**MINISTRY OF EDUCATION AND TRAINING**

**FPT UNIVERSITY**

Capstone Project Document

**Job Searching System**

|  |  |
| --- | --- |
| **Group JSS** | |
| **Group members** | Huỳnh Đức Tài – Leader – SE60630  Nguyễn Ngọc Thiện – Member – SE90129  Phạm Quốc Thái – Member – SE60599  Võ Hoàn Thiện – Member – SE60788  Trịnh Văn Hoàng – Member – 01769  Trần Chung Thành – Member – 01611 |
| **Supervisor** | Mr. Trần Đình Trí |
| **Ext. Supervisor** | N/A |
| **Project code** | JSS |

-Hanoi, 08/2015-

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# Definition, Acronyms and Abbreviations

|  |  |
| --- | --- |
| **Name** | **Definition** |
| JSS | Job Searching System |
| App | Application |
| QA | Quality Assurance |
| BA | Business Analysis |
| DEV | Developer |
| GUI | Graphical User Interface |
| OS | Operating System |
| Admin | Administrator |
| API | Application Programming Interface |
| HTTP | Hyper Text Transfer Protocol |

# 2. Project Management Plan

## 2.1. Problem Definition

### 2.1.1. Name of this Capstone Project

The name of our capstone project is “Job Searching System” which means “Hệ thống tìm việc làm” in Vietnamese. The alternative name is JSS. But it might be different once the project is completed and comes to deployment.

### 2.1.2. Problem Abstract

This project Job Searching System (JSS) is a system in which jobseekers can register themselves online, view organization requirements and apply for the suitable job. This kind of system plays an important role in simplifying the recruitment process. The system has facilities where prospective candidates can create their Profile’s and apply for jobs suited to them. It also makes it possible for organization to post their staffing requirements and view profiles of interested candidates. JSS is developed to provide all categories of job and help to get various type of job, to help jobseekers for getting the quick job.

The need for such services is really high. There are currently some other systems providing quite the same services, but all have their own disadvantages. The purpose of this project is to create a system that overcomes all those disadvantages and becomes the most user-friendly system for Vietnamese people.

Once completed, the product must possess the following characteristics:

* Specialized for Vietnamese users.
* Provides detailed information about career and job opportunities, application process, selection procedure for various jobs, personality development guides.
* Sorting and filtering best suitable jobseekers based on some criteria. Recruiters will not have to waste his time for finding right employee at right post.
* Jobseekers can create entries in order to share experiences

### 2.1.3. Project Overview

#### 2.1.3.1. The Current System

There is no current system. The product is building from scratch as a new idea.

#### 2.1.3.2. The Proposed System

The main system will be a website. Job Searching System is ambitious to overcome the disadvantages of existing systems, based on the analyzing view above.

The system will provide the following main features in front-end:

* Guest can visit the site, find jobs, view recruiter’s information of any kinds
* Jobseeker can create their Profile’s, update skill, apply for jobs suited to them
* Jobseeker can create entries in order to share experiences
* Recruiter can matching Profile, sort and filter best suitable jobseekers based on some criteria
* Recruiter must buy some packages online service for them to post jobs
* Authorized users can send problem reports

The back-end will allow the administrators to manage the most important activities as well as information on the site.

#### 2.1.3.3. Boundaries of the System

* The system can be used by every people with a laptop/computer, a smart phone with Internet connection.
* The language of the system is Vietnamese and English.
* The complete product includes:
* The website for Admin, Manager, Staff, Recruiter, Job Seeker and Guest.
* All process documents involved.

#### 2.1.3.4. Development Environment

##### 2.1.3.4.1. Hardware requirements

**For server**

|  |  |  |
| --- | --- | --- |
| Windows | Minimum Requirements | Recommended |
| Internet Connection | Cable, Wi-Fi (4 Mbps) | Cable, Wi-Fi (8 Mbps) |
| Operating System | Window Server 2008 | Window Server 2008 |
| Computer Processor | Intel® Xeon ® 1.4GHz | Intel® Xeon ® Quad Core (12M Cache, 2.50 GHz) |
| Computer Memory | 1GB RAM | 2GB or more |

Table 2-1: Hardware Requirement for Server

##### 2.1.3.4.2. Software requirements

* Window Server 2008: operating system and platform for development.
* SQL Server 2012 Enterprise Editions: used to create and manage the database for system.
* Visual Studio 2013: used to implement website and web service.
* Github & Tortoise SVN: used for source control.
* Astah: used to create Use-cases diagrams.
* Microsoft Office Visio 2007: used to draw Sequence diagrams.
* Microsoft Office Powerpoint 2010: used to draw Architecture diagram.
* Software Ideas Modeler: used to draw Component diagram, Class diagrams, Flow-chart diagrams, Entity Relationship diagram.
* Facebook: used for communication and meeting.

## 2.2. Project Organization

### 2.2.1. System Process Model

Software needs a software process model to guarantee the deadline and quality. Therefore, it is really important to select the suitable software process model. To accomplish the project, our team decided to choose Iterative Development Model.

##### 2.2.1.1. Iterative Development Model

An iterative life cycle model does not attempt to start with a full specification of requirements. Instead, development begins by specifying and implementing just part of the software, which can then be reviewed in order to identify further requirements. This is then repeated, producing a new version of the software each cycle of model.

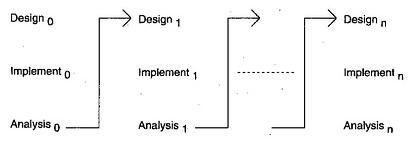


Figure 2-1: Iterative Software Development Model overview

An iterative development approach that allows the functionality to be delivered in parts has become a necessity and an effective way to manage risks. A common iterative approach is to decide what should be developed in iteration and then plan the iteration accordingly. A somewhat different iterative approach is to time box different iterations. In this approach, the length of iteration is fixed and what should be developed in iteration is adjusted to fit the time box. Generally, the time boxed iterations are executed in sequence, with some overlap where feasible. With the project, we decided to choose the second approach – time boxed iteration:

* May 7th – Jul 15th: complete main function of the system.
* Jul 15th – Aug 15th: review and upgrade auxiliary functions.
* Aug 15th - Sep 2th: review and complete the system.

The following advantages of Iterative Development Model are the reason why we choose for this project:

* **Deliver base functionality first.** Iteration can be planned so that the basic, core functions are created first, and the subsequently built upon in future iterations. It guarantees that we will not waste our time on auxiliary functions
* **Defect tracker**: In iterative model, we are building and improving the product step by step. Hence we can track the defects at early stages. This avoids the downward flow of the defects.
* **Project size (not too big and not too small).** Iterative process focus on smaller projects that can be more quickly started and ended with tangibles deliveries. Some large project can even be split up into a set of smaller projects that can utilize Iterative processes.
* **Good organization and team flexibility.** Iterative Process requires a high degree of flexibility and the ability to manage through change.

##### 2.2.1.2. Project Life Cycle

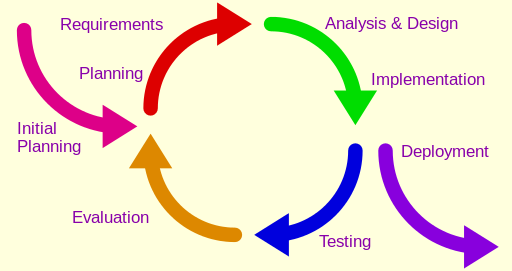


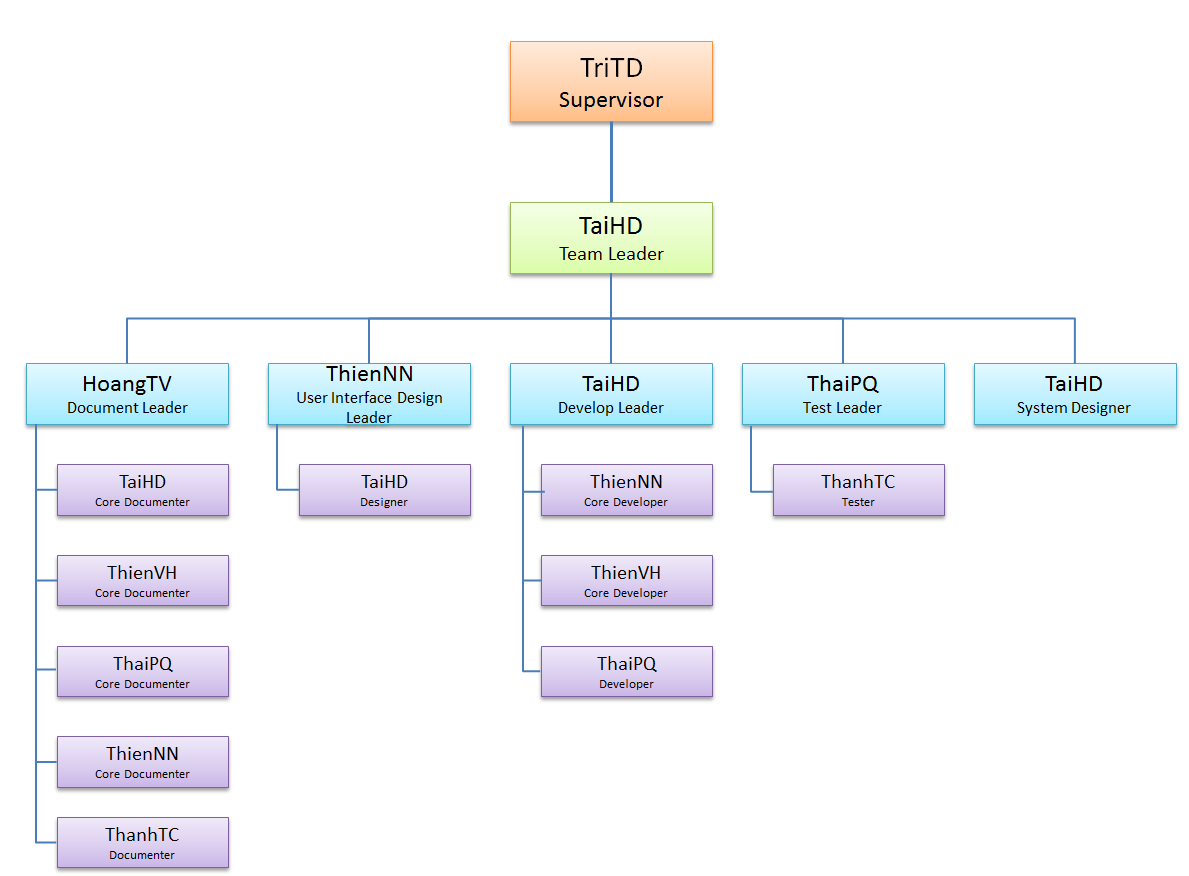
Figure 2-2: Iterative Software Development Model life cycle

The overall flow of the Iterative model is as follows:

* **Initial Plan:**
* Determining the scope, conditions and limitations of the project
* List the main functions of the system
* Choose suitable architecture for the system
* Identify project risks
* Complete Report #1
* **Planning:**
* Create a schedule that describes the activities needed to complete the iteration.
* Decide which function to be completed in the iteration.
* Complete Report #2
* **Requirement:**
* Capture the business requirement
* **Analysis & Design:**
* Detail the functional requirements which are decided to complete before.
* Provide stable system architecture which can implement the functions.
* Complete Report #3, and Report #4
* **Implementation:**
* Build a version of product from what we designed. (Coding)
* Complete a version of software.
* **Testing:**
* Create test plan.
* Test and fix bug.
* Complete Report #5.
* **Deployment:**
* Deploy a version of software with bug fixed.
* Complete Report #6
* **Evaluation:**
* Review and evaluate the iteration.

