Polythecnic University of Puerto Rico

Hato Rey, Puerto Rico

Department of Electrical & Computer Engineering

And Computer Sciences

VLL

Internet Services

SPMP Document

CECS-4204 Software Engineering

Section 22 T-R 6:30-8:30

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Revision History

Date	Version	Description	Author
10/15/2010	0.1	Draft	José López
10/16/2010	0.2	Draft	José López
10/22/2010	0.3	Revised Document	Harry Vega
10/24/2010	1.0	Final SPMP	Emmanuel López

Table of Contents

1. Introduction

1.1. Project Overview

VESA Claro provides a place in the web where customers interested in obtaining cell phone coverage with Claro all the necessary information to make a final decision to subscribe to their services. The website is based on all the products and services that Mr. Harry Vega's VESA Cellular & Internet Services Company offers. Customers will be able to search for available product, current plan, special offers, kiosk location and read review for the product and write their own comment for the product. No sign in nor log in is require for users to access all the content of the page. The language of the product interface is Spanish so every person interested in the services with a basic knowledge of the language could.

1.2. Project Deliverables

The project deliverables list is detailed in Table 1.1.

Deliverable	Date
Software Requirements Specification (SRS)	
System Design Document (SDD)	
Software Test Documentation (STD)	
Project Management Plan (SPMP)	
Working System	

Table 1.1

1.3. Evolution of the SPMP

Updates for the VESA Claro software could be implemented in the future. The software should require as specified in the Software Test Document certain update at least every 6 months to ensure the effectiveness of the product. In the Software Requirements Specification certain updates or upgrade where available if the client desire to expand the services that the web site offers.

1.4. Reference Material

IEEE Std 610.12-1990, IEEE Standard Glossary of Software Engineering Terminology.

1.5. Definition and Acronyms

Acronyms

Acronyms	**Definition**
SPMP	Software Project Management Plan
SRS	Software Requirements Specifications
SDD	Software Design Document
STD	Software Test Documentation
VLL	Vega López López
UML	Unified Modeling Language
IEEE	Institute of Electrical and Electronics Engineers
PC	Personal Computer

Acronyms	Definition
MS	Microsoft
DNS	Domain Name System
VESA	Vega & Santiago

Definitions

Term	Definition
Website	Is a document or information resource that is suitable for the world wide web can be accessed though a web browser and displayed on a monitor or mobile device.
Plan	is typically any procedure used to achieve an objective.
Kiosk	Is a booth that usually sells small stuff and is located generally in shopping mall.
VLL Internet Services	A company that dedicates to creation, design and modification of web address.
Constraints	Is a condition that a solution to an optimization problem must satisfy.
Management	Are the acts of getting people together to accomplish desired goals and objectives efficiently and effectively.
Roles	is a set of connected behaviors, rights and obligations as conceptualized by actors in a social situation.
Programmer	a generalist who writes code for many kinds of software.
Technique	is a procedure used to accomplish a specific activity or task.
Software	is the collection of computer programs and related data that provide the instructions telling a computer what to do.
Flowchart	is a type of diagram, that represents an algorithm or process, showing the steps as boxes of various kinds, and their order by connecting these with arrows.
templates	A standardized non-executable file type used by computer software as a pre-formatted example on which to base other files, especially documents.
stakeholders	a person, group, organization, or system who affects or can be affected by an organization's actions.
Gantt chart	is a type of bar chart that illustrates a project schedule.
Web host	is a type of Internet hosting service that allows individuals and organizations to make their own web site accessible via the World Wide Web.

2. Project Organization

2.1. Process Model

This project is expected to be relatively small and fast-paced in a short period. The system's services, constraints and goals are established with system users. They are defined in detail and serve as a software requirement specification. The system/software design process partitions the requirements to subsystems. Software design involves identifying and describing the fundamental software system abstractions and their relationships. The software design is realized as a set of programs or program units. Unit testing involves verifying that each unit meets its specification. The individual program units or programs are integrated and tested as a whole system to ensure that the software requirements have been met. After testing, the software system is delivered to the client. The software system is installed and put into practical use. The system is monitored periodically and provide system enhancement as needed. The development process model is illustrated in Figure 1.1.

