 **MINISTRY OF EDUCATION AND TRAINING**

**FPT UNIVERSITY**

Capstone Project Document

**DOCUMENT MANAGEMENT**

|  |  |
| --- | --- |
| **Nhóm số** | |
| **Group members** |  |
| **Supervisor** | Phan Trường Lâm |
| **Ext. Supervisor** | N/A |
| **Capstone Project code** |  |

-Ha Noi City, ***01/2016***-

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**B. Report No.2 Software Project Management Plan**

**1. Problem Definition**

#### 1.1 Name of this Capstone Project

* Capstone Project Name : Document Management
* Abbreviation **: DM**

#### 1.2 Problem Abstract

This system was created to manage and searching for document, resolutions and notification for staffs, students and everyone in the FU-HoaLac system. The system provides users with keywords for easy searching and looking over the document. The system also archives the test of the resolution and notice of the school to serve the searching document. Help users are looking for easy text and the system also allows each department to manage documents, updates and add users to their department.

#### 1.3 Project Overview

##### 1.3.1 Current Situation

* Now, there are plenty of systems to manage documents on the market. The specific systems management on a certain issue, such as health, business and so on … but still do not have a system to manage the university's document a complete and clear.

##### 1.3.2 The Proposed System

* The main objective of the system is to help users easily search for relevant documents. Managers can manage and update the relevant documents.
* For Admin:

+ Manage Room

+ Manage Manager

* For Manager:

+ Manage User

+ Manage Document

* For User:

+ Search Document

+ Download Document

+ Logout

* Quest

+ Log in

##### 1.3.3 Boundaries of the System

##### The system allows users to search documents based on keywords, users can also set up a keyword for the corresponding text to easily search others.

##### The administrator will add the manager into system and the manager will add employees in. Each department will be able to manage and update the relevant documents to serve the search easier.

##### 1.3.4 Development Environment

**1.3.4.1 Hardware requirements**

**For web development:**

|  |  |  |
| --- | --- | --- |
| Hardware | Minimum Requirements | Recommended |
| Internet Connection | 512Kbps | 8 Mbps |
| Operating System | Windows Vista, 7, 8 | Windows 7, 8 |
| Computer Processor | 1 GHz | Intel® Core(TM) i5 CPU , M 460 @ 2.53GHz |
| Computer Memory | 2GB of RAM | 4GB of RAM or more |

**1.3.4.2 Software requirements <Yêu cầu phần mềm>** Mô tả các yêu cầu phần cứng phù hợp cho ứng dụng của nhóm **Ví dụ:**

|  |  |
| --- | --- |
| Tools | Uses |
| SQL server 2008 | Used for creating and manage the database for system. |
| Eclipe ??? | Used for implementing website and web service. |
| Github server | Used for storing source codes, documents. |
| Software Ideas Modeler 8 | Used for creating models and diagrams |

**2. Project organization**

#### 2.1 Software Process Model

This project is developed under waterfall model. We apply customized waterfall model to capable with current situation in our team. We choose this model because the following reasons:

* This is a project with clear requirement.



Figure 1: Modified Waterfall development Model

#### 2.2 Roles and responsibilities <Bảng phân chia vai trò>

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Full name** | **Role in Group** | **Responsibilities** |
| **1** | Phan Trường Lâm | Project manager | * Specify user requirement * Control the development process * Give out technique and business analysis support |
| **2** | Phan Nhat Anh | Team Leader,  BA, DEV, Tester | * Managing process * Designing database * Clarifying requirements * Prepare documents * GUI Design * Create test plan * Coding * Testing |
| **3** | Vuong Minh Phuc | DEV, Tester | * Coding * Testing * GUI Design |
| **4** | Nguyen Chi Khang | DEV, Tester | * Coding * Testing * Prepare documents |
| **5** | Duong Huy Hoang | DEV, Tester | * Coding * Testing * Prepare documents |

**Table 2: Roles and Responsibilities Details**

**2.3 Tools and Techniques**

|  |  |
| --- | --- |
| Tool / Technique | Name / version |
| Frontend | HTML, CSS, JavaScript, jQuery, Bootstrap |
| Backend | JavaEE, Spring, Hibernate |
| Web server | Apache Tomcat 7 |
| Development tool | Eclipse |
| DBMS | SQL Server 2008 |
| Modeling tool | Software Ideas Modeler |
| Document tool | Microsoft Word 2013 |

