

**CEBU INSTITUTE OF TECHNOLOGY
UNIVERSITY
COLLEGE OF COMPUTER STUDIES**

**TALISAY DISTRICT HOSPITAL BILLING AND IVENTORY
SYSTEM**

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Abstract

Billing System will be all about the charges and payments of the patient while they are inside the hospital. It will all be recorded from the time they entered the hospital, until they checked-out. While for the Inventory system, it will be a front-end application where all the staff and personnel's medical transactions with the hospital supplies will be recorded and is stored in the database and later on will be passed to the billing system after purchase.

In Billing System, the total charges will be based from the total discounts, patient charges, professional fee (doctor's fee), medical social services, adjustments and more.

For Inventory System, which is a front-end based application, consists of patient's medical supplies transactions which are recorded and will be applied in the total charges and linked to the billing system.

Patients will be able to view their current balances and total charges. But their access will only be there. Hospital admin and staff have the total access of the systems by adding, deleting, and editing transactions.

Software Requirements Specifications

For

TALISAY DISTRICT HOSPITAL

BILLING AND INVENTORY SYSTEM

Signature

Member Name	Position	Signature
Glenn Patrick Cua	Developer / Designer	
Mc Jeve Gindap	Developer / Systems Analyst	
Silvia Sarte	Developer / Project Manager	
Jeric Tac-al	Developer / Tester	
Claudine Tamarra	Documentation / Researcher	

Change History

VERSION	DATE	AUTHOR	CHANGES
1.0	July 24, 2014	Glenn Patrick Cua Mc Jeve Gindap Silvia Sarte Jeric Tac-al Claudine Tamarra	Initial version
2.0	August 4, 2014	Glenn Patrick Cua Mc Jeve Gindap Silvia Sarte Jeric Tac-al Claudine Tamarra	Final Version

Preface

This is the Software Requirements Specifications (SRS) document for the Billing and Inventory System for Talisay District Hospital of the subject Software Project. In particular, the document details the features, functions and software specifications of this software focused for the learning object's entire scope. The document will address the work completed by the Group Letter in detailing the usages of the software. The intended audience of the SRS are hospital admins, staff and patients as users. However, foreknowledge of certain computer systems and basic knowledge of computers is an asset to understanding the SRS.

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1. Introduction

A billing statement lists the charges that a customer has accumulated over a period of time. It gives a summary of activity on an account, including balance, purchases, payments, credits and finance charges. It also summarizes the total discounts, payments of charges from the hospital, doctor's payments and discounts availed.

Inventory system also summarizes all the medical supplies being requested and that are currently available from database.

1.1. Purpose

The objective of this project is to develop a billing statement allowing staff to monitor the payment of every patient in the hospital. The staff can easily detail the customer's invoices with this billing statement. They can lists each amount due, applies any payments previously made, and calculates the balance due. Information will be communicated to patients and/or caregivers in a way commensurate with the age, cognitive ability, language of the patient or caregiver and all information provided by the patient will be treated confidentially. As for the Inventory, all the transactions being made by the staff or admin will be recorded from the date purchased, purchased medical supplies and available supplies remaining.

1.2. Scope

The credit and collection policy will guide Talisay District Hospital staff in the collection of patient account balances as related to self-pay balances for the insured. In the inventory section, the admin will have all the information about the transactions for the supplies used where all will be recorded and updated constantly who are the people requested and when did they request it. It will all be verified and documented.

1.3. Definitions, Acronyms and Abbreviations

Table 1.1 Definitions, Abbreviations and Acronyms

Terms	Definitions
Billing statement	Is a notification sent to a customer who has been invoiced but has not yet paid. It summarizes their balance, and requests payment. Statements should be mailed a few days after the invoice is mailed, before the end of the first billing.
Account Balance	The amount of money in a financial repository, such as a checking account, at any given moment.
Invoice	A detailed list of goods shipped or services rendered, with an account of all costs; an itemized bill.

1.4. Overview

The SRS is organized into two main sections. The first is The Overall Description and the second is the Specific Requirements. The Overall Description will describe the requirements of the SRS from a general high level perspective. The Specific Requirements section will describe in detail the requirements of the system.

The SRS is describing into two chapters, the first one is the Overall Description, the first chapter will tell its definition of the flow of the system and the function of the system. The second chapter is the Specific Requirements, the second chapter tells about the requirements needed by the system in each step. These two chapters should be interacting with each other so that it will understand easily the system being implemented.

2. Overall Description

The project vision is to provide the employee, manipulate the patient's billing statement. This is where the system interacts with the employee to fully monitor the billing statement of the patients. And will allow the hospital personnel to request and verify whether the specific medical supplies are available, if not then it will be approved by a hospital authority and requested to purchase.

2.1. *Product perspective*

Billing System will be all about the charges and payments of the patient while they are inside the hospital. It will all be recorded from the time they entered the hospital, until they checked-out. While for the Inventory system, it will be a front-end application where all the staff and personnel's medical transactions with the hospital supplies will be recorded and is stored in the database and later on will be passed to the billing system after purchase.

2.2. *Product functions*

In Billing System, the total charges will be based from the total discounts, patient charges, professional fee (doctor's fee), medical social services, adjustments and more. For Inventory System, which is a front-end based application, consists of patient's medical supplies transactions which are recorded and will be applied in the total charges and linked to the billing system.

2.3. *User characteristics*

Patients will be able to view their current balances and total charges. But their access will only be there. Hospital admin and staff have the total access of the systems by adding, deleting, and editing transactions.

2.4. *Constraints*

Recording manually the total payments, transactions made, discounts and more is a very hard tasks for hospital authorities. Besides problem of too many paper works and other documents will be misplaced and records will no longer be used if it's lost. So the automated systems that we will be implementing will be a great help for the hospital staff for them to record not just immediately but accurately with just one click.

2.5. *Assumptions and dependencies*

In order to use this application / software. The users should use a personal computer or a laptop and should be connected to the database or the network if applicable within the hospital premises.

3. Specific Requirements

3.1. External interface requirements

3.1.1. User interfaces

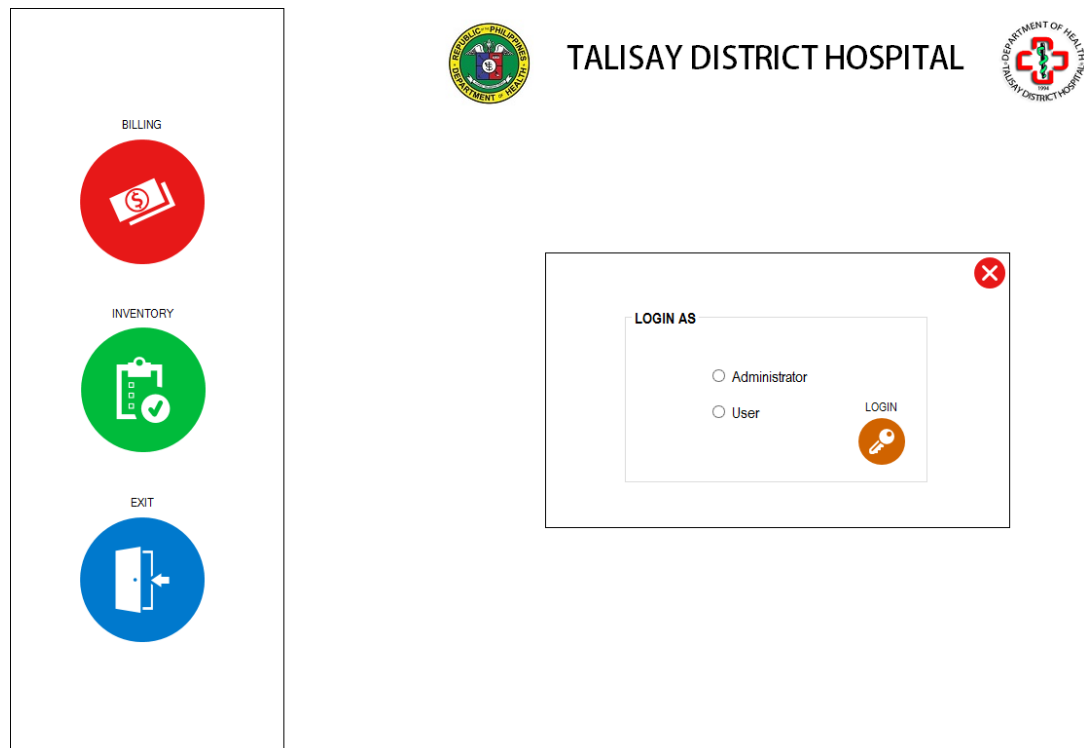
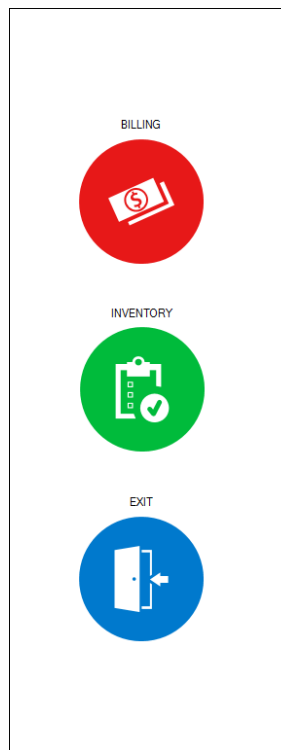



Figure 1.1 Login Form



SUPPLIES AVAILABILITY INQUIRY
TALISAY DISTRICT HOSPITAL

Department: Responsibility Center: SUBMIT 

Office: Code: No.:

Stock No.	Item Description	Unit	Quantity	Status of Stock
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Purpose / Remarks:

Inquired by: Status provided by (Accounting Div.):

Signature: Signature:

Name: Name:

Designation: Designation:

Date: Date:




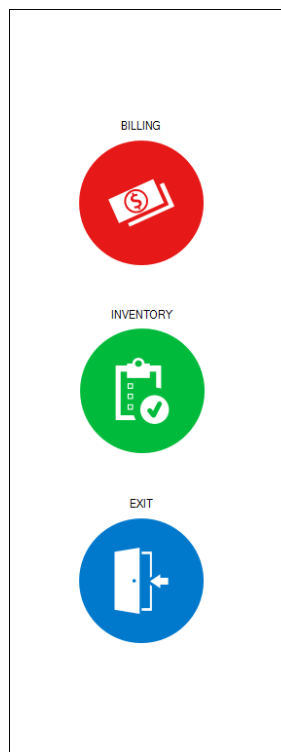

ADD 
DELETE 
EDIT 

Figure 1.2 Supplies Availability Inquiry



REQUISITION AND ISSUANCE SLIP
TALISAY DISTRICT HOSPITAL

Department: Responsibility Center: RIS No.: Date: SUBMIT 

Office: Code: SAI No.: Date:

Stock No.	Unit	Description	Quantity	Quantity	Remarks
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Purpose:

Requested by: Approved by: Issued by: Received by:

Signature: Signature:

Printed Name: Printed Name:

Designation: Designation:

Date: Date:




APPROVE 
EDIT 
DELETE 

Figure 1.3 Requisition and Issuance Slip

PURCHASE REQUEST TALISAY DISTRICT HOSPITAL						X													
BILLING																			
INVENTORY																			
EXIT																			
		Department	<input type="text"/>	PR No.	<input type="text"/>	Date	<input type="text"/>												
		Section	<input type="text"/>	SAI No.	<input type="text"/>	Date	<input type="text"/>												
		<table border="1"> <thead> <tr> <th>Stock No.</th> <th>Unit</th> <th>Item Description</th> <th>Quantity</th> <th>Unit Cost</th> <th>Total Cost</th> </tr> </thead> <tbody> <tr><td colspan="6" style="height: 150px;"></td></tr> </tbody> </table>					Stock No.	Unit	Item Description	Quantity	Unit Cost	Total Cost							SUBMIT APPROVE DELETE EDIT
Stock No.	Unit	Item Description	Quantity	Unit Cost	Total Cost														
		Purpose	<input type="text"/>																
		Signature	<input type="text"/>																
		Printed Name	<input type="text"/>																
		Designation	<input type="text"/>																

Figure 1.4 Purchase Request

3.1.2. Hardware interfaces

NONE: It's a software that will be used for the Talisay District Hospital transactional system.

3.1.3. Software interfaces

The software we will be using is based in the Visual Basic .net programming language. And all of its User Interface are included for the project to be working smoothly and perfectly.

3.1.4. Communications interfaces

NONE

3.2. Functional requirements

3.2.1. Use case 1

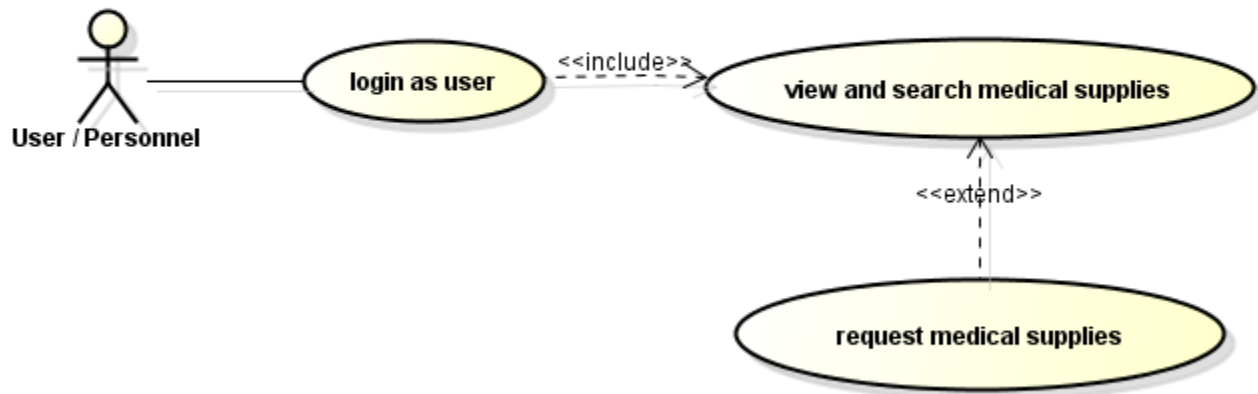


Figure 1.5 Inventory System

Table 1.2 Inventory System

User / Personnel	System
Login	Allows the user to login with limited access.
View and Search Medical Supplies	User / personnel can view and search for medical supplies available with stocks and quantity.
Request Medical Supplies	User / personnel who wants to request for medical supplies can do and will be forwarded to the admin / authority afterwards.