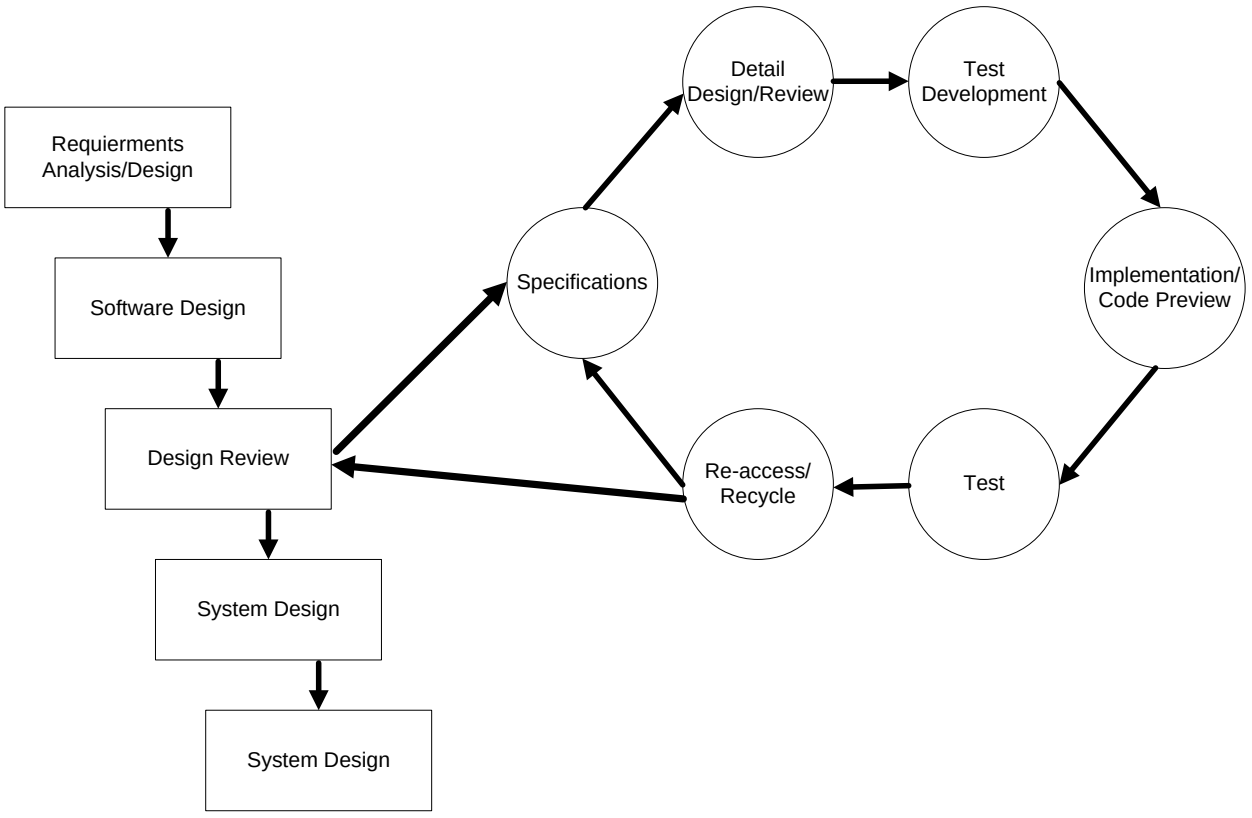


Figure 1.1

2.2. Organizational Structure

VLL Internet Services is a non-hierarchical company, basically each member has the same level of responsibility. However, roles where defined for this project as describe in Table 2.1. Due to the responsibilities flat distribution of VLL Internet Services the decision making process will be based on a simple democratic method. The decisions are presented and evaluated at the group meetings. Each member will have one (1) vote for a total sum of four (3) votes. If no unanimous decision is taken all the details concerning the decision will be revise a second time to see if a final decision can be taken. In case a member of the group is not present on a meeting or will no longer be part of the group the remaining members will share on equal parts the responsibilities The remaining members will continue to perform the decision making process in the same way. During this project each member will be responsible for every task assigned. In case of one of the members is not be able to deliver the task assigned an extra resource from the team will be assigned to assist with the delivery of that given task.

Member	Role
Emmanuel Lopez	Programming Lead
Harry Vega	Programmer and Marketing Design
Jose Carlos Lopez	Programmer and Product / Concept Design

Table 2.1

Member's Role

2.3. Organizational Boundaries and Interface

VLL Internet Services was contracted by Mr. Harry Vega's Vesa Cellular and Internet Services to create a website for his company. The relation was always kept as a boss and worker relationship. Mr. Harry Vega came with the ideas he desire and meeting where schedule or a full explanation of his requirements and what we would create for him. Document such as the SRS where deliver to Vesa so all details of the product such as features, price and delivery date where clear between both parts.

