduced errors of miscalculation of stocks.

Bureaucracy Elimination

- the process of receiving orders is changed to get orders. Instead of waiting for the orders, Pockets gets the orders from all the customers then deliver them in one rotation instead of receiving orders where the delivery truck has to go back and forth for new orders.

Standardization

- all orders are gotten from all customers then delivered to them in one rotation which makes it systematized way of ordering and delivering.

D. Use Case Diagram of the Proposed System
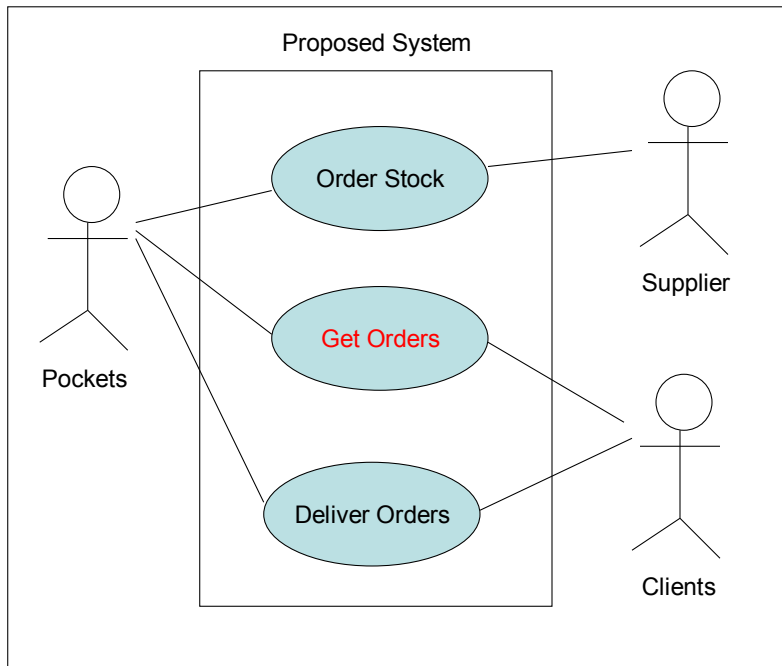
Use Case Narrative:

(Order Stock Use Case Narrative same with existing use case.)

(Deliver Orders Use Case Narrative same with existing use case.)

Identification Summary:

Title: Pockets gets in advance the orders of clients

Summary: this use case allows Pockets to get the orders of the clients in advanced to prepared before the delivery.

Actor: Pockets, Clients

Flow Of Events:

Pre conditions:

- Pockets should have landline

- Pockets' Office should be open.

Main Success Scenarios:

6. Pockets calls clients and asks for the upcoming deliveries needed in advanced.

7. Pockets and clients settle the orders needed.

8. Pockets and clients confirm the delivery schedules suggested by Pockets.

9. Pockets organizes the different schedules obtained from different clients.

10. Pockets prepares stocks to be delivered.

Alternative Sequences:

A1 starts at point 0.

       A client wants to change the undelivered ordered stocks.

       1.   Client calls again and change the previous ordered stocks.

       A1 goes to point 2.

A2 starts at point 2

       Pockets have insufficient stocks to accommodate Clients.

       5.   Pockets tells Client about the inventory problems.

       6.   Client makes adjustment to the stocks needed.

       A2 goes to point 3.

A3 starts at point 4.

       Client wants his order to be delivered A.S.A.P.

       7.   Another client wants his order to be delivered the next day.

       8.   Pockets change some delivery schedules and confirms to the client.

Error Sequences:

E1 starts at point 0.

       Clients don't need any deliveries.

       2.   If there's no client, there will be no business; use case fails.

Post Conditions:

- Pockets has more order calls

- Pockets adds more to delivery schedules.

Appendices:

Interview
Name: Mrs. Annie Q. Regis
Company Name: Pockets Wine and Liquor

Interviewer: When did you start the business?

Mrs. Regis: November 15, 2008

Interviewer: Did you have changes in your business process when you started and now?

Mrs. Regis: in terms of delivery, yes, minimum amount is required, for the bars to avail of free delivery.

Interviewer: What problems are you facing in running the business?

Mrs. Regis: Lower sales during enrollment periods-low season.

Interviewer: Do you have competitors in the area?

Mrs. Regis: Yes, so far there are 2 right now, Ralph's wines and spirits and Angelo's.

Interviewer: How do you replenish your stock?

Mrs. Regis: I order twice a week from Manila suppliers.

Interviewer: How do your clients order from you and how do you order from your supplier?

Mrs. Regis: Clients placed order by fax or by phone, same as with my suppliers

Interviewer: How do you deliver your orders and how many are you delivering to?

Mrs. Regis: free delivery and right now more or less 8 bars and restaurant

Interviewer: What are the problems in reordering and delivering your products?

Mrs. Regis: Before, I lost items in transit via Sulpicio Lines, I changed my carrier-vessel. In delivering my products, I get some traffic on orders because sometimes my clients order at the same time. There we start to have difficulties in delivering their orders on time.

Interviewer: What improvements do you think you can make to solve these problems?

Mrs. Regis: I changed my carrier-vessel. Regarding the delivery of orders, I bought more delivery vans.

A-1

Order Supply

Pockets → Call Supplier → Supplier still in business? — No → (end)

Supplier still in business? — Yes → Order needed stock → Confirm stock figures → A

A → Stocks ordered Sufficient? — No → Adjust orders

Stocks ordered Sufficient? — Yes → Set delivery date → Delivery will push through? — No → Set delivery date

Delivery will push through? — Yes → Settle delivery → A

A-2

A-3

Receive Orders — Pockets

Waiting for clients' call

Client called before day ends? — No → (end)

Yes

Get order list From client

Stocks are sufficient? — No → Adjust Stocks

Yes

Confirm order ← Adjust Stocks

→ A

A

Prepare stocks ordered

Schedule Delivery

(end)

A-4

A-5

Deliver Orders

Pockets

Check delivery list

Double check orders

Delivery count correct?

No

Yes

Inform clients of delivery

A

A

Orders push through?

No

Yes

Deliver orders

Delivery truck got Into accident?

Yes

Supplier gets orders

A-6