**Wholesaling Online**

**&Manufacturing**

**Management System**

Project Proposal

By

**Miss. NontraMahachanont 542115026**

**Mr. ParinyaPanyanak 542115034**

Department of Software Engineering

College of Arts, Media and Technology

Chiang Mai University

Project Advisor

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Mr.Phudinan Singkhamfu**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Document Name** | **Version** | **Status** | **Date** | **Viewable** | **Reviewer** | **Responsible** |
| **Documents** | | | | | | |
| Wholesaling\_Online & Manufacturing\_Management\_System\_Proposal\_V.0.1.docx | V.0.1  - Add Chapter1  - Introduction & Background  - Adjust Project Name | Draft | 07-02-2014 | NM, PP, PS | NM, PP | NM, PP |
| Wholesaling\_Online & Manufacturing\_Management\_System\_Proposal \_V.0.2.docx | V.0.2  - Adjust Abstract  - Add Chapter3  - Quality Standards | Draft | 27-02-2014 | NM, PP, PS | NM, PP | NM, PP |
| Wholesaling\_Online & Manufacturing\_Management\_System\_Proposal \_V.0.5.docx | V.0.5  - Add Chapter2  - Business Review  - Business Tools  - Software review  - Technology Review  - Development Tool Review  - Add Chapter4  - Project Plan | Draft | 01-03-2014 | NM, PP, PS | NM, PP | NM, PP |
| Wholesaling\_Online & Manufacturing\_Management\_System\_Proposal \_V.0.7.docx | V.0.7  -Add Chapter5  - References  - Adjust Technology Review  - Adjust Schedule & Milestone  - Adjust Project Name | Draft | 03-03-2014 | NM, PP, PS | NM, PP | NM, PP |
| Wholesaling\_Online & Manufacturing\_Management\_System\_Proposal \_V.0.8.docx | V.0.8  - Adjust Chapter 1  - Adjust Chapter 2  - Adjust Chapter 4  - Adjust Project Name  - Fix inappropriate word | Draft | 04-03-2014 | NM, PP, PS | NM, PP | NM, PP |
| Wholesaling\_Online & Manufacturing\_Management\_System\_Proposal \_V.0.9.docx | V.0.9  - Adjust Feature  - Adjust System architecture  - Fix inappropriate word | Draft | 05-03-2014 | NM, PP, PS | NM, PP | NM, PP |

**Document History**

**\*NM = NontraMahachanont**

**\*PP = ParinyaPanyanak**

**\* PS = PhudinanSingkhamfu**

**Table of contents**

Document History …………………………………………………………………………….2

Table of Contents……………………………………………………………………………...3

[Chapter One | Introduction and Background 4](#_Toc348955762)

[Chapter Two | Literature Review 5](#_Toc348955763)

[2.1 Business Review 5](#_Toc348955764)

[2.2 Business Tools and Software Review 6](#_Toc348955765)

[2.3 Technology Review 9](#_Toc348955774)

[2.4 Development Tool Review 12](#_Toc348955790)

[Chapter Three |Quality Standard 15](#_Toc348955803)

[3.1 ISO29110 for Very Small Entity (VSE) 15](#_Toc348955804)

[3.1.1 Project Management process 15](#_Toc348955805)

[3.1.2 Software Implementation process 15](#_Toc348955806)

[Chapter Four | Project Plan 16](#_Toc348955807)

[4.1 Motivation 16](#_Toc348955808)

[4.2 Aims and Objectives 16](#_Toc348955812)

[4.3 Deliverables and Limits 17](#_Toc348955813)

[4.3.1Deliverables 18](#_Toc348955814)

[4.3.2 Limits 19](#_Toc348955815)

[4.4 Schedule & Milestones 19](#_Toc348955816)

[Chapter Five | References 20](#_Toc348955817)

# **Chapter One | Introduction and Background**

# Formerly, there are many problems about manufacturer which manage their order. These things can occur in Phungnoi bakery manufacturer and affect to another work while they are not obtaining their correctly ordering information. When these situations happen, most of them may try to re-check ordering to resolve their wrong ordering information. The popular ways that Phungnoi bakery may use in this situation were finding a new product to replace the lack ordering or increase the number of workers to re-check the entire of ordering, so it wasted a more time to resolving the problems. By these ways, if they aware enough, they may increase the effectiveness of the worker because the accuracy in ordering is very important since they know that main ordering are correct, may be some ordering be lost but not know where is the defect and how they can re-check it become to the right data.

# Nowadays, there are many technologies and tools developed for many purposes. So the manufacturer is cannot handle their ordering information and control their manufacturing may use these technologies to resolve its. The technology that very useful and accuracy obtain an ordering from wholesalers and calculate all ingredients of manufacturing. With this, they can use information in the system and share it to another worker with the same document. When their workers see this information, they may understand it instantly and can cooperation work with another colleague. This solution may be a good way to managing to order system, but there is one important problem that happens in manufacturing. The problem is they cannot control their materials anymore after get ordering information. Because of manufacturer cannot know that how many materials are uses in manufacturing to order in each day. So the calculation ingredients will affect to the manufacturing part.

# With these problems, our group decides to create Wholesaling Online & Manufacturing Management System to solve all previous problems. By creating as a web application with consists with wholesaling online, order management system, member management system, ingredient management system and summary report system. The main objective of this system is to handle the ordering information and control the manufacturing part for estimate the ingredients of the manufacturer. We hopefully that this system and all function implemented will solve the manufacturer management problem.

# **Chapter Two |Literature Review**

## Business Review

**Overview**

Wholesaling Online & Manufacturing Management System is a web application that derived by JSP, HTML5, and CSS3. It is a web that created for helping the manufacturer estimate about how much to produce the product or how much ingredient needs to used in manufacturing part. Then, it can help the wholesaler to order and manage their ordering information easily.

**Target**

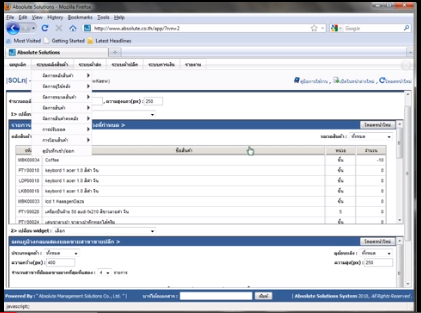
The main target of Wholesaling Online & Manufacturing Management System is to collect the orders from the wholesalers for manage manufacturing and also analyze how many ingredients needs to use in manufacturing from ordering information.

**Benefit**

* The wholesaler gets convenient to order the bakery.
* The wholesaler can manage their order instantly.
* The wholesaler can know their transaction history.
* The manufacturer can know how many products should be manufacturing.
* The manufacturer can know their transaction history.
* The manufacturer can know their manufacturing history.
* The manufacturer can control the usage of ingredients.
* The manufacturer can produce accuracy product for each wholesaler ordering.

## Business Tools and Software Review

## Absolute |Solutions| Website



**Figure 1 Absolute |Solutions| website Review**

## Software Description

Figure 1: This website is the business management website that using technology cloud computing that provides server, database, and IT expert. The aims are to improve company to better management. By use the wholesale and retail system, store system and order system.

## Pros

* All data is security from virus on machine.
* The user can save investment.
* Support using this web site with every operation system.
* Support alert message with SMS and email.

## Cons

* Support only internet access areas.
* No estimate the ingredients from ordering information.
* No summary report system.

## Bakery land website



**Figure 2 Bakery land website Review**

## Software Description

Figure 2: This website is the bakery online website that using for trading their bakery. It has many type of product included package and bakery material. The aims are to improve company to better marketing. By use the internet to sale the product.

## Pros

* The user can order the product through the website.
* Have tutorial description for ordering.
* Good category management.

## Cons

* Support only internet access areas.
* No estimate the ingredients from ordering information.
* No summary report system.

## PRIMS Software



**Figure 3 PRIMS software Review**

## Software Description

Figure 3: This program is the ingredient management program in the enterprise. It’s has many feature to support such as scheduling, insures recipe compliance, eliminates operator errors, eliminates waste and records actual inventory usage.

## Pros

* Easy to use for no user experience to operation.
* Flexible technology to control over manual operation.
* Record each step in the process.
* Fast and accuracy.

## Cons

* No membership and login support.
* No online interactive.
* No coverage report type function.

## Technology Review

## Spring Framework



**Figure 4 Spring Framework Logo**

## Technology Detail

Figure 4: The spring framework is an open source tool for supporting Java-based enterprise application development. This framework use to develop any java application and make J2EE easy to use. It contains pattern and configuration for programming which can be deployed on any platform. It also supports various components to work together such as JDBC and Hibernate.

## Alternative Technology

* ASP.NET Framework

## The selection of this technology

* Support MVC pattern.
* Support .Net and java.
* Easy for unit testing when split it to another part with JUnit.
* Support to connect with various components and technologies.

## Cascading Style Sheets (CSS)



**Figure 5 CSS Logo**

## Technology Detail

Figure 5: CSS is stands for Cascading Style Sheets. It is a last version of CSS style sheets used to design element of website such as layout, color, size or font of website. Then display HTML elements that presentation of web pages.

## The selection of this technology

- CSS make web pages look better than only HTML does.

- Helps to design the web flexibility.

- Redesign (i.e. colors, size, fonts) with not has effect to HTML code.

- The feature more than the old version such as Combinatory, CSS Selectors, Pseudo-elements, Style properties.

## HTML5



**Figure 6 HTML5 Logo**

## Technology Detail

Figure 6: HTML5 is the lasts revision of the HTML. It is a markup language to create a user interface for present contents that can be displayed in a web browser.

## Alternative Technology

* Another HTML version
* XHTML

## The selection of this technology

- Makes creating accessible sites easier.

**-** Allow other can access easily.

**-** Simple and clean.

**-** Easy to handle error.

**-** Reduce the external plug-in such as flash.

**-** Support for local storage.

**-** New content-specific elements, like <article>, <footer> and <header>.

**-** New form controls, like calendar, date, time, email and URL.

## Development Tool Review

## NetBeans



**Figure 7 NetBeans Logo**

## Development Tool Description

Figure 7: NetBeans is an open-source program to integrated development environment for developing with any language such as Java, PHP, C++ and other programming language. It is referred to developing Java desktop applications and also develops web application. It's constantly improving Java Editor, provide many features and an extensive range of tools, templates and samples.

## Alternative Tool

* Eclipse
* IntelliJ IDEA

## The selection of this tool

* Open source for any users no need license or contract.
* Provide many features necessary for MVC pattern development.
  + Support Ant and Maven – no custom built system that only works in the IDE.
  + Includes new features for editing/debugging HTML5.
  + Written using swing.
  + Built-in support for version control systems plug-ins. For example, it can be a nightmare to get SVN configured correctly on 64 bit systems.

## MySQL Workbench



**Figure 8 MySQL Workbench Logo**

## Development Tool Description

Figure 8: MySQL Workbench is an open source relational database management system which used for develop database architects. It can do such as provides data modeling, comprehensive administration tools for server configuration, SQL development, user administration and backup. Then also supports many development tool for create a web application such as Eclipse and NetBeans.

## Alternative Tool

* Microsoft Access
* SQLite
* TomCat
* Appserve

## The selection of this tool

* Easy to integrate with many development tools.
* Provide many features support.
* More security.
* Flexible for using and manage via other tools.
* Can visualize table relationships.

## Adobe Dreamweaver



**Figure 9 Adobe Dreamweaver Logo**

## Development Tool Description

Figure 9: Adobe Dreamweaver is the tool for design and develop the website that provides a visual interface for making and editing HTML websites.

## Alternative Tool

* Notepad++
* CoffeeCup Free HTML Editor
* PageBreeze
* TextMate

## The selection of this tool

## Complete function that necessary to create a website.

* Work with offline.
* Support with layout tool.
* Can split the code and design of the webpage at the same time.

**Chapter Three| Quality Standard**

## 3.1 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.

### 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.

**Activities**

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

### 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.

**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 Four | Project Plan**

## Motivation

Nowadays, Phungnoi bakery manufacturer has complicated their ordering information. Sometime can manage their information, and some are cannot. Then there are affect to manufacturing part to control ingredients of all ordering. By the way, as the technology is growing every day, some company turn it as an advantage by use the system to help them solve the problem by managing data in their company.

So we realized that using normal online shopping and order management system to solve the problem for ordering and managing in the system is easy and faster way to solve the problem, but the disadvantages about this way are online shopping, not suit for wholesaling, each ordering information cannot be analyze their summary to apply with manufacturing department of the manufacturer and cannot be an estimate the ingredients to limit their materials. We are unable to manage it anymore even if the manufacturer are collect the entire ordering information from the program to analyze and estimate to resolve their over ingredients in manufacturing by themselves, the estimating still continues because the manufacturer not knows about real ingredient usage of the manufacturing compare with ordering information, they just continue to estimating it in every day but almost over and unstable.

With these reasons, we think there must be some system to manage the problems that can help the manufacturer who needs to obtain online ordering from wholesalers and know their accuracy target in manufacturing every day. This system should still able to use the report for limiting their cost that can be controlled and has more function to help solve these problems more easily, thereby resulting in “Wholesaling Online & Manufacturing Management System”.

## Aims

The aim of this project is to develop a website that provides wholesaling online, member management, order management, ingredients management, and report to manufacturer, also to be a commerce website that makes an order with the manufacturer as quick and easy as possible. Then also increasing the effectiveness of the manufacturer will control their standard and the strictness of the manufacturing will limit their budget.

## Objectives

* Alternative way to help manufacturing estimate ingredients and summary all usage.
* Provide multiple systems to help manufacturer can correctly cooperation.
* Activities of the manufacturer are a summary into the report for easy to controlled.
* Alternative way to help wholesaler ordering conveniently.

## System Architecture

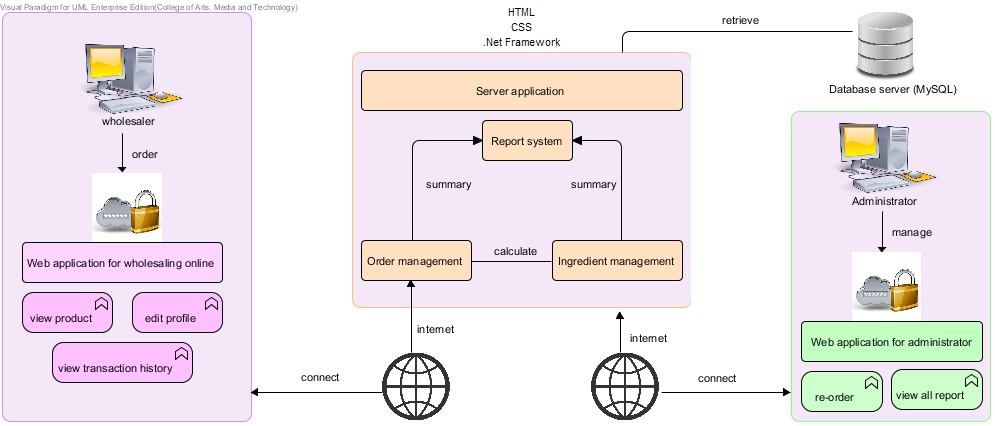


Figure 10: Wholesaling Online & Manufacturing Management System

Figure 10: Shows the overview of the Wholesaling Online & Manufacturing Management System. The system uses internet to connect with web application. The data will controls by the server application. The system provides order management system to calculate ingredient management system and summary to report system. Every process, summary information of the report may help the manufacturer can know the amount of ordering and ingredients usage in each day. It will store all management information to the database system (MySQL) and display summary information to the manufacturer side. Wholesaling Online & Manufacturing Management System consisted of two sides. The first side supported automatically to wholesaler ordering online and also can manage their order. Another side has administrator to control system and manage wholesale ordering information. The administrator and the wholesaler can view their history of their own information.

## Deliverables and Limits

### Deliverables

**4.5.1.1 Progress Report I**

* **Feature#1:** Member Management System
  + - * The user can register them to the system.
      * The wholesaler and administrator can login to the system.
      * The wholesaler and administrator can log out to the system.
      * The wholesaler and administrator can edit their profile.
      * The wholesaler and administrator can view their profile.
      * The administrator can view the wholesaler profile.
* **Feature#2:** Order Management System
  + - * The wholesaler and administrator can search bakery details.
      * The wholesaler and administrator can view bakery details.
      * The wholesaler can make an order.
      * The wholesaler can update their order.
      * The wholesaler can delete their order.
      * The administrator can receive ordering from the wholesaler.
      * The administrator can make a manufacturing order.
      * The administrator can update a manufacturing order.
      * The administrator can delete a manufacturing order.
      * The administrator can add details of bakery.
      * The administrator can update bakery information.
      * The administrator can delete bakery information.

**4.5.1.2 Progress Report II**

* **Feature#3:** Ingredient management System
* The administrator can add details of ingredients.
* The administrator can update details of ingredients.
* The administrator can delete details of ingredients.
* The administrator can view ingredient information.
* The administrator can add ingredient type information.
* The administrator can update ingredient type information.
* The administrator can delete ingredient type information.
* The administrator can view ingredient type information.
* The administrator can add details of menu.
* The administrator can update details of menu.
* The administrator can delete details of menu.
* The administrator can view menu information.

**4.5.1.3 Progress Report III**

* **Feature#4:** Summary Report System
* The wholesaler can view their order report.
* The wholesaler can view their transaction history.
* The administrator can view wholesaler transaction history.
* The administrator can view all ordering information report.
* The administrator can view real manufacturing report.
* The administrator can view ingredient usage report.
* The wholesaler and administrator can print their report.

**4.5.1.4 Software Document**

* Project Proposal
* Project Plan
* Software Requirement Specification
* Software Design Document
* Use Case
* Use Case Description
* Class Diagram
* Sequence Diagram
* Activity Diagram
* Testing Document
* Test plan
* Unit Test Document
* System Test Document
* Test Report
* Unit Test Document
* Integration Test Document
* Traceability Record
* Software Quality Assurance
* Progress Status Report
* Self-Assessment Report

### Limits

- Membership is required for using all function in the application.

- The application required Internet connection to execute.

- This application supports only Phungnoi bakery manufacturer as a sample for developing and testing the system.

- Estimate function shall calculate only ingredients.

**4.6 Future work**

* Support another function such as billing management system.
* This system can be used in any manufacturer.
* Use other technologies to provide more convenient service.
* Support other major operating system platforms.

## Schedule & Milestones

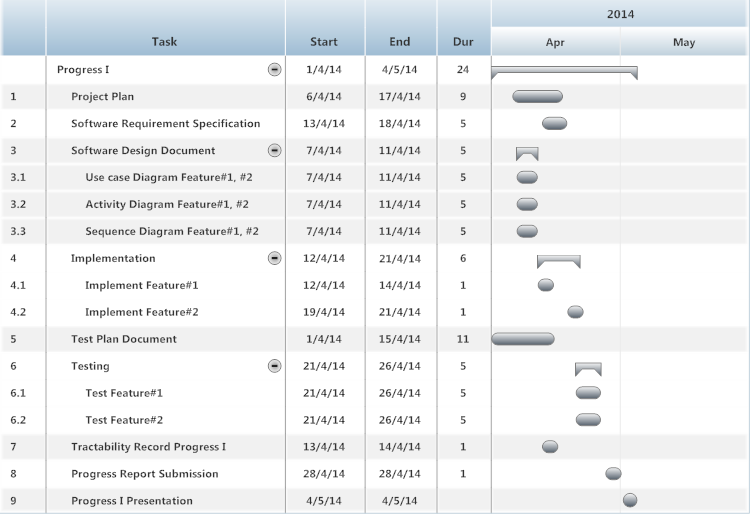
According from Figure 4.7.1 to Figure 4.7.4 was show the schedule and milestones of Wholesaling Online & Manufacturing Management System. During period of time, there are work terminologies. And the description is shown below that:

**Schedule Plan:**

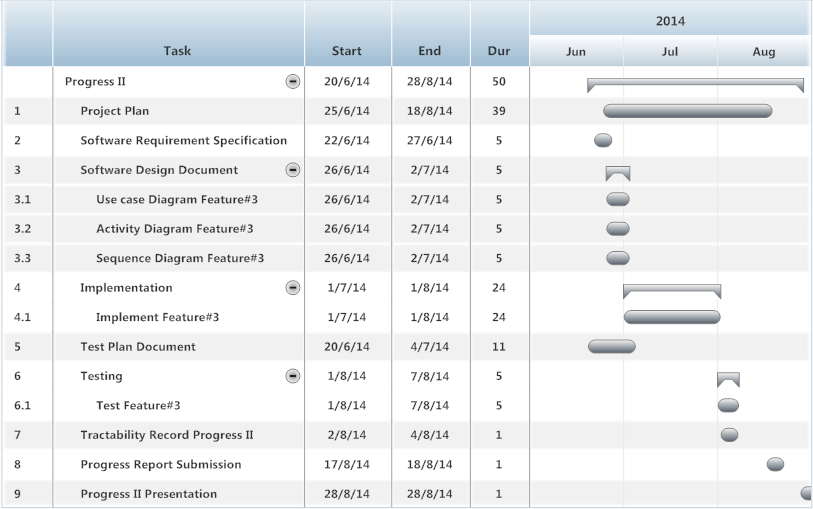
|  |  |  |
| --- | --- | --- |
| **Progress** | **Duration** | **Task** |
| **Proposal** | **Start:** 07 February 2014  **End:** 05 April 2014 | Proposal Document |
| **Progress I** | **Start:** 06 April 2014  **End:** 05 June 2014 | **Feature#1:** Member Management  **Feature#2:** Order Management |
| **Progress II** | **Start:** 20 June 2014  **End:** 28 August 2014 | **Feature#3:** Ingredient Management |
| **Progress III** | **Start:** 07 September 2014  **End:** 20 November 2014 | **Feature#4 :** Summary Report |
| **Final Progress** | **Start:** 07 December 2014  **End:** 20 January 2015 | System and Document are complete |



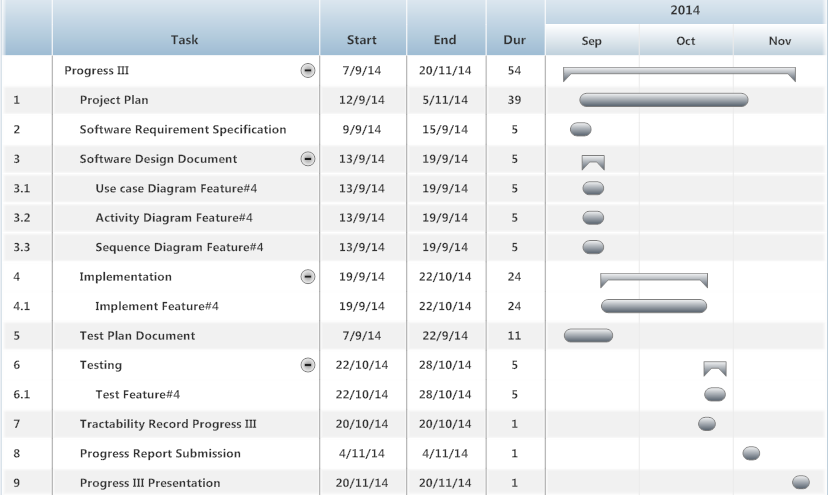
**Figure 4.7.1: Proposal Milestone MilestMilestone**