2.4. Project Responsibilities

As describe in Table 2.1 the responsibilities were divided between the three (3) members of VLL Internet Services. Emmanuel Lopez is the lead programmer of the product which responsibilities are to revise every code made by the other members and since the others have different roles the mayor responsibility of creating the code is in his hands.

Harry Vega is in charge of programming some of the features but also to create a Marketing strategy for the success of the website. Jose Carlos Lopez is also in charge of programming some parts of the code but in the first steps of the development he is charge of developing any new ideas and contributing to the design of the product.

3. Managerial Process

3.1. Management Objectives and Priorities

The first priority of the product was to meet up with the client to stipulate all the requirements he desire and what VLL can offer to him. After several meetings, all the details where covered and the SRS was created to assure a full understanding from both parts. In the SRS all the details where cover and as stipulated in Table 2.1 the roles for each member where establish. After this, the development of the SDD was made with the help of the Product / Concept Design which serves as a full guide for the developer team to be based and cover all the details of the product. The SDD serve as the guide for the lead programmer to divide the work with the developers. While this was running the marketing process was being develop and consulted the client so the final product can be as effective as possible and the company could beneficed the most from the website. Then the STD document was made so when the code was finish or between the development certain test would be implemented so the final version could be the most perfect possible.

3.2. Assumptions, Dependencies and Constraints

There are no dependencies associated to this task. Several constraints are associated to this task. The duration of this task will be restricted to the fall semester of 2010 in the Polytechnic University of Puerto Rico. It will also need to be delivered by Tuesday October 27, 2010.The primary resources assigned to this task have time constraints as they work and take other courses at the university. The resources need to use their free time efficiently to deliver the documentation on the due date. There is no budget or cost management constraints, however a budget report will need to be provided along with this documentation.

3.3. Risk Management

In case of one of the primary resources not be able to deliver the documentation an extra resource from the team will be assigned to assist with the needed documentation. In order to avoid data loss each member should have an addition storage source besides the computer hard disk to back up the documentation. The assigned resources will back up each revision of the documentation in order that every member has the most recent version in case of a data loss event.

3.4. Staffing Plan

VLL Internet Service consists of three (3) members. As the roles where establish in Table 2.1 each of the members has a specific role in the process of this product. All our member contain the necessary knowledge of the tools and language needed for the website and if any problem occurs or something is not known the member will learn how to do it. As the programming leader, Emmanuel Lopez, has the most knowledge in the languages and tools use for the project. Harry Vega also has the technical knowledge to develop its part but also contains the necessary skills for the marketing strategy. Jose Carlos Lopez also contains the necessary knowledge of creating code for the product but at the begging he had the lead in the process of the design. The product started to take around mid-August when conversation with Mr. Harry Vega started contacting us with an expected deliver of the final product by the end of October.

4. Technical Process

4.1. Methods, Tools, and Technique

Formal modeling and specification techniques will be used. IEEE Standards will be used for the creation of project such as the SRS, the STD, the SDD and the SPMP. UML will be used as a diagram based guide for the creation of use cases. Access to standard office resources will be also needed such as: PC, MS Word and a printer. Team members of VLL have access to standard office resources of their own. Specialized software testing tools or software may be required. The VLL will research and provide the necessary software testing tools required for this project as describe in the Software Test Documentation document.

4.2. Software Documentation

4.2.1. SRS - Software Requirements Specification

4.2.1.1. Description

The Software Requirements Specification (SRS) documentation makes the application understandable in order to avoid misconceptions between the client and the development team. It also helps the developer understand the user's needs. This document will be based on the IEEE 830-1998, also known as the Recommended Practice for Software Requirements Specification.

4.2.1.2. Deliverables and Milestones

For this task the group will need to develop and deliver the Software Requirements Specification document. The assigned resources will need to do research on the best practices for SRS documentation process. Then the resources will meet with the team to present and discuss the drafts of the documentation. Each draft will be revised by the other team members and will provide feedback as needed.

4.2.1.3. Resources Needed

The primary resources for this task will be Jose Carlos Lopez, Emmanuel Lopez and Harry Vega. They will be responsible for the completion and delivery of the Software Requirements Specification documentation. Access to standard office resources will be also needed such as: PC, MS Word and a printer. MS Visio will be used to create flowcharts and use case diagrams.

