

BUS USER SUPPORT SYSTEM

Project Plan

**Project Code: BUSS**

**Document Code: BUSS\_Project\_Plan\_v1.1\_EN**

**Hanoi, 13/05/2015**

SIGNATURE PAGE

|  |  |  |
| --- | --- | --- |
| AUTHOR: | Nguyen Thanh Nam  Project Manager (PM) | 13/05/2015 |
| REVIEWERS: | Nguyen Thanh Nam  Project Technical Leader (PTL) | 18/05/2015 |
|  |  |
| Trinh Thi Tuyet Mai  Developer | 18/05/2015 |
|  |  |
| APPROVAL: | Nguyen Van Sang  Supervisor | 18/05/2015 |
|  |  |

Record of change

\*A - Added M - Modified D – Deleted

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Effective Date | Changed Item | A\* M, D | Change Description | Reason for Change | Revision Number | |
| 13/05/2015 | Add Project Plan | A | Add Project Plan | First Version | v1.0 |
| 20/08/2015 | Update Project Plan | M | Update Project Plan | Update | v1.1 |
|  |  |  |  |  |  |

TABLE OF CONTENTS

[1. Project Overview 6](#_Toc420099748)

[1.1. Project Description 6](#_Toc420099749)

[1.2. Scope and Purpose 6](#_Toc420099750)

[1.3. Assumptions and Constraints 8](#_Toc420099751)

[1.4. Project Objectives 9](#_Toc420099752)

[1.5. Critical Dependencies 10](#_Toc420099753)

[1.6. Project Risk 10](#_Toc420099754)

[2. Project Development Approach 11](#_Toc420099755)

[2.1. Project Process 11](#_Toc420099756)

[2.2. Requirement Change Management 12](#_Toc420099757)

[2.3. Quality Management 13](#_Toc420099758)

[3. Estimate 17](#_Toc420099759)

[3.1. Size 17](#_Toc420099760)

[3.2. Effort 17](#_Toc420099761)

[3.3. Schedule 17](#_Toc420099762)

[3.4. Resource 20](#_Toc420099763)

[3.5. Infrastructure 20](#_Toc420099764)

[3.6. Training Plan 21](#_Toc420099765)

[3.7. Finance 21](#_Toc420099766)

[4. Project Organization 23](#_Toc420099767)

[4.1. Organization Structure 23](#_Toc420099768)

[4.2. Project Team 23](#_Toc420099769)

[4.3. External Interfaces 27](#_Toc420099770)

[5. Communication & Reporting 28](#_Toc420099771)

[6. Configuration Management 31](#_Toc420099772)

Definitions and Acronyms

| Acronym | Definition | Note |
| --- | --- | --- |

|  |  |  |
| --- | --- | --- |
| BA | Business Analyst |  |
| BU | Business Unit |  |
| CC | Infrastructure Configuration Controller |  |
| CM | Configuration Management |  |
| DEV | Developer |  |
| PIC | Person in charge |  |
| PM | Project Manager |  |
| PTL | Project Technical Leader |  |
| QA | Quality Assurance Officer |  |
| SRS | Software Requirement Specification |  |
| TC | Test Case |  |
| PCB | Process Capability Baseline |  |
| BL | BusLover |  |
| BUSS | Bus User Support System |  |
|  |  |  |

# Project Overview

## Project Description

|  |  |  |  |
| --- | --- | --- | --- |
| Project Code | BUSS | Contract Type | None |
| Customer | FPT University | 2nd Customer | None |
| Project Level | Group | Project Rank | None |
| Application Type | Android application | Project Manager | Nguyen Thanh Nam |
| Project Category | Development | Business Domain | Bus user support |

**Table 1.1**. Project Description

## Scope and Purpose

### Purpose of Project

This project is a capstone project of our team at FPT University. The main purpose of the project is to complete our university study program and to get on with our future careers. Bus Support Interaction Network is the subject that we choose to prove our qualifications of all knowledge and experiences obtained in the study progress.