3.2.2. Use case 2

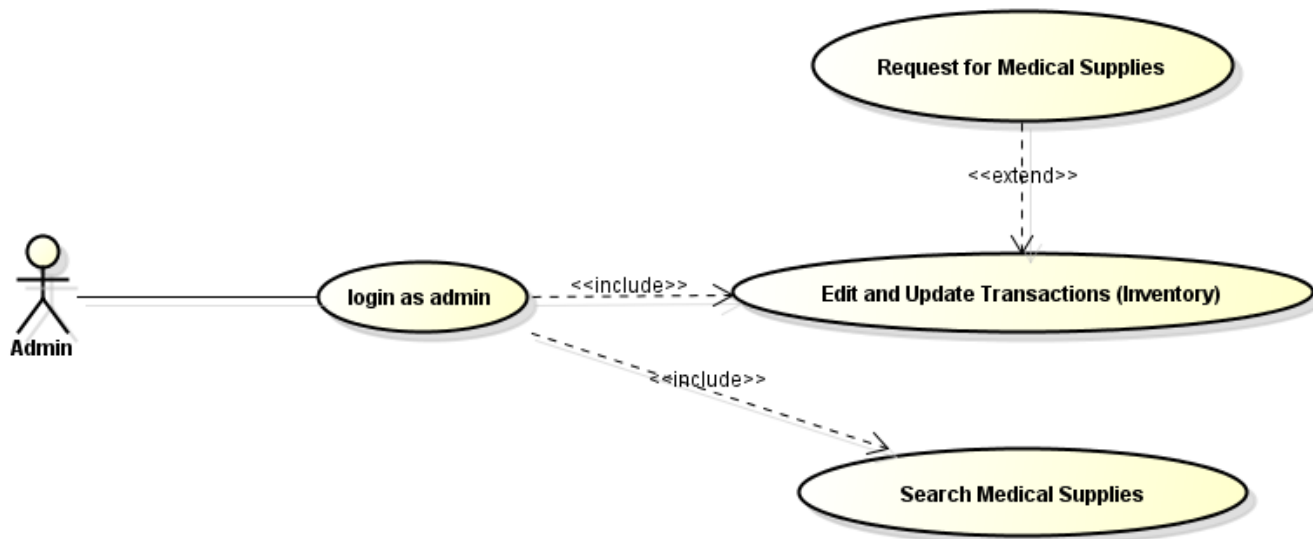


Figure 1.6 Inventory System

Table 1.3 Inventory System

Admin	System
Login	Allows the admin to login with full control of the system.
Request for Medical Supplies	The authorities are the only ones who can request for medical supplies after verification if the requested supply is not available.
Edit and Update Medical Supplies Transactions	Admin or authorities can Update and Edit medical supplies if there are any additional, corrections or unnecessary errors found.
Search Medical Supplies	Admin can search for available medical supplies, same with the user.

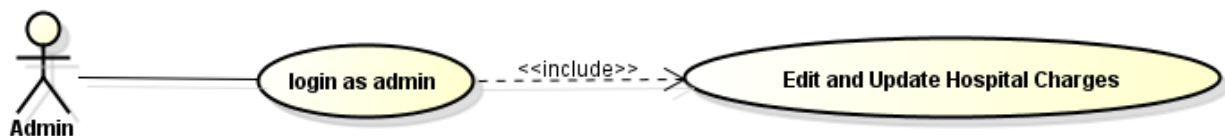


Figure 1.7 Billing System

Table 1.4 Billing System

Admin	System
Login	Allows the user to login with limited access.
Edit and Update Hospital Charges	Admin can Edit and Update Total charges from the hospital and change any amount or discounts.

3.3. *Performance Requirements*

The softwares that we will be implementing should work accurately with less bugs and should be user friendly. Where hospital staff should be able to find it easy to study and familiarize immediately the do's and dont's of the 2 systems.

3.4. *Design constraints*

The User Interface will be based on the hospital's informative design and should be working in all the operating systems available. We will be using Visual Basic .net for this software to be working perfectly.

3.5. *Software system attributes*

The billing and inventory systems should be working to all interfaces and should be runnable in the network server of Talisay District Hospital and all its groups and subgroups.

Software Project Management Plan
for

TALISAY DISTRICT HOSPITAL
BILLING AND INVENTORY SYSTEM

Signature

Member Name	Position	Signature
Glenn Patrick Cua	Developer / Designer	
Mc Jeve Gindap	Developer / Systems Analyst	
Silvia Sarte	Developer / Project Manager	
Jeric Tac-al	Developer / Tester	
Claudine Tamarra	Documentation / Researcher	

Change History

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2.0	August 4, 2014	Glenn Patrick Cua Mc Jeve Gindap Silvia Sarte Jeric Tac-al Claudine Tamarra	Final Version

Preface

The following Software Project Management Plan (SPMP) describes the proposed plan to be taken by our group, to contribute to the completion of the Billing and Inventory System for Talisay District Hospital.

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Table 1.8	Methods and Techniques
Table 1.9	Verification and Validation Plan
Table 2.0	Documentation Plan

4. Overview

4.1. *Project Summary*

1.1.1. *Purpose, scope and objectives*

Billing and Inventory System for Talisay District Hospital!

This project concerns with implementing the topic Software Project Management Plan in to the Billing and Inventory System. It involves defining appropriate procedures to provide detailed guidance for preparing and updating of SPMPs based on standards and ensuring that these are followed, to develop a project plan where management is seen as everyone's responsibility and every important details about the said topic should be place into this matter.

The scope of this project is to develop a Billing and Inventory System. To focus with serving this project with the best assurance of a good process and product quality of the tools or materials, we must create an effective ways for the users to make them comfortable in using the systems.

The objective of this project is to create a two system which is Billing and Inventory System that would ensure every transactions of every patient being admitted. This is where the system interacts with the hospital admins and staff. This project does NOT include the maintenance of the website but the object alone, if it is not effective enough.

1.1.2. *Assumptions and constraints*

Billing and Inventory System for Talisay District Hospital!

The project shall be finished before October 18, 2014, the end of the 1st semester of the Software Project (SP) course. All codes shall be written in VB.net programming language. The software shall be published at Desktop (PC) Computers.

The project will be planned with the following assumptions:

- this software should be published on Desktop Computers.
- this software should be user-friendly.
- The software / applications used will depend on the graphics and design used within the

- software, such as Adobe Photoshop, Visual Basic .net 2012, Astah and Metro Studio.
- the User Interface (UI) for this software should be attainable for such user to be interested and excited to use the system.
- time
 - o one semester
 - o once the software is done and running, it should be published along with desktop computers and should be finished before the semester ends
- end-users
 - o the end-users such as hospital admin and staff will be our main focus in this software, in our case, we will try to understand what the end-users really need if they are going to use the systems and what they want to happen.
- resources
 - o Softwares such as Adobe Photoshop, Visual Basic .net 2012, Astah and Metro Studio are needed to implement this software and other resources used will be discovered later on.
 - o we need a desktop or laptop to enable us to work with this project or software.

1.1.3. Project deliverables

Billing and Inventory System for Talisay District Hospital!

As part of the project, the Group will deliver the following documents and requirements to the client.

- Software Requirement Specification (SRS) document including use case maps, list of features within the scope of the project and the Quality Assurance requirements.
- Software Project Management Plan document.
- Software Test Documentation document.
- Software Design Description document.
- Status report of the software.
- All other documents and requirements that the group might have generated that add value to the final deliverable.

1.1.4. Schedule and budget summary

Billing and Inventory System for Talisay District Hospital!

No further budget needed, resources and other requirements are attainable without spending any amount.

Table 1.1 Schedule Allocation Plan

Milestone	Date (initiation / completion)
Written Proposal	June 28, 2014 (completion)
System Requirements Specifications	July 25, 2014 (completion)
Software Project Management Plan	August 1, 2014 (completion)
Software Design Document	
Software Test Document	
Increment	
Software Output Presentation	
Final Documents	

2. Definitions

Table 1.2 Definitions

SRS	Software Requirements Plan
SPMP	Software Project Management Plan
SDD	Software Test Documentation
STD	Software Design Description
TBD	To be decided
BISTDH	Billing and Inventory System for Talisay District Hospital

3. Project organization

a. External structure

Billing and Inventory System for Talisay District Hospital!

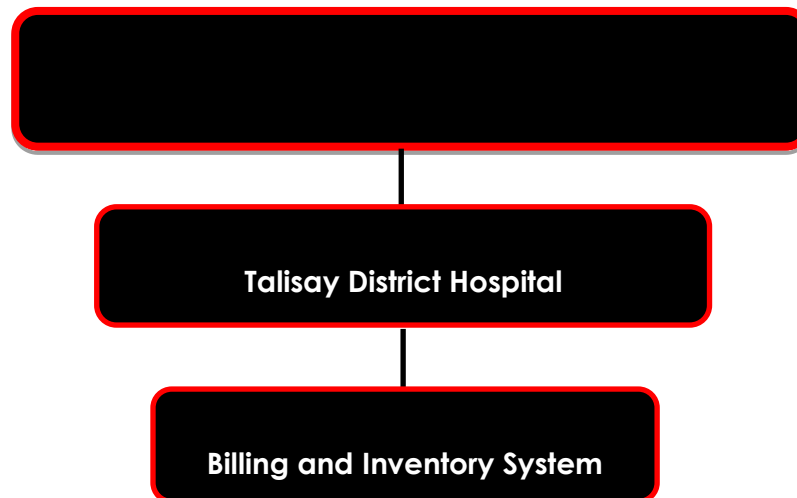


Figure 1.1 External Interface

a. Internal structure

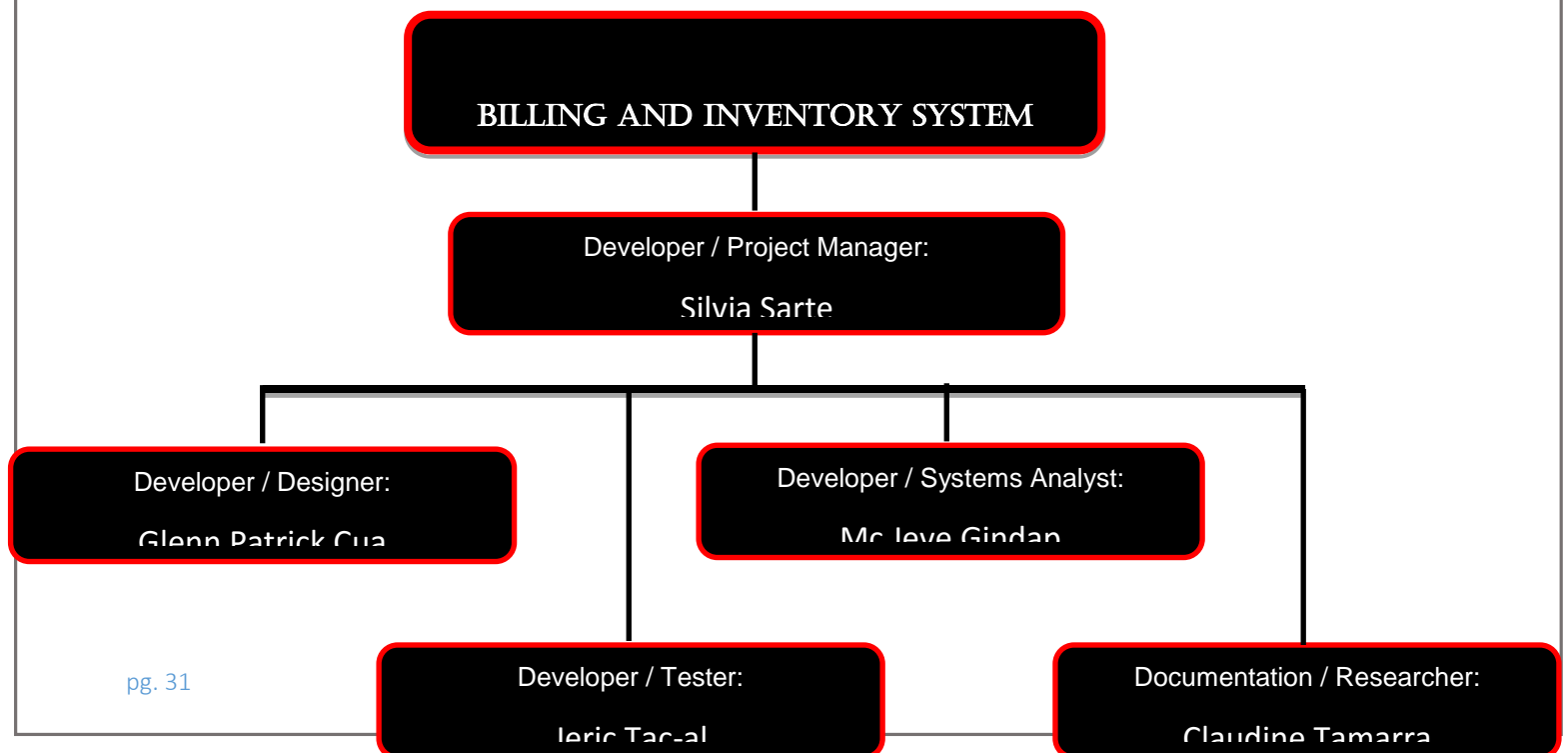


Figure 1.2 Internal Interface

3.3. Roles and responsibilities

This section describes the organization of the Group as decided by the team during a continuous role definition exercise. It is important to note that this is not a comprehensive list of responsibilities. It is the outcome of an initial team role building session. This section will be updated as the project progresses.

Table 1.3 Roles and Responsibilities

Role	Responsibilities
Team Leader/Project Manager	<ul style="list-style-type: none"> - Software project planning and monitoring - Milestone and schedule planning and monitoring - Set and communicate the team meeting agendas - Keep reminders for the group
System Developer	<ul style="list-style-type: none"> - Write and test codes and then rewrite and refined it if required. - Observe, test, diagnose and resolve the faults that occur in the software. - Analyzes the current system status then develops it towards the end of the project.
Documentation Officer	<ul style="list-style-type: none"> - The one in charge with the document reports. - Requirements Specifier.
Graphic Artist / Designer	<ul style="list-style-type: none"> - Plans and designs the templates and User Interface of the software
Programmer	<ul style="list-style-type: none"> - The one in charge of the program for the system.

Table 1.4 Roles and Responsibilities

Person's Responsible	Role
June 2014 – October 2014	

Glenn Patrick Cua	Developer / Designer
Mc Jeve Gindap	Developer / Systems Analyst
Silvia Sarte	Developer / Project Manager
Jeric Tac-al	Developer / Tester
Claudine Tamarra	Documentation / Researcher

4. Managerial process plans

a. Start-up plan

i. Estimation plan

This software is divided into two systems, Inventory and Billing Systems built for Talisay District Hospital.

The major topics that was given to our group is the Software Project Management Plan, each topics/sub-topics will be provided a process structure which defines several task and schedules that will be incorporated towards us.

Each system topic will be partially facilitated during the timeframe given by our adviser until it will be approved by her. Once the approval is made, we can precede already with the implementation process primarily the static and dynamic contents made from the storyboard in to the final output to our project.

The timeframe that was given to us is only 6 months (June 2014 – October 2014).

