**Web-based Ordering & Ingredient Estimating for Bakery Manufacturer**

Project Management Plan

By

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**Mr.Phudinan Singkhamfu**

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**\*PS = Phudinan Singkhamfu**

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# **Chapter One | Introduction**

Project Name: Web-based Ordering & Ingredient Estimating for Bakery Manufacturer

As a result of quantity demand, the Phungnoi bakery manufacturer becomes an important source among wholesalers. Some bakery manufacturer has many wholesalers and orders, for example, many branches ordered bakery products more than ten thousand baths. These leads to the problems that the bakery manufacturer cannot manage or handle the information easily because of many factors such as time, communication and system. So we have an idea to create a new system that able to manage information easily and provide convenient order process on the wholesale side. Then also helps the manufacturer control their ingredient usage in each manufacturing. These will make the managing process more reliable and convenient because the system provides managing system function such as order management, product management, member management, recipe management, ingredient estimation, and report system.

## 1.1 Identification

This document is the software project management plan, which described the process of the Web-based Ordering & Ingredient Estimating for Bakery Manufacturer. This document included planning, scheduling, activities, evaluating overall of the project and the risk that may possible for managing the software process activities.

## 1.2 Scope

Web-based Ordering & Ingredient Estimating for Bakery Manufacturer is a management system that helps the admin can manage manufacture’s information efficiency. Then the system helps the wholesaler to manage their order easier, and the employee also can apply ingredient usage’s information with traditional workflows. The project focuses on implementation of the general order management system and supports the process of manufacturer system. The objective of this project is to develop management system that apply to the Phungnoi bakery manufacturer for controlling information’s correction and ingredient usage standard. Another objective is to develop a system that support conveniently ordering for the Phungnoi bakery’s wholesalers.

## 1.3 Document Overview

The purpose of the Web-based Ordering & Ingredient Estimating for Bakery Manufacturer development plan is to guide the developer while develop the system. This project has developed in the process of making the project and all documents according to the software quality assurance. In this project will use the ISO29110 standard that suit with very small entity.

## 1.4 Objective

Firstly, the implement a software management system which would be include many management features, such as member management, product management, order management, ingredient estimation, report system, etc.

Second objective is to develop web-based online ordering for the wholesalers. This objective is to provide order management system and other services support wholesale side.

Third objective is to develop ingredient estimating function for control budget and standard of the bakery manufacturer.

Where the last objective is to study the iterative development process and adapt the software engineering methodologies and knowledge that we have learned from the previous courses for the senior project.

## 1.5 Work Products to be Develop

### 1.5.1 Deliverables and Delivery Instruction

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Deliverable** | **Media** | **No. of Copies** | **Date** |
| 1 | The Project Proposal | Document | 3 | 26 March 2014 |
| 2 | The Progress Report I   * Project Plan V.1.0 * Web-based Ordering & Ingredient Estimating for Bakery Manufacturer Web Application V.1.0   **Progress I**: Web-based Ordering & Ingredient Estimating for Bakery Manufacturer web application provides member management system and product management system functions  Features   * Login to web application * Logout from web application * Add members information;   - username  - password  - first name  - last name  - phone number  - address  - profile picture  - role name   * View members information;   - member ID  - username  - first name  - last name  - phone number  - address  - profile picture  - role name  - last sign in date  - create date   * Edit members information;   - username  - password  - first name  - last name  - phone number  - address  - profile picture  - role name   * Remove existing members * Search member information;   - member ID  - username  - first name  - last name  - phone number  - address  - role name  - last sign in date   * Add bakery product information;   - product name  - price  - category  - product picture  - information   * Edit existing bakery product information;   - product name  - price  - category  - product picture  - information   * View existing bakery product information;   - product ID  - product name  - price  - category  - product picture  - information   * Remove existing bakery product * Search bakery product information;   - product ID  - product name  - price  - category  Documentation   * Software Requirement Specification Document V.1.0 * Software Design Document V.1.0 * Software Test Plan Document V.1.0 * Software Test Record V.1.0 * Traceability Record V.1.0 * Project Status Report V.1.0 * Executive Summary V.1.0 | Document  Software  Document  Document  Document  Document  Document  Document  Document | 3  1  3  3  3  3  3  3  3 | 31 July 2014  31 July 2014  31 July 2014 |
| 3 | The Progress Report II   * Project Management Plan V.2.0 * Web-based Ordering & Ingredient Estimating for Bakery Manufacturer Web Application V.2.0   **Progress II**: Web-based Ordering & Ingredient Estimating for Bakery Manufacturer web application provides order management system and ingredient management system functions  Features   * Order bakery product to product cart * Edit current order’s information on time * Cancel current order’s information on time * Select repeat previous order’s information * Save unfinished product cart and return to continue later * View all bakery product list in each order * View total price and discount of each order * Send finished product cart to the ordering process * Display order notification * View current order list;   - member ID  - first name  - last name  - order ID  - delivery date  - total price  - order status   * View current order information;   - member ID  - first name  - last name  - order ID  - order date  - delivery date  - product ID  - product name  - product quantity  - total price  - discount  - order status   * Calculate total number of bakery product in daily order * Search ordered history;   - member ID  - first name  - last name  - order ID  - delivery date   * View ordered history list;   - member ID  - first name  - last name  - order ID  - delivery date  - total price  - order status   * View ordered history information   - member ID  - username  - first name  - last name  - order ID  - order date  - delivery date  - product ID  - product name  - product quantity  - total price  - discount  - order status   * Mark progressive of order status while the order in the preparation stage * View progress order status while the order in the preparation stage * Comment the suggestion message to the feedback page * Add ingredient information;   - ingredient name  - ingredient picture  - category   * View ingredient information;   - ingredient ID  - ingredient name  - ingredient picture  - category   * Edit ingredient information;   - ingredient name  - ingredient picture  - category   * Remove existing ingredient * Search ingredient information;   - ingredient ID  - ingredient name  - category  Documentation   * Software Requirement Specification Document V.2.0 * Software Design Document V.2.0 * Software Test Plan Document V.2.0 * Software Test Record V.2.0 * Traceability Record V.2.0 * Project Status Report V.2.0 * Executive Summary V.2.0 | Document  Software  Document  Document  Document  Document  Document  Document  Document | 3  1  3  3  3  3  3  3  3 | 22 October 2014  22 October 2014  22 October 2014 |
| 4 | The Final Progress Report   * Project Management Plan V.3.0 * Web-based Ordering & Ingredient Estimating for Bakery Manufacturer Web Application V.3.0   **Final Progress**: Web-based Ordering & Ingredient Estimating for Bakery Manufacturer web application provides ingredient estimation system and report system functions  Features   * Add menu recipe information;   - product name  - ingredient name  - ingredient quantity  - units   * View menu recipe list   - recipe ID  - product name   * View menu recipe information;   - recipe ID  - product ID  - product name  - product picture  - information  - category  - ingredient ID  - ingredient name  - ingredient quantity  - units   * Edit menu recipe information;   - product name  - ingredient name  - ingredient quantity  - units   * Remove existing menu recipe * Search menu recipe information;   - recipe ID  - product ID  - product name  - ingredient ID  - ingredient name   * Calculate current ingredient usage * Choose a period to estimating ingredient usage from the past * View ingredient usage list;   - product ID  - product name   * View ingredient usage information;   - product ID  - product name  - ingredient ID  - ingredient name  - ingredient quantity  - units   * Make a document report * View content in text report * Save and print text report as a PDF file format * Make a graph from ordered data by day, month and year * View statistical graph data;   - graph image  - statistical portion   * Save and print graph statistical as a PDF file format   Documentation   * Software Requirement Specification Document V.3.0 * Software Design Document V.3.0 * Software Test Plan Document V.3.0 * Software Test Record V.3.0 * Traceability Record V.3.0 * Project Status Report V.3.0 * Executive Summary V.3.0 | Document  Software  Document  Document  Document  Document  Document  Document  Document | 3  1  3  3  3  3  3  3  3 | 16 January 2015  16 January 2015  16 January 2015 |

### 1.5.2 Non-Deliverables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Non-Deliverable** | **Media** | **No. of Copies** | **Date** |
| 1 | 30 Seconds Video Presentation | File | 1 | 17 September 2014 |
| 2 | Abstract 150 words | File | 1 | 17 September 2014 |
| 3 | Poster Presentation | Poster | 1 | 18 September 2014 |

## 1.6 Acronyms and Definitions

### 1.6.1 Acronyms

SRS Software Requirement Specification

URS User Requirement Specification

SDD Software Design Document

OS Operation System

VSE Very Small Entity

PMP Project Management Plan

SI Software Implementation

IDP Iterative Development Process

SCI Software Configuration Item

SCM Software Configuration Management

SQA Software Quality Assurance

AD Activity Diagram

UC Use Case

IEEE Institute of Electrical and Electronics Engineers

RTM Requirement Traceability Matrix

UI User Interface

UTR Unit Testing Record

STR System Testing Record

### 1.6.2 Definitions

Feature Transformation of input parameters to output parameters based on a specified algorithm. It describes the functionality of the product in the language of the product. Used for requirements analysis, design, coding, testing or maintenance. [8] [IEEE90]