### 2.2.2. Role and Responsibilities

The list of the specific roles and responsibilities in JSS project are listed below:



**Figure 2-3:** Roles and assigned members in JSS project

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Full name** | **Roles** | **Responsibilities** |
| **1** | Huỳnh Đức Tài | Team Leader, System Designer, Develop Leader, Core Documenter, Designer | * Managing process * Develop the developing plan based on project plan * Contact with supervisor in providing updated information * Design all of System Architecture, such as Entity Relationship diagram, Database diagram, Coding environment * Manage coding process * Coding some difficult function * Take responsible for Report 4 * Design User Interface * Training |
| **2** | Nguyễn Ngọc Thiện | User Interface Design Leader, Core Documenter, Core Developer | * Take responsible for User Interface Design * Coding main function * Draw Sequence diagrams * Write Report 3 |
| **3** | Phạm Quốc Thái | Test Leader, Core Documenter, Developer | * Take responsible for Testing and Report 5 * Develop the test plan based on project plan * Develop test cases for the system * Coding * Testing |
| **4** | Võ Hoàn Thiện | Secretary, Core Documenter, Core Developer | * Write and send meeting-minute to all team-members * Take responsible for Report 3 * Coding main function |
| **5** | Trịnh Văn Hoàng | Document Leader | * Take responsible for Report 1, 2, 6 * Managing documents * Maintain all documentation by preparing standard templates |
| **6** | Trần Chung Thành | Documenter, Tester | * Creating test cases for the system * Testing * Support writing documents |

**Table 2-3:** Roles and Responsibilities

### 2.2.3. Tools and Techniques

|  |  |
| --- | --- |
| **Title** | **Detail** |
| **Software and Framework** | **Software:**  - Microsoft® Office, Microsoft® Project (2007, 2010, 2013)  - Operating System: Microsoft® Windows 7, 8.1  - Source Control: Tortoise SVN 1.7.9  - Visual Studio 2013  - Microsoft SQL Server 2012  - Browser: Chrome 41, Firefox 37  **Framework:**  - MVC 5  - C#  - .NET Framework 4.5  - Entity Framework 6.0  - Bootstrap 3.0  - Identity 1.0  - Razor 3.0 |
| **Hardware** | Notebooks for developing/testing with the minimum configuration:  RAM:2GB Hard disk: 150GB Chipset: Core 2 Dual 2.0 GHz |
| A server computer with the minimum configuration:  RAM: 2GB  Hard disk: 150GB  Chipset: Core 2 Dual 2.0 GHz |

**Table 2-4:** Tools and Techniques

## 2.3. Project Management Plan

### 2.3.1. Tasks

#### 2.3.1.1. Iteration 1

##### 2.3.1.1.1. Initiating and Planning

###### Description:

* Define how to communicate
* Define project and system scope
* Study the other websites functions
* Register Capstone Project
* Define project and system of new project
* Prepare development environment
* Study technology and framework

###### Output:

System Introduction document (Report 1)

Project Management Plan document (Report 2)

###### Deliverables:

Deliver System Introduction and Project Management Plan documents before 14/05/2015

###### Resources Needed:

6 people for three weeks

###### Dependencies and Constraints:

N/A

###### Risks:

Conflict ideas and be changed in future

##### 2.3.1.1.2. Requirements

###### Description:

* Create Software Requirements Specification

###### Output:

Software Requirements Specification document (Report 3)

###### Deliverables:

Deliver Software Requirements Specification document before 04/06/2015

###### Resources Needed:

6 people for three weeks

###### Dependencies and Constraints:

None

###### Risks:

Because there is no actual user, and the requirements come from all the team members, conflicts may happen regularly.

##### 2.3.1.1.3. Design

###### Description:

* Draw System Architecture Design
* Draw Component diagram
* Design User Interface
* Design Database
* Write Detail Design

Create logical and physical database design

###### Output:

System Detail Design document (Report 4)

###### Deliverables:

Deliver System Detail Design document before 11/06/2015

###### Resources Needed:

3 people for two weeks

###### Dependencies and Constraints:

Depends on the completion of SRS

###### Risks:

SRS may not be detailed enough to capture the business rules, the Database Design will be changed much in the future.

##### 2.3.1.1.4. Test Plan

###### Description:

* Create Test Plan

###### Output:

Test Plan

###### Deliverables:

None

###### Resources Needed:

1 people for a week

###### Dependencies and Constraints:

Depends on the completion of previous documents

###### Risks:

N/A

##### 2.3.1.1.5. Implementation and Testing

###### Description:

* Create Sample code
* Create all Database access class
* Create Unit test form
* Coding
* Create test-cases
* Testing
* Create bug list
* Write Report 5

###### Output:

Source code and Report 5

###### Deliverables:

Demo to Supervisor

###### Resources Needed:

5 people for 28 days

###### Dependencies and Constraints:

Depends on the completion of SRS, SDD, Database Design

###### Risks:

Team members may not easily get used to new technologies. The team does not have a common place and may lack of time to implement all the requirements.

##### 2.3.1.1.6. Evaluation

###### Description:

Review and evaluate the iteration

###### Output:

Next Iteration plan

###### Deliverables:

None

###### Resources Needed:

1 people for 3 days

###### Dependencies and Constraints:

Implementation and Testing is finished

###### Risks:

N/A

#### 2.3.1.2. Iteration 2

##### 2.3.1.2.1. Initiating and Planning

###### Description:

* Define plan for Iteration 2
* Update Report 1 and Report 2

###### Output:

System Introduction document (Report 1)

Project Management Plan document (Report 2)

###### Deliverables:

Deliver System Introduction and Project Management Plan documents before 30/07/2015

###### Resources Needed:

2 people for a week

###### Dependencies and Constraints:

N/A

###### Risks:

None

##### 2.3.1.2.2. Requirements and Design

###### Description:

* Update Report 3 and Report 4

###### Output:

Software Requirements Specification document (Report 3)

System Detail Design document (Report 4)

###### Deliverables:

Deliver Software Requirements Specification document and System Detail Design document before 05/08/2015

###### Resources Needed:

4 people for a weeks

###### Dependencies and Constraints:

None

###### Risks:

N/A

##### 2.3.1.2.3. Implementation

###### Description:

* Fix bugs and code uncompleted function

###### Output:

Source code

###### Deliverables:

Demo to Supervisor

###### Resources Needed:

3 people for a week

###### Dependencies and Constraints:

Depends on the completion of SRS, SDD, Database Design

###### Risks:

N/A

##### 2.3.1.2.4. Testing

###### Description:

* Create Integration test-cases, System test-cases, and Acceptance test.

###### Output:

Report 5

###### Deliverables:

Deliver Report 5 before 05/08/2015

###### Resources Needed:

2 people for two weeks

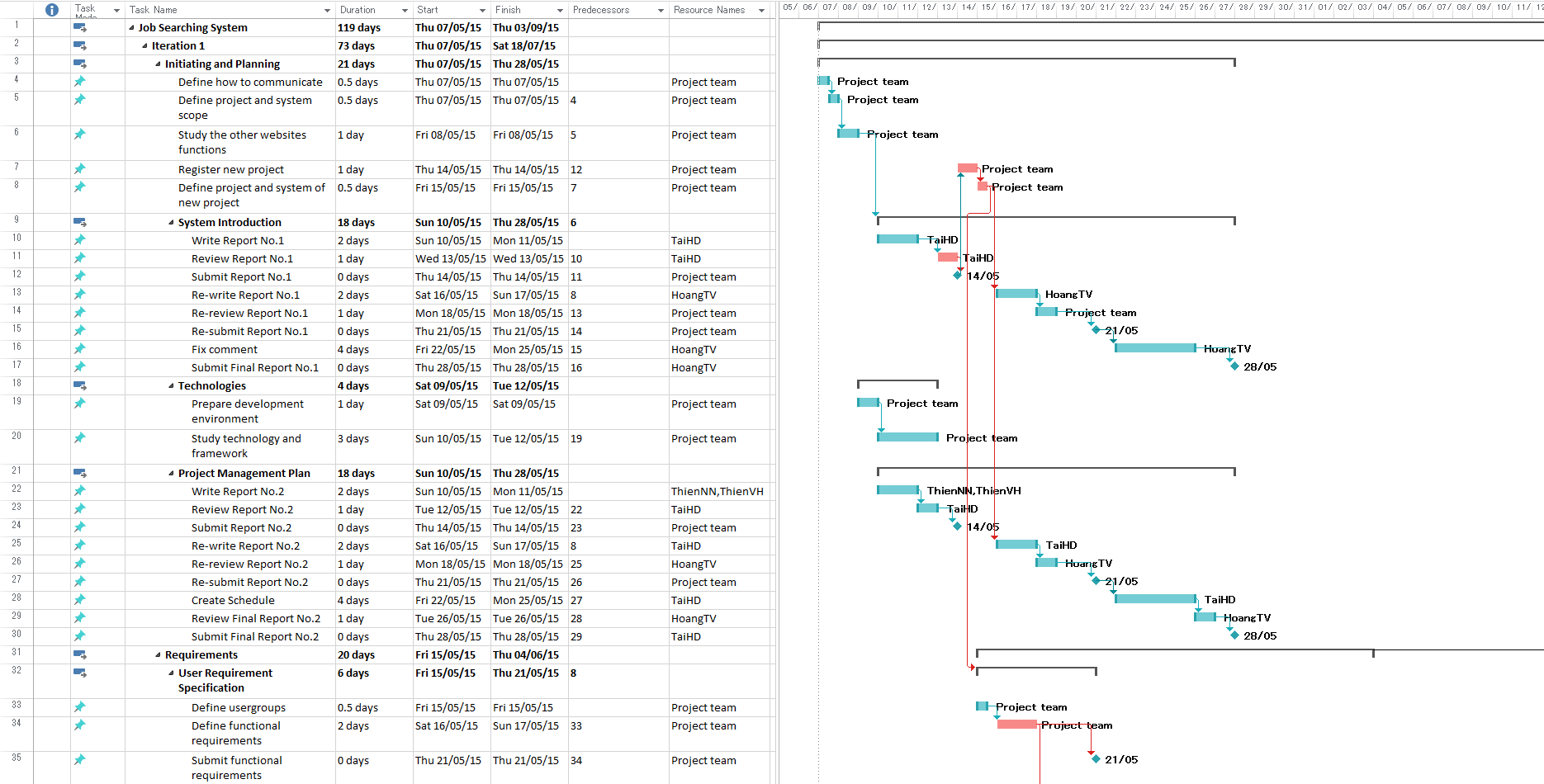
###### Dependencies and Constraints:

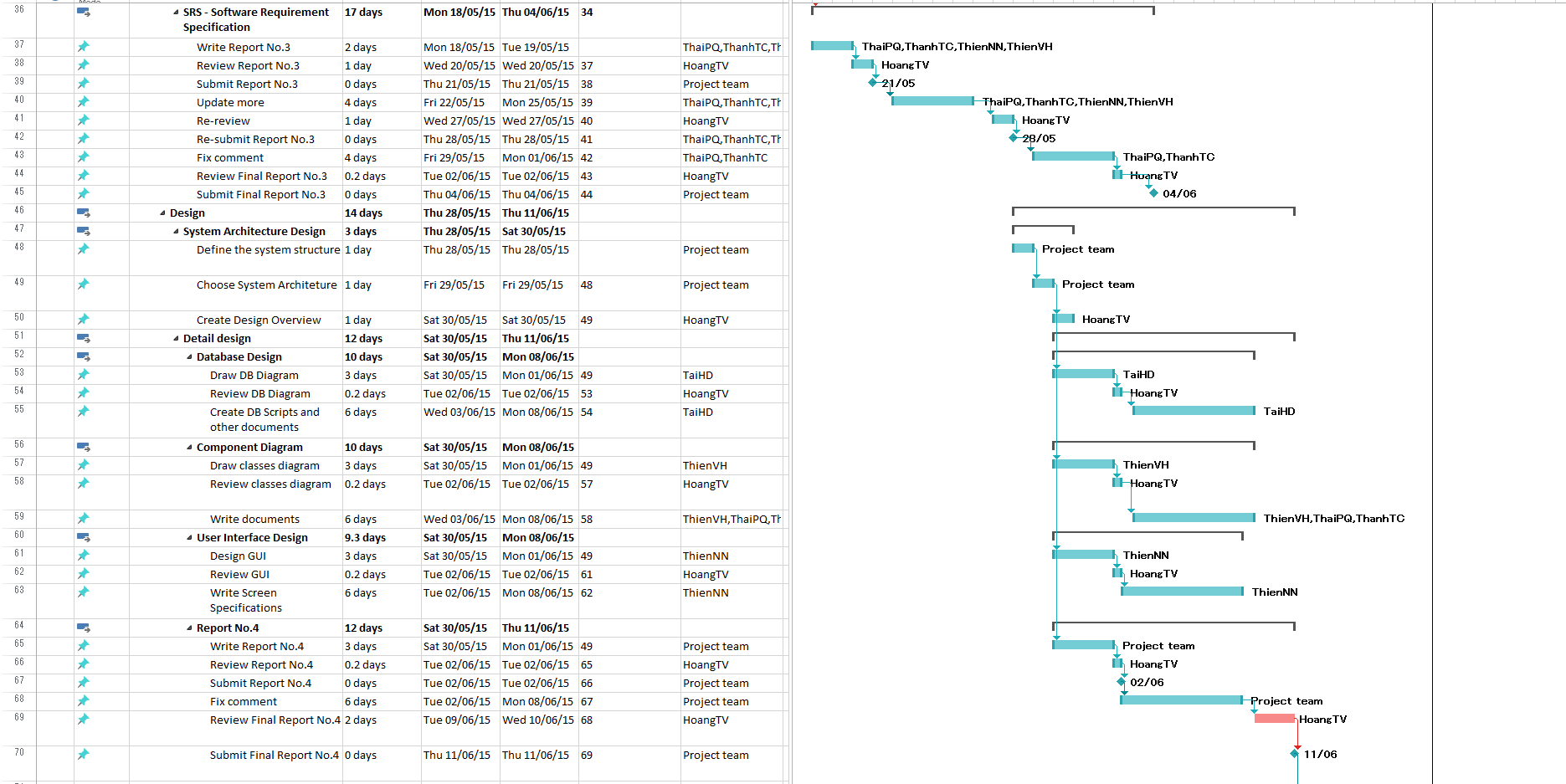
Depends on the completion of coding

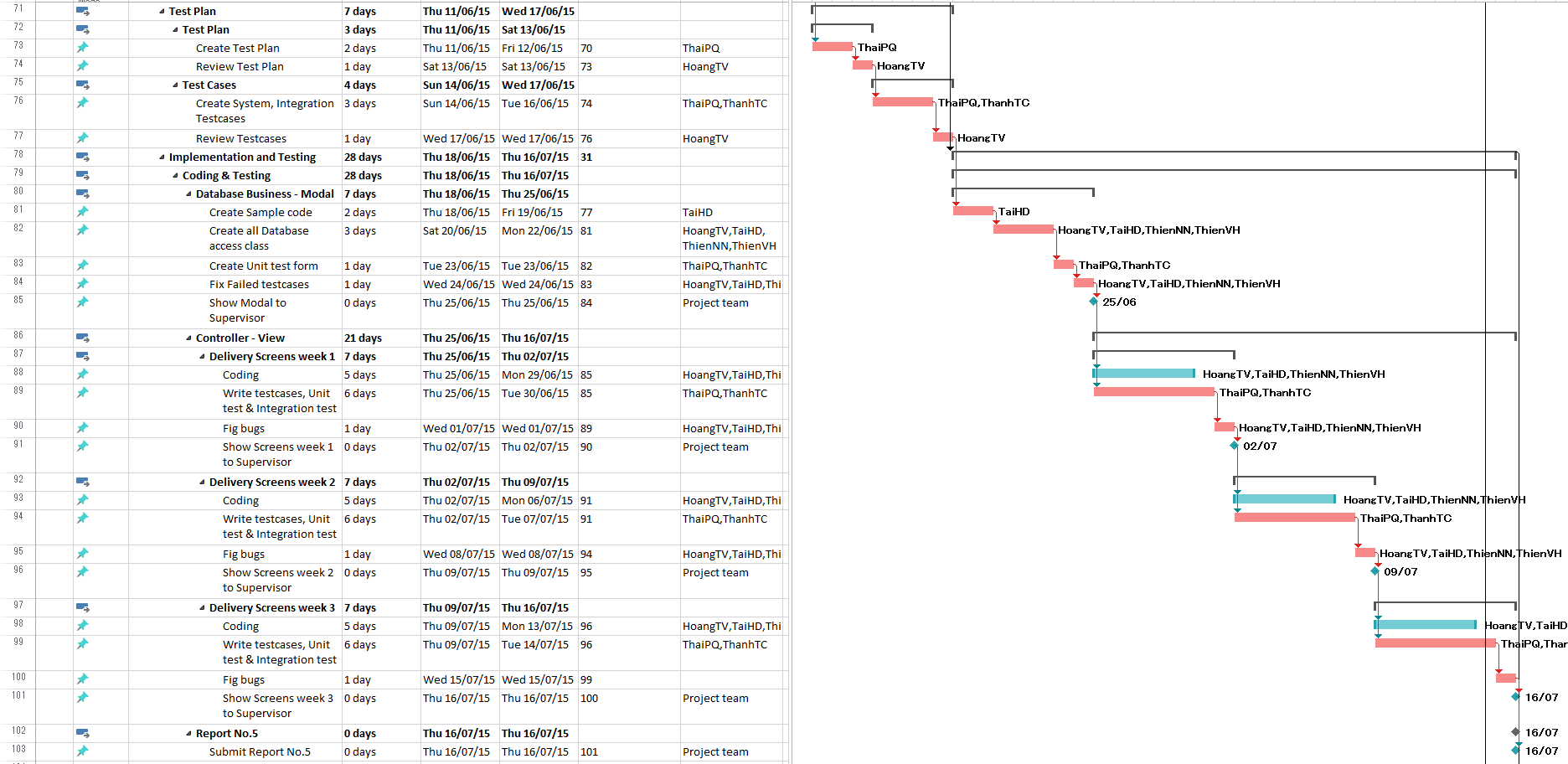
###### Risks:

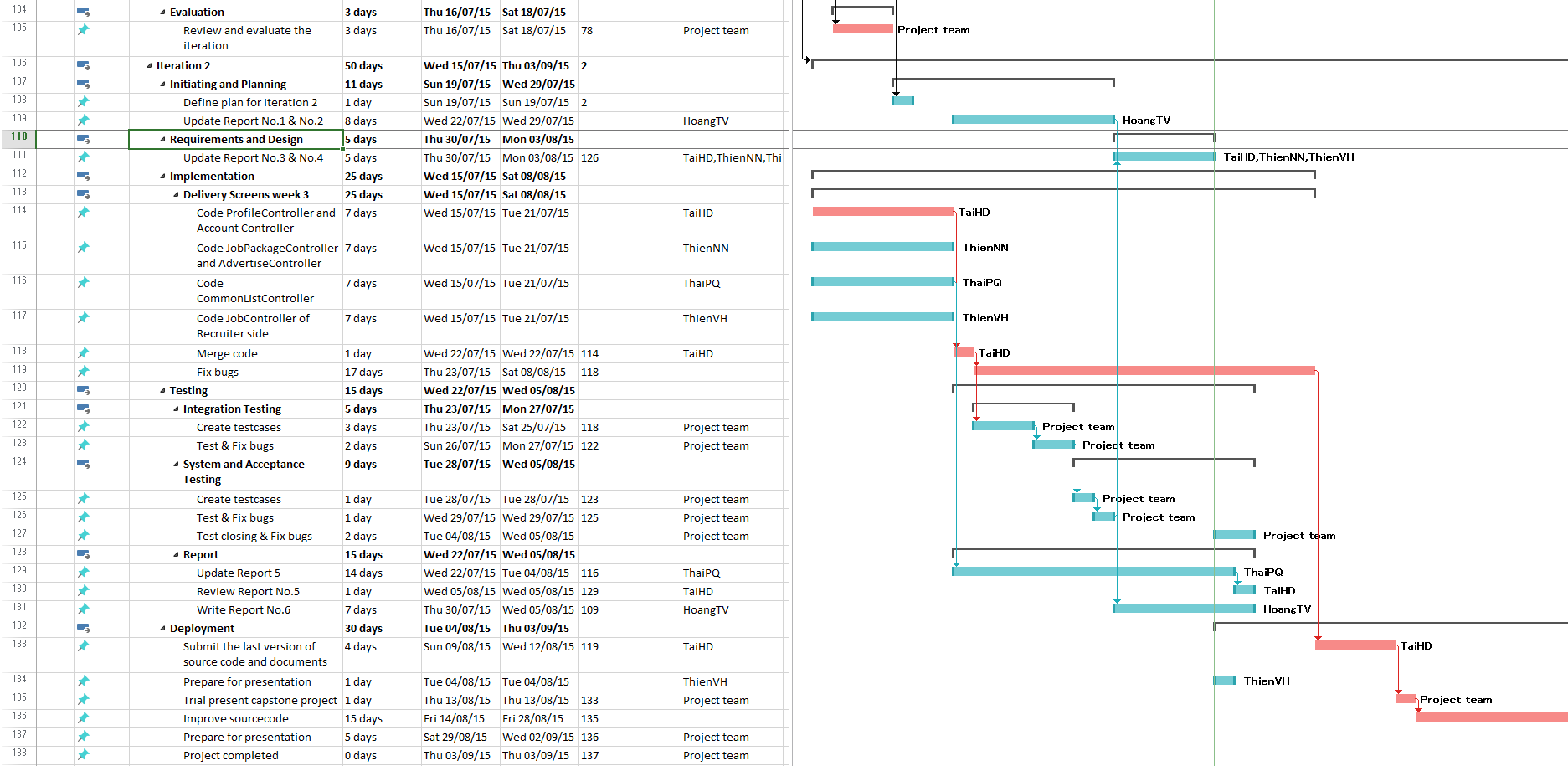
N/A

### 2.3.2. Tasks Sheet: Assignment and Timetable









### 2.3.3. All Meeting Minutes

#### 2.3.3.1. Meeting Minute 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 1 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Introduction | | | | | |
| **Date:** | | May, 7th 2015 | **Note Taker:** | | | ThienNN | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ | | | | | |
| **Absent** | | ThanhTC | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | * Introduce about team members * Introduce Capstone project guidelines * The team will have 4 groups:  1. Documentation 2. Development 3. Design 4. Testing   - Leader: TaiHD | | | Project team |  | |  |
| 2 | * Project overview: Anime Viet-sub | | | Project team |  | | * The Anime Viet-sub may be changed. |
| 3 | * To change project * Initial Idea Report 1 * Microsoft project , Report 2 | | | Project team | May, 14th | |  |

#### 2.3.3.2. Meeting Minute 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 2 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Discuss about choosing project and giving task for next week | | | | | |
| **Date:** | | May, 14th 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | - Change subject of the project:  + Vietnamese: Hệ thống tìm việc  + English: Job searching system - About the new project:  + Help people searching job  + Help company posting their recruitments.  + Match the job with the job-seeker automatically.   + Focus on searching. (This is the key function of the system).  + Get charge from the company's posting and ads.  + Consider about recruitment process.  + Make appointment between company and applicant.  + Manage job's status. | | | Project Team | 14-May | | - Project team all agreed to work with the new object |
| 2 | Tasks for next week: - Update Report #1 and Report #2 - Learn about the system:  + User group  + Functions of each group - Complete Report #3 - Have a meeting without present of lecturer and writing minute. | | | Project Team | 21-May | | - Learning form the following website:  + http://www.careerlink.vn/  + http://www.jobstreet.vn/  + http://www.vietnamworks.com/ - Discuss about new project: 16-May 08:30 am. (online meeting) - Another meeting of team members will hold every Tuesday 01:00 pm at school. |
| 3 | Project planning: - Complete report #4 before Jun-5. - Complete coding & testing before Jul-15 - Repair and upgrade coding from Jul-15 until Aug-15. | | | Project Team | N/A | |  |