There were no necessarily defined costs for this system or project but only time management.

ii. Staffing plan

Table 1.5 Staff Plan

Name	Affiliation to project	June-October 2014
Glenn Cua	CIT-U Student	Part Time
Mc Jeve Gindap	CIT-U Student	Part Time
Silvia Sarte	CIT-U Student	Part Time
Jeric Tac-al	CIT-U Student	Part Time
Claudine Tamarra	CIT-U Student	Part Time

4.1.3. Resource acquisition plan

Our group will have all access to the system, applications, graphics and all necessary tools available. The course adviser will facilitate the group in determining its support needs and in obtaining the needed tools facilities.

4.1.4. Project staff training plan

No training for our group will be provided. The group members are already well-knowledgeable enough to their respective disciplines and each has already an experience in working with web development, flash development and its associated phases. In addition, each members has undergone many training including the several courses given to us with corresponding projects related to this matters, we have accommodated our limited experience in this area by recognizing the need for admins and staff assigned from the hospital which we had a good working relationship in the development of this project. Perhaps, the admins and staffs whose services will acquire from companies, Etc. will fill our knowledge gap in this area.

b. Work plan

i. Work activities

From the beginning until now, the group is still working with the assigned topics/sub-topics in the system and eventually planning to finalize the output of it. The group is partially doing some checking through our adviser and yet to be approved. Afterwards, once approval will be made, the group will implement primarily the dynamic parts and yet organize everything in our project.

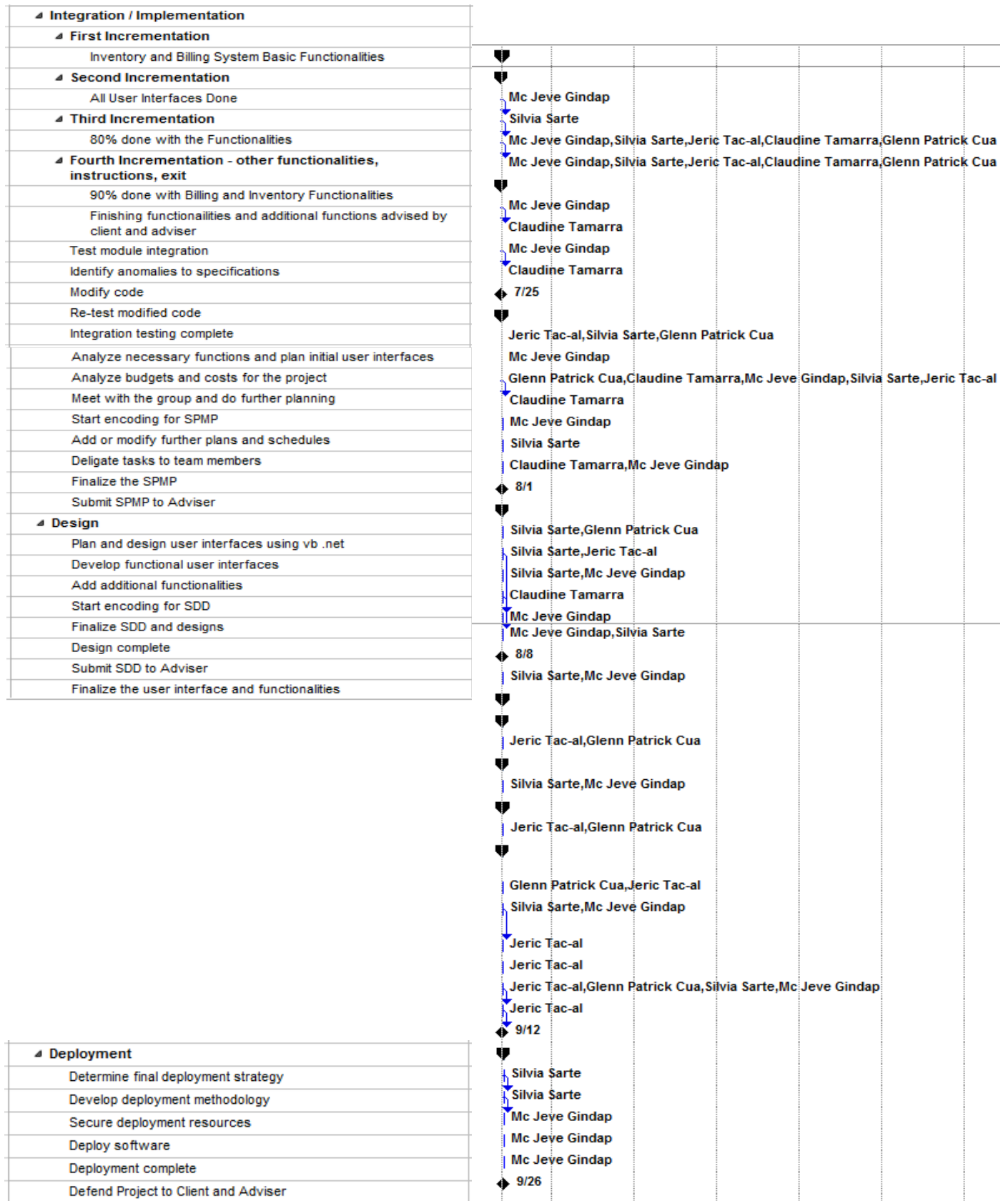
The following confirmed topics/sub-topics that has been made with or without approval are Software Project Management Plan. Everything was made from twenty - third of July until present.

Task Name	Duration	Start	Finish	Cost	Resource Names
▲ Project Gantt Chart	74 days	Mon 6/23/14	Fri 9/26/14	\$52,250.00	
▲ Project Proposal	11 days	Mon 6/23/14	Mon 7/7/14	\$1,550.00	
Interview sir randy about the system to be proposed	2 hrs	Mon 6/23/14	Mon 6/23/14	\$200.00	Mc Jeve Gindap
Analyzing proposed project	6 hrs	Fri 6/27/14	Fri 6/27/14	\$600.00	Silvia Sarte
Meeting with group to finalize project	1 hr	Fri 6/27/14	Fri 6/27/14	\$500.00	Mc Jeve Gindap,Silvia Sarte,Jeric Tac-al,Claudine Tamarra,Glenn Patrick Cua
Meeting with Instructor maam Iarmie for proposal submission	30 mins	Mon 7/7/14	Mon 7/7/14	\$250.00	Mc Jeve Gindap,Silvia Sarte,Jeric Tac-al,Claudine Tamarra,Glenn Patrick Cua
▲ Software Requirement Specifications	15 days	Mon 7/7/14	Fri 7/25/14	\$6,200.00	
Plan for project requirements	6 hrs	Tue 7/8/14	Tue 7/8/14	\$600.00	Mc Jeve Gindap
Start encoding SRS	3 days	Tue 7/8/14	Fri 7/11/14	\$2,400.00	Claudine Tamarra
Add necessary requirements needed	2 days	Wed 7/16/14	Thu 7/17/14	\$1,600.00	Mc Jeve Gindap
Finalize the SRS	2 days	Fri 7/18/14	Mon 7/21/14	\$1,600.00	Claudine Tamarra
Submit SRS to Adviser	0 hrs	Fri 7/25/14	Fri 7/25/14	\$0.00	Mc Jeve Gindap
Analyze budgets and costs for the project	6 hrs	Mon 7/28/14	Mon 7/28/14	\$600.00	Mc Jeve Gindap
Meet with the group and do further planning	30 mins	Mon 7/28/14	Mon 7/28/14	\$250.00	Glenn Patrick Cua,Claudine Tamarra,Mc Jeve Gindap,Silvia Sarte,Jeric Tac-al
Start encoding for SPMP	2 days	Mon 7/28/14	Wed 7/30/14	\$1,600.00	Claudine Tamarra
Add or modify further plans and schedules	30 mins	Wed 7/30/14	Wed 7/30/14	\$50.00	Mc Jeve Gindap
Deligate tasks to team members	2 hrs	Thu 7/31/14	Thu 7/31/14	\$200.00	Silvia Sarte
Finalize the SPMP	5 hrs	Fri 8/1/14	Fri 8/1/14	\$1,000.00	Claudine Tamarra,Mc Jeve Gindap
Submit SPMP to Adviser	0 days	Fri 8/1/14	Fri 8/1/14	\$0.00	Mc Jeve Gindap,Claudine Tamarra
▲ Design	6 days	Mon 8/4/14	Sat 8/9/14	\$4,000.00	
Plan and design user interfaces using vb .net	30 mins	Mon 8/4/14	Mon 8/4/14	\$100.00	Silvia Sarte,Glenn Patrick Cua
Develop functional user interfaces	4 hrs	Mon 8/4/14	Mon 8/4/14	\$800.00	Silvia Sarte,Jeric Tac-al
Add additional functionalities	2 hrs	Tue 8/5/14	Tue 8/5/14	\$400.00	Silvia Sarte,Mc Jeve Gindap
Start encoding for SDD	2 days	Tue 8/5/14	Wed 8/6/14	\$1,600.00	Claudine Tamarra
Finalize SDD and designs	2 hrs	Thu 8/7/14	Thu 8/7/14	\$200.00	Mc Jeve Gindap
Design complete	4 hrs	Thu 8/7/14	Thu 8/7/14	\$800.00	Mc Jeve Gindap,Silvia Sarte
Submit SDD to Adviser	0 hrs	Fri 8/8/14	Fri 8/8/14	\$0.00	Mc Jeve Gindap,Claudine Tamarra
Finalize the user interface and functionalities	0.5 hrs	Sat 8/9/14	Sat 8/9/14	\$100.00	Silvia Sarte,Mc Jeve Gindap

➤ Integration / Implementation	29 days	Mon 8/25/14	Tue 9/30/14	\$31,300.00	
➤ First Incrementation	3 days	Sat 8/23/14	Tue 8/26/14	\$4,800.00	
Inventory and Billing System Basic Functionalities	3 days	Sat 8/23/14	Tue 8/26/14	\$4,800.00	Jeric Tac-al, Glenn Patrick Cua
➤ Second Incrementation	6 days	Sat 8/30/14	Fri 9/5/14	\$9,600.00	
All User Interfaces Done	6 days	Sat 8/30/14	Fri 9/5/14	\$9,600.00	Silvia Sarte, Mc Jeve Gindap
➤ Third Incrementation	7 days	Sat 9/6/14	Mon 9/15/14	\$11,200.00	
80% done with the Functionalities	7 days	Sat 9/6/14	Mon 9/15/14	\$11,200.00	Jeric Tac-al, Glenn Patrick Cua
➤ Fourth Incrementation - other functionalities, instructions, exit	5 days	Mon 9/8/14	Fri 9/12/14	\$3,200.00	
90% done with Billing and Inventory Functionalities	1 day	Mon 9/8/14	Mon 9/8/14	\$1,600.00	Glenn Patrick Cua, Jeric Tac-al
Finishing functionalities and additional functions advised by client and adviser	1 day	Tue 9/9/14	Tue 9/9/14	\$1,600.00	Silvia Sarte, Mc Jeve Gindap
Test module integration	4 hrs	Wed 9/10/14	Wed 9/10/14	\$400.00	Jeric Tac-al
Identify anomalies to specifications	3 hrs	Thu 9/11/14	Thu 9/11/14	\$300.00	Jeric Tac-al
Modify code	4 hrs	Fri 9/12/14	Fri 9/12/14	\$1,600.00	Jeric Tac-al, Glenn Patrick Cua, Silvia Sarte, Mc Jeve Gindap
Re-test modified code	2 hrs	Fri 9/12/14	Fri 9/12/14	\$200.00	Jeric Tac-al
Integration testing complete	0 days	Fri 9/12/14	Fri 9/12/14	\$0.00	Jeric Tac-al
➤ Deployment	6 days	Fri 9/19/14	Fri 9/26/14	\$4,000.00	
Determine final deployment strategy	2 days	Fri 9/19/14	Mon 9/22/14	\$1,600.00	Silvia Sarte
Develop deployment methodology	1 day	Tue 9/23/14	Tue 9/23/14	\$800.00	Silvia Sarte
Secure deployment resources	6 hrs	Wed 9/24/14	Wed 9/24/14	\$600.00	Mc Jeve Gindap
Deploy software	1 day	Wed 9/24/14	Wed 9/24/14	\$800.00	Mc Jeve Gindap
Deployment complete	2 hrs	Thu 9/25/14	Thu 9/25/14	\$200.00	Mc Jeve Gindap
Defend Project to Client and Adviser	0 days	Fri 9/26/14	Fri 9/26/14	\$0.00	Glenn Patrick Cua, Claudine Tamarra, Jeric Tac-al, Mc Jeve Gindap, Silvia Sarte

ii. Schedule allocation

The project duration is constrained to only one semester; from the third week of July 2014 with final deliverables due in the first week of October 2014 or extension days beyond October (if necessary). We will control our schedule with main artifacts.



4.2.3. Resource allocation

As a student in the CIT-U, each team member has a fixed amount of time available for the project. During July to October, each of us is expected to devote a time at least 3-5 hours daily to research and help in implement and develop the project, and respective tasks. This work includes time spent working on any laptop or desktop computer, document preparation and inspection, tool development whether individually or by group working with it.

Task Name	Duration	Start	Finish
▲ Project Gantt Chart	74 days	Mon 6/23/14	Fri 9/26/14
▲ Project Proposal	11 days	Mon 6/23/14	Mon 7/7/14
Interview sir randy about the system to be proposed	2 hrs	Mon 6/23/14	Mon 6/23/14
Analyzing proposed project	6 hrs	Fri 6/27/14	Fri 6/27/14
Meeting with group to finalize project	1 hr	Fri 6/27/14	Fri 6/27/14
Meeting with Instructor maam larmie for proposal submission	30 mins	Mon 7/7/14	Mon 7/7/14
▲ Software Requirement Specifications	15 days	Mon 7/7/14	Fri 7/25/14
Plan for project requirements	6 hrs	Tue 7/8/14	Tue 7/8/14
Start encoding SRS	3 days	Tue 7/8/14	Fri 7/11/14
Add necessary requirements needed	2 days	Wed 7/16/14	Thu 7/17/14
▲ Analysis	7 days	Fri 7/25/14	Sat 8/2/14
Analyze necessary functions and plan initial user interfaces	5 hrs	Fri 7/25/14	Fri 7/25/14
Analyze budgets and costs for the project	6 hrs	Mon 7/28/14	Mon 7/28/14
Meet with the group and do further planning	30 mins	Mon 7/28/14	Mon 7/28/14
Start encoding for SPMP	2 days	Mon 7/28/14	Wed 7/30/14
Add or modify further plans and schedules	30 mins	Wed 7/30/14	Wed 7/30/14
Delegate tasks to team members	2 hrs	Thu 7/31/14	Thu 7/31/14
Finalize the SPMP	5 hrs	Fri 8/1/14	Fri 8/1/14
Submit SPMP to Adviser	0 days	Fri 8/1/14	Fri 8/1/14
▲ Design	6 days	Mon 8/4/14	Sat 8/9/14
Plan and design user interfaces using vb .net	30 mins	Mon 8/4/14	Mon 8/4/14
Develop functional user interfaces	4 hrs	Mon 8/4/14	Mon 8/4/14
Add additional functionalities	2 hrs	Tue 8/5/14	Tue 8/5/14
Start encoding for SDD	2 days	Tue 8/5/14	Wed 8/6/14
Finalize SDD and designs	2 hrs	Thu 8/7/14	Thu 8/7/14
Design complete	4 hrs	Thu 8/7/14	Thu 8/7/14
Submit SDD to Adviser	0 hrs	Fri 8/8/14	Fri 8/8/14
Finalize the user interface and functionalities	0.5 hrs	Sat 8/9/14	Sat 8/9/14

▴ Integration / Implementation	29 days	Mon 8/25/14	Tue 9/30/14
▴ First Incrementation	3 days	Sat 8/23/14	Tue 8/26/14
Inventory and Billing System Basic Functionalities	3 days	Sat 8/23/14	Tue 8/26/14
▴ Second Incrementation	6 days	Sat 8/30/14	Fri 9/5/14
All User Interfaces Done	6 days	Sat 8/30/14	Fri 9/5/14
▴ Third Incrementation	7 days	Sat 9/6/14	Mon 9/15/14
80% done with the Functionalities	7 days	Sat 9/6/14	Mon 9/15/14
▴ Fourth Incrementation - other functionalities, instructions, exit	5 days	Mon 9/8/14	Fri 9/12/14
90% done with Billing and Inventory Functionalities	1 day	Mon 9/8/14	Mon 9/8/14
Finishing functionalities and additional functions advised by client and adviser	1 day	Tue 9/9/14	Tue 9/9/14
Test module integration	4 hrs	Wed 9/10/14	Wed 9/10/14
Identify anomalies to specifications	3 hrs	Thu 9/11/14	Thu 9/11/14
Modify code	4 hrs	Fri 9/12/14	Fri 9/12/14
Re-test modified code	2 hrs	Fri 9/12/14	Fri 9/12/14
▴ Deployment	6 days	Fri 9/19/14	Fri 9/26/14
Determine final deployment strategy	2 days	Fri 9/19/14	Mon 9/22/14
Develop deployment methodology	1 day	Tue 9/23/14	Tue 9/23/14
Secure deployment resources	6 hrs	Wed 9/24/14	Wed 9/24/14
Deploy software	1 day	Wed 9/24/14	Wed 9/24/14
Deployment complete	2 hrs	Thu 9/25/14	Thu 9/25/14
Defend Project to Client and Adviser	0 days	Fri 9/26/14	Fri 9/26/14

4.2.4. Budget allocation

Table 1.6 Budget allocation

Task Name ▼	Cost ▼
▴ Project Gantt Chart	\$52,250.00
▴ Project Proposal	\$1,550.00
Interview sir randy about the system to be proposed	\$200.00
Analyzing proposed project	\$600.00
Meeting with group to finalize project	\$500.00
Meeting with Instructor maam larmie for proposal submission	\$250.00
▴ Software Requirement Specifications	\$6,200.00
Plan for project requirements	\$600.00
Start encoding SRS	\$2,400.00
Add necessary requirements needed	\$1,600.00
Finalize the SRS	\$1,600.00
Submit SRS to Adviser	\$0.00

Analysis	\$5,200.00
Analyze necessary functions and plan initial user interfaces	\$1,500.00
Analyze budgets and costs for the project	\$600.00
Meet with the group and do further planning	\$250.00
Start encoding for SPMP	\$1,600.00
Add or modify further plans and schedules	\$50.00
Delegate tasks to team members	\$200.00
Finalize the SPMP	\$1,000.00
Submit SPMP to Adviser	\$0.00
Design	\$4,000.00
Plan and design user interfaces using vb .net	\$100.00
Develop functional user interfaces	\$800.00
Add additional functionalities	\$400.00
Start encoding for SDD	\$1,600.00
Finalize SDD and designs	\$200.00
Design complete	\$800.00
Submit SDD to Adviser	\$0.00
Integration / Implementation	\$31,300.00
First Incrementation	\$4,800.00
Inventory and Billing System Basic Functionalities	\$4,800.00
Second Incrementation	\$9,600.00
All User Interfaces Done	\$9,600.00
Third Incrementation	\$11,200.00
80% done with the Functionalities	\$11,200.00
Fourth Incrementation - other functionalities, instructions, exit	\$3,200.00
90% done with Billing and Inventory Functionalities	\$1,600.00
Finishing functionalities and additional functions advised by client and adviser	\$1,600.00
Test module integration	\$400.00
Identify anomalies to specifications	\$300.00
Modify code	\$1,600.00
Re-test modified code	\$200.00
Integration testing complete	\$4,000.00
Deployment	\$1,600.00
Determine final deployment strategy	\$800.00
Develop deployment methodology	\$600.00
Secure deployment resources	\$800.00
Deploy software	\$200.00
Deployment complete	\$0.00
Defend Project to Client and Adviser	

Cost of Documents Presentation or Report is due to printing or hardcopies.
Since software tools has already been provided and ready to access at all time, due costs is N/A.

4.3.1. Requirements control plan

This section will specify the metrics, reporting mechanisms, and control procedures necessary to measure, report, and control the product requirements, the project schedule and resources, and the quality of the work processes and work products. All elements of the control plan will be consistent with the CIT-U program's standards, policies and the procedures for project control learned in the CIT-U core courses.

4.3.2. Schedule control plan

Group adviser will maintain the schedule in a project document. The group members themselves will be the responsible for gathering the individual tasks for each of them and making the status report. The adviser himself/herself will only give them a certain timeframe, check project updates, and advice time management as long as the members will meet the deadline. If the work scheduled gets behind, the team will spend an extra time on the project to make sure that there will be no major delays and inaccuracies occurring in the project.

4.3.3. Budget control plan

This project has no plan on budget control yet. If the project needs substantial amount, the team will spend an extra money to deliver the project.

4.3.4. Quality control plan

The adviser represents already as the quality manager; she will generate a separate Quality Control Plan document but only depends with the set standards. From this document, checklist and other evaluation measures will be determined necessary or otherwise.

Weekly meeting and reviews at the end of each phase will be the main mechanisms that Group will use to control the quality of the work process and the resulting work.

In addition, Group adviser will monitor quality control throughout the project by the mentoring. Each group member is also assigned an individual facilitator who will meet with the student on a regular basis to review individual and group progress and to address any managerial or technical issues or questions. The facilitator is encouraged to review the group's work products and to ask questions to determine the health and progress of the project.

4.3.5. Reporting plan

General Reporting

The Group will use a set of applications and methods available from the CIT-U program to communicate to the client, and adviser of the status requirements, schedules, quality, and other desired or required status metrics for the team project.

Internal Reporting

Team members will submit individual partially an assigned document presentation or report every scheduled day courtesy by the adviser. The adviser will consolidate all files and make one status report but only depends with the Client standards. Each group members will have a regularly scheduled one-on-one meeting with the group adviser to discuss regarding the assigned tasks and any issues in greater detail. At the regular group lead meetings, Group lead will report the adviser or facilitator regarding the group project's current progress, unresolved issues, and need for assistance.

External Reporting

Status and Progress reports will be sent to the client every weekend.

4.3.6. Metrics collection plan

Each group member will cooperate and submit their respective parts of the document presentation every scheduled due dates about as well as the developer's individual progress and productivity. Each group members will also report on tasks assigned, tasks done or not done, problems, hours planned, actual hours, and future plans at every status meeting with the adviser. The adviser will consolidate the data and will analyze the efforts spent per developer for the whole time doing their project.

4.3.7 Risk management plan

The group lead will generate a separate Risk Management Plan document at any necessary means. Risk will be identified at the beginning of each phase and the group lead will assemble them into a prioritized risks list. That list will be published on the group's project management system. During the weekly status meeting, the group members will raise risks and reassess the prioritized risks and if necessary, revise the list. The group will use "Risk Statement." Team members will determine the mitigation plans for all identified risks and tasks that need to be completed and then these risks

and tasks will be assigned as action items. The team will monitor high priority risks every week. All risks will be documented by the group.

4.3.8 Project closeout plan

The group will ensure the proper closeout of the project in late October 2014. And all the documents will also be submitted in the said date or later.

5. Technical process plans

5.1 Process Model

The group will use VB.net for system implementation of the project. Group will provide an iteration plan at the beginning of the iteration. The process will be applied to specify the phase of the implementation for the project. Software is the most important tool for the project development.

5.2 Methods, tools, and techniques

The methods and techniques listed in this table will be evaluated and applied in specific areas of the project as appropriate:

Table 1.7 Methods and Techniques

Category	Methods and Techniques
Requirements Elicitation	<ul style="list-style-type: none">- Elicitation from existing previous modules/ topic from the interactive learning object website.- Meetings- Status report presentation- Brainstorming
Formal Specification and Analysis	<ul style="list-style-type: none">- Formal models using UML to model structural aspects of the requirements and design- Use cases to define requirements that should be place in SRS document
Document presentation report	<ul style="list-style-type: none">- Weekly partial document report for revisions of documents for completion.
Estimation	<ul style="list-style-type: none">- Function Point method for conversion from Function Point count to effort may be used for size estimation and project scope definition.

Table 1.8 Methods and Techniques

Category	Tools
Operating System	Windows XP, Vista, 7, 8, MAC OS
Development languages	VB.net – Microsoft Visual Studio 2012
Document	All documents will be written in Microsoft Word
Graphics / Design Application	Metro Studio for icons and images

5.3 Infrastructure Plan

The Talisay District Hospital will primarily be considered for development of the project. All hardware and software is available in the hospital facilities.

5.4 Product Acceptance Plan

The client with signing appropriate acceptance document accepts every milestone of the project formally. At the end of each phase the client will install the product and perform an acceptance test. This may result in additional requests for changes and improvements.

6. Supporting process plans

6.1. Configuration management plan

The group's adviser is part and responsible of a separate document and it will be maintained.

6.2. Verification and validation plan

Several tasks collectively make up continuing activities that go across the different life cycle phases. These general activities are traceability analysis, evaluation, interface analysis, and testing. These activities are horizontal threads that tie together the subsequent phase activities and allow verification to be more effectively conducted.

Traceability analysis

The traceability is the ability to identify the relationships between originating requirements and their resulting system features. It permits tracking forward or backward through the network of interrelationships that are created as requirements are decomposed and refined through a system's life cycle. Traceability allows verification of the properties set forth in the concept and that requirement specifications have been carried forward to the design specification, implemented in the code, included in the test plan and cases, and provided to the customer and user in the resulting system.

Evaluation

Evaluation ascertains the value or worth of an item and help to assure that a system meets its specifications. Evaluations are performed by many persons across all life cycle phases, on both interim and final software products, and may be either a comprehensive or selective assessment of a system. Evaluations are used through all phases and for all type of software products, including user documents, manuals, and other project documents. These may be of many forms, such as text or graphic representations, and in various media, such as paper, magnetic tape, diskette, and computer files. This range of product types and forms requires a large variety of techniques for performing and managing software evaluations.

Interface analysis

When information is passed across a boundary, there is always the possibility of losing some information or alerting the information content. The task of interface analysis serves to ensure the completeness, accuracy, and consistency of these interfaces. Interface requirements at the design and implementation phases should be identified analyzed at the functional, physical, and data interface level. The goal of interface analysis is to evaluate the specific software deliverables (e.g., requirements, design, code) for correct, consistent, complete, and accurate interpretation of the interface requirements.

Testing

In the context of software verification and validation, testing can be defined as the testing that is performed in support of the V&V objectives. These objectives may differ from those of the developer. Testing is performed at several points in the life cycle, starting from the requirement phase up to the test phase. The various test activities are listed below:

Component Testing

Testing conducted to verify the implementation of the design for one software elements or a collection of software elements

Integrating Testing

An orderly progression of testing in which software elements, hardware elements, or both are combined and tested until the entire system has been integrated.

System Testing

The process of testing an integrated hardware and software system to verify that the system meets its specified requirements

Acceptance Test

Formal testing conducted to determine whether or not a system satisfies its acceptance criteria and to enable the customer to determine whether or not to accept the system.

This section explains out V&V plan for each phase of software development.

Table 1.9 Verification and validation plan

Phase	V&V Input	V&V Tasks	V&V Output
Requirements	SRS Interface requirements documentation User documentation	Requirements traceability analysis Requirements evaluation Requirements interface analysis Test plan generation	Requirements phase tasks reporting Test plan : System - Acceptance
Design	SRS Interface requirements documentation Interface design documentation User documentation	Design traceability analysis Design evaluation Interface analysis Test plan generation Test design generation	Design phase task reporting Test plan Component Integration Test design Component Integration System acceptance
Implementation	Source Code listing	Code traceability analysis	Implementation phase task reporting

	Executable code Interface design documentation User documentation	Code evaluation Interface analysis Documentation evaluation Test case generation Test procedure generation Component test execution	Test cases Component Integration System Acceptance Test procedure Component Integration - System
Test	Source code listing Executable code User documentation	Test procedure generation Integration test execution System test execution Acceptance test execution	Test phase task reporting Test procedure Acceptance Anomaly report V&V phase summary
Installation and Checkout	Installation package	Installation configuration audit V&V final report generation	Installation and checkout phase task reporting

6.3. Documentation plan

There are a number of documents that will be produced during the lifetime of the project. All documents are responsibility of the project team members. The lists of documents that will be created and maintained under version control include:

Table 2.0 Documentation Plan

Project Proposal	
Software Requirements Specification (SRS)	defines the functionality that is required by the client.
Software Project Management Plan (SPMP)	defines the project management plan.
Software Test Documentation (STD)	defines the testing of the project on documentation.
Software Design Description (SDD)	defines the project design description.
Status Report	
Use Case Diagram	
Use Case Description	

6.4. Quality assurance plan

The group project will be assured to fulfill the commitment to the software process and the software product as specified in the requirement specification by the documents made for the project. The project is also a subproject for Talisay District Hospital, therefore there are certain standards that needs to be followed for it to be a subproject of Talisay District Hospital. The scope of this project is only allowable and limited for Talisay District Hospital, so quality and specification is needed for this project to be running.

6.5. Reviews and audits

The SPMP specifies the plan, schedule and methods to be used in conducting the project reviews and audits. So far, the only products that were created are documents and the initiation of the project. It is expected that in the future the details about the review and audits will be maintained within the team's QA Plan. And most of the reviews will be provided at the final stage of this project.

6.6. Problem resolution plan

All the problems encountered will be noted in order to further improve the project. There will be a series of test taken in order to thoroughly check the system. Evaluate and retest all the information and data gathered for the quality and stability of the system.

6.7. Subcontractor management plan

Not applicable to group project.

6.8. Process improvement plan

Process improvement will be done as a part of the final project evaluation and “lessons learned” phase. At that time the process improvement plan will be created and will be implemented.

6.9 Additional Plans

Not applicable to group project.

7. Plan Annexes

APPENDIX A – ORGANIZATION CHART INTERNAL

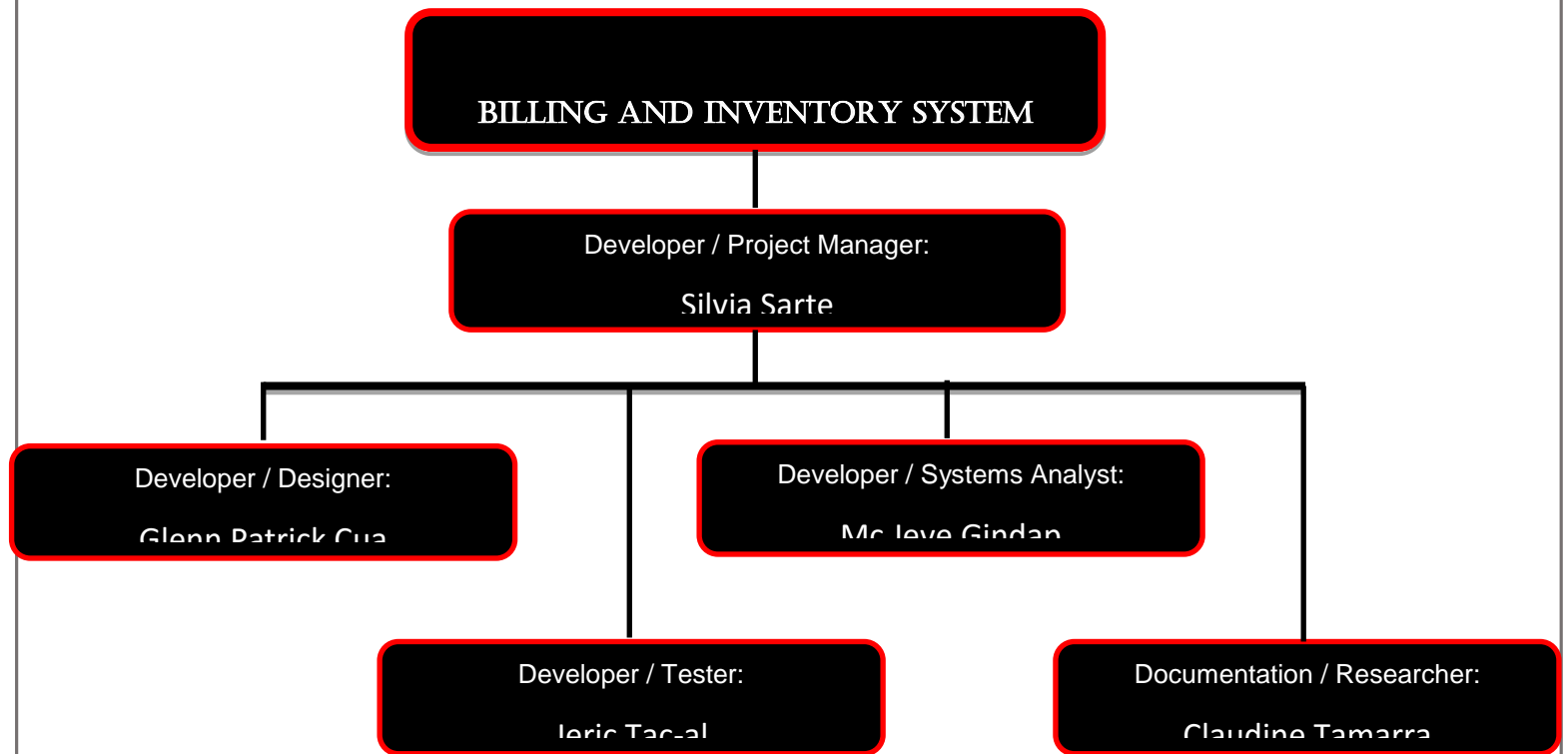


Figure 1.3 Organization Chart Internal

APPENDIX B – WORK ACTIVITIES

Task Name	Resource Name		Start	Finish	Cost	
➤ Integration / Implementation		29 days	Mon 8/25/14	Tue 9/30/14	\$31,300.00	
➤ First Incrementation		3 days	Sat 8/23/14	Tue 8/26/14	\$4,800.00	
Inventory and Billing System Basic Functionalities		3 days	Sat 8/23/14	Tue 8/26/14	\$4,800.00	Jeric Tac-al,Glenn Patrick Cua
➤ Second Incrementation		6 days	Sat 8/30/14	Fri 9/5/14	\$9,600.00	
All User Interfaces Done		6 days	Sat 8/30/14	Fri 9/5/14	\$9,600.00	Silvia Sarte,Mc Jeve Gindap
➤ Third Incrementation		7 days	Sat 9/6/14	Mon 9/15/14	\$11,200.00	
80% done with the Functionalities		7 days	Sat 9/6/14	Mon 9/15/14	\$11,200.00	Jeric Tac-al,Glenn Patrick Cua
➤ Fourth Incrementation - other functionalities, instructions, exit		5 days	Mon 9/8/14	Fri 9/12/14	\$3,200.00	
90% done with Billing and Inventory Functionalities		1 day	Mon 9/8/14	Mon 9/8/14	\$1,600.00	Glenn Patrick Cua,Jeric Tac-al
Finishing functionalities and additional functions advised by client and adviser		1 day	Tue 9/9/14	Tue 9/9/14	\$1,600.00	Silvia Sarte,Mc Jeve Gindap
Test module integration		4 hrs	Wed 9/10/14	Wed 9/10/14	\$400.00	Jeric Tac-al
Identify anomalies to specifications		3 hrs	Thu 9/11/14	Thu 9/11/14	\$300.00	Jeric Tac-al
Modify code		4 hrs	Fri 9/12/14	Fri 9/12/14	\$1,600.00	Jeric Tac-al,Glenn Patrick Cua,Silvia Sarte,Mc Jeve Gindap
Re-test modified code		2 hrs	Fri 9/12/14	Fri 9/12/14	\$200.00	Jeric Tac-al

APPENDIX C – RESOURCE ALLOCATION

Task Name	Duration	Start	Finish
Project Gantt Chart	74 days	Mon 6/23/14	Fri 9/26/14
Project Proposal	11 days	Mon 6/23/14	Mon 7/7/14
Interview sir randy about the system to be proposed	2 hrs	Mon 6/23/14	Mon 6/23/14
Analyzing proposed project	6 hrs	Fri 6/27/14	Fri 6/27/14
Meeting with group to finalize project	1 hr	Fri 6/27/14	Fri 6/27/14
Meeting with Instructor maam larmie for proposal submission	30 mins	Mon 7/7/14	Mon 7/7/14
Software Requirement Specifications	15 days	Mon 7/7/14	Fri 7/25/14
Plan for project requirements	6 hrs	Tue 7/8/14	Tue 7/8/14
Start encoding SRS	3 days	Tue 7/8/14	Fri 7/11/14
Add necessary requirements needed	2 days	Wed 7/16/14	Thu 7/17/14
Finalize the SRS	2 days	Fri 7/18/14	Mon 7/21/14
Submit SRS to Adviser	0 hrs	Fri 7/25/14	Fri 7/25/14
Analysis	7 days	Fri 7/25/14	Sat 8/2/14
Analyze necessary functions and plan initial user interfaces	5 hrs	Fri 7/25/14	Fri 7/25/14
Analyze budgets and costs for the project	6 hrs	Mon 7/28/14	Mon 7/28/14
Meet with the group and do further planning	30 mins	Mon 7/28/14	Mon 7/28/14
Start encoding for SPMP	2 days	Mon 7/28/14	Wed 7/30/14
Add or modify further plans and schedules	30 mins	Wed 7/30/14	Wed 7/30/14
Delegate tasks to team members	2 hrs	Thu 7/31/14	Thu 7/31/14
Finalize the SPMP	5 hrs	Fri 8/1/14	Fri 8/1/14
Submit SPMP to Adviser	0 days	Fri 8/1/14	Fri 8/1/14
Design	6 days	Mon 8/4/14	Sat 8/9/14
Plan and design user interfaces using vb .net	30 mins	Mon 8/4/14	Mon 8/4/14
Develop functional user interfaces	4 hrs	Mon 8/4/14	Mon 8/4/14
Add additional functionalities	2 hrs	Tue 8/5/14	Tue 8/5/14
Start encoding for SDD	2 days	Tue 8/5/14	Wed 8/6/14
Finalize SDD and designs	2 hrs	Thu 8/7/14	Thu 8/7/14
Design complete	4 hrs	Thu 8/7/14	Thu 8/7/14
Submit SDD to Adviser	0 hrs	Fri 8/8/14	Fri 8/8/14
Finalize the user interface and functionalities	0.5 hrs	Sat 8/9/14	Sat 8/9/14

▲ Integration / Implementation	29 days	Mon 8/25/14	Tue 9/30/14
▲ First Incrementation	3 days	Sat 8/23/14	Tue 8/26/14
Inventory and Billing System Basic Functionalities	3 days	Sat 8/23/14	Tue 8/26/14
▲ Second Incrementation	6 days	Sat 8/30/14	Fri 9/5/14
All User Interfaces Done	6 days	Sat 8/30/14	Fri 9/5/14
▲ Third Incrementation	7 days	Sat 9/6/14	Mon 9/15/14
80% done with the Functionalities	7 days	Sat 9/6/14	Mon 9/15/14
▲ Fourth Incrementation - other functionalities, instructions, exit	5 days	Mon 9/8/14	Fri 9/12/14
90% done with Billing and Inventory Functionalities	1 day	Mon 9/8/14	Mon 9/8/14
Finishing functionalities and additional functions advised by client and adviser	1 day	Tue 9/9/14	Tue 9/9/14
Test module integration	4 hrs	Wed 9/10/14	Wed 9/10/14
Identify anomalies to specifications	3 hrs	Thu 9/11/14	Thu 9/11/14
Modify code	4 hrs	Fri 9/12/14	Fri 9/12/14
Re-test modified code	2 hrs	Fri 9/12/14	Fri 9/12/14
Integration testing complete	0 days	Fri 9/12/14	Fri 9/12/14

▲ Deployment	6 days	Fri 9/19/14	Fri 9/26/14
Determine final deployment strategy	2 days	Fri 9/19/14	Mon 9/22/14
Develop deployment methodology	1 day	Tue 9/23/14	Tue 9/23/14
Secure deployment resources	6 hrs	Wed 9/24/14	Wed 9/24/14
Deploy software	1 day	Wed 9/24/14	Wed 9/24/14
Deployment complete	2 hrs	Thu 9/25/14	Thu 9/25/14
Defend Project to Client and Adviser	0 days	Fri 9/26/14	Fri 9/26/14

Software Design Description

for

TALISAY DISTRICT HOSPITAL
BILLING AND INVENTORY SYSTEM

Signature

Member Name	Position	Signature
Glenn Patrick Cua	Developer / Designer	
Mc Jeve Gindap	Developer / Systems Analyst	
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Change History

VERSION	DATE	AUTHOR	CHANGES
1.0	July 24, 2014	Glenn Patrick Cua Mc Jeve Gindap Silvia Sarte Jeric Tac-al Claudine Tamarra	Initial version
2.0	August 4, 2014	Glenn Patrick Cua Mc Jeve Gindap Silvia Sarte Jeric Tac-al Claudine Tamarra	Final Version

Preface

The following Software Design Description (SDD) describes the proposed plan to be taken by our group, to contribute to the completion of the Billing and Inventory System for Talisay District Hospital.

The purpose of this project is to assemble under one cover a sufficient body of knowledge about managing a successful software project. This SDD is intended to be used by the Talisay District Hospital staff for the purpose of evaluating the groups' contribution on the project for implementing the design of the said project. This documentation will allow us to indicate and introduce our User Interface and to develop our project in the early stage possible.

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5. Introduction

5.1. *Purpose*

This Software Design Description provides the design details of the Billing and Inventory system for Software Project.

This document describes the system design for the Billing and Inventory System. It describes how the application will be constructed, by specifying the components to be used, how they will be organized in relation to each other, and the general principles of the application's internal construction.

This document also serves as a systems reference manual for the running system once it is implemented, and is the primary reference for application migrations, support and maintenance. This document will also allow us to indicate our project's interface in each module and label.

5.2. *Scope*

The document contains the complete description of the design of Billing and Inventory System.

The Software Design Description is all about the module descriptions and details of the project assigned to our group. This document describes how the software will satisfy the requirements; how the software functions internally; and how the operating system, structure, interfaces, design inputs and sources, design constraints, timing between components, and data structures are considered and integrated into the code. The control flow, control logic, data flow model (structure, rules), and relationship between data and process are detailed. Methods to mitigate the consequences of software failure are an integral part of the software design.

The basic architecture is the company server for Talisay District Hospital, which is our client. The basic form will be written in VB.net.

The designated members that will make the system will act as the administrators of the system. They will have the full access to make changes to the system. The changes could include, but not limited to, changing the contents of the data either enhancing it or deducting its contents. The assigned administrators are also able to manipulate and edit the codes, whichever our instructor wants us to change or modify.

5.3. *Definitions and Acronyms*

Table 1.1 Definitions and Acronyms

Term	Definition and Acronyms
Billing statement	Is a notification sent to a customer who has been invoiced but has not yet paid. It summarizes their balance, and requests payment. Statements should be mailed a few days after the invoice is mailed, before the end of the first billing.
CCS	College of Computer Studies
SDD	Software Design Description, A blueprint or model of the software system. The SDD is used as the primary medium for communicating software design information.
SRS	Software Requirements Plan
BISTDH	Billing and Inventory System for Talisay District Hospital

6. Decomposition Description

6.1. Module Decomposition

6.1.1. Module 1 Description

The administrator GUI allows the administrator to edit the system by adding, updating, modifying and optimizing the system.

Table 1.2 Administrator Module Description

Identification	Administrator
Type	Module
Purpose	To allow the Administrator to perform major functions such as: adding, updating, enhancing and optimizing the system.

6.1.2. Module 2 Description

The user / patients GUI allows the patients to view their current balances and total charges.

Table 1.3 Patients Module Description

Identification	Patients
Type	Module
Purpose	To allow the patients to view their current balances and total charges

6.2. Concurrent Process Decomposition

6.2.1. Billing and Inventory Data Process

Identification: Billing and Inventory Data Process
Type: Scripting File
Purpose: So that user can monitor each patient's transactions.
Function: Hospital transactions.
Lifetime: As long as the server working and the software installed.

6.3. Data Decomposition

6.3.1. Administrator Entity Description

Table 1.4 Administrator Entity Description

Attribute Name	Attribute Type	Size
Name	String	20
Password	String	30

6.3.2. User Entity Description

Table 1.5 User Entity Description

Attribute Name	Attribute Type	Size
Name	String	30

7. Dependency Description

7.1. *Inter-module Dependencies*

7.1.1. *Dependent Modules*

3.1.1 Administrator Module: This module let the administrator navigate the entire code of the system for further changes.

7.2. *Inter-process Dependencies*

3.2.1. Billing and Inventory Data process: This process relies on the billing an inventory transactions.

7.2.1. *Dependent Process*

NONE

8. Interface Description

This part of the Software Design Description (SDD) is where the Graphical User Interface is documented.