4.2.1.4. Dependencies and Constraints

There are no dependencies associated to this task. Several constraints are associated to this task. The duration of this task will be restricted to the fall semester of 2010 in the Polytechnic University of Puerto Rico. Although it was handled in September, It handle for a revision and needs to be fix by Thursday October 28, 2010.The primary resources assigned to this task have time constraints as they work and take other courses at the university. The resources need to use their free time efficiently to deliver the documentation on the due date. There is no budget or cost management constraints, however a budget report will need to be provided along with this documentation.

4.2.2. SDD- Software Design Documentation

4.2.2.1. Description

The Software Design Document will describe and specify the system architecture and the application design in the FICUS project. The software application will then be developed based on the detailed descriptions on this document. This document will be based on the IEEE 1016-1998, also known as the Recommended Practice for Software Design Descriptions; it will also be based on other SDD templates.

4.2.2.2. Deliverables and Milestones

For this task the group will need to develop and deliver the Software Design Document. The assigned resources will need to do research on the best practices for SDD documentation process. Then the resources will meet with the team to present and discuss the drafts of the documentation. Each draft will be revised by the other team members and will provide feedback as needed.

4.2.2.3. Resources Needed

The primary resources for this task will be Jose Carlos Lopez, Emmanuel Lopez and Harry Vega. They will be responsible for the completion and delivery of the Software Requirements Specification documentation. Access to standard office resources will be also needed such as: PC, MS Word and a printer. MS Visio will be used to create flowcharts and use case diagrams.

4.2.2.4. Dependencies and Constraints

There are no dependencies associated to this task. Several constraints are associated to this task. The duration of this task will be restricted to the fall semester of 2010 in the Polytechnic University of Puerto Rico. Although it was handled in by Thursday October 28, 2010.The primary resources assigned to this task have time constraints as they work and take other courses at the university. The resources need to use their free time efficiently to deliver the documentation on the due date. There is no budget or cost management constraints, however a budget report will need to be provided along with this documentation.

4.2.3. STD- Software Test Documentation

4.2.3.1. Description

The Software Test Documentation will be the guidelines to generate a final document that will be used to indicate whether the software system under test is fit for purpose according to whether or not it has met acceptance criteria defined by project stakeholders. A report providing any important information uncovered by the tests accomplished, and an assessment of the quality of the testing effort will be also part of the subsequent documentation of the STD.

4.2.3.2. Deliverables and Milestones

For this task the group will need to develop and deliver the Software Test Documentation. The assigned resources will need to do research on the best practices for STD documentation process. Then the resources will meet with the team to present and discuss the drafts of the documentation. Each draft will be revised by the other team members and will provide feedback as needed.

4.2.3.3. Resources Needed

The primary resources for this task will be Jose Carlos Lopez, Emmanuel Lopez and Harry Vega. They will be responsible for the completion and delivery of the Software Requirements Specification documentation. Access to standard office resources will be also needed such as: PC, MS Word and a printer Specialized testing Software will also be required for the testing of the software.

4.2.3.4. Dependencies and Constraints

There are no dependencies associated to this task. Several constraints are associated to this task. The duration of this task will be restricted to the fall semester of 2010 in the Polytechnic University of Puerto Rico. Although it was handled in by Thursday October 28, 2010.The primary resources assigned to this task have time constraints as they work and take other courses at the university.

The resources need to use their free time efficiently to deliver the documentation on the due date. There is no budget or cost management constraints, however a budget report will need to be provided along with this documentation.

4.2.4. SPMP- Software Project Management Plans

4.2.4.1. Description

The Software Project Management Plan document will identify the scope of the project, estimate the work involved, and create a project schedule. The SPMP begins with requirements described on the SRS; these requirements define the software to be developed. The SPMP is then developed to describe the tasks that will lead to completion.

4.2.4.2. Deliverables and Milestones

For this task the group will need to develop and deliver the Software Project Management Plan. Also a Gantt chart will be needed to schedule and track the project. The assigned resources will need to do research on the best practices for SPMP documentation process. The assigned resources will meet with the team to present and discuss the drafts of the documentation. Each draft will be revised by the other team members and will provide feedback as needed..

4.2.4.3. Resources Needed

The primary resources for this task will be Jose Carlos Lopez, Emmanuel Lopez and Harry Vega. They will be responsible for the completion and delivery of the Software Requirements Specification documentation. Access to standard office resources will be also needed such as: PC, MS Word and a printer.

