MINISTRY OF EDUCATION AND TRAINING

FPT UNIVERSITY

Capstone Project Document

WeTeach

WeTeach	
Group Members	Nguyễn Viết Nam – SE03599 – 0984536543 Trần Nhật Trường – SE03527 – 0978203753 Nguyễn Thịnh Cường – SE03238 – 0969666682 Chu Văn Toàn – SE03675 - 0962464541
Supervisor	Đào Trọng Duy
Ext Supervisor	
Capstone Project code	TE

1. INTRODUCTION

1.1 Purpose

This document includes information about WeTeach team, work schedule from start to the end of project; project risk management plan and communication plan. This will be used by project manager to manage and control work of all team. The supervisor can use this to track progress of the project team.

1.2 Definition and Acronyms

Acronyms & Abbreviation	Definition	Note
PM	Project Manager	
PMP	Project Management Plan	
SRS	Software Requirement Specification	
SDD	Software Detail Design	
SUM	Software User Manual	

Table 2.1: Definitions and Acronyms

1.3 References

2. PROJECT OVERVIEW

2.1 Project Description

This website has 2 mains users: *Leaner* and *Trainer*. WeTeach's goal is become a bridge between *Leaner* and *Trainer*. *Leaner* can use this website to look for different course in different category. *Trainer* can use this website to provide, promote…their course. We have review system that will make sure every course has the best content.

2.2 Standard Objectives

- This project must be finished no later than 18 Aug, 2017
- The 4 of team members give best effort to complete the project
- The final site covers 100% of requirements

2.3 Milestones and Deliverables

No	Milestones	Completion Date
1	Kick off Project	05/10/2017
2	End of Phase 1	07/07/2017
3	End of Phase 2	08/18/2017
4	Project defense	Expected: 08/23/2017 – 08/25/2017

Table 2.2: Milestones

3. PROJECT ORGANIZATION

3.1 Software Process Model

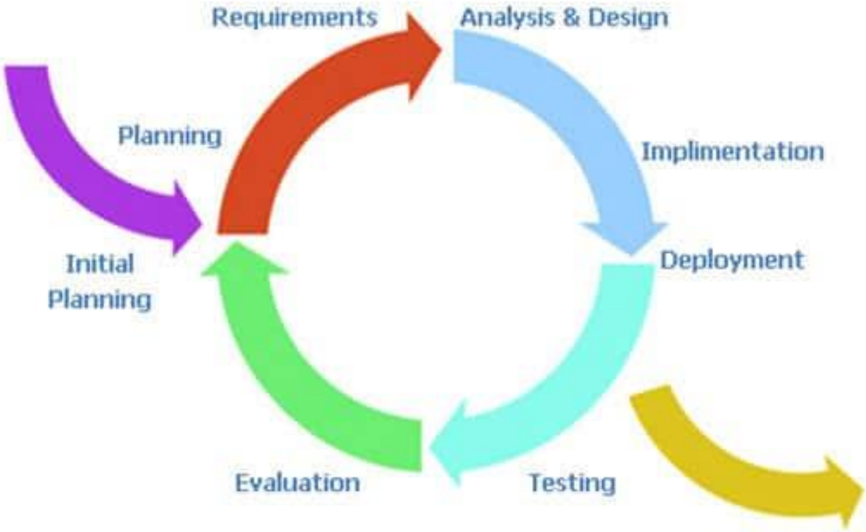


Figure 2.1: Incremental and Iterative Model

In this project, we apply Incremental and Iterative model as development process model.

Incremental and Iterative software development is a method of software development that is modeled around a gradual increase in feature additions and a cyclical release and upgrade pattern. This method begins with planning and continues through iterative development cycles involving continuous user feedback and the incremental addition of features concluding with the deployment of completed software at the end of each cycle. It is one of the methodologies of Agile software development, rational unified process and extreme programming.

3.2 Project Lifecycle

This project is divided into 2 phase: Phase 1 and Phase 2. Each Phase goes through planning, requirement specification, analysis and design, development, testing and evaluation. In each Phase we base on result of the previous Phase to plan and specify requirement and develop additional function for the system.