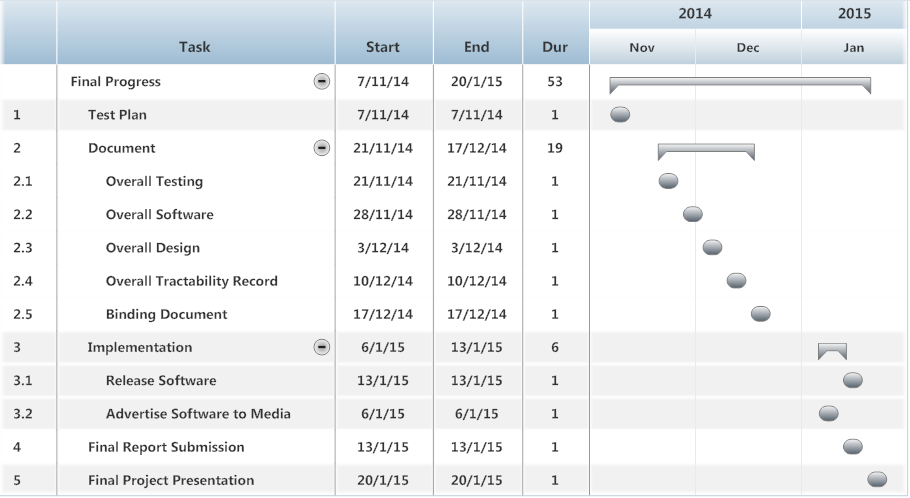
**Figure 4.7.2: Progress Report I Milestone**



**Figure 4.7.3: Progress Report II Milestone**



**Figure 4.7.4: Progress Report III Milestone**



**Figure 4.7.5: Final Progress Report Milestone**

**Chapter Five | References**

[1] Adobe Dreamweaver CS6. Available from http://en.wikipedia.org/wiki/Adobe\_Dreamweaver

[2] CSS. Available from <http://en.wikipedia.org/wiki/Cascading_Style_Sheets>

[3] VSE. Available from http://profs.etsmtl.ca/claporte/English/VSE/Deploy-Pack/Entry

[4] Project Management Process. Available from http://en.wikipedia.org/wiki/Project\_ Management\_Professional

[5] Software Implementation Process. Available from http://profs.etsmtl.ca/claporte/

English/VSE/Deploy-Pack/Entry%20Profile-DP-Software

[6] HTML. Available from <http://en.wikipedia.org/wiki/HTML>

[7] Absolute |Solutions|. Available from https://www.absolute.co.th/index.html

[8] Bakery land website Available from http://www.bakeryland.co.th/

[9] PRIMS. Available from http://www.foodsafetyconnect.com/Food-Safety—Quality-Management-1069/PRIMS--Production-Recipe-Ingredient-Management-Software-328/

[10] Netbeans. Available from http://www.softpicks.com/software/Development/

Miscellaneous/NetBeans-IDE-180921.htm

[11] Spring Framework. Available from http://springframework.net/overview.html

[12] CSS. Available from http://en.wikipedia.org/wiki/Cascading\_Style\_Sheets

[13] MySQL Workbench. Available from http://www.oracle.com/technetwork/issue-archive/book-beat-archive-1878886.html