TRƯỜNG ĐẠI HỌC FPT

Capstone Project Document

Carrier Trading Center

Report #2 – Project Plan

Carrier Trading Center		
Group Members	Lê Văn Dương	SE03290
	Vũ Văn Quyết	SE03344
	Đặng Lê Tuấn	SE03807
	Trịnh Đình Quyết	SE03159
	Lê Gia Hoàng	SE03200
Supervisor	Mr. Nguyễn Văn Sang	
Project code	CTC	

- Hanoi, 02/2017-

SIGNATURE PAGE

AUTHOR:	Trịnh Đình Quyết Team member	15/01/2017
REVIEWERS:	Lê Văn Dương Project manager	20/01/2017
APPROVAL:	Nguyễn Văn Sang Supervisor	--/--/2017

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1 INTRODUCTION

1.1 Purpose

This part is the project management plan of Carrier Trading Center (CTC) Project – our Capstone Project in FPT University. It is included the project overview, project organization, tools and infrastructures, schedule, risk management, quality management and some coding convention of this project

1.2 Definitions and Acronyms

Acronym & Abbreviation	Definition	Note
CTC	Carrier Trading Center	
FU	FPT University	
ERD	Entity Relationship Diagram	
RUP	Rational Unified Process	
SRS	Software Requirement Specification	
SAD	Software Architecture Design	

Table 1-1: Definitions and Acronyms

2 PROJECT OVERVIEW

2.1 Project description

Project Code	**CTC**	**Contract Type**	**None**
Customer	FPT University	2nd Customer	None
Project Level	Group	Project Rank	None
Application Type	Website	Project Manager	Lê Văn Dương
Project Category	Development	Business Domain	E-commerce

Table 2-1: Project Description

2.2 Scope

UC No.	Group Of Functions	Function	Glossary
Guest			
UC001	**Register**	Register a new account	
UC002	**Bill of lading list**	Search bill of lading	
UC003		View bill of lading list	
UC004	**Price list**	View price	
UC005		Reference price	
Admin			
UC006	**Bill of lading list**	View bill of lading detail	

UC007		Search bill of lading	
UC008		View bill of lading list	
UC009		View carrier auction success	
UC010		Summary all bill of lading	
UC011		View carrier list who are auctioning	
UC012	**Manage user**	Search user	
UC013		View user profile	
UC014		Edit user profile	
UC015		Add company	
UC016		Account recharge for user	
UC017		Active user	
UC018		Deactivate user	
UC019		Edit company information	
UC020		View user list	
UC021	**Price list**	View price list	
UC022		Add a new price	
UC023		View price table history	
UC024		Edit price list	
UC025		Reference price	
UC026		Edit reference price	
UC027	**Transaction history**	Transaction History	
UC028	**Login**	Login	
UC029	**Logout**	Logout	
UC030	**Manage report**	Search report	
UC031		Response report	
UC032		View report list	
UC033	**Manage profile**	View profile	
UC034		Edit profile	
UC035		Forget password	
UC036		Change password	
Goods owner			
UC037	**Bill of lading list**	View bill of lading list	
UC038		View bill of lading detail	
UC039		Search bill of lading	
UC040		View carrier auction success	
UC041		Confirm complete transaction	
UC042		Post a new bill of lading	
UC043		Cancel bill of lading	
UC044	**Manage profile**	Edit profile	
UC045		View profile	
UC046		Change password	
UC047		Forget password	
UC048		Add company	
UC049	**Manage report**	Send report	
UC050		Search report	
UC051		Cancel report	
UC052		View report list	
UC053	**Price list**	Reference price	

UC054		View price list	
UC055	**Account recharge**	Account recharge	
UC056	**Transaction history**	Transaction history	
UC057	**Login**	Login	
UC058	**Logout**	Logout	
UC059	**Connect to carrier**	Connect to carrier	
Carrier			
UC060	**Bill of lading list**	View bill of lading list	
UC061		Confirm complete transaction	
UC062		View bill of lading detail	
UC063		Auction bill of lading	
UC064		Search bill of lading	
UC065		Cancel bill of lading	
UC066	**Manage profile**	Edit profile	
UC067		View profile	
UC068		Change password	
UC069		Forget password	
UC070		Add company	
UC071	**Manage report**	View report list	
UC072		Search report	
UC073		Cancel report	
UC074		Send report	
UC075	**Price list**	Reference price	
UC076		View pricing list	
UC077	**Transaction history**	Transaction history	
UC078	**Login**	Login	
UC079	**Logout**	Logout	
UC080	**Connect to goods owner**	Connect to goods owner	
UC081	**Account recharge**	Account recharge	