3.3 Role and Responsibilities

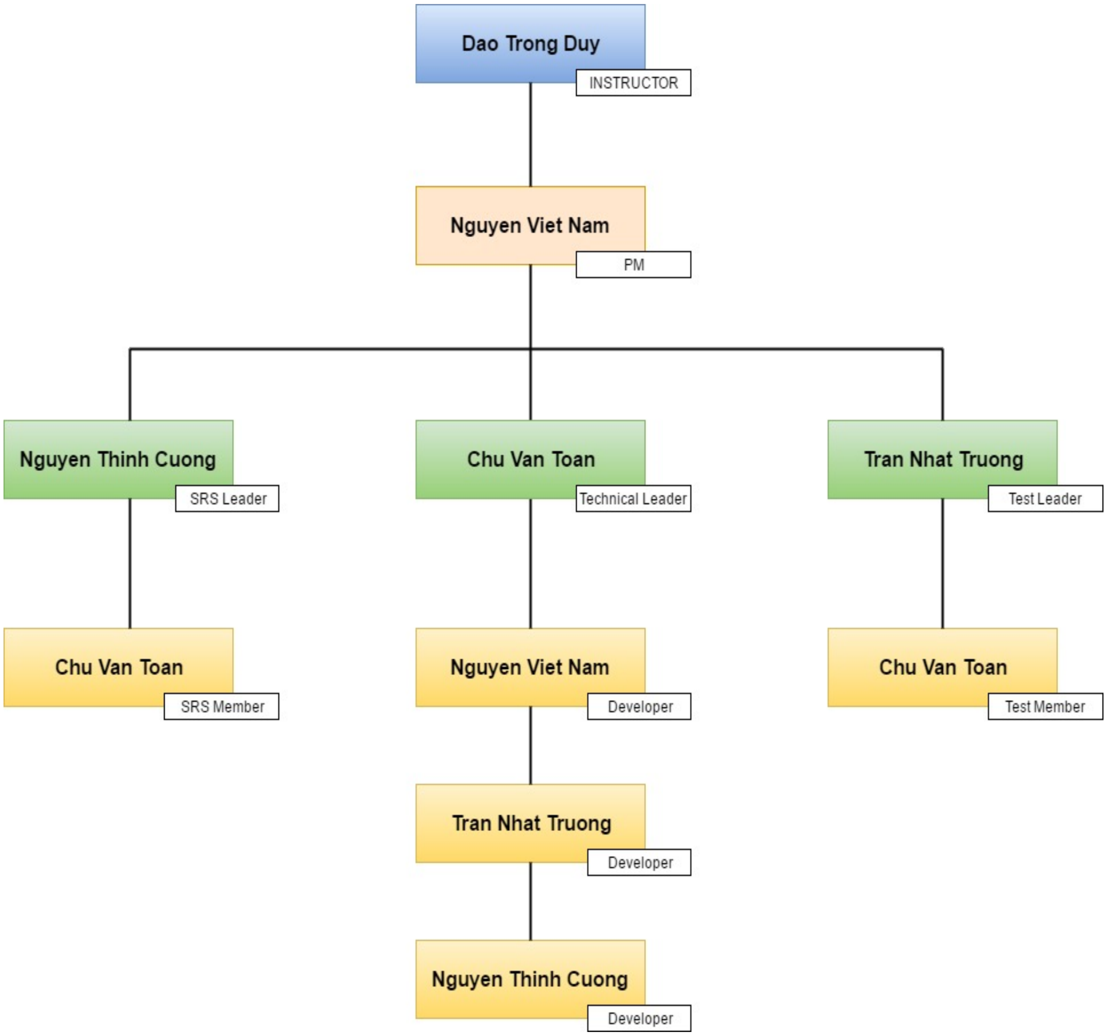


Figure 2.2: Organization Structure

Role	Full Name	Responsibility
Instructor	Dao Trong Duy	- Give instruction for project team. - Verify Deliverables. - Supervise project team’s status
PM	Nguyen Viet Nam	Have overall responsibility of the project: - Create project plan. - Assign task to team members. - Tracking team member’s work. - Report work status to the instructor
❖❖ ***Requirement analysis team***		