4.2.4.4. Dependencies and Constraints

There are no dependencies associated to this task. Several constraints are associated to this task. The duration of this task will be restricted to the fall semester of 2010 in the Polytechnic University of Puerto Rico. Although it was handled in by Thursday October 28, 2010.The primary resources assigned to this task have time constraints as they work and take other courses at the university. The resources need to use their free time efficiently to deliver the documentation on the due date. There is no budget or cost management constraints, however a budget report will need to be provided along with this documentation.

4.2.5. Working System

4.2.5.1. Description

The Working System will be a beta version of the application .

The team will need to complete the design tasks before starting the development. Once the development is started features can be reviewed, modified or added as we are using a cyclical software process model. However the final product must contain the requirements specified on the SRS.

4.2.5.2. Deliverables and Milestones

For this task the group will need to develop and deliver the beta version of the application. The assigned resources will need to follow the requirements specified on the SRS to develop and deliver the application. The final product or application should be the same as described on the SRS. The resources will develop the different features specified on the requirements. After developing each feature it will need to be tested. After the testing the other team members will provide input on the feature and go back to the developing stage if additional functionality is required to meet the specifications.

4.2.5.3. Resources Needed

The primary resources for this task will be Jose Carlos Lopez, Emmanuel Lopez and Harry Vega. They will be responsible for the completion and delivery of the Software Requirements Specification documentation. Access to standard office resources will be also needed such as: PC, MS Word and a printer. DNS entry for the website will be required. A web hosting service will be used to host the application. http://www.hostmonster.com/ will be used as the website content manager.

4.2.5.4. Dependencies and Constraints

There are no dependencies associated to this task. Several constraints are associated to this task. The duration of this task will be restricted to the fall semester of 2010 in the Polytechnic University of Puerto Rico. Although it was handled in by Thursday October 28, 2010.The primary resources assigned to this task have time constraints as they work and take other courses at the university. The resources need to use their free time efficiently to deliver the documentation on the due date. There is no budget or cost management constraints, however a budget report will need to be provided along with this documentation.

5. Work Packages, Schedule, and Budget

5.1. Resource Requirements

VLL Internet Services has all the necessary equipment and software for the development of the product. Necessary resources include:

- PC
- Microsoft Office 2007
- Adobe Dreamweaver
- Printer

The final product will be access from a web host but both the client and s will have a copy of the software in case something happens.

5.2. Budget and Resource Allocation and Schedule

5.2.1. Budget and Resource Allocation

Item	Cost
Adobe Dreamweaver	$398.75
Microsoft Office 2007	$357.99
PC	$899.99
Printer	$107.00
Salary	$3,000.00
TOTAL	$4,763.73