Figure 2-1: Scope of CTC

2.3 Standard objectives

Metrics	Unit	Committed	Re-committed	Note
Start Date		03/01/2017		
End Date		19/04/2017		
Duration	Day	105		
Team Size	Person	5		
Billable Effort	Person-day	520		
Calendar	Person-day	520		

effort				
Effort Usage	%	100		

Figure 2-2: Standard objectives

2.4 Milestones and deliverables

No	Stage	Deliverable/ Milestone	Delivery Date	Inspect	Final	Delivery Location
1	Initiation	Deliver Report No.1	09/01/2017			Supervisor
3	Initiation	Deliver Report No.2	16/01/2017			Supervisor
4	Solution	Software Requirement Specification	10/02/2017			Supervisor
5	Solution	System Architectural Design	24/02/2017			Supervisor
6	Construction	Complete Coding	18/03/2017			Supervisor
7	Construction	Deliver Report No.5	24/03/2017			Supervisor
8	Construction	Deliver Report No.6	17/04/2017			Supervisor
9	Termination	The last Document and CD source code	19/04/2017			FU
10	Termination	Project completed	26/04/2017			FU

Figure 2-3: Milestones and deliverables

3 PPROJECT ORGANIZATION

3.1 Software Process Model

3.1.1 FPT Software Process Model

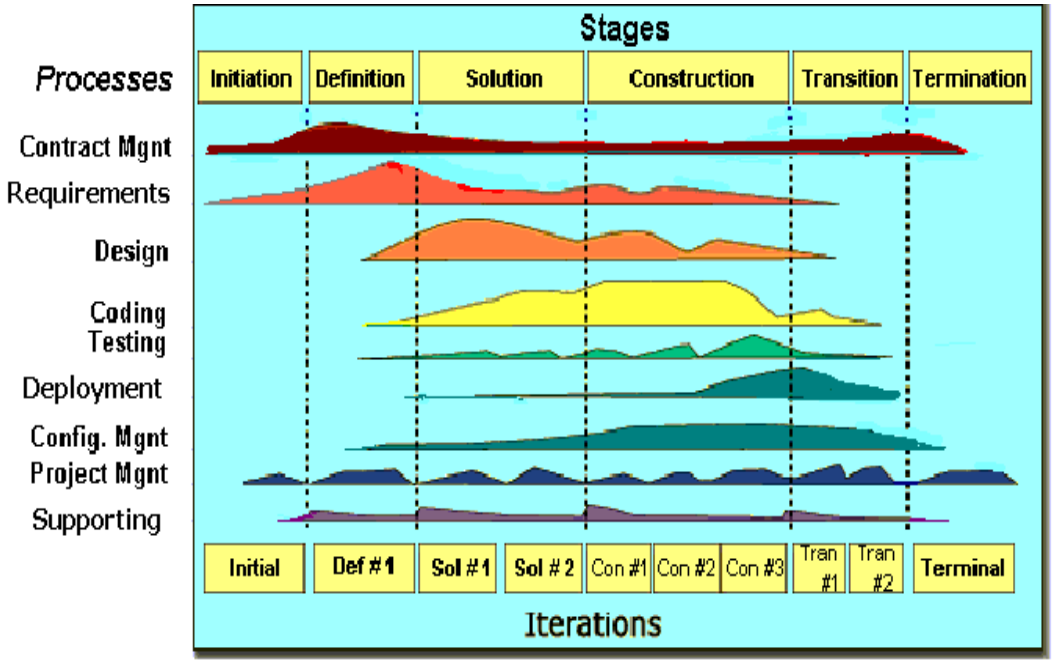

Figure 3-1: FPT Software process model

The software lifecycle is broken into *cycles*, each cycle working on a new generation of the product. The FPT Software process divides one development cycle in six consecutive *phases*:

1. Initiation phase
2. Definition phase
3. Solution phase
4. Construction phase
5. Transition
6. Termination

3.1.2 Project Life Cycle

Basing on FPT Software process and real-world project, we decided to divide the project into 4 phases: Initiation, Solution, Construction, and Termination:

- **Initiation Phase:** This is the explanatory phase of the project. Project objective and description is described at this stage. The purpose of this phase is to collect and understand business requirements, detail the project plan and agree upon a high level statement of work. Our primary objectives are complete project identification and project plan. After these are completed, the project is checked against the following criteria:
  - Identify business functions of the system
  - Determining the scope, conditions and limitations of the project
  - List the main functions of the system
  - List one or more suitable architecture for the system
  - Identify project risks
  - Complete Report #1, and Report #2
- **Solution Phase**: In this phase, the architecture of the system is designed. The goal is to translate requirements and specification into a technical solution to produce Technical Design.
  - Our *primary objectives* are complete Requirement Specification, Architecture Design and Database Design.
  - Finally, the plan must be provided (including estimates of cost and time) for the construction phase. The plan must ensure proper and accurate based on experience.
  - Complete Report #3 and Report #4
- **Construction Phase**: This is the longest phase of a project life cycle.
  - In this phase, all functions of the system will be installed. The installation will be divided into small stages, each stage of the installation a few functions. The results of each phase will be the release of the module function can be executed.
  - Construction and improvement of products until the final product is ready to deliver to the user. During this phase, all the components and other features of the application is developed and integrated into the product.
  - This phase emphasizes the resource management and control operations to optimize cost, time and quality.
  - Complete software packages and Report #5 and report #6
- **Termination Phase**: This is the final phase in the life cycle of a project.
  - Their products will be deployed to the client. The feedback received during the transfer process will be recorded and put on the new functional requirements or functionality enhancements in the next version of the product.
  - Phase transfer switch also includes the training system and the new system for the user.
  - Complete capstone project

3.2 Roles and Responsibilities

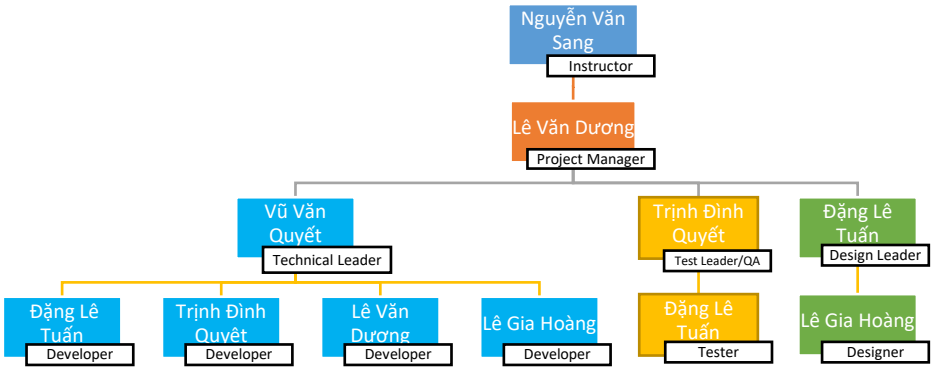

Figure 3-2: Roles and responsibilities

3.3 Organization Structure

Role	Responsibility
Project Manager	Planning, developing schedules, coordinating communication, generally responsible for keeping the team's focus on the main goal.
Technical Leader	Responsible for choosing and deciding what technologies should be used, as well as for overseeing the work being done by other developers.
Quality Assurance Manager	Ensuring the product meets the certain standards of quality from requirements.
Test Leader	Responsible for test execution, including test set-up and test run, evaluation of test run and error recovery, defect logging and test results recording.
Developer	Involve coding the product and reviewing code of other developers.
Designer	Involve designing product's user interface.
Tester	Involve testing the product.

Table 3-1: Project Structure

3.4 Project Team Member

Team Member	Role
DuongLV	Project Manager, Developer

QuyetVV	Technical Leader, Developer
QuyetTD	Tester Leader / QA, Developer
HoangLG	Developer, Designer
TuanDL	Designer, Tester, Developer

Table 3-2: Project Team Member

4 TOOLS AND INFRASTRUCTURES

4.1 Tool and Techniques

Programming languages	JavaScript, Java, Html
Framework	Java Server Face, Hibernate
Software architecture	Java Server Face
Version control	SVN
IDEs/Editors	Eclipse
UML tools	Astah Professional 7.0
Web server	Apache Tomcat 7
DBMS	MySQL
Deployment server	Apache Tomcat 7
Project management tool	Microsoft Project 2010
Development process	Rational Unified Process

Table 4-1: Project Team Member

4.2 Hardware requirement

- Personal computers for developing with the recommended configuration: 4GB of Ram DDR3, 100GB of hard disk SSD, Processor: 2.4GHz Intel Core i5

- A sever computers for testing with the Recommended configuration: 4GB of Ram DDR3, 100GB of hard disk SSD, Processor: 2.4GHz Intel Core i5

4.3 Software requirements

- Operating system: Window 8.1, 10
- Web server: Apache Tomcat
- IDE: Eclipse
- DBMS: MySQL
- Soured control: Microsoft Project Plan
- Design Graphic: Adobe Photoshop 6
- Contact tool: Skype
- Architecture design: Astah

5 SCHEDULE

5.1 Detailed schedule

Refers to “CTC_Project_Schedule_v1.0_EN” file.

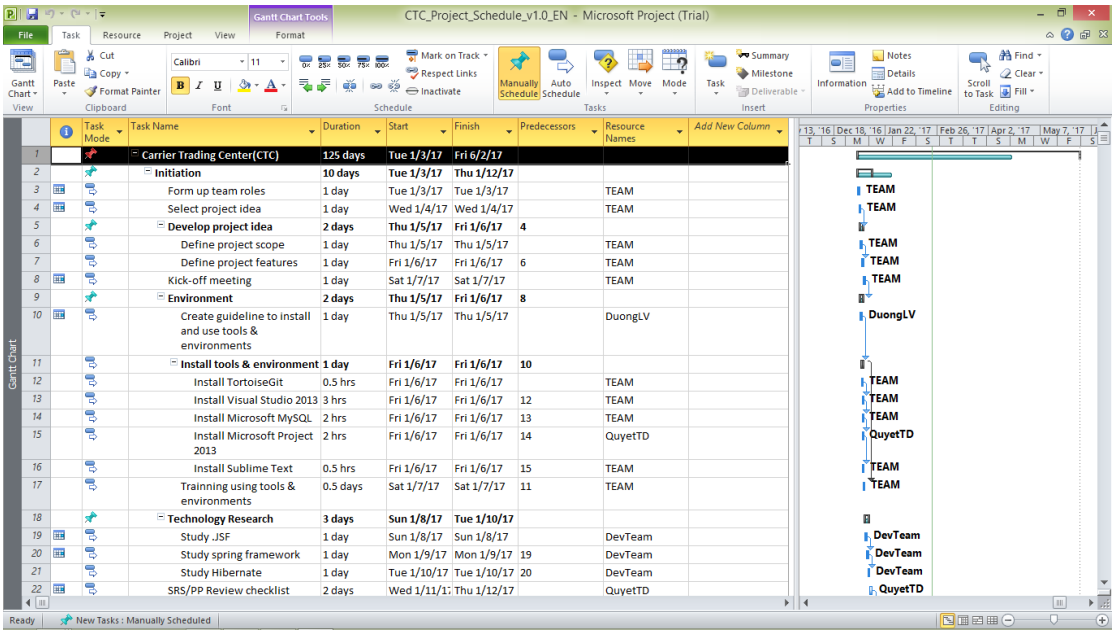

Figure 5-1: CTC Project Management file

5.2 Meeting Minutes

All meeting minutes will be written following this template:

<table>
<tr><td>Meeting/Project Name:</td><td colspan="3">CTC</td></tr>
<tr><td>Date of Meeting:</td><td></td><td>Time: (Type)</td><td>hours (Face-to-face)</td></tr>
<tr><td>Meeting Called by:</td><td>QuyetVV</td><td>Location:</td><td>FPT University‘s Library</td></tr>
<tr><td>Note Taker:</td><td>QuyetTD</td><td>Time Keeper:</td><td>DuongLV</td></tr>
<tr><td colspan="4">1. Meeting Objective
- Choose names, ideas for project</td></tr>
<tr><td colspan="4">2. Attendance</td></tr>
<tr><td>Name</td><td>Roles</td><td>E-mail</td><td>Phone</td></tr>
<tr><td>Lê Văn Dương</td><td>Project Manager</td><td>DuongLVSE03190@fpt.edu.vn</td><td>0166-977-5349</td></tr>
<tr><td>Lê Gia Hoàng</td><td>Developer</td><td>HoangLGSE03200@fpt.edu.vn</td><td>0165-901-2428</td></tr>
<tr><td>Đặng Lê Tuấn</td><td>Designer</td><td>TuanDLSE03807@fpt.edu.vn</td><td>0968-095-029</td></tr>
<tr><td>Vũ Văn Quyết</td><td>Technical Leader</td><td>QuyetVVSE03344@fpt.edu.vn</td><td>0972-381-151</td></tr>
<tr><td>Trịnh Đình Quyết</td><td>Test Leader/QA</td><td>QuyetTDSE03159@fpt.edu.vn</td><td>0964-657-385</td></tr>
<tr><td colspan="4">3. Content
-</td></tr>
<tr><td colspan="4">4. Note
-</td></tr>
</table>

Table 5-1: Meeting Minutes Template

5.3 Communication Plan

Weekly meeting schedule: We use Iterative and Incremental Process Model, then we divide the system into two sub-systems (CTC services and CTC Front-end), each sub-system is divided into a bunch of small tasks. Each task is recorded to Trello then estimated depending on difficulty and the amount of work by the whole team, after that the Team Leader will assign the task to team members and depending on difficulty, the Technical Leader will assign deadlines for each task. We will have a meeting every Monday to inform to all team about what each member finished last week, the status (fast, on time or slow), the

issues met and how to solve them. If any member raises any issue, the whole team will help to find out a solution together. After that, the team will define detailed stories for next week tasks and estimate how long it takes to finish them.

Daily discussing schedule: Each sub-system has one development team with different schedule. Whenstarting work-day, each team will have a stand-up meeting to inform to others: “What did I do yesterday?”, “What will I do today?” and “Are there any impediments in my ways?”. By focusing on what each person accomplished yesterday and will accomplish today, the team gains an excellent understanding of what work has been done and what work remains.

Unscheduled meeting: If someone has an important problem that he wants to solve immediately, we will have a meeting for discussion, usually via some online channel: Facebook, Skype, or Phone.

6 RISK MANAGEMENT PLAN

No	Description	Avoidance plan	Contigency plan	Status
R1	**Illness or absence of team members**	Member has to notice to the team about absence period and the plan of how to keep up with the work process.	Ensure that the absence of a member will not affect others and always have plans to deal with this problem.	Closed
R2	**Business problem**	Any ideas are welcome but members have to discuss with others and always focus on the reality and possibility.	Make sure the business logic of any ideas is carefully analyzed.	Closed
R3	**Change management overload**	A large number of change requests dramatically raises the complexity of the project and distracts key resources.	If there is a “must be changed” requirement, all team members must join the meeting to decide whether it should be implemented or not.	Closed
R4	**Project team misunderstand requirements**	When the project team a gap misinterprets requirements develops between expectations, requirements and work packages.	Make sure any miscommunication has to be resolved.	Closed
R5	**New technology**	Choosing technology based on member’s qualification. There are some issues canot resolve	When someone chooses a new technology, he/she has to explain to all team members about the decision.	Closed

Table 6-1: Risk Management

Communication channel: Our main communication channels are sky. On the other hand, we used face-to-face meeting, Email, Messenger. However, we sometimes make a phone call or instant message if someone has a problem.

7 EFFORT ESTIMATION

Task name	Worst case (days)	Best case (days)	Most likely (days)	Expected case (days)
Initiation	**95**	**92**	**93**	**93**
Solution	**95**	**92**	**92**	**93**
Construction	**150**	**145**	**147**	**148**
Termination	**40**	**35**	**38**	**39**
Total	380	348	370	373

Table 7-1: **Effort Estimation**

8 CODING CONVENTION

Reference to CTC_Coding_Convention_Oracle_EN