SRS Leader	Nguyen Thinh Cuong	Complete SRS document and submit to PM.
SRS Member	Chu Van Toan	Create user case diagram Specify non-functional requirement
❖❖ ***Technical team***		
Technical Leader	Chu Van Toan	- Create coding convention - Decide technique and tools to be used - Develop website
Developer #1	Nguyen Viet Nam	Together with team leader develop website
Developer #2	Nguyen Thinh Cuong	Together with team leader develop website
Developer #3	Tran Nhat Truong	Together with team leader develop website
❖❖ ***Test team***		
Test Leader	Tran Nhat Truong	- Create test plan - Create test case - Report test result
Test Member	Chu Van Toan	- Implement test case

4. TOOL AND INFRASTRUCTURES

4.1 Hardware

- Personal computer for coding and testing with minimum configuration of 4GB RAM, 320GB of hard disk, Intel core i5
- Internet network connection

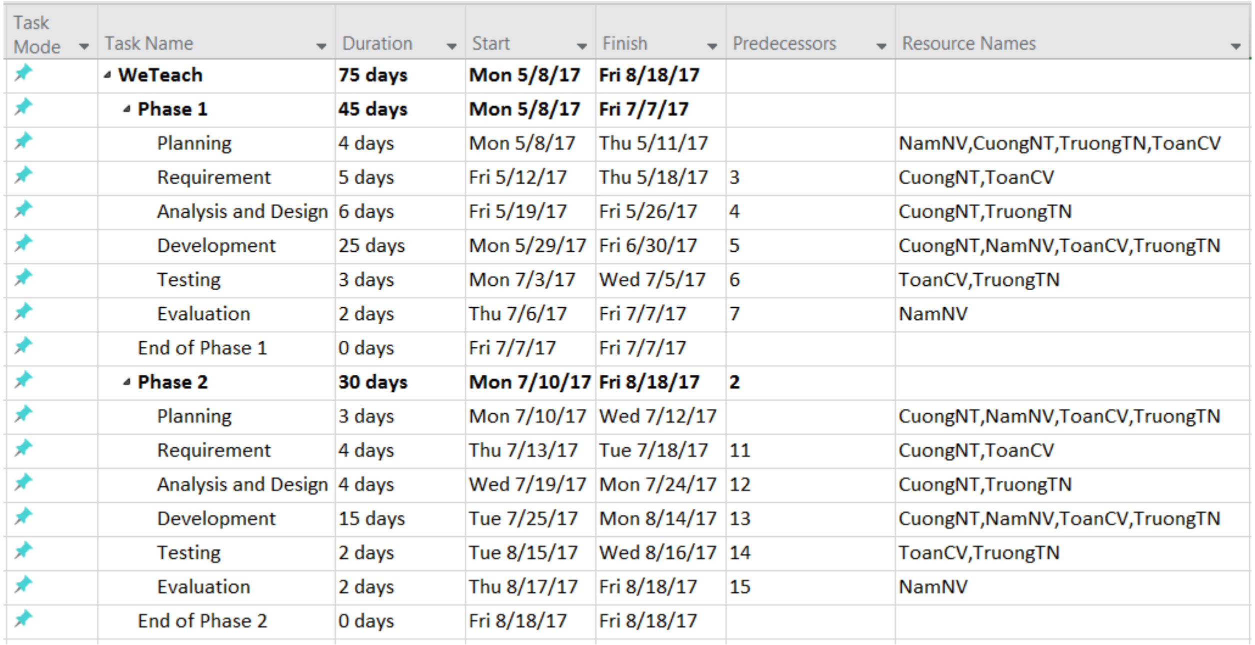
4.2 Software

Category	Software Name	Version
Operating System	Microsoft Windows 10	Professional
Office Tools	Microsoft Word	2016
	Microsoft Excel	2016
	Microsoft Power Point	2016
Management Tools	Microsoft Project	2016
	Google Driver	
Design Tools	www.draw.io	
	Balsamiq Mockups	3.5.9
Development Tools	Eclipse	
Database Tools	SQL Server Management Studio	
Source Code Management Tool	Github	

5. SCHEDULE

5.1 Detailed Schedule

Below is the image of work schedule for this project.



Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
📌	**WeTeach**	**75 days**	**Mon 5/8/17**	**Fri 8/18/17**		
📌	**Phase 1**	**45 days**	**Mon 5/8/17**	**Fri 7/7/17**		
📌	Planning	4 days	Mon 5/8/17	Thu 5/11/17		NamNV,CuongNT,TruongTN,ToanCV
📌	Requirement	5 days	Fri 5/12/17	Thu 5/18/17	3	CuongNT,ToanCV
📌	Analysis and Design	6 days	Fri 5/19/17	Fri 5/26/17	4	CuongNT,TruongTN
📌	Development	25 days	Mon 5/29/17	Fri 6/30/17	5	CuongNT,NamNV,ToanCV,TruongTN
📌	Testing	3 days	Mon 7/3/17	Wed 7/5/17	6	ToanCV,TruongTN
📌	Evaluation	2 days	Thu 7/6/17	Fri 7/7/17	7	NamNV
📌	End of Phase 1	0 days	Fri 7/7/17	Fri 7/7/17		
📌	**Phase 2**	**30 days**	**Mon 7/10/17**	**Fri 8/18/17**	**2**	
📌	Planning	3 days	Mon 7/10/17	Wed 7/12/17		CuongNT,NamNV,ToanCV,TruongTN
📌	Requirement	4 days	Thu 7/13/17	Tue 7/18/17	11	CuongNT,ToanCV
📌	Analysis and Design	4 days	Wed 7/19/17	Mon 7/24/17	12	CuongNT,TruongTN
📌	Development	15 days	Tue 7/25/17	Mon 8/14/17	13	CuongNT,NamNV,ToanCV,TruongTN
📌	Testing	2 days	Tue 8/15/17	Wed 8/16/17	14	ToanCV,TruongTN
📌	Evaluation	2 days	Thu 8/17/17	Fri 8/18/17	15	NamNV
📌	End of Phase 2	0 days	Fri 8/18/17	Fri 8/18/17		