8.1. Module Interface

8.1.1. Administrator Module Description

Table 1.6 Administrator Module Description

Identification	Administrator
Type	Textbox / Select Box / Combo Box
Description	This will display all the functions that the Administrator can use.
Function/s	

8.2. Process Interface

INVENTORY

8.2.1. Login Menu

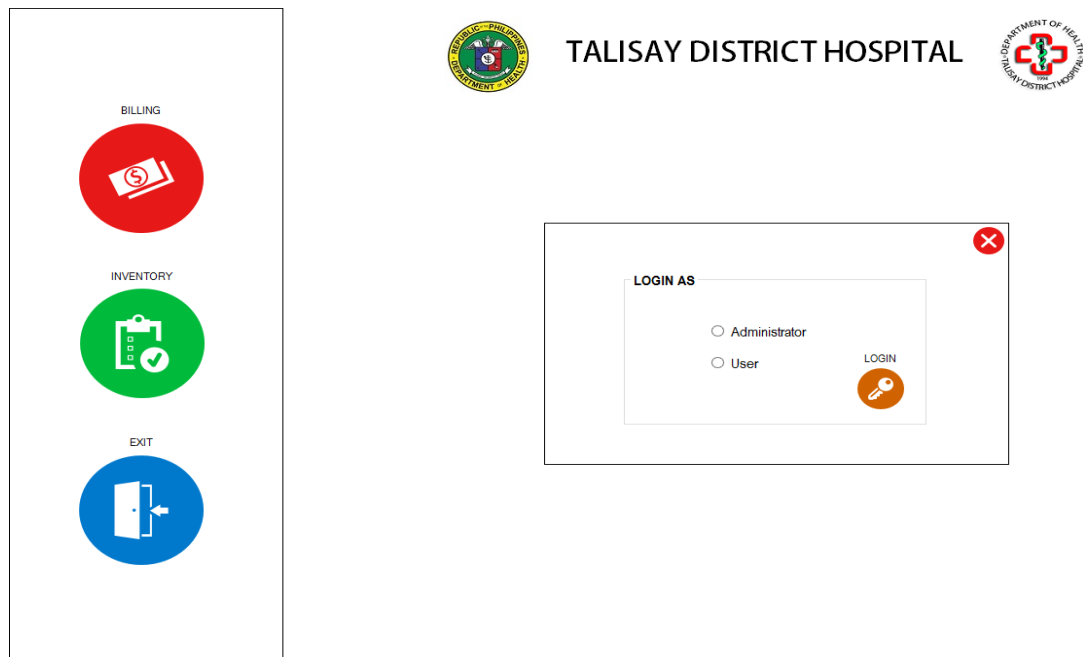


Figure 1.1 Inventory Login Menu

This figure above shows the interface when the User/Administrator logs to the system.

8.2.2. *Supplies Availability Inquiry*

BILLING

INVENTORY

EXIT

SUPPLIES AVAILABILITY INQUIRY
TALISAY DISTRICT HOSPITAL

Department Responsibility Center

Office Code No.

SUBMIT

Stock No.	Item Description	Unit	Quantity	Status of Stock
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<div></div>				

Purpose / Remarks

Inquired by: Signature Name Designation Date

Status provided by (Accounting Div.): Signature Name Designation Date

ADD

DELETE

EDIT

Figure 1.2 Supplies Availability Inquiry

This figure above shows the process interface when the User will inquire for the supplies availability by adding the requested supplies, they can also edit and delete the added supplies.

8.2.3. *Enter Admin Password*

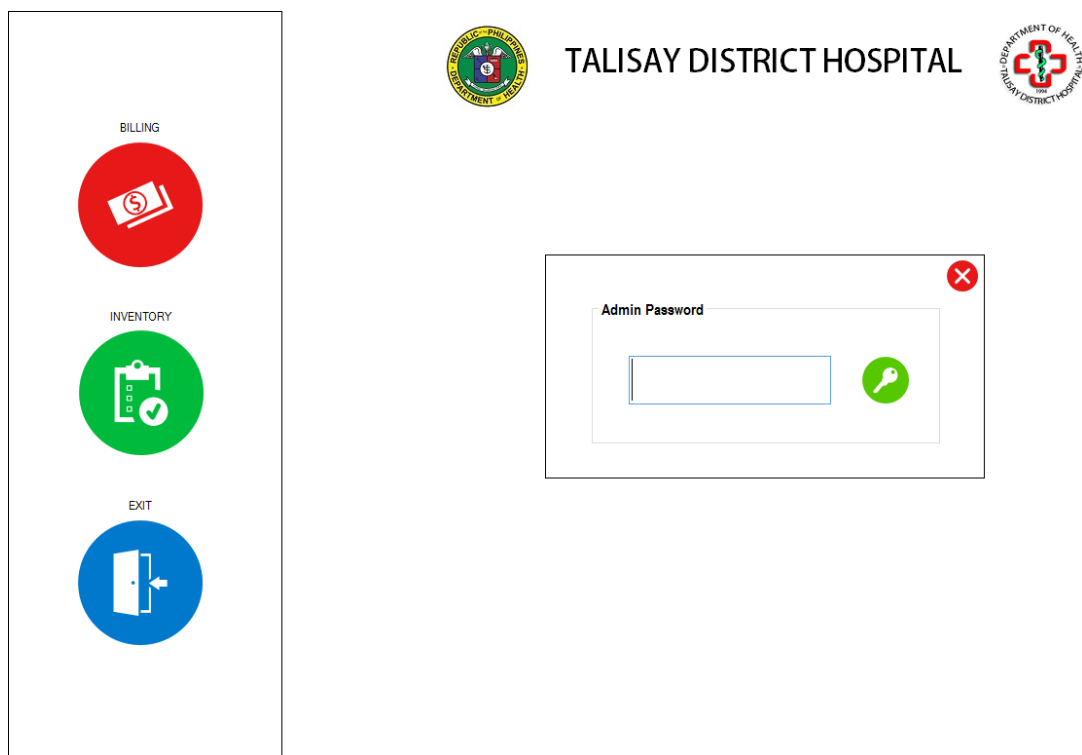


Figure 1.3 Enter Admin Password

This figure above shows the interface for inputting the admins password and will be logged in to the admin panel.

8.2.4. Admin Panel

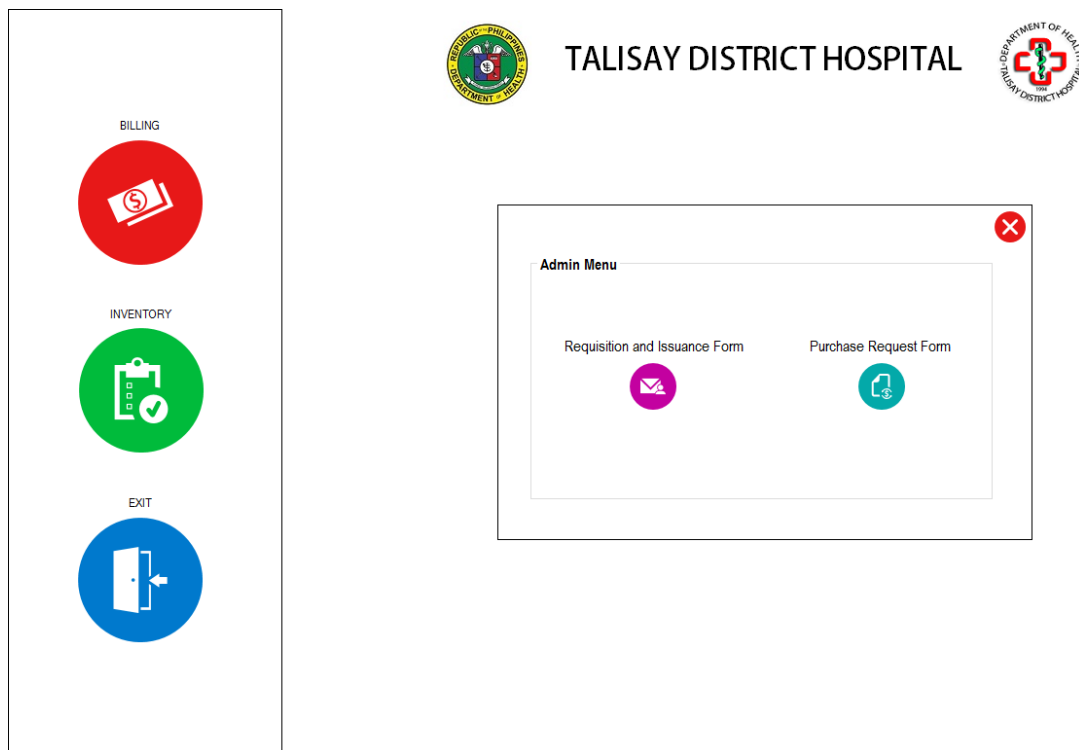


Figure 1.4 Admin Panel

This figure above shows the interface for the admin to be able to choose what form they will access.

8.2.5. Requisition and Issuance Form

BILLING

INVENTORY

EXIT

REQUISITION AND ISSUANCE SLIP

TALISAY DISTRICT HOSPITAL

Department: Responsibility Center: RIS No.: Date:

Office: Code: SAI No.: Date:

Stock No.	Unit	Description	Quantity	Quantity	Remarks
-----------	------	-------------	----------	----------	---------

Purpose:

Requested by:

Approved by:

Issued by:

Received by:

Signature

Printed Name

Designation

Date

SUBMIT

APPROVE

EDIT

DELETE

Figure 1.5 Requisition and Issuance Form

This figure above shows the interface for the admin to be able to edit, delete and approve requested supplies. In this interface, all the existing and available supplies can be seen.

8.2.6. *Purchase Request Form*

BILLING

INVENTORY

EXIT

PURCHASE REQUEST
TALISAY DISTRICT HOSPITAL

Department PR No. Date

Section SAI No. Date

Stock No.	Unit	Item Description	Quantity	Unit Cost	Total Cost
-----------	------	------------------	----------	-----------	------------

Purpose

Requested by:

Approved by:

Signature

Printed Name

Designation

SUBMIT

APPROVE

DELETE

EDIT

Figure 1.6 Purchase Request Form

This figure above shows the interface for the admin to be able to edit, delete and approve requested supplies. In this interface, all the supplies that are not available will be viewed and will be requested for purchase.

BILLING

8.2.7. *Main Menu*

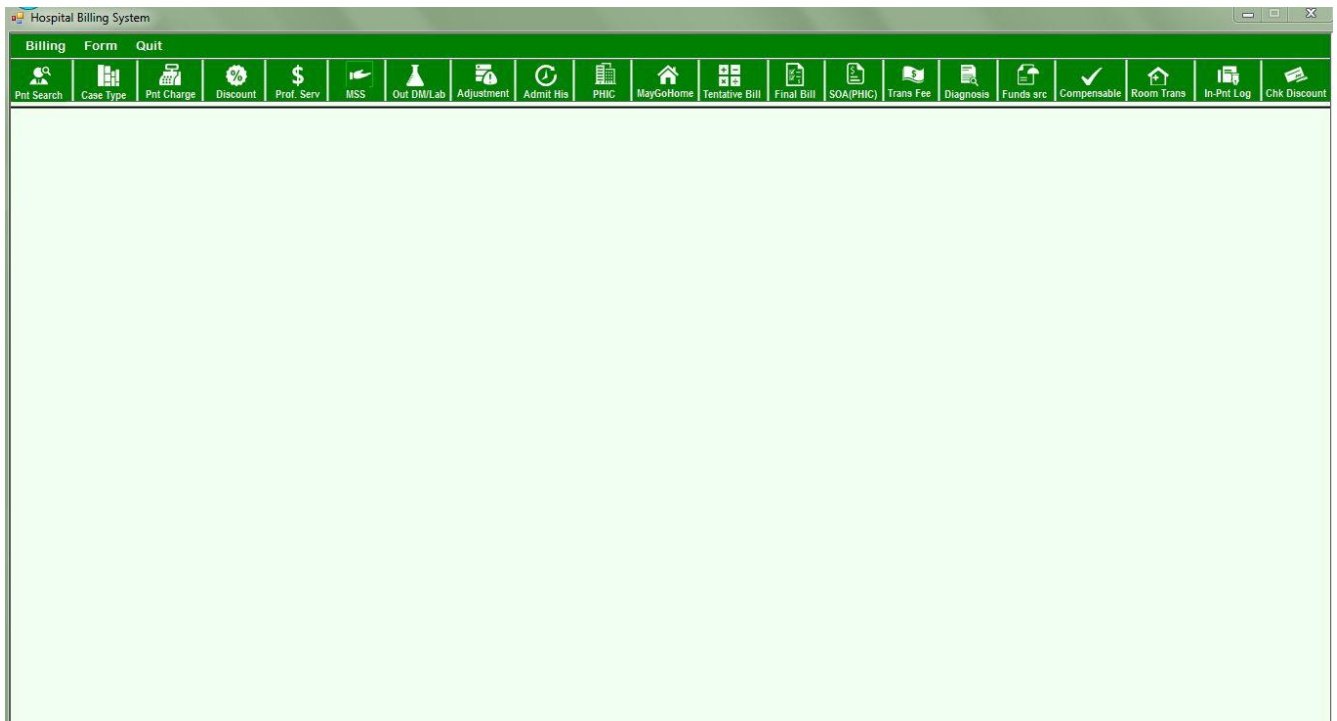


Figure 1.7 Billing Main Menu

This figure above shows the interface for the Billing Main Menu and all its components.

8.2.8. Patient Search



The image shows a 'Patient Search' dialog box with a green title bar and standard window controls. It contains several input fields for patient information: 'Health Record Number', 'Last Name', 'First Name', 'Middle Name', 'Birthdate', 'Birthplace', and 'Sex' (a dropdown menu). At the bottom, there are 'Retrieve' and 'Cancel' buttons, and a note that says 'Input in any of the field to search'.

Health Record Number:

Last Name:

First Name:

Middle Name:

Birthdate:

Birthplace:

Sex:

Input in any of the field to search

Figure 1.8 Patient Search

This figure above shows the interface for the Billing where all the patient records of the hospital will be searched and can be retrieved.

8.2.9. *Billing Patient's Name*

The screenshot displays a software interface for billing a patient's name. At the top, there is a green menu bar with the options 'Billing', 'Form', and 'Quit'. Below this is a toolbar containing various icons for different functions such as 'Pnt Search', 'Case Type', 'Pnt Charge', 'Discount', 'Prof. Serv', 'MIS', 'Out DM/Lab', 'Adjustment', 'Admit His', 'PHIC', 'MayGoHome', 'Tentative Bill', 'Final Bill', 'SOA(PHIC)', 'Trans Fee', 'Diagnosis', 'Funds arc', 'Compensable', 'Room Trans', 'In-Pnt Log', and 'Chk Discount'. The main window is titled 'Billing(Patient's Name)' and contains the following fields and controls:

- Hospital No.:** 0000123
- Date/Time Logged:** Aug 5, 2014 04:21 pm
- Accomodation:** Pay
- Encounter:** Admitted
- CASE TYPE:** A dropdown menu with 'B' selected.
- CONTINUE PHIC?:** A dropdown menu with 'No' selected.
- Action Buttons:** A vertical stack of four buttons on the right: 'Edit' (with a pencil icon), 'Save' (with a floppy disk icon), 'Cancel' (with a red X icon), and 'Close' (with a red X icon).