5.2.2. Schedule

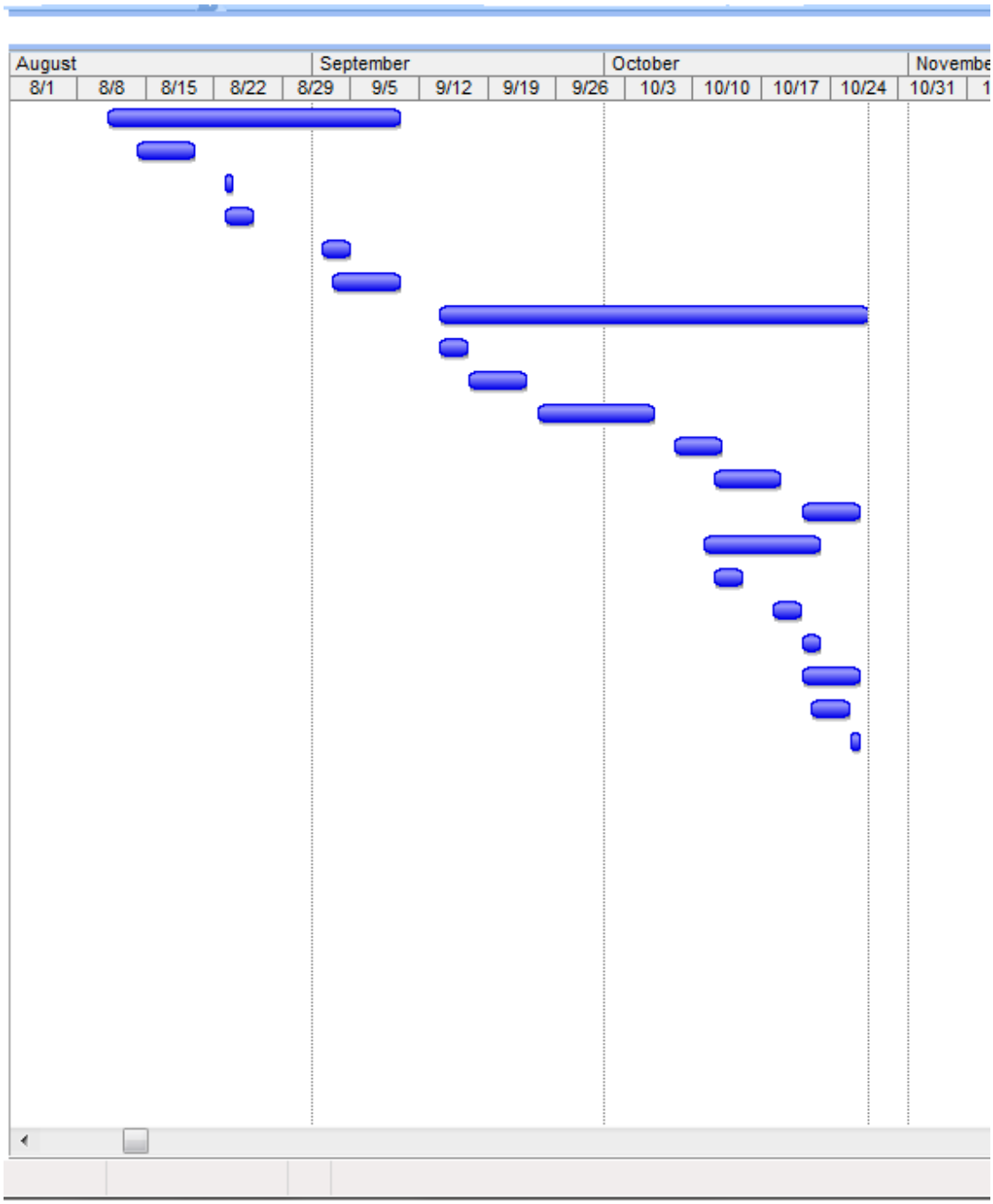
For this project the all the tasks will be tracked on MS project. A time table has been created in order to keep track of the tasks. Each task will be assigned to different resources. For every given task the resource will be responsible for its completion. The next table (Table 5.1 & Table 5.2) will show you how we implemented the timetable.

Save (Ctrl+S) Tue 10/26/10

Gantt Chart

	Task Name	Duration	Start	Finish
1	SRS Document	23 days?	Wed 8/11/10	Thu 9/9/10
2	Review of possible solutio	4 days?	Sat 8/14/10	Thu 8/19/10
3	Introduction of SRS	1 day	Mon 8/23/10	Mon 8/23/10
4	Limitation of software	3 days?	Mon 8/23/10	Wed 8/25/10
5	Assumption and depender	3 days?	Thu 9/2/10	Sat 9/4/10
6	Final SRS Document	6 days?	Fri 9/3/10	Thu 9/9/10
7	SDD Document	33 days?	Tue 9/14/10	Wed 10/27/10
8	Introduction of SDD	3 days?	Tue 9/14/10	Thu 9/16/10
9	Interface Description	4 days?	Fri 9/17/10	Wed 9/22/10
10	Decomposition description	9 days?	Fri 9/24/10	Tue 10/5/10
11	Dependency description S	3 days?	Fri 10/8/10	Tue 10/12/10
12	Detailed Design	5 days?	Tue 10/12/10	Mon 10/18/10
13	Detailed Data Design	4 days?	Thu 10/21/10	Tue 10/26/10
14	STD Document	10 days?	Mon 10/11/10	Fri 10/22/10
15	Introduction of STD	3 days?	Tue 10/12/10	Thu 10/14/10
16	Test Description STD	3 days?	Mon 10/18/10	Wed 10/20/10
17	Final STD document	2 days?	Thu 10/21/10	Fri 10/22/10
18	SPMP Document	4 days?	Thu 10/21/10	Tue 10/26/10
19	SPMP Draft	2 days?	Fri 10/22/10	Mon 10/25/10
20	Final SPMP Document	1 day?	Tue 10/26/	Tue 10/26/10

Table 5.1


August
September
October
Novembe
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8/8
8/15
8/22
8/29
9/5
9/12
9/19
9/26
10/3
10/10
10/17
10/24
10/31

Table 5.2