IEEE Institute of Electrical and Electronics Engineers. Biggest global interest group for engineers of different branches and computer scientists. [8] [IEEE90]

Plan A documented series of tasks requires meeting and objective, typically including the associated schedule, budget, resources, organizational description and work breakdown structure. [IEEE90]

Project Management The application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project. [8]  [IEEE90]

Project Plan A formal, approved document used to guide both project execution and project control. The primary uses of the project plan are to document planning assumptions and the decision, to facilitate communication among stakeholders, and to document approved scope, cost, and schedule baseline. [8] [IEEE90]

Risk Management The systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, evaluating treating and monitoring risk. [8] [IEEE90]

Validation Confirmation by examination and provision of objective evidence that the particular requirements for a specified intended use fulfilled. Part of quality control. [9] [IEEE90]

Verification Confirmation at the end of the process by examination and provision of objective evidence that specified requirements to the process has fulfilled. Part of quality control. [8] [IEEE90]

Traceability The ability to trace the history, application or location of an item or activity, or work products or activities, by means of recorded identification. The establishment and maintenance of relationships between such items. Horizontal traceability describes the relationship between work products of the same type (e.g., customer requirements). Vertical traceability describes the relationship between work products which build upon each other or are derived from each other (e.g., from customer requirements to qualification test cases). Bidirectional reliability allows to directly following relationship in both directions. [8] [IEEE90]

Configuration Management A was discipline applying technical and administrative direction and surveillance to: identify and document the functional and physical characteristics of a configuration item, control change processing implementation status, and verify compliance with specified requirements. [10] [IEEE90]

Design The period the software life cycle during which the design for architecture, software components, interfaces, and design are created, documented, and verified to satisfy the requirement. [IEEE90]

Implementation The period the software life cycle during which a software product is create a documentation and debugged. [IEEE90]

Work Product Any tangible item that results from a project function, activity, or task. Examples of work products include customer requirement, project plan, design documents, source, and object code, user’s manuals.

Software Computer programs, procedures, and associated documentation and data pertaining to the operation of a computer system. [11] [IEEE90]

Software Engineering The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software; that is, the application of engineering to software. [8] [IEEE90]

Quality Assurance (1) A planned and systematic pattern of all actions necessary to provide adequate confidence that an item or product conforms to established technical requirement. [12] [IEEE90]

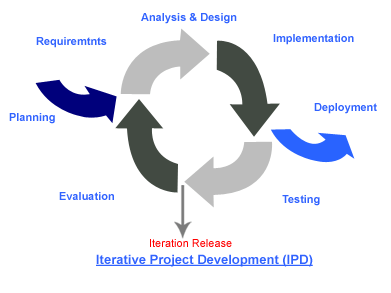
(2) A set of activities designed to evaluate the process by which producers developed or manufactured. [12] [IEEE90]

# **Chapter Two | Infrastructure**

## Software Development Life Cycle

The Iterative process model is iterating on steps as the project development with requirements. Iterative model iterates Requirement, Design, Development (Implement), Test phases, and Deployment (Evaluate, Feedback) for each requirement and builds up quality until complete. The advantage of iterative model is building and improving the product step by step. Thus, developer can track the defects at early stages and avoid flow of defects.

Web-based Ordering & Ingredient Estimating for Bakery Manufacturer project using iterative development process, because it does not attempt to start with a full specification of requirements. We needed to develop the iterative way to review and improve the software and its documents for each development progress until it has finished. [7]



**Figure 1: Iterative Development Model [1]**

## 

## Software Acquisition Plans

### 2.2.1 Design Tools

* Smart Draw 2013
* Visual Paradigm for UML 10.2
* Adobe Photoshop Elements 7.0
* Paint

### 2.2.2 Development Tools

* Microsoft SQL Server Management Studio
* Microsoft Visual Studio Ultimate
* Tortoise SVN

### 2.2.3 Configuration Management Tools

* Github
* Google Chrome
* Firefox

### 2.2.4 Document Tools

* Microsoft Office Word
* Microsoft Office PowerPoint
* Notepad ++
* Adobe Reader 9