Figure 1.9 Billing Patient's Name

This figure above shows the interface for the Billing Patient's Name where patient names can be edited and can be saved.

8.2.10. *Patient Charges*

Billing Form Quit

Pnt Search Case Type Pnt Charge Discount Prof. Serv MSS Out DM/Lab Adjustment Admit His PHIC MayGoHome Tentative Bill Final Bill SOA(PHIC) Trans Fee Diagnosis Funds src Compensable Room Trans In-Pnt Log Chk Discount

PatientCharges

Hospital No.: 00003 Date/Time Logged: Aug 5, 2014 04:21 pm Accomodation: Pay Encounter: Admitted

ACCOUNT NO.: 000212 CHARGE SLIP NO.:
CHARGE SLIP DATE: 08/05/2014 COST CENTER:

CHARGE SLIP NO.	TYPE OF CHARGE	ITEM	UNIT OF MEASURE	QUANTITY	PRICE	AMOUNT	OR INCLUSION
-----------------	----------------	------	-----------------	----------	-------	--------	--------------

TOTAL AMOUNT:

+ Add
View Slip
Close
Save

Figure 2.0 Patient's Charges

This figure above shows the interface for the Billing Patient Charges where accounts can be added and the payment slips can be viewed.

9. Detailed Design

9.1. Module Detailed Design

9.1.1. Administrator Module Detail

Table 1.7 Administrator Module Detail

Attribute	Type	Purpose
Name	String	Use to identify the administrator who administers.
Password	String(encrypted)	Use to identify if the administrator is authorized.

9.1.2. User Module Detail

Table 1.8 User Module Detail

Attribute	Type	Purpose
Name	String	Use to identify the user.

10. Annexes

6.1. Data flow diagram (optional)

6.2. Class diagram

6.3. Sequence diagram / Communication diagram

6.4. User interface design

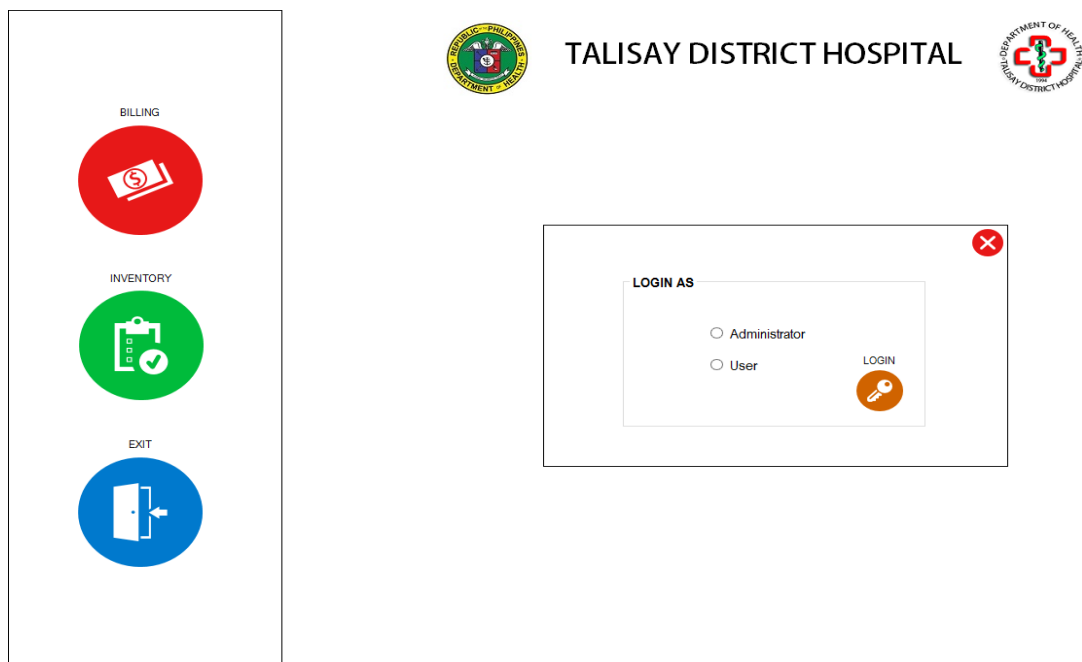
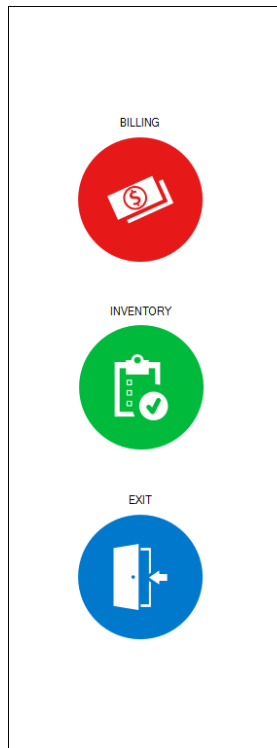


Figure 1.1 Inventory Login Menu



SUPPLIES AVAILABILITY INQUIRY

TALISAY DISTRICT HOSPITAL

Department

Office

Responsibility Center

Code No.

SUBMIT

Stock No.	Item Description	Unit	Quantity	Status of Stock
<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>

Purpose / Remarks

ADD

DELETE

EDIT

Inquired by:

Signature

Name

Designation

Date

Status provided by (Accounting Div.):

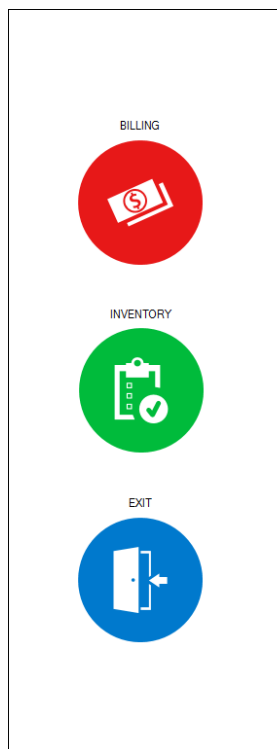
Signature

Name

Designation

Date

Figure 1.2 Supplies Availability Inquiry



✖

Admin Password


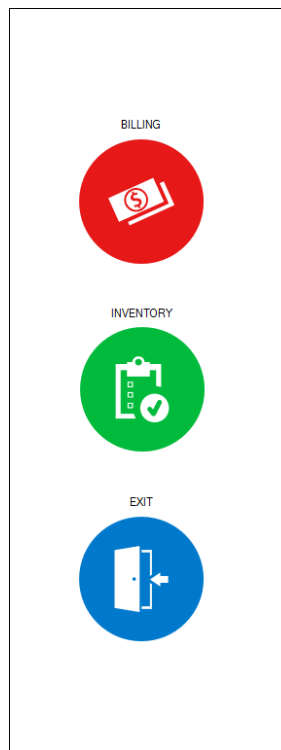


Figure 1.3 Enter Admin Password



TALISAY DISTRICT HOSPITAL

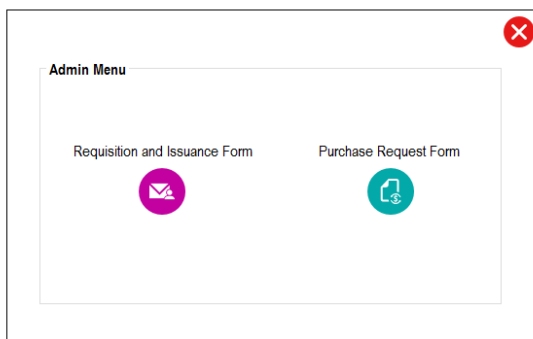
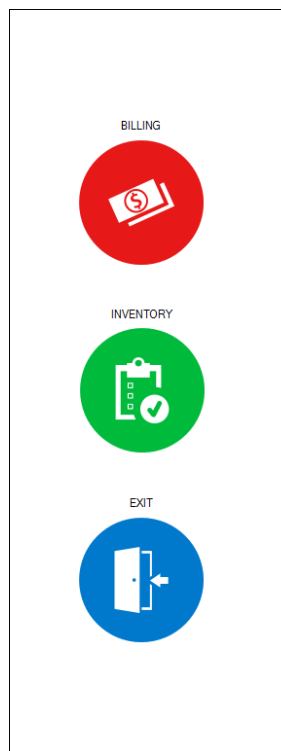


Figure 1.4 Admin Panel



REQUISITION AND ISSUANCE SLIP

TALISAY DISTRICT HOSPITAL

Department

Responsibility Center

RIS No.

Date

Office

Code

SAI No.

Date

Stock No.

Unit

Description

Quantity

Quantity

Remarks

Purpose

Requested by:

Approved by:

Issued by:

Received by:

Signature

Printed Name

Designation

Date

SUBMIT

APPROVE

EDIT

DELETE

Figure 1.5 Requisition and Issuance Form



Patient Search

Health Record Number:

Last Name:

First Name:

Middle Name:

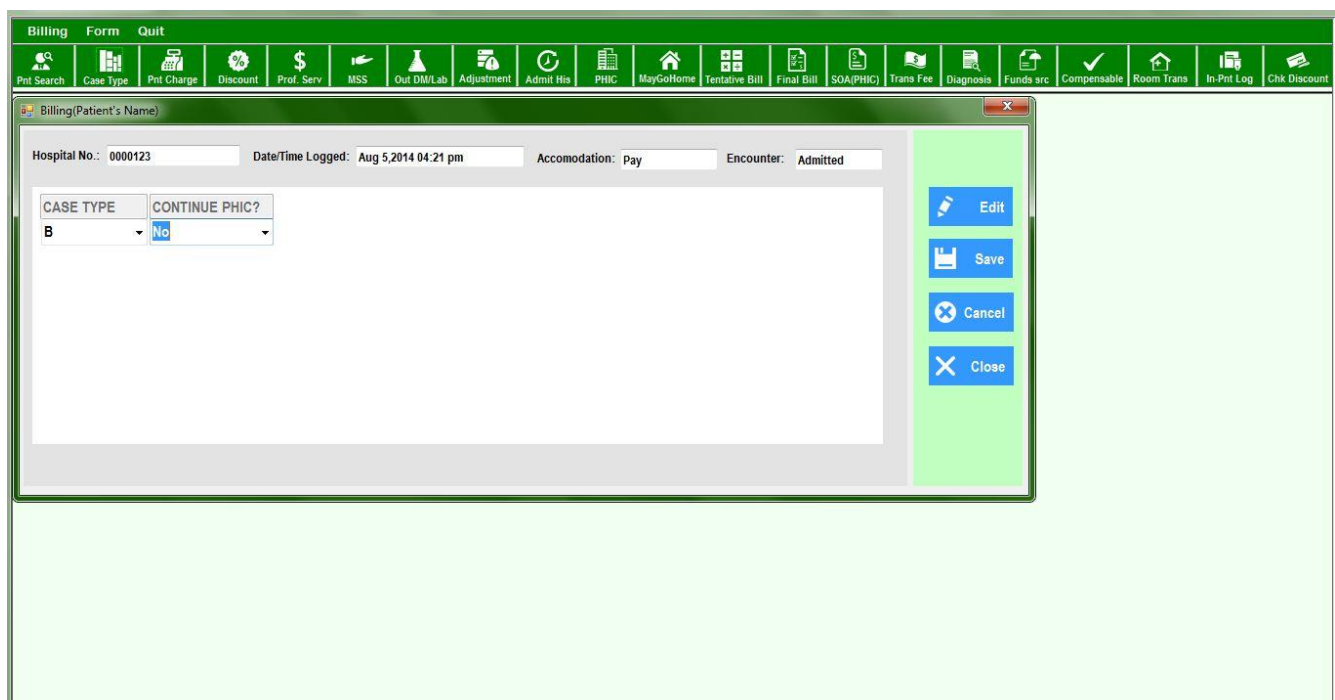
Birthdate:

Birthplace:

Sex:

Input in any of the field to search

Figure 1.8 Patient Search



Billing Form Quit

Pnt Search Case Type Pnt Charge Discount Prof. Serv MSS Out DM/Lab Adjustment Admit His PHIC MayGoHome Tentative Bill Final Bill SOA(PHIC) Trans Fee Diagnosis Funds src Compensable Room Trans In-Pnt Log Chk Discount

Billing(Patient's Name)

Hospital No.: 0000123 Date/Time Logged: Aug 5, 2014 04:21 pm Accomodation: Pay Encounter: Admitted

CASE TYPE CONTINUE PHIC?

B No

Figure 1.9 Billing Patient's Name

CEBU INSTITUTE OF TECHNOLOGY UNIVERSITY

COLLEGE OF COMPUTER STUDIES

Software Test Documentation

For



TALISAY DISTRICT HOSPITAL
BILLING AND INVENTORY SYSTEM



Signature

Member Name	Position	Signature
Glenn Patrick Cua	Developer / Designer	
Mc Jeve Gindap	Developer / Systems Analyst	
Silvia Sarte	Developer / Project Manager	
Jeric Tac-al	Developer / Tester	
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1.0	July 28, 2014	Glenn Patrick Cua Mc Jeve Gindap Silvia Sarte Jeric Tac-al Claudine Tamarra	Initial version
2.0	August 4, 2014	Glenn Patrick Cua Mc Jeve Gindap Silvia Sarte Jeric Tac-al Claudine Tamarra	Final Version

Preface

This document provides an overview of the software test document to be used in CCS417 - Software Project. This document is prepared by Team Members as a group study or as another criterion.

The context of STD describes a process rather than a product. During system development, this document and its supplements provide the information needed to do adequate testing. It lists approaches and standards to ensure that a quality product that meets the needs of the user is produced. This document is augmented by supplementary documents that list schedules, assignments and results. A record of the final result of the testing should be kept externally. For the maintenance phase, this document provides the context for regression testing when any changes are made.

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11. Scope

This document is used as to test the system on its different functions.

There will be a testing plan in order to have a systematic testing for the system and in order to follow specific steps in testing the functionality. Test design will be specified identify the features to be tested by this design. Test case will also be specified identify the test design specification. There will be a test procedure to specify the steps for executing a set of test cases or more generally, the steps used to analyze software item in order to evaluate a set of features. A test transmittal report will be provided to identify test items being transmitted for testing. Most of all a test log is very important in order to provide a chronological record of relevant details about the execution tests. And a test log identifier to specify unique identifier assigned to the test log. And the test incident report to document the events that occur during the testing process that requires investigation. A summary report is provided to summarize the results of the designated testing activities and to provide evaluations based on these results.

These are the different test process that will be followed in order to evaluate the system. This portion will also tell us about the execution of the program with dynamic aspects of software testing. This show us the purpose, outline, the content of what's inside of the project and some documentation. It focuses on the dynamic part of the system by doing some testing in every module.