#### 2.3.3.3. Meeting Minute 3

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 3 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review Report #1, Report #2, and Website functions | | | | | |
| **Date:** | | May, 21st 2015 | **Note Taker:** | | | ThienNN | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **\* Report #1 Review**: - Remove **Objective** part, keep **Purpose** and **Idea** part. - Correct grammar and wrong words.  **\* Report #2 Review:** - **Existing System:** has some disadvantages, try to develop a system which can solve all the problems of the existing product. - **Proposed System:** + Copy from the **Purpose** part - Report #1.  + Including the features that make the whole system better than the existing systems. - **Project plan:** missing this part; update and review next week. **- Project team:** missing organization diagram.  **\* Report #3:** - Discuss about: sequence of operation, flow of event. - Show the report #3 next week.  **\* Other comments:** - Using **Github** instead of **Google code** | | | Project Team | 28-May | |  |
| 2 | Send an email to request change the theme of capstone project. From ***Anime Viet-sub Sharing System*** into ***Job Searching System.*** | | | TaiHD | 21-May | | Done |

#### 2.3.3.4. Meeting Minute 4

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 4 | **Facilitator:** | | | None | |
| **Subject:** | | Review Use Case Diagram, Checking Progress | | | | | |
| **Date:** | | May, 26th 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | Question & answer: 1. Does manage function need all 4 functions create, read, update, delete? 2. Function **Package Online** explanation | | | Project Team | N/A | | 1. Do not need all 4 functons.  2. Package Online: recruiter could buy some services, and then their posting can be the first search or has high priority than the others... |
| 2 | Receive documents from team and synthetize a final version of Report #3 | | | ThienNN | 27-May | |  |

#### 2.3.3.5. Meeting Minute 5

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 5 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review Use Case Diagram, Checking Progress | | | | | |
| **Date:** | | May, 28th 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **\* Report #1:** - Change:   + chance and challenger. (**Purpose** part)  + “similar” = just like  **\* Report #2:** - Change:  + italic and bold project name (**Project Name** part)  + existed = existing (**Proposed** part)  + Iteration = iterative  + add missing part of the project plan.  **\* Report #3**:  + Adding user group before requirement.  + Create Manager Account belongs to Manage Account.  + Add new user group: Staff.  + Staff: manage job, manage topic and ads. (but ads cost is decided by manager) | | | Project Team | 2-Jun | | - Done editing Report #1 |
| 2 | **Recruiting Process**: - Posting Job -> Check in Real -> Mark as Checked -> Job is now accepted. **Discuss about Business Rules**: - Guest cannot login. - Login for other role. **ERD**: - CV and Profile must be clear. - Add Entities Fly or Advertise. - Customer for advertising. - Package Online: make it clearer. --> Service Package and Type - Moderator --> Manager - change "has" into another word. - Missing Category. | | | Project Team | 2-Jun | |  |

#### 2.3.3.6. Meeting Minute 6

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| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 6 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review Use Case Diagram, Checking Progress | | | | | |
| **Date:** | | June, 4th 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **Review Report #3:** - Manage Applied Job: do not need to change. - Manage Skill: change into **Manage Own Skill**. - Change order of the list functions. - Remove word "Requirement" from heading. - Remove function **Manage Resume**. Function **Manage Profile** is now used for CV management. - Manage **Benefit**: change another word. **-** **Find Job Seeker CV**: not good. - **Buy Job Package**: discuss later with team. - Staff: **+**Process Job Package Request. - Package: number of jobs, day expired. - Manage Jobs: Add Job ....--> Found Job Seeker (The whole process and **Matching** function). | | | Project Team | 13-Jun | | - Send by mail |
| 2 | **Review Report #4:** - **4.3**: Redo - Write component diagram. | | | Project Team | 18-Jun | |  |

#### 2.3.3.7. Meeting Minute 7

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| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 7 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review Report #4, Report #3 | | | | | |
| **Date:** | | June, 18th 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **\* Review Report 4:** - Design Overview: put description part above the image. - Component diagram: Change position of View Module and Controller Module; name the component (SearchModel, SearchView, SearchController, Apply…)  - CRC: must complete. **\* Review Report 3:** - Get job alert function: have a link on any email: "Tôi không muốn nhân email từ web này nữa"; check duplicated email and if it is, inform user about the existance; it's not suitable for the website to send all the email for every job (cracks...); this function can be removed. - All functions are accepted. - Check ERD & database. **\*GUI:** - Check date time when job expire. - Which algorithms, which data structures. - For both Window and Unix. | | | Project team | 19-Jun | | - Send mail |
| 2 | - Coding - Built Report 5 - Class diagram - Meeting next week. | | | Project team | 2-Jul | |  |

#### 2.3.3.8. Meeting Minute 8

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| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 8 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Assign Task for summer vacation | | | | | |
| **Date:** | | June, 24th 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **Business rule discussion:**  - Payment:  + Website takes money from recruiter.  + Or, takes money by the time one job is posted.  + Recruiter must spend money to get that job public.  - Advertise:  + Unit advertises on screen.  + The place of advertise decide the price.  + Staff views the order request from recruiter.  - Service package: must have a definition.  - Job Process: Recruiter register account 🡪 cannot use 🡪 approve by website 🡪 can create job 🡪 the job is not public 🡪 payment 🡪 public job.  - ERD:  + do not allow slant line  + Posting Job Entity 🡪 Job Entity  + Job 🡪 Category +  + Change the word “belong to”  + Add arrow sign  + Build database | | | Project team | 3-Jul | |  |
| 2 | **Report #4:**  **-** Draw system architecture diagram.  - Guideline for drawing SAD  - Draw about 6~12 sequence diagram. | | | Project team | 3-Jul | |  |

#### 2.3.3.9. Meeting Minute 9

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| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 9 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review task, report #4 | | | | | |
| **Date:** | | June, 3rd 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **Review Report #4:**  **-** Architecture Design:  + Business process layer must be removed.  - Missing flow chart.  - Coding: have 14 days left until ending of iteration 1.  - Change test leader role for: ThaiPQ  - Check list: could be removed.  - Create unit test case (lecture gave template) | | | Project team | 10-Jul | |  |
| 2 | **Review Coding**:  - Check about HD resolution and computer resolution.  - Java script needs to be edited.  -Advertise must be brought to the right and left side, not at the footer. | | | Project team | 10-Jul | |  |