### 2.2.5 Operating System

* Windows 7, Window 8

## 2.3 Hardware and Material Resources

* Computers
* **Name:** Sony VAIO-VAIO

**Processor:** Intel® Pentium® Processor T4300 (2.10 GHz)

**Memory:** 2.00 GB

**Graphics:** Intel® Graphics Media Accelerator HD

**Operating System:** Window® 7 Home Basic (64-bit)

* **Name:** Sony VAIO

**Processor:** Intel® Core (TM) I3-3120M (2.5 GHz)

**Memory:** 4.00 GB

**Graphics:** Radeon Graphics System

**Operating System:** Window® 8 Based Processor (64-bit)

# **Chapter Three | Management Procedures**

## 3.1 Project Team Structure

|  |  |  |
| --- | --- | --- |
| **No.** | **Participants** | **Roles** |
| 1 | Miss. Nontra Mahachanont | Development Team Member |
| 2 | Mr. Parinya Panyanak | Development Team Member |
| 3 | Aj. Phudinan Singkhamfu | Project Advisor |

## 3.2 Project Responsibility

|  |  |  |
| --- | --- | --- |
| **No.** | **Participants** | **Responsibility** |
| 1 | Miss. Nontra Mahachanont | Feasibility Study |
| All members | Project Proposal |
| Miss. Nontra Mahachanont | Project Requirements Specification |
| Miss. Nontra Mahachanont | Project Management Plan |
| Mr. Parinya Panyanak | Project Software Design Document |
| Mr. Parinya Panyanak | Implementation |
| Mr. Parinya Panyanak | Software Test Report Document |
| 2 | Aj. Phudinan Singkhamfu | Review Document |
| Approve The Document |
| Approve Change Document |

## 3.3 Change Management

Change Management manages all of the changes in the project during the development process. All of the change requests will be recording into the change management document.

We have a strategy for managing the changes by following these rules:

* Create requirement traceability to trace change document.
* Specify version of each document.
* Determine baseline document version.
* Approving the change request by project advisor.

# **Chapter Four | Quality Standard**

## 4.1 ISO29110 for Very Small Entity (VSE)

ISO29110 is a guide applies to a Very Small Entity (VSE), enterprise, organisation, department or project up to 25 people, dedicated to software development. The Guide provides Project Management and Software Implementation processes which integrate practices based on the selection of ISO/IEC 12207 - *Systems and Software Engineering — Software Life Cycle Processes* and ISO/IEC 15289 *Software Engineering – Software Life Cycle Process – guidelines for the content of software life cycle process information products (documentation)* standards elements. [4]

### 4.1.1 Project Management Process

The purpose of the Project Management Process is to improve the success rate of projects in all areas of knowledge, which allows complying with the project’s objectives in the expected quality, time, and cost. [3]

**Activities**

* Project Planning Process
* Project Plan Execution Process
* Project Assessment and Control Process
* Project Closer Process

### 4.1.2 Software Implementation Process

The purpose of the Software Implementation Process is the systematic performance of the analysis, design, construction, integration, and tests activities for new or modified software products according to the specified requirements. [4]

**Activities**

* Software Implementation Initiation Process
* Software Requirements Analysis Process
* Software Architectural Design Process
* Software Construction Process
* Software Integration and Test Process
* Software Delivery Process

# **Chapter Five | Quality Planning**

## 5.1 Reviews/Responsibility

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Stage Exit Review** | | | | |
| **No.** | **Stage** | **Review Item** | **Responsibility** | **Reviewer** |
| 1 | Project Planning | Project Management Plan | NM | All members  Advisor |
| 2 | Requirements Specification | Project Proposal | All members | All members  Advisor |
| Software Requirement Specification | NM | All members  Advisor |
| 3 | Architecture and Detailed Design | Software Design Document | PP | All members  Advisor |
| 4 | Development | Implementation | PP | All members  Advisor |
| Unit Test Report | PP | All members  Advisor |
| 5 | Software Testing | System Test Report | PP | All members  Advisor |
| 6 | Project Monitoring and Control | Traceability Record | NM | All members  Advisor |
| Project Status Report | NM | All members  Advisor |
| Change Request | NM | All members  Advisor |

## 5.3 Testing

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Process** | | | |
| **No.** | **Test** | **Verification** | **Responsibility** |
| 1 | Unit Testing | All members  Advisor | Parinya Panyanak |
| 2 | System Testing | All members  Advisor | Parinya Panyanak |

# **Chapter Six | Schedule and Milestones**

## 6.1 Project Schedule

According from Figure 2 to Figure 6 was show the schedule and milestones of Web-based Ordering & Ingredient Estimating for Bakery Manufacturer. During period of time, there are work terminologies. And the description is shown below that:

* **Feature#1:** Member Management System

**-** Admin can activate member.

**-** Admin can manage member information by provides the username, password, first name, last name, phone number, address, and role name.