However, we also want to create a truly creative and useful tool that actually helps and encourage people’ use and attention toward bus or public transportation in general. Not only by making it easier and more convenient but with a new and young approach, we also hope that this project may be a part of the change in Vietnamese’ traffic habits in the future.

4 months may not be a long time at all but with efforts and determined hearts, we are looking forward to achieving not only knowledge, experiences and skills but friendship and maturity.

### Scope of Project

The scope of this project contains: Requirement Analysis, Design, Coding and Testing (Unit Test, Component test, Integration Test, System Test).

### The functions of Project

There are the core functions of BUSS’s project:

* **Path finding**: Users input the departure and destination location to find paths available for them to travel by bus. The results will automatically be sorted based on collected personal usage data and can be rearrange or filtered to match users' preferences.
* **Bus searching**: Users can search for specific bus through one of these scenario:
  + Look up from the bus list: Display a full list of all the buses available in the current city. Users can filter this list by number or names of the streets they pass.
  + Look for buses that pass or are near the current locations of users.
  + Look for buses that travel from the current location to a predefined destination.
* **Route navigating**: Step-by-step giving users detailed directions on how to get to the predefined destination mostly by bus. Maps and information will be refresh each time a step completed, continuously guide users until they reach their destination.
* **Smart stop tracking**: Once users get on a bus, they can setup a tracker which will keep an eye on the bus all the time. The user only have to choose a stop they want to get off, and leave the rest to the tracker. Whenever the bus comes near that predefined stop, it will notify them to prepare the leave.
* **Bus reminder**: the app functions similarly to an alarm yet with greater effort by integrating map information and bus information into users' schedule. To use this feature, the user first sets up a time frame at about which they need to hit the road. User then chooses a departure location and a bus that they should get on. About time, the app will notify user if there are buses of the preferred kind which about to get to the nearest bus-stop of the departure location. This feature function well in combination with **Path finding** and **Smart tracking** features.

## Assumptions and Constraints

|  |  |  |
| --- | --- | --- |
| No | Description | Note |
| Assumptions | | |
| 1 | On each bus, there is a GPS device which is able to submit JSON over 3G network | Resources |
| 2 | Reviewers will have seven days to approve a milestone document. If no comments were received within this time period, the documents would be considered approved. | Procedures |
| Constraints | | |
| 1 | This project must be completed and delivered before 27/08/2015 | Schedule |
| 2 | As the project progress, PM must submit 6 reports on certain dates. | Schedule |
| 3 | Software Requirement Specification Document and Project Plan must be completed within 11 days since 11/05/2015  Deadline: 22/05/2015 | Schedule |
| 4 | Design Document (including Architecture design, screen design, database design) must be completed within 15 days since 09/06/2015  Deadline: 24/06/2015 | Schedule |
| 5 | Integration Test (including test plan, test case, defect list, etc.) must be completed within 15 days since 14/07/2015  Deadline: 04/08/2015 | Schedule |
| 6 | Coding phase and unit testing must be done within 33 days since 23/06/2015  Deadline: 10/08/2015 | Schedule |
| 8 | Deliver User manual, software package and installation guide in 5 days since 21/08/2015  Deadline: 26/08/2015 | Schedule |
| 9 | Finish all work and complete Termination phase on 27/08/2015 | Schedule |

## Project Objectives

### Standard Objectives

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Metrics | Unit | Committed | Re-committed | Note |
| Start Date | date | 11-05-2015 |  |  |
| End Date | date | 28-08-2015 |  |  |
| Duration | day | 110 |  |  |
| Team Size | person | 4 |  |  |
| Billable Effort | person- day | 280 |  | 1 person-day = 8 person-hours |
| Calendar effort | person- day | 280 |  | 1 person-day = 8 person-hours |
| Effort Usage | % | 100 |  |  |

Table 1.3. Standard Objectives

| Metrics | Unit | Basic for setting Goals |
| --- | --- | --- |
| Average |
| Customer Satisfaction | point | 9 |
| Leakage | Wdef/mm | 5 |
| Effort Efficiency | % | 95 |
| Timeliness | % | 100 |

### Specific Objectives

| Metrics | Unit | Basic for setting Goals | |
| --- | --- | --- | --- |
| Plan | Actual |
| Training Android. | person-day | 15 | 15 |
| Execute group review | person-day | 8 | 5 |
| Training requirements, process before coding | person-day | 8 | 5 |

## Critical Dependencies

| No | Dependency | Expected delivery date | Note |
| --- | --- | --- | --- |
| 1 | This project must be completed and delivered to FPT University. | 27/08/2015 |  |
| 2 | All Team Member have Summer’s Holiday from 22/06/2015 | 28/06/2015 |  |
| 3 | Project Plan and SRS must be completed and delivered to Supervisor. | 22/05/2015 |  |
| 4 | User manual, Software Package and Installation Guide must be completed and delivered to Supervisor and FPT University. | 23/08/2015 |  |
| 5 | Team Member must join study Japanese and join Japanese exam. | 05/07/2015 |  |

## Project Risk

PM identifies are document risk in the risk management plan. Updated to trigger each milestone, each event also, is updated weekly by the PM, risk management plan will be notified to all of the stakeholders affected. Status of risk is reported to supervisor at Project Milestones Report.

Reference to BUSS\_Risk\_Management\_EN.xls

# Project Development Approach

## Project Process

Process of this project is performed follow to Software Development Process of Fsoft.

### Fsoft Process Model



Figure 1.1. Fsoft process model

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

* Initiation phase
* Definition phase
* Solution phase
* Construction phase
* Transition
* Termination

### Project Life Cycle

Basing on Fsoft process and real-world project, we decided to divide our 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

- 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 provide (including estimates of cost and time) for the construction phase. The plan must ensure proper and accurate based on experience.
  + Complete Report #2 and Report #3

- 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, Report #4 and Report #5

- 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 Report #6

## Requirement Change Management

|  |  |
| --- | --- |
| Where is the change request logged? | RCM Sheet.xls |
| Who logs the change request? | Any team members |
| Who reviews the change request? | PM or who is PM assign |
| Who approves the change request? | PM by default. PTL if:  - Changes to project scope  - Changes in delivery plan of project deliverables  - Changes to assignment for key roles (PM, PTL) |

## Quality Management

### Defect Prevention Strategy

|  |  |  |
| --- | --- | --- |
| Item (Process/Product) | Strategy | Expected Benefits |
| Requirement missing | List up all of requirement into SRS document. | 10–20% reduction in defect injection rate and about 2% improvement in productivity |
| Careless mistake in Design Document Format/Template wrong | After designing, QA will review Document Format base on checklist review design | Improvement in quality as overall defect removal efficiency will improve; some benefits in productivity as defects will be detected early |
| Use wrong template | Have a meeting to disseminate all template that is used in this project for all member | All member will use right template when do document |
| Coding application does not match with User Requirement. | Develop Team must study about Requirement/Design within 1 weeks since project is assigned. | Coding Application match with User Requirement. |

### Review Strategy

| Review Item | Reviewer | Review Type | Review Method | Completion Criteria |
| --- | --- | --- | --- | --- |
| Project plan  Project schedule  CM Plan | PM,QA,PTLs, Supervisor | Group review  Group review  One-person review | Use checklist and Self-review |  |
| Business analysis and requirements specification document, Use Case catalog | PM,QA, Supervisor | Group review and One-person review | Use checklist |  |
| Design document, object model | Self-review, PM,QA Supervisor | One-person Review | Use checklist |  |
| Stage plans | PM,QA, Supervisor | One-person review | Use checklist |  |
| Complex/first time generated program specs incl. test cases, interactive diagrams |  | Group review |  |  |
| Code | Self-review, Peer review, Team Lead, PM, Supervisor | One-person review and Group review | Self-review and use checklist |  |

### Unit Testing Strategy

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item to be Unit Tested | Unit Test Type | Unit Test Technique | Tool Used | Unit Test Completion Criteria |
| Source Code | White-Box Test | Using unit test case and test script | None | -Number of UTC/KLOC: 40 UTC/KLOC  -Number defects/KLOC: 3-4 defects/KLOC  -Statement coverage: 97%  -Branch coverage: 100%  -Path coverage: 100% |

### Integration Testing

| Item to be Integration Tested | Integration Test Type | Integration Test Technique | Tool Used | Completion Criteria |
| --- | --- | --- | --- | --- |
| Do test by flow of functions and items which have concern each other | Black-Box Test |  | Checklist, Boundary | -Number of UTC/KLOC: 30UTC/KLOC  -Number defects/KLOC: 2-3 defects/KLOC |

### System Testing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item to be System Tested | System Test Type | System Test Technique | Tool Used | Completion Criteria |
| Test whole system. | Black-Box Test |  | None | -Number of UTC/KLOC: 60 UTC/KLOC  -Number defects/KLOC: 4-6 defects/KLOC |

### Estimates of Defects to be detected

| Review/Testing Stage | Targeted No. of Defects to be detected | % of Defects to be detected | Basic for Estimation |
| --- | --- | --- | --- |
| Requirements review | 10 | 8% | Referenced similar previous project estimations and PCB |
| Design review | 15 | 12% | Referenced similar previous project estimations and PCB |
| Code review | 30 | 23% | Referenced similar previous project estimations and PCB |
| Unit Test | 50 | 37% | Referenced similar previous project estimations and PCB |
| Integration Test | 15 | 12% | Referenced similar previous project estimations and PCB |
| System Test | 10 | 8% | Referenced similar previous project estimations and PCB |
| Total | 130 | 100% |  |

### Measurements Program

|  |  |  |  |
| --- | --- | --- | --- |
| Data to be collected | Purpose | PIC | When |
| Size: No. of KLOC | Achieve target | PM | At the end of stages |
| Effort: No. person-day | Monitor and controlling team member to keep plan. | Team members | Daily |
| Quality: No. defects detected | Managing product’s quality. | Reviewer, Tester | Right after the review/test |
| Schedule | Monitor and controlling software developing processing keep plan. | PM | Weekly and at the end of stages |

# Estimate

## Size

This project is performed and must complete all requirements from teacher and FPT University. So size of our project is in Capstone Project limit.

## Effort

The Effort estimation is documented in the table below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Initiation | Solution | Construction | Termination | Total |
| Effort(person/day) | 37.2 | 74.8 | 130.8 | 37.2 | 280 |
| Total % budgeted Effort Usage (%) | 13 | 27 | 47 | 13 | 100 |

## Schedule

### Project Milestone & Deliverables

| No | Stage | Committed Delivery date | Description of Deliverable | Delivery media |
| --- | --- | --- | --- | --- |
| Initiation | |  | Requirements agreed, Report 1 reviewed | |
| 1 | Develop project idea | 11-05-2015 | Project goals and scope defined, milestone description defined, resource committed |  |
| 2 | Q&A Management Sheet | 13-05-2015 | Criteria: Documentation reviewed |  |
| 3 | Submit report no.1 final | 22-5-2015 | Completed report no.1 |  |
| 4 | Project Plan | 22-05-2015 | Criteria: Documentation reviewed |  |
| 5 | SRS | 22-05-2015 | Criteria: Documentation reviewed |  |
| Solution | |  |  | |
| 1 | Screen Prototype | 02-06-2015 | Criteria: Documentation reviewed |  |
| 2 | Architecture Design | 06-06-2015 | Criteria: Documentation reviewed |  |
| 3 | Screen Design | 10-06-2015 | Criteria: Documentation reviewed |  |
| 4 | Class Design | 10-06-2015 | Criteria: Documentation reviewed |  |
| 5 | Detail Data Design | 11-6-2015 | Criteria: Documentation reviewed |  |
| 6 | Submit report no.2 final | 12-06-2015 | Completed report no.2 |  |
| 7 | Submit Test Plan Final | 18-06-2015 | Criteria: Documentation reviewed |  |
| 8 | Complete Test Case | 24-06-2015 | Criteria: Documentation reviewed |  |
| 9 | Submit Report no.3 Final | 26-06-2015 | Completed report no.3 |  |
| Construction | |  | Product developed & tested and released to supervisor, documentation reviewed. | |
| 1 | Complete Coding and Unit Test | 17-07-2015 | Source code  Acceptance criteria: Product unit tested |  |
| 2 | Submit report no.4 Final | 21-07-2015 | Completed report no.4 |  |
| 3 | Complete Testing | 07-08-2015 | Completed Test |  |
| 4 | Submit report no.5 Final | 11-08-2015 | Completed report no.5 |  |
| Termination | |  | Project post-mortem is conducted, Project assets archived and released to supervisor | |
| 1 | Submit the last document and CD source code | 27-08-2015 | Final Documents and Source Code |  |
| 2 | Lesson learned | 27-8-2015 | Criteria: Completed |  |
| 3 | Complete Presentation Slide | 27-8-2015 | Criteria: Completed |  |
| 4 | Submit report no.6 Final | 27-08-2015 | Completed report no.6 |  |
| 5 | Present capstone project | 04-09-2015 | Criteria: Completed |  |
|  | Project Complete | 04-09-2015 | Criteria: Completed |  |

### Activity Schedule

The detail project schedule is available in file *BUSS\_Project\_Schedule.mpp*. The Project Schedule is weekly updated by the Project Manager.

| No. | Activity | Start date | End date | Responsible | End date |
| --- | --- | --- | --- | --- | --- |
| Defect Prevention | | | | | |
| 1 | Training coding convention | 11-05-2015 | 20-06-2015 | Nguyen Thanh Nam |  |
| 2 | Training for QA and tester to use checklist | 19-05-2015 | 26-05-2015 | Bui Bich Phuong |  |
| **Quality Control** | | | | | |
| 1 | Group review requirement | 21-05-2015 | 21-05-2015 | Trinh Thi Tuyet Mai |  |
| 2 | Group review design | 09-06-2015 | 09-06-2015 | Nguyen Thanh Nam |  |
| 3 | Group review coding | 08-08-2015 | 08-08-2015 | Nguyen Thanh Nam |  |
| Project Tracking | | | | | |
| 1 | Solution : Milestone review meeting | 27-06-2015 | 27-06-2015 | Nguyen Thanh Nam |  |
| 2 | Construction : Milestone review meeting | 08-08-2015 | 08-08-2015 | Nguyen Thanh Nam |  |
| 3 | Termination : Milestone review meeting | 15-08-2015 | 15-08-2015 | Nguyen Thanh Nam |  |
| Configuration Management | | | | | |
| 1 | Baseline code | 06-06-2015 | 06-06-2015 | Nguyen Thanh Nam |  |
| 2 | Base line test report, test case and test plan | 08-08-2015 | 08-08-2015 | Bui Bich Phuong |  |
| QA | | | | | |
| 1 | Final Inspection: Report 1 | 22-05-2015 | 22-05-2015 | Nguyen Thanh Nam |  |
| 2 | Final Inspection: Report 2 | 12-06-2015 | 12-06-2015 | Nguyen Thanh Nam |  |
| 3 | Final Inspection: Report 3 | 24-06-2015 | 24-06-2015 | Nguyen Thanh Nam |  |
| 4 | Final Inspection: Report 4 | 21-07-2015 | 21-07-2015 | Nguyen Thanh Nam |  |
| 5 | Final Inspection: Report 5 | 15-08-2015 | 15-08-2015 | Nguyen Thanh Nam |  |
| 6 | Final Inspection: Report 6 | 25-08-2015 | 25-08-2015 | Nguyen Thanh Nam |  |

## Resource

Specified as in the section *4.2.* [Project Team](#_Project_team)

## Infrastructure

| Item | Description | Expected Availability by | Note |
| --- | --- | --- | --- |
| Development Environment | | | |
| Operating System | Window 7 (64 bit), Window 8.1 (64 bit) |  |  |
| Browser | Google Chrome, Firefox(all version) |  |  |
| Development language | PHP |  | for Web service |
|  | Java, XML |  | for Android app |
| Technology | | | |
| Development language | Java, XML |  |  |
| Server |  |  |  |
| Hardware Requirement | | | |
| Hardware Configuration | 2GB workspaces on server |  |  |
| Smart phone | Xperia Z3 |  |  |
| Equipment & Tools | | | |
| Source Version Control | GitHub for Windows | Definition stage |  |
| Task Tracking | MS Project Professional 2013 | Initiation stage |  |
| SRS | Microsoft Office Word, Microsoft Office Excel, Microsoft Office Visio | Initiation stage |  |

## Training Plan

| Training Area | Participants | When, Duration | Waiver Criteria |
| --- | --- | --- | --- |
| Technical | | | |
| Android | NamNT, MaiTTT | 2 weeks | Mandatory |
| Web service with PHP | NamNT | 1 weeks | Mandatory |
| MS Project Professional 2013 | All members | 1 hour |  |
| Process | | | |
| Quality system | NamNT | 3 hours | If already trained |
| Configuration management | All members | 2 hours | If already trained for CC. For others, on-the-job training |
| Group review | All members | 2 hours | If already trained |
| Defect prevention | All members | 2 hours | Mandatory |

## Finance

Because this project is non-business, it is a Capstone Project at FPT University. So we do not estimate about finance.

# Project Organization

## Organization Structure



## Project Team

| Role | Responsibility | Qualification | Full name | Effort (%) | | Start date | End date |
| --- | --- | --- | --- | --- | --- | --- | --- |
| PM | Have overall responsibility of the project:  - Project planning and scheduling  - Task assignment and tracking processing  - Reporting to supervisor  - Interface with other departments as per need |  | Nguyen Thanh Nam | 30 | | 11-05-2015 | 27-08-2015 |
| Responsible for all modules | | | | | | | |
| Project Technical Leader (PTL) | PTL is responsible for the technical project execution |  | Nguyen Thanh Nam | | 40 | 11-05-2015 | 27-08-2015 |
| Developer #1 | Coder |  | Trinh Thi Tuyet Mai | | 90 | 11-05-2015 | 27-08-2015 |
| Developer #2 | Coder |  | Tran Trung Anh | | 80 | 11-05-2015 | 27-08-2015 |
| Others | | | | | | | |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | QA | - Final inspection  - Review documents |  | Nguyen Thanh Nam | 30 | 11-05-2015 | 27-08-2015 | | | | | | | | |
| Tester | - Create test plan |  | Trinh Thi Tuyet Mai | | 10 | 11-05-2015 | 27-08-2015 |
| Tester | - Create test case, test report  - Execute test. |  | Bui Bich Phuong | | 90 | 11-05-2015 | 27-08-2015 |
| Requirement analysis | - Analyze requirement |  | Bui Bich Phuong | | 10 | 11-05-2015 | 27-08-2015 |
| Requirement analysis | - Analyze requirement |  | Tran Tu Anh | | 20 | 11-05-2015 | 27-08-2015 |

The detail of Human resource budget allocation over the whole project life is in the below table:

| Role | Name | W2-May | W3-May | W4-May | W1-Jun | W2-Jun | W3-Jun | W4-Jun | W1-Jul | W2-Jul | W3-Jul | W4-Jul | W1-Aug | W2-Aug | W3-Aug | W3-Aug | W3-Aug | Total(pd) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PM  TL | NamNT | 5% | 8% | 5% | 6% | 6% | 8% | - | 8% | 8% | 7% | 8% | 7% | 6% | 6% | 6% | 6% | 70 |
| D  De  T  R | MaiTTT | 5% | 5% | 5% | 6% | 6% | 6% | - | 7% | 8% | 8% | 9% | 9% | 9% | 8% | 5% | 4% | 70 |
| D,  R | AnhTT | 5% | 5% | 5% | 5% | 6% | 6% | - | 8% | 9% | 9% | 9% | 9% | 8% | 7% | 5% | 4% | 70 |
| T,  R | PhuongBB | 5% | 5% | 6% | 7% | 6% | 6% | - | 7% | 6% | 7% | 9% | 9% | 9% | 9% | 5% | 4% | 70 |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 280 |

Note: PM: Project Manager

TL: Technical Leader

D: Developer

T: Tester

De: Designer

R: Requirement Analyst

## External Interfaces

### Fsoft Interfaces

| Department | Contact Person  (name-position) | Contact address  (email, telephone) | Responsibility |
| --- | --- | --- | --- |
| Teacher | Pham Ngoc Ha | [hapn@fsoft.com.vn](mailto:hapn@fsoft.com.vn) | Explain whole questions about JS course |

### FPT University’s Interfaces

| Department | Contact Person  (name-position) | Contact address  (email, telephone) | Responsibility |
| --- | --- | --- | --- |
| Teacher | Nguyen Van Sang | [sangnv@fpt.edu.vn](mailto:sangnv@fpt.edu.vn) | - Review and accept documents during project  - Review and accept products of the project.  - Resolve escalated issues and receive project reports. |
| Training Department |  | [acad.hn@fpt.edu.vn](mailto:acad.hn@fpt.edu.vn) | Management course of student |

# Communication & Reporting

| Communication Type | Method / Tool | When | Information | Participants / Responsible |
| --- | --- | --- | --- | --- |
| Project Task Tracking | | | | |
| Task scheduling | MS Project Professional 2013 | At the beginning of every stage, and weekly  Refinement and rescheduling as necessary |  | PM |
| Task assignment | MS Project Professional 2013 | Weekly |  | PTL |
| Task status reporting | Daily Report at Daily Meeting | Daily |  | Project Team Members |

|  |
| --- |
| Project Meeting |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Kick-off Meeting | Face to face | Initiation stage | Project introduction; Project plan review; Risk identification; stakeholders identify. | PM, Project Team Members |
| Project Progress Review Meetings | Face to face | Weekly and on event | Communicate project status  Communicate and resolve any open issue, risks, and changes  Discuss any suggested improvement | PM, Project Team Members |
| Milestone Meetings | Face to face | 5 days After the completion of stages: Definition, Solution & Construction | Project objective review, evaluate project performance (quality, schedule, effort), Causal analysis, update project plan for next stage | PM, Project Team Members, QA, Supervisor |
| Transfer/Sharing of project documentation/information | Tortoise SVN | When available | All project documentation and information | PM, Project Team Members, QA |

|  |
| --- |
| Supervisor Communication and Reporting: |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Report | Agreed Fsoft and FU standard format | 5pm Monday, Weekly | Project status report, Issue requiring clarifications, escalation, if any | PM Project Team Members, QA |
| Project Meetings with supervisor | Face to face | 12h00 Wednesday, Weekly | As above | PM Project Team Members, QA |
| Requirement gathering/clarification | Face to face meeting | During requirement analysis phase | As in Q&A list | PM |

|  |
| --- |
| Communication with Supervisor |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Review Project Plan & Project schedule | By attend project meeting | Significant changes to WO, PP and Project schedule (scope, objectives Organization, HR, major milestone, deliverables ) |  | PM |
| Project Progress Review | By email and/or via Operation meeting at Group/Division level | