MINISTRY OF EDUCATION AND TRAINING

FPT UNIVERSITY

Capstone Project

Home Delivery Management System

Software Project Management Plan

Group 1		
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Capstone Project code	HDMS	

- Ho Chi Minh City, Sep / 2012 -

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2.1 Problem Definition

2.1.1. Name of this Capstone Project

Project Full name: **Home Delivery Management System**
Project Code: **HDMS**

2.1.2. Problem Abstract

TicTac is a company providing Home Delivery service for online and offline shops. The business consists of many complex processes such as delivery booking, items tracking, task assigning, etc. To increase efficiency in work and compete with other service providers in the industry, the company needs a powerful information system that helps complete management tasks quickly and easily.

2.1.3. Project Overview

2.1.3.1.   The Current System

Currently, TicTac is not using any information system. All the tasks are done manually using paper and common software like Microsoft Word and Microsoft Excel.

2.1.3.2.   The Proposed System

HDMS is developed as a web-based system. Below features are provided to support the management process:

- *Management*: Customers, Staff, Orders, and other are managed easily through the system.

- *Online Delivery Booking*: Customers can book deliveries online using TicTac's website. They can also manage and track all the deliveries they have booked.

- *Collection and Delivery Planning*: The system will help managers at the company to create good plans for collecting and delivering items which are able to help increase efficiency and reduce cost.

- *Reporting*: Daily, weekly, or any required type of report are created precisely and quickly by the system.

2.1.3.3.   Boundaries of the System

- The system is intended to use for TicTac Co. only.

- All the functions of the system are built based on the requirements from TicTac.

- The system will be used only for managing the tasks related to the delivery process in TicTac. It does not include general management functions like accounting, customer relationship, salary managing, etc.

2.1.3.4. Development Environment

Hardware Requirements:

- Personal computers for developing with the minimum configuration: 2 GB of RAM, 40GB of hard disk, Core 2 Duo 2.0 GHz
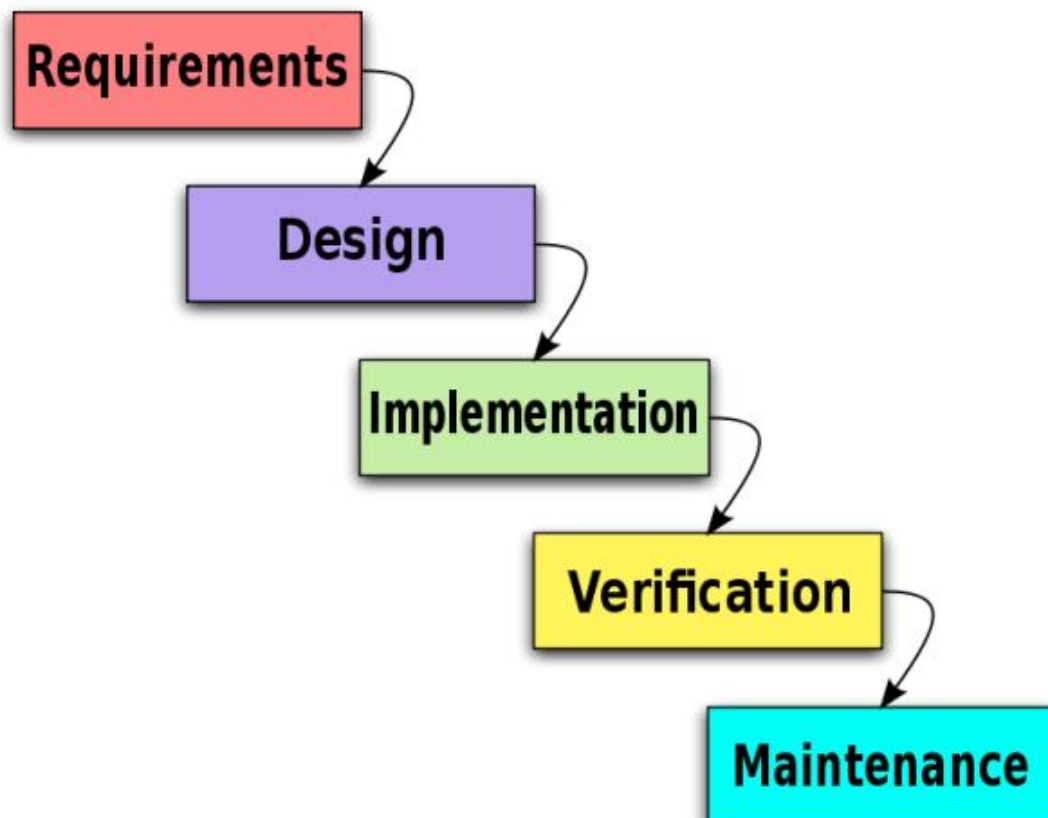
Software Requirements:

- Operating system: Windows 7
- IDE: Visual Studio 2010 SP1
- Microsoft Office (Word, Excel)
- DBMS: SQL Server 2008 R2 Express
- Source Control: SVN

2.2 Project organization

2.2.1 Software Process Model

Due to specific characteristics of a Capstone project, the model we use for developing this project is Waterfall model.

2.2.2 Roles and Responsibilities

Full name	Role in Group	Responsibilities
Lâm Hữu Khánh Phương	Supervisor	• Tracking & managing progress • Advising Idea & solutions • Suggesting & supporting in technologies
Lê Anh Đảo	Team Leader, Developer, Business Analyst, Tester, QA	• Tracking & managing progress • Designing database • Creating coding framework • Analyzing requirements • Planning & scheduling • Coding • Testing • Writing documents & reports
Nguyễn Bá Linh	Developer, Business Analyst, Tester	• Analyzing requirements • Coding • Writing documents • Testing
Hồ Hữu Tài	Developer, Business Analyst, Tester	• Analyzing requirements • Coding • Writing documents • Testing
Thân Văn Thành	Developer, Business Analyst, Tester	• Analyzing requirements • Coding • Writing documents • Testing
Lê Quang Tú	Developer, Business Analyst, Tester	• Analyzing requirements • Coding • Writing documents • Testing

Table 1 - Roles and Responsibilities

2.2.3 Tools and Technologies

Tools:

- *Microsoft Visual Studio 2010*: Used to implement software modules.
- *Microsoft SQL server 2008 R2 Express*: Used as the database of the system.
- *Microsoft Excel*: For the team leader to manage tasks of the members and the progress of the project.
- *TortoiseSVN*: Control Source code of the whole project.
- *VisualSVN*: extension for using subversion (SVN) inside Visual Studio.
- *Google Cloud Connect*: Connect and synchronize the documents.
- *Assembla*: Used as SVN repository
- *Visual Paradigm*: Design database and draw use cases
- *Google Chrome, Firefox*: Used to test the system

Technologies:

- ASP.NET MVC 3
- LINQ
- HTML 5, CSS 3, AJAX, jQuery, Bootstrap
- Google Maps API

2.3 Project Mangement Plan

2.3.1 Tasks

Feasibility study	
Description	General requirements analysis, technology & business process study
Deliverables	The feasibility report and decisions for the project
Resources Needed	25 man-days
Dependencies and Constraints	N/A
Risks	The project or the chosen technology is not feasible.
Documentation and review	
Description	Create all the necessary documents for research and delivery
Deliverables	1. Project Management Plan (PMP) 2. Software Requirements Specification (SRS) 3. Software Design Description (SDD) 4. Software Test Documentation (STD) 5. Software User's Manual (SUM)
Resources Needed	FPT templates, 75 man-day
Dependencies and Constraints	Follow FPT templates
Risks	Not follow FPT templates, poor review leads to faults in later phases
GUI design and implementation	
Description	Design user interface
Deliverables	Prototype
Resources Needed	25 man-days
Dependencies and Constraints	Web Application
Risks	The interface is not user-friendly and not effective
Implementation	
Description	Create the executable files
Deliverables	Usable software product
Resources Needed	Visual Studio 2010, .NET framework 4, Web browsers 200 man-days
Dependencies and Constraints	N/A
Risks	Not meet the deadline, or not all the functions can be implemented
Release and deployment	
Description	Release the complete application and deploy it on the server
Deliverables	HDMS installation file and all the related documents (SUM)
Resources Needed	Installation package 10 man-days
Dependencies and Constraints	Meet the user requirements
Risks	The program is not running properly in real environment Cannot release before the deadline

Quality control	
Description	Testing application's performance and usability
Deliverables	STD
Resources Needed	QA, testers (team member),members), FPT template test case 75 man-days
Dependencies and Constraints	Follow FPT template test case
Risks	The program performance bellow standard Not user friendly Bugs and leakages
Human resource management	
Description	Manage human resource, task assignments and member's performances
Deliverables	Project Task List – Assignment Table sheet
Resources Needed	Project Task List
Dependencies and Constraints	N/A
Risks	Lack of planning and management skill Communication problem Decrease in team members during project implementation