12. Definitions

Contains key terms as used in this document:

3.1 design level:

The design decomposition of the software item (e.g., system, subsystem, program, or module).

3.3 software feature:

A distinguishing characteristic of a software item (e.g., performance, portability, or functionality).

3.4 software item:

Source code, object code, job control code, control data, or a collection of these items.

3.5 test:

- (A) A set of one or more test cases, or
- (B) A set of one or more test procedures, or
- (C) A set of one or more test cases and procedures.

3.6 test case specification:

A document specifying inputs, predicted results, and a set of execution conditions for a test item.

3.7 test design specification:

A document specifying the details of the test approach for a software feature or combination of software features and identifying the associated tests.

3.8 test incident report:

A document reporting on any event that occurs during the testing process which requires investigation.

3.9 testing:

The process of analyzing a software item to detect the differences between existing and required conditions (that is, bugs) and to evaluate the features of the software item.

3.10 test item:

A software item which is an object of testing.

3.11 test item transmittal report:

A document identifying test items. It contains current status and location information.

3.12 test log:

A chronological record of relevant details about the execution of tests.

3.13 test plan:

A document describing the scope, approach, resources, and schedule of intended testing activities. It identifies test items, the features to be tested, the testing tasks, who will do each task, and any risks requiring contingency planning.

3.14 test procedure specification:

A document specifying a sequence of actions for the execution of a test.

3.15 test summary report:

A document summarizing testing activities and results. It also contains an evaluation of the corresponding test items.

4 Test Plan

4.1 Purpose

This Test Plan will prescribe the scope, approach, resources, and schedule of the testing activities. In addition, to identify the items being tested, the features to be tested, the testing tasks to be performed, the personnel responsible for each task, and the risks associated with this test plan. The primary focus of this plan is to ensure that the functionalities provide the expected output.

The purpose of this document is to describe the standards and procedures to follow during the software testing phases of the Billing and Inventory System. This document supports the section on Testing and Validation in the Integration and Methods Quality Manual.

The test plan is to provide the necessary information's needed for the verification and validation of the features and functionalities of the system. All test procedures will be done thoroughly and with enough credibility.

4.2 Outline

4.2.1 Test Plan Identifier

The identifiers for this document are:

- *Billing and Inventory System v1 – TP(Test Plan)*
- *Billing and Inventory System v1.1 – DS(Design Specification)*
- *Billing and Inventory System v2 – CS(Case Specification)*
- *Billing and Inventory System v2.1 – TD(Test Documentation)*
- *Billing and Inventory System v2.2 – TL(Test Log)*
- *Billing and Inventory System v3 – IR(Incident Report)*
- *Billing and Inventory System final – TS(Test Summary)*

4.2.2 Introduction

This test plan covers a full systems test of the Billing and Inventory System. This includes operator and user procedures. In addition to comprehensively testing multi program functionality, external interfaces, security, recovery, and performance will also be evaluated. It will test software items for the Administrators and users.

This test plan is a planning document that shows the following:

- How the testing will be done
- Who will do it/persons responsible for the tasks
- What items will be tested
- How long it will take for the testing to be done

4.2.3 Test Items

All items that make up the “Billing and Inventory System” features of will be tested during the testing.

Dynamic Part for the System

- Log-in Form
- Supplies Availability Inquiry
- Confirm Play Again
- Proceed to Next Level
- Hint Button
- Audio Button

4.2.4 Features to be tested

The functionalities that to be tested and to be achieved:

- Audio Feature
- Dynamic Levels Functionality

4.2.5 Features not to be tested

Not Applicable.

4.2.6 Approach

The testing for this project will consist of functional testing. Each function shall be tested directly from execution and the testers will analyze the result or resulting action to check whether it functions correctly or not. Every test function will be tested individually I will be verified for any errors.

- **Top down testing** - will be used because the top integrated modules will be tested first and the branch of the module is tested step by step until the end of the related module. The one who will test the items will consider the availability of the resources for estimated period and the scope of the project.

It is hoped that every member will be keen during the testing and will have at least one full time independent test person who is most likely the team leader who will also be the one to approve and verify everything.

4.2.7 Item pass / fail criteria

The system must satisfy all the necessary requirements set by the client. Test items will be passed if the following requirements are met:

Test Item	Requirements
Software Design Modules	All links must be properly working.
Dynamic Part	All functions should work and run according to the features set by the developer and all contents of the dynamic part of the system should generate

	dynamic outputs.
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[Table 4.2.7.1] Item pass / fail criteria

4.2.8 Suspension criteria and resumption requirements

If any defects are found which seriously impact the test progress, the Quality Assurance officer may choose to suspend testing.

When to suspend test?

If the program contains one or more critical defects, which seriously prevents or limits testing progress. When the assigned test resources are not available when needed by the test team.

When to resume test?

Resumption will only occur when the problem(s) that caused the suspension has been resolved.

When to repeat tests?

When a new version of the system is transmitted to the adviser after a suspension of testing has occurred, another set of tests will be run.

4.2.9 Test deliverables

The following documents shall be included:

Master Test Plan (This document)
Test Design Specifications
Test Case Specifications
Test Logs
Test Incident Report Logs
Test Summary Reports
Test Input Data and Test Output Data

TASK	Assigned to	Status
Create Acceptance Test Plan	Project Team Leader – Mc Jeve Gindap	
Create System/Integration Test Plan	Project Team Leader – Mc Jeve Gindap	

Define Unit Test Rules and Procedures	Project Team Leader, Designer – Mc Jeve Gindap	
Define turnover procedures for each level	Designer, Documentation Officer – Honey Tingson	
Verify prototypes of Screens	Designer, Client, Documentation Officer	
Verify prototypes of Reports	Designer, Client, Documentation Officer	

[Table 4.1] Test deliverables

4.2.10 Testing tasks

- Operation Testing
- Error recording
- Analysis on encountered errors
- Debugging
- Re – Test

4.2.11 Environmental Needs

The following represent the essential hardware and software needs:

- This system will be implemented through applications like Visual Basic .net 2012, Astah and Metro Studio.

For hardware, any computer will do if it is supported by the required specifications. The system will be running in a web browser (**Recommended Browser: Google Chrome/ Mozilla Firefox**).

Application Type: Billing and Inventory System

Server side: WINDOWS XP/ WINDOWS 7/ WINDOWS 8

MS Office

Browser Mozilla Firefox/Google Chrome

4.2.12 Responsibilities

Role	Responsibilities
Team Leader (Silvia Sarte)	<ul style="list-style-type: none">• Software project planning and monitoring• Milestone and schedule planning• Set and communicate the group meeting agendas• Keep reminders of the group
System Developer	<ul style="list-style-type: none">• Write codes and optimize it if required

(Mc Jeve Gindap / Glenn Patrick Cua/ Jeric Tac-al/ Silvia Sarte	<ul style="list-style-type: none"> • Resolve the errors that occur in the software
Documentation Officer (Claudine Tamarra)	<ul style="list-style-type: none"> • In-charge in the document reports • Keeps accurate records • Ensures that the project management method meets conventional standards • Requirements specifier
Designer (Glenn Patrick Cua)	<ul style="list-style-type: none"> • Plans and designing templates • Designing user interface of the software
Quality Assurance/Tester (Jeric Tac-al)	<ul style="list-style-type: none"> • Test the software • Determine the errors
Systems Analyst (Mc Jeve Gindap)	<ul style="list-style-type: none"> • Analyzes the flow of the entire system • Designing the Structure of the Database

Each member has its individual responsibilities because each one has its own topic, each members do research, planning and developing. Each member focuses its respective topics.

[Table 4.2.12.1] Responsibilities

4.2.13 Staffing and Training needs

All members already have the necessary skills to conduct the software testing. Therefore there will be no training provided for the team.

4.2.14 Schedule

Software testing will be conducted the 1st week of February and will end at the 1st week of March.

4.2.15 Delayed software testing of the other test items might require the team to extend the software testing time frame. If the testing schedule is significantly impacted by system failure, the project manager has agreed to assign a full-time person to the test group to do debugging.

If hardware problems impact system availability during the day, then the test group will schedule their activities during the evening.

13. 4.2.16 Approvals

SNO	Task/s	Author	Date &Signature
1)	Test Plan Documentation	Jeric Tac-al	
2)	Review	Silvia Sarte	
3)	Test Plan Documentation	Jeric Tac-al	
4)	Approval	Silvia Sarte	

[Table 4.5] Approvals

5 Test Design Specification

5.1 Purpose

To identify the test items being implement for testing. It includes the person who is responsible in testing each item. This report will help to determine the effectiveness and robustness of the system by testing each specified item features. It specifies refinements of the test approach and to identify the features to be tested by this design and its associated tests.

5.2 Outline

5.2.1 Test Case Specification Identifier

The Functional Testing Plan for Billing and Inventory System.

5.2.2 Features to be tested

The Features that to be tested

- Audio Feature
- Dynamic Levels
- Letter Combination Functionality

5.2.3 Approach Refinements

The test personnel will use the IEEE Standard as a guideline in making the test design and test case specifications. The approach in this Software Test Document is to make the testing phase for Billing and Inventory System be neatly organized.

Interface Testing

During interface testing, different inputs will be entered, including erroneous ones.

Security Testing

The log in panel will be tested if it follows the specified function stated in the Software Requirements Specifications document. This is to check that the system is critically filtered.

Constraints

There will be a scheduled final test of the system on October 2014. There might be constraints that would occur. However, full effort shall be given in order to fully meet the target output.

5.2.4 Test Identification

The system must satisfy the set requirements of the clients. The following will be the basis for the item testing:

- Resulting action based on its purpose
- User input
- Generated output
- Compliance from its functionality

5.2.5 Features Pass/Fail Criteria

The system must satisfy all the necessary requirements set by the client. Test items will be passed if the following requirements are met:

Test Item	Requirements
Software Design Modules	All links must be properly working and the game should be functioning well.
Dynamic Part	All functions should work and run according to the features set by the developer and all contents of the dynamic part of the system should generate dynamic outputs.

[Table 5.2.5.1] Item pass / fail criteria

6 Test Case Specification

6.1 Purpose

The purpose of this document is to indicate the item to be tested, such as a particular module or product feature. It includes a reference to the corresponding test design document and describes any dependence on execution of other test cases. Like any standard document, a test case specification is labeled with a unique identifier.

6.2 Outline

6.2.1 Test Case Specification Identifier

Functional Testing Plan of Billing and Inventory System.

6.2.2 Test Items

All items that make up the “Billing and Inventory System” features will be tested during the testing.

Dynamic Part for the System

- Play Button
- Instructions
- Exit Button
- Play Again
- Proceed to Next Level
- Hint Button
- Audio Button

6.2.3 Input Specifications

Must be using Desktop computer to open this system/application.

6.2.4 Output Specifications

Specify all of the outputs and features required of the test items. Provide the exact value (with tolerances where appropriate) for each required output or feature.

I. Main Menu

A. Play Button

1. Beginner

Click Beginner to play easy levels.

2. Advanced

Click Advanced to play intermediate levels.

3. Expert

Click Expert to play hard levels.

B. Instructions

Shows the instructions and procedures to play this game

C. Exit

Click Exit to terminate game and application closes.

II. Inside The Game

A. Proceed to Next Level

Click to continue playing and go on to next level.

B. Hint

Click hint to show hints and clues.

C. Audio

Click Audio icon to hear the voice that spells out the given image.

D. Input Username

Input name for identification and used for Royalty Rankings.

6.2.5 Environmental Needs

Software testing will be done using the following resources:

Hardware:

- Personal Computer or laptop with any Operating System

Software:

- Web Browser

6.2.6 Specific Procedure Requirements

All users must be computer literate or must have a little knowledge on how to operate a computer in order for the user to use the system.

7 Test Procedure Specification

7.1 Purpose

To specify the steps for executing a set of test cases or, more generally, the steps used to analyse a software item in order to evaluate a set of features.

From the module level to the application level, this article defines the different types of testing. Depending upon the purpose for testing and the software requirements/specs, a combination of testing methodologies is applied. One of the most overlooked areas of testing is regression testing and fault tolerant testing.

7.2 Outline

7.2.1 Test procedure specification identifier

Functional Testing Plan for Billing and Inventory System.

7.2.2 Purpose

This procedure has the main purpose to achieve the execution of the test case and to minimize all the errors that can occurred when the test is conducted.

7.2.3 Special Requirements

Full attention of the developer and also the tester's knowledge ideas on how to deal on the testing process is most required.

7.2.4 Procedure Steps

- All members should be prepared for the test and anticipate possible errors
- Gather all the requirements and provide appropriate data need for the test.
- Document the test results in any way suitable for recording

A. Log

Test results will be immediately recorded.

- Errors will be tested during the tests therefore a pen and paper will do.

B. Set Up

Hardware and software performance will be added to ensure that such external factors will not influence the test results.

1. Turn on the laptop or PC.

C. Start

Start the testing with the external functionalities and then its internal functionalities.

1. Open the Application from Desktop.

D. Proceed

During the execution of test procedure, a priority must be met which is to finish the interrupted testing.

- Run tests according to test cases and modules.

E. Measure

Precautionary measures are applied during the execution of the procedure such as time table management to have enough time and to be well-organized.

- Measurements during the testing process will be based on human observations and each will be logged. Measurements with regards to time will be done manually using timers. Anything that goes wrong will be logged as well.

F. Shutdown

Insufficiency of information or suspension of testing due to unnecessary events may take to consideration but still take some extra effort just to cover time being.

- You have to stop running the source code and close application.

G. Restart

Any revisions made to the interface or some of the codes, considering the time can be covered by debugging codes and making retouches from the user interface, must construct ideas out of the members to help generate a new output.

- If you are restarting, restart the application and run source code again.

H. Stop

To put up an end, conducting short review to every little details of the whole testing procedure executed and has a checking of the entire test made.

- You have to stop running the source code and close application.

8 Test summary report

8.1 Purpose

The purpose of this report is to identify the individual test items that are being transmitted for testing. Beside the status of the test, the item transmittal report also includes the physical location of the test and the responsible tester of each item.

To summarize the results of the designated testing activities and to provide evaluations based on these results.

8.2 Outline

8.2.1 Test summary report identifier

Functional Testing Plan for Billing and Inventory System.

8.2.2 Summary

A test has been conducted and initially uncovered the errors which immediately resolved by the developers.

8.2.3 Summary of results

The conduct of the test is a success and some of the minor errors had been uncovered which immediately resolved.

8.2.4 Evaluation

This section provides an overall evaluation of the testing process including problems and limitations.

The tested items for the features of the project are functioning well and served its purpose. Thus, it made the test a successful one.

8.2.5 Summary of activities

As a summary of the activities, those were performed for the testing and for achieving the goal of the test execution.

8.2.6 Approvals

The people that are involved in approving this document is/are:

Mrs. Leah V. Barbaso	- Software Project Adviser
Mrs. Larmie T. Santos – Feliscuzo	- Software Project Instructor