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|  | **MINISTRY OF EDUCATION AND TRAINING** |

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| **FPT UNIVERSITY** |
| Capstone Project Document |
| [Project name] |

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| --- | --- |
| **<Group Name>** | |
| **Group Members** | <Member name><RollNo><Student code >  <Member name><RollNo>< Student code >  <Member name><RollNo>< Student code >  <Member name><RollNo>< Student code >  <Member name><RollNo>< Student code > |
| **Supervisor** |  |
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| **Capstone Project code** |  |

- Hanoi, <month>/<year> -

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# Acknowledgement

*[Fill team’s acknowledgement here…]*

# Definition and Acronyms

*[Fill all the definitions, acronyms,… used within the document] in the table format as below]*

|  |  |
| --- | --- |
| **Acronym** | **Definition** |
| PWM | Psychology website |
| AWS | Amazon Web Services |
| BA | Business Analysis |
| BR | Business Rule |
| ERD | Entity Relationship Diagram |
| GUI | Graphical User Interface |
| PM | Project Manager |
| SDD | Software Design Description |
| SPMP | Software Project Management Plan |
| SRS | Software Requirement Specification |
| UAT | User Acceptance Test |
| UC | Use Case |
| API | Application Program Interface |

# I. Project Introduction

*[Provide final project introduction information follow the template as part II in the Report #1]*

## 1. Overview

### 1.1 Project Information

*[Provide the brief information of the project: project name, project code, group name, etc.]*

### 1.2 Project Team

*[List out the details of the project team and stakeholders…]*

## 2. Product Background

*[This section summarizes the rationale for the new product. Provide a general description of the history or situation that leads to the recognition that this product should be built. You should also mention here the information on the customer /the people who raise project idea/request]*

## 3. Existing Systems

[Add the system which might help solving the problems you listed above or the systems in which you can learn/refer the features for your system design]

## 4. Business Opportunity

*[Describe the market opportunity that exists or the business problem that is being solved. Describe the market in which a commercial product will be competing or the environment in which an information system will be used. This may include a brief comparative evaluation of existing products and potential solutions, indicating why the proposed product is attractive. Identify the problems that cannot currently be solved without the product, and how the product fits in with market trends or corporate strategic directions]*

## 5. Software Product Vision

*[Write a concise vision statement that summarizes the purpose and intent of the new product and describes what the world will be like when it includes the product. The vision statement should reflect a balanced view that will satisfy the needs of diverse customers as well as those of the developing organization. It may be somewhat idealistic, but it should be grounded in the realities of existing or anticipated customer markets, enterprise architectures, organizational strategic directions, and cost and resource limitations]*

## 6. Project Scope & Limitations

*[The project scope defines the concept and range of the proposed solution. It’s also important to define what will not be included in the product. Clarifying the scope and limitations helps to establish realistic expectations of the many stakeholders. It also provides a reference frame against which proposed features and requirements changes can be evaluated. Proposed requirements that are out of scope for the envisioned product must be rejected, unless they are so beneficial that the scope should be enlarged to accommodate them (with accompanying changes in budget, schedule, and/or resources)]*

# II. Project Management Plan

*[Provide final project plan information follow the template as part II in the Report #2]*

## 1. Overview

### 1.1 WBS & Estimation

*[Create/Provide the project WBS & Estimation following the table template as below. In which, we categorize the WBS items into three levels of complexity (Simple, Medium, Complex) and estimate the total effort to complete each item in man-day]*

### 1.2 Project Objectives

*[Provide the overall project objective description and then the specific target metrics of your project in term of time, cost, and quality*

### 1.3 Project Risks

*[List out the details on project risks in the table below]*

## 2. Management Approach

*[Describe the approach you would use the manage and implement your project]*

### 2.1 Project Process

*[Draw and describe the software development process model that the team would apply into the project implementation]*

### 2.2 Quality Management

*[Provide the approach you would apply to improve the project quality, reach the project quality objectives*

### 2.3 Training Plan

*[You need to plan the training activities in case any of your team member lack of knowledge/skills to handle the project works]*

## 3. Master Schedule

*[Given the main project deliverables. Those can be internal and/or external deliverables]*

## 4. Project Organization

*[Provide the project organization, the role and responsibilities of each project team member]*

## 5. Project Communication

*[Provide the details of project communication plan, the to-be-used tools, the project interface, etc.]*

## 6. Configuration Management

### 6.1 Tools & Infrastructures

*[List out the tools & infrastructure that you would use in the software development and deployment]*

### 6.2 Document Management

*[Describe how you would manage project documents & their changes/versions]*

### 6.3 Source Code Management

*[Describe how you would manage project source codes & their changes/versions]*

# III. Software Requirement Specification

*[Provide final software requirement specification follow the template as part II in the Report #3]*

## 1. Overall Description

### 1.1 Product Overview

*[This section presents a high-level overview of the product and the environment in which it will be used, the anticipated users, and known constraints, assumptions, and dependencies]*

### 1.2 Business Rules

*[Provide common business rules that you must follow. The information can be provided in the table format as the sample below]*

## 2. User Requirements

*[Provide specification of the user requirement: actor, use cases, use case diagram, use case specification, etc.* ***These contents are optional****, it can be ignored if the functional requirements are clear enough]*

## 3. Functional Requirements

*[Provide specification of software system: screen, functions, system data, diagrams, functional specification, etc.]*