2.3.2 Task sheet

Task Name	Duration	Start	Finish
Home Delivery Management System	**75 days**	Mon 9/10/12	**Fri 12/21/12**
Initiating	**1 day**	Mon 9/10/12	Mon 9/10/12
Project Kick-off meeting	1 day	Mon 9/10/12	Mon 9/10/12
Planning	**4 days**	**Tue 9/11/12**	**Fri 9/14/12**
Prepare Project Introduction	1 day	**Tue 9/11/12**	Tue 9/11/12
Develop Software Project Management Plan	2 days	**Wed 9/12/12**	Thu 9/13/12
Review Project plan	1 day	**Fri 9/14/12**	Fri 9/14/12
Executing	**65 days**	**Mon 9/17/12**	**Fri 12/14/12**
Analysis	**4 days**	**Mon 9/17/12**	**Thu 9/20/12**
Create SRS	4 days	Mon 9/17/12	Thu 9/20/12
Review SRS	1 day	Fri 9/21/12	Fri 9/21/12
Design	**10 days**	Mon 9/24/12	**Fri 10/5/12**
Architecture Design	2 days	Mon 9/24/12	Tue 9/25/12
Database Design	2 days	Wed 9/26/12	Thu 9/27/12
UI Design	3 days	Fri 9/28/12	Tue 10/2/12
Create Software Detail Description	2 days	Wed 10/3/12	Thu 10/4/12
Review DD	1 day	Fri 10/5/12	Fri 10/5/12
Implementation	**35 days**	Mon 10/8/12	**Fri 11/23/12**
Implement database	2 days	Mon 10/8/12	Tue 10/9/12
coding (code and fix bug)	33 days	Wed 10/10/12	Fri 11/23/12
Testing	**10 days**	**Mon 11/26/12**	**Fri 12/7/12**
Create software Test plan	1 day	Mon 11/26/12	Mon 11/26/12
Review Test plan	1 day	Tue 11/27/12	Tue 11/27/12
Create Software Test Document	1 day	Wed 11/28/12	Wed 11/28/12
Execute IT	3 days	Thu 11/29/12	Mon 12/3/12
Execute ST	3 days	Tue 12/4/12	Thu 12/6/12
Review STD	1 day	Fri 12/7/12	Fri 12/7/12
Final release	**5 days**	Thu 12/13/12	**Wed 12/19/12**
Create Software Installation package	2 days	Thu 12/13/12	Fri 12/14/12
Create User manual Guide	2 days	Mon 12/17/12	Tue 12/18/12
Review User Manual Guide	1 day	Wed 12/19/12	Wed 12/19/12
Closing	**6 days**	Thu 12/20/12	**Thu 12/27/12**
Prepare project presentation	5 days	Thu 12/20/12	Wed 12/26/12
Final Capstone project Presentation	1 day	Thu 12/27/12	Thu 12/27/12

2.3.3 Meeting Minutes

No	Date	Content
1	9/11/2012	- Introduce capstone project. - Discuss working methods, communication methods - Discuss technologies to use. - Share contact information
2	9/13/2012	- Define business processes - Assign tasks
3	9/18/2012	- Track progress - Review database - Discuss template for SRS, SDS, install Guide. - Assign tasks
4	9/20/2012	- Track progress - Review report 1 - Review database - Review use cases - Assign tasks
5	9/25/2012	- Track progress - Assign tasks
6	9/27/2012	- Track progress - Review Prototype - Review report 2 - Assign tasks

2.4 Coding Convention

2.4.1 Naming Convention

- Private Fields: underscore followed by lowerCamelCase.
- Non-private Fields and properties: UpperCamelCase.
- Local variables: lowerCamelCase.
- Do not use consecutive underscores in name.
- Do not use Hungarian style.

2.4.2 Lengths

- Public name should not be longer than 32 characters or 7 words.
- Methods should contain no more than 70 lines of code (if it is, it must be divided into methods).
- Methods should contain no more than 5 levels of indentation (if it is, it must be divided into methods).
- A line of code should contain no more than 80 characters.

2.4.3 Other Convention

- Use `var` keyword whenever possible.
- Remove all unnecessary `using` in file header.
- Do not allow empty `catch` block.