**-** Admin can specify member’s role in the system.

**-** Admin can display member list.

**-** Admin can view member information consist of the member ID, username, first name, last name, phone number, address, role name, create date, and last sign in date.

- Member can login to the system.

**-** Admin can search member information by the member ID, username, first name, last name, phone number, address, role name, and last sign in date.

- Member can login to the system.

- Member can view verification notification.

- Member can logout from the system.

- Member can update personal profile.

- Member can display personal information consist of the member ID, username, first name, last name, phone number, address, role name, create date, and last sign in date.

- Member can view personal information consist of the member ID, username, first name, last name, phone number, address, role name, create date, and last sign in date.

- An application provides member management system.

- An application provides member information consist of the member ID, username, first name, last name, phone number, address, role ID, role name, create date, and last sign in date.

* **Feature#2:** Product Management System

- Admin can manage product information by provides the product name, product picture, category, information, and price.

- Admin can display bakery product list such as the product ID, product name, and price.

- Admin can display bakery product information consist of the product ID, product name, category, and price.

- Member can search bakery product information by the product ID, product name, category, and price.

- Member can view bakery product list such as the product ID, product name, and price.

- Member can view bakery product information consist of the product ID, product name, category, and price.

- An application provides product management system.

- An application provides product information consist of the product ID, product name, product picture, information, price, and category.

* **Feature#3:** Order Management System

- Wholesaler can order bakery product and manage them on the time constraint.

- Wholesaler can save unfinished product cart while they already input some information (product name and quantity) which has incomplete. Then the wholesaler can return to continue their order later.

- Wholesaler can repeat previously ordered information from ordered history information.

- Wholesaler can view bakery product list at the end of current order.

- Wholesaler can view the total price and discount of all bakery product list which has ordered.

- Wholesaler can send finished product cart to the system.

- Wholesaler can receive confirmation notification by alert message on the screen.

* Employee can view current order information consist of the member ID, first name, last name, order ID, product ID, product name, product quantity, total price, discount, and order status.
* An application provides the total number of bakery product in daily order.
* Employee can know the total number of bakery product in daily order.

- Employee can mark progressive of order status while the order in the preparation stage.

- Wholesaler can view own order status in the preparation stage.

- An application provides order management system.

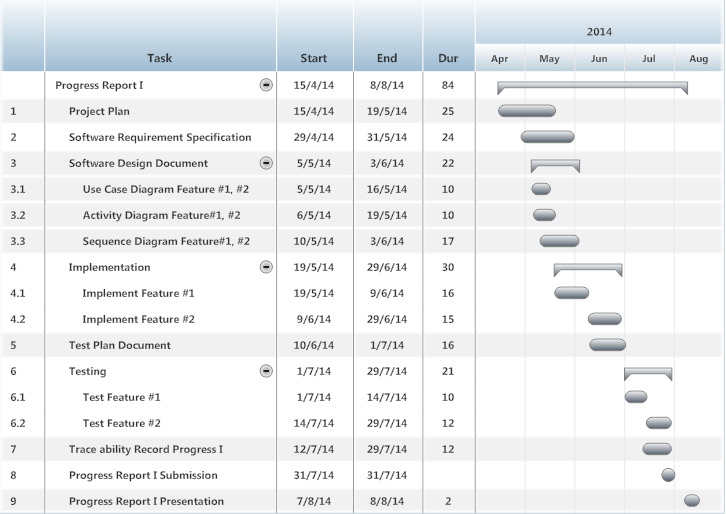
- An application provides order information consist of the order ID, order date, delivery date, product ID, product name, product quantity, total price, discount, category, and order status.

* Wholesaler can search own ordered history by filter keywords of the order ID, delivery date, product ID, product name, product quantity, total price, discount, and order status.
* Wholesaler can view own ordered history list such as the order ID, total price, order status, and delivery date.
* Wholesaler can view own ordered history information consist of the order ID, product ID, product name, product quantity, delivery date, total price, discount, and order status.
* Wholesaler can comment a suggestion message to the feedback page.
* Employee can search all ordered history by filter keywords of the order ID, member ID, first name, last name, and delivery date.
* Employee can view all ordered history list such as the member ID, first name, last name, order ID, total price, order status, and delivery date.
* Employee can view all ordered history information consist of the order ID, member ID, first name, last name, product ID, product name, product quantity, delivery date, total price, discount, and order status.
* **Feature#4:** Ingredient Management System
* Admin can manage ingredient information by provides the ingredient name, category, and ingredient picture.
* Admin can search ingredient information by filter keywords of the ingredient ID, ingredient name, and category.
* Admin can view ingredient information consist of the ingredient ID, ingredient name, category, and ingredient picture.
* An application provides ingredient management system.
* An application provides ingredient information consist of the ingredient ID, ingredient name, category, and ingredient picture.
* **Feature#5:** Ingredient Estimation
* Admin can manage menu recipe information by provides the product name, ingredient name, ingredient quantity, and units.
* Admin can search menu recipe information by filter keywords of the recipe ID, product ID, product name, ingredient ID, and ingredient name.
* Admin can view menu recipe list consist of the recipe ID and product name.
* Admin can view menu recipe information consist of the recipe ID, product ID, product name, product picture, information, category, ingredient ID, ingredient name, ingredient quantity, and units.
* An application provides menu recipe information consist of the recipe ID, product ID, product name, information, category, ingredient ID, ingredient name, ingredient quantity, units, and product picture.
* An application provides ingredient estimation function.
* Employee can view current ingredient estimation result consist of the product ID, product name, ingredient ID, ingredient name, ingredient quantity, and units.
* Employee can choose a period at start to end for processing previous ingredient estimation result.
* Employee can view the ingredient usage results consist of the product ID, product name, ingredient ID, ingredient name, ingredient quantity, units, and delivery date.
* **Feature#6:** Report System
* Wholesaler and Employee can make a text report consist of order report and ingredient estimation report.
* Wholesaler and Employee can view the report contents.
* Wholesaler and Employee can save and print text report as a PDF file format.
* An application provides a report system.
* Wholesaler and Employee can make an ordered history graph by choosing the filter keywords of the day, month, and year.
* Wholesaler and Employee can view a graph data consist of the graph image and statistical data.
* An application provides convert function from the existing ordered information to be a graph.



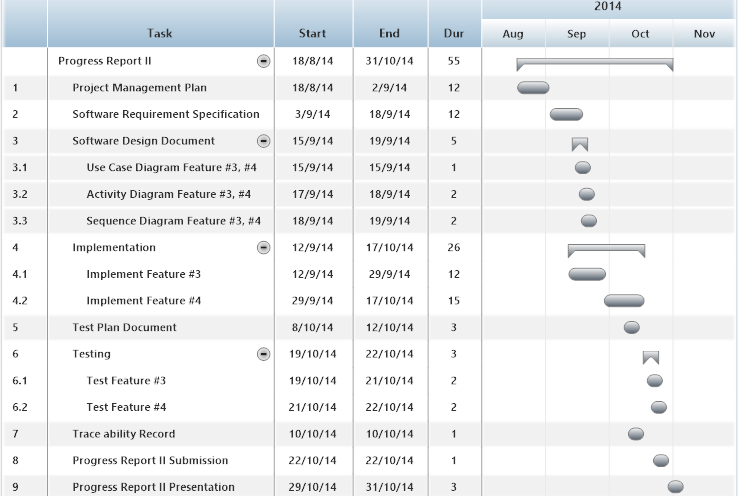
**Figure 2: Proposal Milestone**

As shown in figure 2, There are the details of each task that our have done with the documentation which represent by form of start date, end date, and duration.



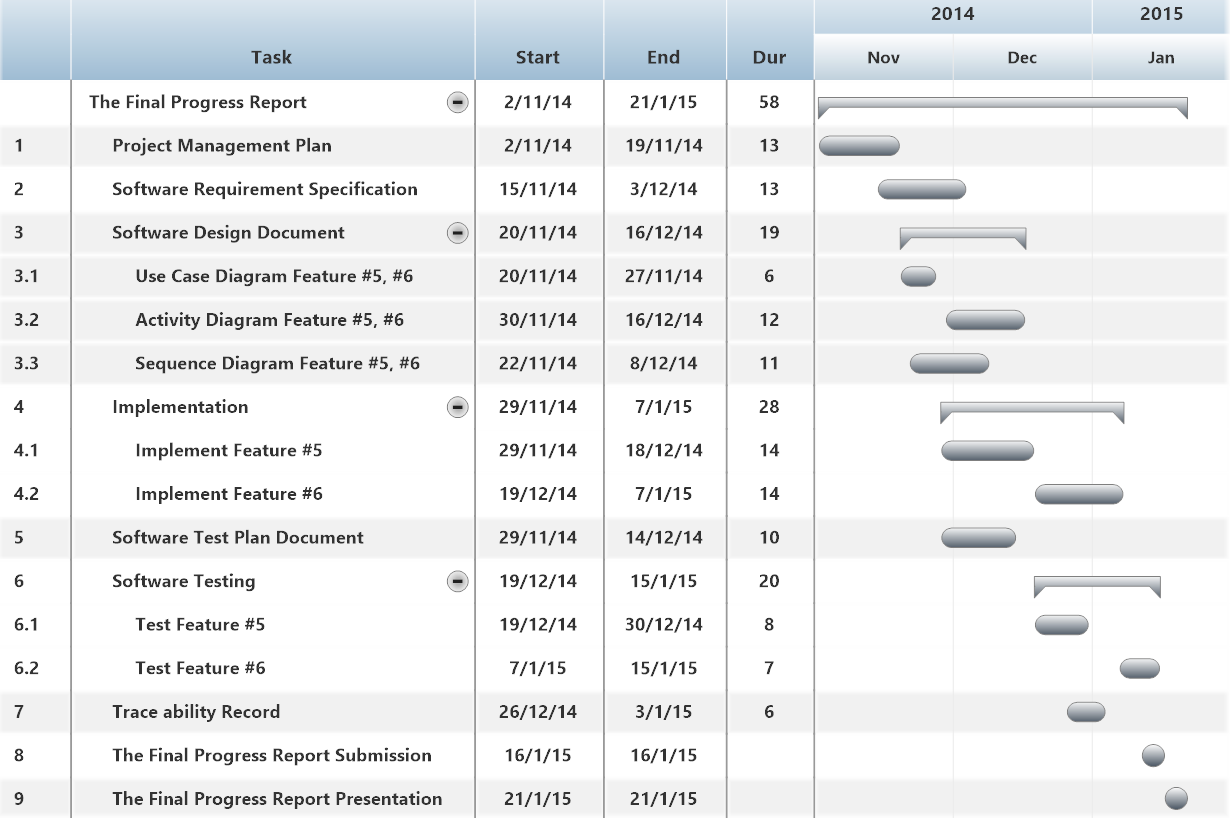
**Figure 3: Progress Report I Milestone**

As shown in figure 3, We will start develop the feature#1 and #2. In addition we will also start to do the development plan, quality plan, software requirement specification, software design, test plan, and traceability record which represent by form of start date, end date, and duration.



**Figure 4: Progress Report II Milestone**

As shown in figure 4, We will start develop the feature#3 and #4. In addition we will also start to do the development plan, quality plan, software requirement specification, software design, test plan, and traceability record which represent by form of start date, end date, and duration.



**Figure 5: Final Progress Report Milestone**

As shown in figure 5, We will start develop the feature#5 and #6. In addition we will also start to do the development plan, quality plan, software requirement specification, software design, test plan, and traceability record which represent by form of start date, end date, and duration.



**Figure 6: Publication Milestone**

As shown in figure 6, We will start to update the development and deployment which represent by form of start date, end date, and duration.

# **Chapter Seven | Software Configuration Management**

## 7.1 Software Configuration Management

Software Configuration Management is a set of activities designed to control change by identifying the work products that are likely to change, establishing relationships among them, defining mechanisms for managing different versions of these work products, controlling the changes imposed, adding, and reporting on the changes made. In other words, SCM is a methodology to control and manage software development project. [6]

## 7.2 Filename Format

For the filename format that we using for all project document is: [Project name]-[Document name]\_[Version].file type