Figure 2.3: Task List

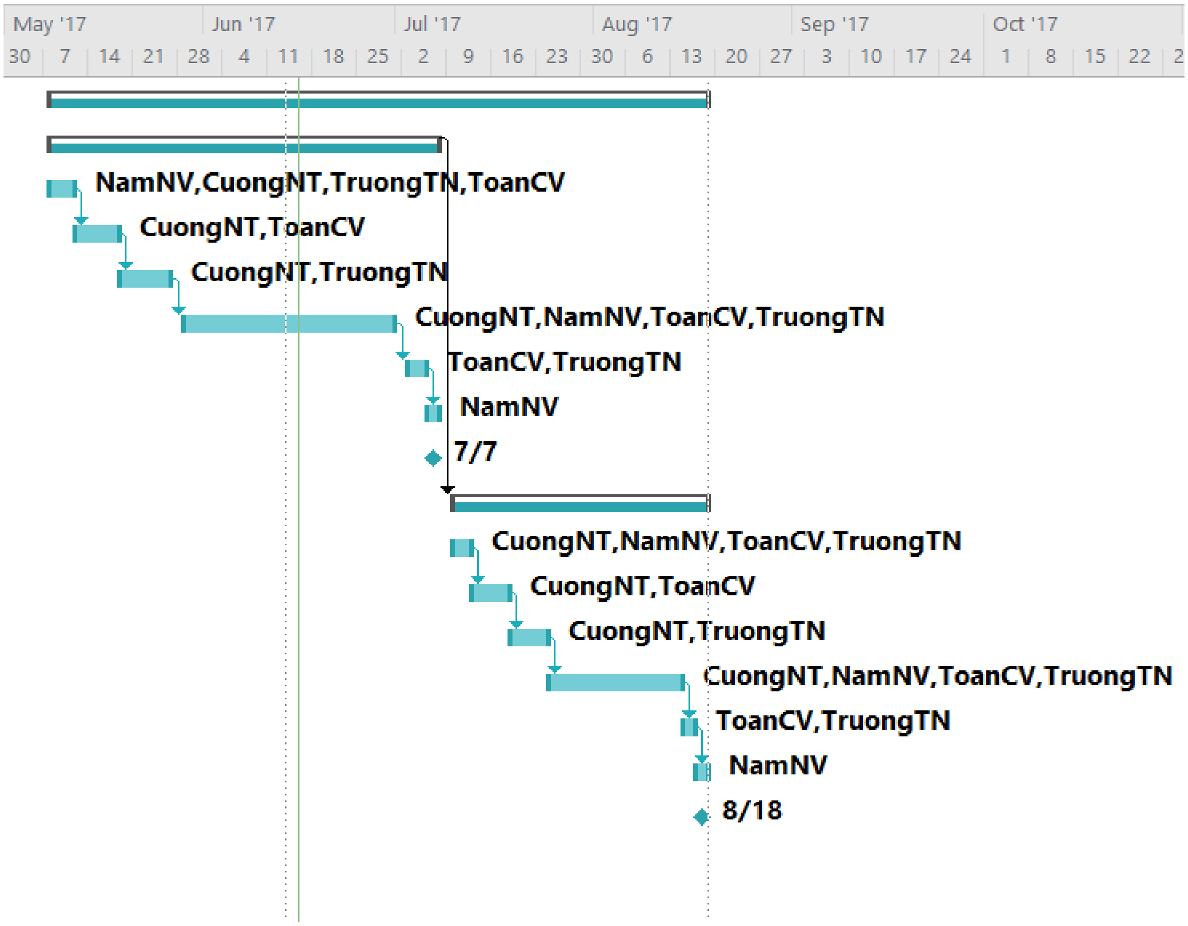


Figure 2.4: Grant Chart

6. COMMUNICATION MANAGEMENT

6.1 Meeting Schedule

We scheduled to meet the instructor once a week and have our own meeting which is also once a week to assign work and resolve all the problems that we have to face during working time.

6.2 Communication Channels

Our main communication channels are physical meeting, email, Facebook Messager…

7. RISK MANAGEMENT

Risk Code	Risk	Avoidance Plan	Contingency Plan	Impact
R01	Team member is not pulling their weight.	Create friendly but professional environment. Listen and give everybody the chance to speak out their ideas.	Talk to them directly. Talk about this issues with the team to work it out.	High
R02	Team member lack of knowledge and skill.	Provide training classes for team members.	Project Manager have responsibility to monitor and support team members whenever they need.	Medium
R03	Team member have conflict.	Organize team building to create a cohesive group.	Bring up the issue with the team and together find the solution.	High
R04	The product does not receive a good feedback from the customer.	Meet customer at least 1 time per 2 weeks to discuss and review website's requirement.	Specify customer's required again and work overtime if necessary.	High
R05	Deliver the website later than expected.	Project Manager have responsibility to make sure everything is on track.	Work overtime if necessary.	High
R06	Data lost	Always backup data using Github or Google Docs. Each team member also should keep data file in their own computer.	Try to restore as much data as possible.	High
R07	Requirement changing too much.	The team and customer together agree on the requirement. The team have responsibility to give customer advise.	Carefully review the requirement to decide if it's necessary to be change. Work overtime if necessary.	Medium

8. BUSINESS RULES

ID	Business Rules Name	Business Rules Description
BR1	User details	The following details are required when create a new user:

		• Email • Username • Password • Account Type • First Name • Last Name • Gender • DOB • Phone Number • Job • Profile Picture • Biography For Trainer: • Fields • Document (include Certification…)
BR2	Username	Username can not contain special characters like !$#@%^&*, length must be > 6 and can not be duplicated
BR3	Password	Password must contains at least one upper case, one number, one special character and length must be >8
BR4	Biography	Length must be < 200
BR5	Fields	Fields must belong to one of the following categories: • Development • Business • IT & Software • Personal Development • Design • Marketing • Office Productivity • Music • Health & Fitness • Teacher Training • Music • Language • Academic
BR6	Rate Course	Users can rate each course as many times as they want but the system will only record the latest one.
BR7	Rate Trainer	Users can rate each Trainer as many times as they want but the system will only record the latest one.

BR8	Course Statistic	The system will only record data from logged in users not guest.
BR9	Create New Course – Course Goals	Each text input’s length must be < 150
BR10	Create New Course – Curriculum	Required format: .xlxs
BR11	Create New Course – Course Title	Length must be < 100
BR12	Create New Course – Course Subtitle	Length must be < 150
BR13	Create New Course – Course Description	Length must be < 500
BR14	Create New Course – Course Image	Upload one image only. Required dimensions: 2048x1152 pixels. Required format: .jpg, .jpeg, .gif, .bmp or .png
BR15	Create New Course – Promotional Video	Upload one video only. Required quality: at least 360p. Required format: .mp4
BR16	Create New Course – Auto Reply	Length must be < 200

9. CONFIGURATION MANAGEMENT

9.1 Version Numbering Rules

- **For Documents:**

Each file has a version number as part of its identity. This version number is physically represented as a 2-part string with the following format: <version>.<revision>

For example, version 1.0 indicates 1 as the version, and 0 as the revision number.

The original version will be numbered 0.1. Subsequent revisions will be numbered 0.2, 0.3 and so on. The approved version will be 1.0.

  - **Version number:** appears to the left of the decimal. It is changed only when the core content of the item is significance changed. For example: when a item is completely overhauled, with substantial internal changes, the version 1.0 would become version 2.0.
  - **Revision number:** appears to the right of the decimal. It is changed when the existing content is changed, but the main (or core) content is remained. The normal sequence of revision is 1.1, 1.2, and so on.

- **For Software Source Files:**

Software executables and support files are generally identified by name and version number.

The version number is physically represented as a 3-part string with the following format: <version>.<revision><update>.

For example, version 1.1a indicates 1 as the version, 0 as the revision number, and a as the update level.

- **Version number:** appears to the left of the decimal. It is changed only when the core content of the item is significance changed, as when moving from one are of the development tool to another, when an application is completely overhauled, or the user interface changes fundamentally. In this case, version 1.1a would become version 2.0.
- **Revision number:** appears to the right of the decimal. It is changed when new features, functionality or other content are added or significantly changed. In normal case, the core architecture or user interface have been extended or limited in some manner. The most common reason for changing the revision number is adding a new module or other functionality to the software. The normal sequence of revision is 1.0, 1.1 and 1.2 and so on.
- **Update level:** is appended or incremented when the only change to the software item is to correct on or more defects, without the addition of any new function. Version 1.1 would become v1.1a, 1.1b and so on. This updating is overridden when a combination revision, involving bug fixes and new feature additions, is performed. In such a case, the software revision number is incremented and any update indicator is dropped, as in v1.1b to 1.2.

9.2 Directory Structure

A folder for storing all project documents is created on Github. This folder includes of some main folders as viewed following table:

Main Folder	Sub-folder	Purpose
Templates		Store templates of documents
Meeting Minutes		Store project meeting minutes
Project Report	TE_Report1_ProjectIntroduction	Store Introduction Document
	TE_Report2_ProjectManagementPlan	Store PMP and related files

	TE_Report3_SoftwareRequirementSpecification	Store SRS and related files
	TE_Report4_SoftwareProjectDesignDescription	Store SDD and related files
	TE_Report5_SoftwareProjectTestDocumentation	Store STD and related files
	TE_Report6_SoftwareUserManual	Store SUM and related files
Source Code	Phase 1	Store source code completed in Phase 1
	Phase 2	Store source code completed in Phase 2
Training		Store training documents of team members

10.CODING CONVENTION

10.1 Coding Convention

- Using prefix “TE” for each classes or constants – For example: TE_ImangeProcessor.
- Naming class: Use the uppercase letter for the first character
- Naming variables:
  - Start the name with a lowercase letter and capitalize the first letter of embedded words.
  - Start the name with a verb.
  - Don’t use prefixes.
  - Use keywords before all arguments.
  - Make the word before the argument describe the argument.

10.2 Comment Convention

- Write comment for all functions and important logic.