#### 2.3.3.10. Meeting Minute 10

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| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 10 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review coding, testing, and plane for iteration 2 | | | | | |
| **Date:** | | June, 17td 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **Coding:**  **-** Must be spent more effort to complete all function. | | | Dev Team | 24-Jul | |  |
| 2 | **Testing:**  - V-Model  - Create Excel for unit test (urgent)  - Show test case for iteration test & system test | | | Test Team | 24-Jul | |  |
| 3 | Plan for iteration 2. | | | Leader | 18-Jul | | - Send email. |

#### 2.3.3.11. Meeting Minute 11

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| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 11 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review coding, testing, and plane for iteration 2 | | | | | |
| **Date:** | | June, 23rd 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **Coding:**  **-** Must be done in 1-2 days.  - Create demo scenario. | | | Dev Team | 25-Jul | |  |
| 2 | **Testing:**  - Do not need to use other template for unit test case.  - Test team must assign task clearly.  - **Unit test** part put before **system test** part.  - Format all document before printing. | | | Test Team | 30-Jul | |  |
| 3 | **Plan:**  **-** Submit document: 18-Aug  - Document must be done before 13-Aug  - After submit document, code can be modified.  - Always back-up before editing | | | Project  Team | 30-Jul | |  |

#### 2.3.3.12. Meeting Minute 12

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| **MEETING DETAILS** | | | | | | | |
| **Title:** | | Meeting Minute 12 | **Facilitator:** | | | Mr. Tran Dinh Tri | |
| **Subject:** | | Review software, report #5 | | | | | |
| **Date:** | | June, 30th 2015 | **Note Taker:** | | | ThienVH | |
| **Attendees:** | | TaiHD, ThienNN, HoangTV, ThienVH, ThaiPQ, ThanhTC | | | | | |
| **Absent** | | None | | | | | |
| **Content** | | | | | | | |
| **No** | **Notes Taken** | | | **Assign To** | **Deadline** | | **Comments** |
| 1 | **Report #5:**  **-** Unit Test: add function to compete, update day by day.  - Update integration test from all member of test team.  - Redefine system test and integration test.  - Create acceptance test (with template given by lecture) | | | Test Team | 6-Aug | |  |
| 2 | **Update Report #2**:  - Add to plan:  + Code: Missing function  + Re-code: function failed, function need to be improved.  + Create Presentation (\*.ppt)  + Scenario plan. | | | Project Team | 6-Aug | |  |
| 3 | **Report #6:**  - Create report #6 | | | HoangTV | 6-Aug | |  |
| 4 | **Review code:**  **-** Failed on checking job package is available or not before creating job.  - After create job successful, are there any check on job package to reduce its value.  - Change display status “Từ chối” 🡪 “Bị từ chối”.  - Delete apply job then cannot apply anymore? 🡪 Failed  - Link with view profile detail on Manage Applicant Page. | | | Code team | 6-Aug | |  |
| $ | **Update scenario:**  **-** Presentation and showing product in one hour (30 min for each part) | | | Project team | 6-Aug | |  |

## 2.4. Convention Rules

The original of this document was developed by the Microsoft special interest group. We made some add-ons. The following rules follow the standard rules for developing applications using .NET and C#.

### 2.4.1. Naming Conventions

The following terms describe different ways to case identifiers.

#### Pascal case

The first letter in the identifier and the first letter of each subsequent concatenated word are capitalized. For example:

BackColor, DataSet

#### Camel case

The first letter of an identifier is lowercase and the first letter of each subsequent concatenated word is capitalized. For example:

numberOfDays, isValid

#### Uppercase

All letters in the identifier are capitalized. For example:

ID, PI

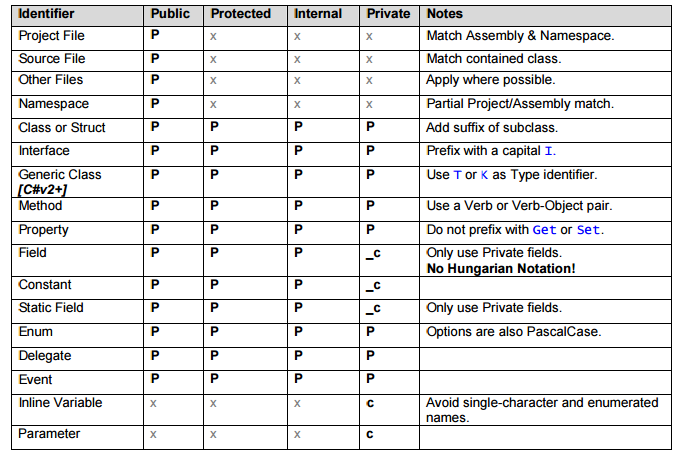
#### Definition:

“c” = camelCase

“P” = PascalCase

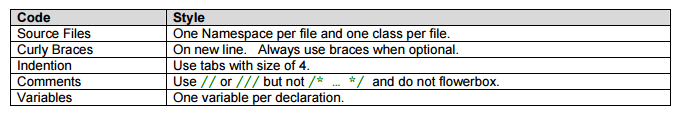
“\_” = Prefix with \_Underscore

“x” = Not Applicable.

****

**Table 2-5:** Naming Conventions

### 2.4.2. Coding Styles



**Table 2-6:** Coding Styles

### 2.4.3. Comments

* All comments should be written in the same language, be grammatically correct, and contain appropriate punctuation
* Use // or /// but never /\* … \*/
* Use inline-comments to explain assumptions, known issues, and algorithm insights
* Do not use inline-comments to explain obvious code. Well written code is self documenting.
* Always apply C# comment-blocks (///) to public, protected, and internal declarations
* Only use C# comment-blocks for documenting the API
* Always include comments. Include , , and comment sections where applicable
* Include and where possible

### 2.4.4. Language Guidelines

Using C# Code Convention From:

<http://msdn.microsoft.com/en-us/library/vstudio/ff926074.aspx>

## 2.3. Other material