**3. Project Management Plan**

#### 3.1 Software development life cycle

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Phase** | **Description** | **Deliverable** | **Resource Needed** | **Dependencies and Contrains** | **Risks** |
| **Create Project Introduction** | Determine the main target of the project. Research for similar solutions which is being used. After that, analyze information to have an overview about the project. | **Project Introduction (Report 1)** | **4 people 3 days** | **N/A** | **Goal of project may be unclear** |
| **Project Management Plan** | Select the process model for project.  Determine the technology will apply.  Define the role and tasks detail for members.  Determine tools using.  Create the plan for the project base on process model. | **Project Management Plan (Report 2)** |  |  | **All members not skilled which technology applied.**  **Unequal division task.** |
| **Requirement Analysis** | - Analysis requirement from customer.  - Clarify requirements for general system.  - Drawing use case diagrams to determine functions which system support.  - Write Use Case Specification | **Software requirement specification**  **(Report 3)** | 7 days | N/A | - Not clear scope  - Miss requirement  - Members understand scope different way. |
| **Prepare Development Framework** | - Members review or research all technologies will apply to this project.  -Install all the tools will using in all of project.  -Create sub version repository. Create project solutions. |  | 4 people | N/A | N/A |
| **Software Design Description** | -Define overall description of the system architecture design.  -Drawing component diagrams to describe the system.  -Design detail with Class, Sequence diagrams.  -Design Screens to make prototype.  -Describe fully attributed ERD.  -Describe the technology which use. | **Software Design Description (Report 4)** | 7 days | Depend on “Requirement Analysis | - Lack of experience.  - Missing user requirement. |
| **Design Database** | Create Schema and inputs sample data | **Initial database script** |  | Based on database design in SDD |  |
| **Implementation** | - Implement the system base on design specification | Software source code | 4 people  63 days | Base on development Framework, description in SRS and SDD | - Problem occur when apply OCR technology.  - Bug occur because design or developer.  - Defect and incident are two main factors can lead to the delay of project deadline |
| **Test** | - Create test plan to verify and validation the system  -Determine which features will be tested or not.  -Draw workflow for testing.  -Give system testing test case.  -Black Test Box | **Test Suite**  **Software Test Document Guide Implementation**  **(Report 5)** | 14 days | Depend on “Implement” | The newly discovered defects may requires a lot of work to fix it |
| **User Manual** | Create user’s manual documents contains Installation Guide and User Guide | **Software User’s Manual**  **(Report 6)** | 4 peoples for 3 days | Based on completed software package | Members write perfunctory. |
| **Review Document** | Recheck carefully all the document, check spelling, grammar mistakes, notation, format. Review with supervisor about the content of documents | **Reviewed documents** | 4 peoples for 2 days |  | Still missing some errors because large document. |

**Table 4: Software Development Life Cycle Detail**

#### 3.2 Phase Detail

##### 3.2.1 Phase 1: Requirement Analysis

|  |  |  |
| --- | --- | --- |
| **Task** | **Description** | **Author** |
| 1. **Collect requirements** | Get the customer’s requirement, define which systems provide similar service after that determine their strengths and weakness. |  |
| 1. **Analysis requirements** | Base on customer’s requirement, define the scope of the system, functions system will provide. |  |
| 1. **Clarify main functions** | Define which functions are the main functions, which functions unnecessary. |  |

**Table 5: Requirement Analysis Phase Detail**

##### 3.2.2 Phase 2: Design

|  |  |  |
| --- | --- | --- |
| **Task** | **Description** | **Author** |
| 1. **Create Use case Diagram** | Create Use case diagram to define the functions which system provide and the actors who interact with system. |  |
| 1. **Create ERD** | Make the ERD to define the relationship between the entities based on requirements. |  |
| 1. **Create Database** | Create the Database for the system based on ERD Diagram. |  |
| 1. **Create Sequence Diagram** | Create the Sequence Diagrams to show the flow of process in system. |  |
| 1. **Create Class Diagram** | Create the Class Diagrams to define the class which in the system with operations and attributes. |  |

**Table 6: Design Phase Detail**

##### 3.2.3 Phase 3: Implement

|  |  |  |
| --- | --- | --- |
| **Task** | **Description** | **Author** |
| 1. **GUI** | Make the interface for customer or manager interact. |  |
| 1. **Vehicle Management Module** | Implement Vehicle Management to allow Manager control the vehicles of parking. |  |
| 1. **Fee Management Module** | Implement Fee Management to allow Manager control the fee base on turn in-out or base on month. |  |
| 1. **Report Module** | This module allow user report fee receive from the number of vehicle in one shift. |  |
| 1. **Employee Management Module** | This module allow manager control the employee of the Parking. |  |
| 1. **Core System** | Core system is optical character recognition allow recognize character and number in the picture of the vehicles plate. This system use to manage information of vehicles come in and out the car parking. |  |

**Table 7: Implement Phase Detail**

#### 3.3 Task sheet: Assignments and Timetable

See Task Sheet spreadsheet comes with this document

#### 3.4 All Meeting Minutes

See on Meeting Minutes folder comes with this document

**4. Coding Convention**

#### 4.1 Naming Conventions

* With variable or function we name follow PascalCase. Example for: function GetAllProducts();
* Name of interface: interface Iservice

#### 4.2 Comment Conventions

* Every time you start to write any function or edit you have to write it first

//Datetime 19-01-2016

//PhatNB Create Function()

//

* In case you want to delete some codes just comment it

//int a;

Beside that comment each 3-5 codes.