### 3.1 System Functional Overview

### 3.2 <<Feature Name 1>>

#### a. <<Function Name 1>>

*[A function can be a screen or a non-screen function (listed in the part 5.1 above). In this part, you need to provide the details on the related function, focus on mentioning below information*

* *Function trigger: how this function is triggered (navigation path, a timing frequency, etc.*
* *Function description: actors/roles, purpose, interface, data processing, etc.*

*Screen layout: mockup prototype of the screen*

## 4. Non-Functional Requirements

### 4.1 External Interfaces

*[This section provides information to ensure that the system will communicate properly with users and with external hardware or software elements.]*

### 4.2 Quality Attributes

*[List all the required system characteristics (quality attributes) specification]*

## 5. Other Requirements

*[List out other requirements, appendix information etc. in this part]*

# IV. Software Design Description

*[Provide final software design information follow the template as part II in the Report #4]*

## 1. Overall Description

### 1.1 Assumptions

[Describe any items, based on which to design future system]

### 1.2 Design Constraints

[Describe any global limitations or rules that have a significant impact on the design of the system's software (and describe the associated impact]

### 1.3 [Technology Suggestion]

*[This section is optional. If this section isn’t set, remove it out of the document]*

## 2. System Architecture Design

### 2.1 Overall Architecture

*[Select suitable architecture style and describe the architectural diagram in the relationship/connection to the external systems. The content of this section include the overall diagram and the explanation for each of the diagram components]*

### 2.2 System Architecture

*[Select suitable architecture patterns for sub-systems. The content of this section include the overall diagram and the explanation for each of the diagram components]*

### 2.3 Package Diagram

*[Provide the package diagram for each sub-system. The content of this section include the overall package diagram(s) and the explanation for each package]*

## 3. System Detailed Design

### 3.1 <Feature Name1>

*[Provide the detailed design for the feature <Feature Name1>. It include Class Diagram, Class Specifications, and Sequence Diagram(s)]*

#### a. Class Diagram

*[This part presents the class diagram for the relevant feature]*

#### b. Sequence Diagram(s)

*[Provide the sequence diagram(s) for the feature]*

## 4. Class Specification

*[Provide the description for each class, including Class Methods information]*

## 5. Data & Database Design

### 5.1 Database Design

*[Provide the tables relationship and table specifications]*

### 5.2 Data File Design

*[List out the data files and file formats which are used in the system]*

# V. Software Testing Documentation

*[Provide final software testing information follow the template as part II in the Report #5]*

## 1. Overall Description

### 1.1 Test Model

*[Provide the testing model for your project which fits to your selected software development process model, i.e V-Model, Iterative, etc.]*

### 1.2 Testing Levels

*[List out and describe all testing levels that would be performed in the project: unit testing, integration testing, system testing, acceptance testing (alpha, beta),..]*

### 1.3 Testing Types

*[List out and describe all testing levels that would be performed in the project: functional testing, non-functional testing, structural testing, changes testing, etc.]*

## 2. Test Plan

### 2.1 Test Stages

*[Clearly state the stage in which the test will be executed. Identified below are the stages in which common test are executed]*

### 2.2 Resources

#### a. Human Resources

*[List and provide the details on roles and responsibilities of the project members who would involve in testing works]*

#### b. Environment

*[List and provide the details about the tools (software, hardware, infrastructure) which the project would use for testing]*

### 2.3 Test Milestones

*[Separate test milestones, which should be identified to communicate project status accomplishments]*

### 2.4 Deliverables

*[Define deliveries of Testing. Refer to the Project Management Plan for more details]*

## 3. Test Cases

*[Prepare the details on the test cases following the provided template*

* *Unit Test Cases: Report5\_Unit Test Case.xls*
* *Other Test Cases: Report5\_ Test Case.xls]*

## 4. Test Reports

*[Provide the test result, statistics and the relevant test analysis for your testing in the project]*

# VI. Release Package & User Guides

*[Provide final software testing information follow the template as part II in the Report #6]*

## 1. Deliverable Package

### 1.1 Source codes & documents

*[The section will list all source programs/classes and documents with version number in this release. You can see the example following table for reference, can customize or delete if not using belong to each project characteristics]*

### 1.2 Known Issues, Limitations & Restrictions

*[List out all known (pending) issues, limitation and restrictions in the final deliverable package]*

## 2. Installation Guides

### 2.1 System Requirements

*[Define any system requirements necessary to support the application. These can include the supported host operating systems and network platforms, configurations, memory, peripherals, and companion software.]*

### 2.2 Setup Files

*[List of installation scripts and setup files]*

### 2.3 Installation Instruction

*[Includes installation instructions and configuration guidelines]*

## 3. User Manual

### 3.1 Terms and definitions

*[Detail about terms and definitions used in this user guide.]*

### 3.2 System requirements

*[Define any system requirements necessary to support the application. These can include the supported host operating systems and network platforms, configurations, memory, peripherals, and companion software(s).]*

### 3.3 Application Usage

*[Provide the guides to use each of the feature of the application or software system]*

### 3.4 Troubleshooting

*[Descript some common troubles while using application.]*

# VII. Appendix

## 1. Glossary [Optional]

*[Place all definitions or abbreviation used in this document]*

## 2. References [Optional]

*[Place all referenced materials used in this document]*

## 3. Others [Optional]

*[Provide any other information here…]*