## 7.3 Project Repository

C:\Users\VAiO\Desktop\Senior Project

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Item name** | **File name** | **File Type** | **Owner (Role)** | **Repository (Path)** | **Baseline Version** |
| 1 | Project Proposal | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – Project Proposal\_V.1.4 | .docx | PP, NM | C:\Users\VAiO\Desktop\Senior Project\Project Plan | 1.4 |
| 2 | Project Management Plan | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – PMP\_V.3.0 | .docx | PP, NM | C:\Users\VAiO\Desktop\Senior Project\PMP | 3.0 |
| 3 | Software Requirement Specification | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – SRS\_V.3.0 | .docx | PP, NM | C:\Users\VAiO\Desktop\Senior Project\SRS | 3.0 |
| 4 | Software Design Document | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – SDD\_V.3.0 | .docx | PP, NM | C:\Users\VAiO\Desktop\Senior Project\SDD | 3.0 |
| 5 | Software Test Plan Document | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – Test Plan\_V.3.0 | .docx | PP, NM | C:\Users\VAiO\Desktop\Senior Project\Test Plan | 3.0 |
| 6 | Traceability Record | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – TR\_V.3.0 | .docx | PP, NM | C:\Users\VAiO\Desktop\Senior Project\TR | 3.0 |
| 7 | Software Source Code | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – Code\_V.3.0 | .zip | PP, NM | C:\Users\VAiO\Desktop\Senior Project\Code | 3.0 |
| 8 | 30 Seconds Video Presentation | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – VDO\_V.1.0 | .mp4 | PP, NM | C:\Users\VAiO\Desktop\Senior Project\VDO | 1.0 |
| 9 | Poster Size A1 | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – Poster\_V.1.0 | .png | PP, NM | C:\Users\VAiO\Desktop\Senior Project\Poster | 1.0 |
| 10 | Software Product | Web-based Ordering & Ingredient Estimating for Bakery Manufacturer – Software\_V.3.0 | .zip | PP, NM | C:\Users\VAiO\Desktop\Senior Project\Software | 3.0 |

## 7.4 Software Configuration Item Table

# **Chapter Eight | Risk Management**

Risk management is concerned with identifying risks and drawing up plans to minimize their effect on the project. [5]

A risk is probability that some adverse circumstance will occur. [13]

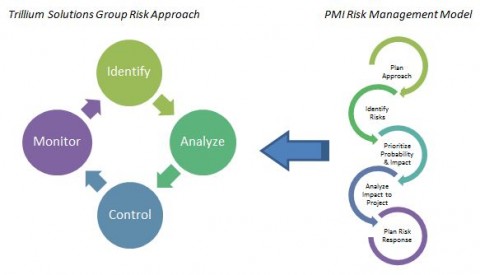
- Project risks affect schedule or resources.

- Product risks affect the quality or performance of the software being developed.

- Business risks affect the project team during developing or procuring the software.

Identified risks at the start of the project and the start of the development phase. All identified risks are documented and assessed in the Risk Management Process by the Project Development Team. In the Risk Management Process defines the possible risks, solution of them, and who is responsible for. [14]

## 8.1 Risk Management Process



**Figure 3: Risk Management Process Model [2]**

1. Risk identify: identify the project, product, and business risks.

2. Risk analyze: Assess the likelihood and consequences of the risks.

3. Risk controlling: Draw up plans to avoid or minimize the effects of the risks.

4. Risk monitoring: Monitor the risks throughout the project.

## 8.2 Risk Identification and Solutions

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Risk Statement** | **Risk Solution** | **Priority** |
| 1 | The requirements might be change. | * Meeting and discuss the impact of the changed requirements with the team member and project advisor. * Design system which changed requirements and related with the other requirements. * Use software configuration management and follow change management step. | High |
| 2 | During the implementing, the internet maybe out of order or slow. | * Change the working place. | Medium |
| 3 | The deliverables maybe delay. | * Try to study more hard than previous work. * Ask a professional to make faster understand. * Try to follow the schedule and milestone. | High |
| 4 | Team member maybe get engaged and can’t develop the project. | * Assign work to left team member who doesn’t get involved. | Low |
| 5 | Budget of developing may not enough. | * Ask for more budgets from project advisor. | Low |
| 6 | Work products are not submitted on time. | * Establish the project plan. * Develop project follow the project plan. | High |
| 7 | Work products are not traceable. | * Create the traceability record. | Medium |
| 8 | Team member lack skill and knowledge. | * Team member is tutoring implementation. * Ask for assistance and support from textbooks, websites, experienced developer, and advisor. | High |
| 9 | Ambiguous responsibility. | * Always discuss the work together. | Medium |
| 10 | Team member misunderstand system work. | * The member’s review system before development phase and use diagram to explain system working. | High |
| 11 | Human resource not enough. | * Planning schedule and hard working. | Medium |
| 12 | Unfamiliar with testing process. | * Studying test technique during the test design. | Medium |
| 13 | The computer crash. | * Always save all file in Github repository. | Medium |
| 14 | Bad communication between team members | * Try to understand each other and exchange more information together. | Medium |

# **Chapter Nine | References**

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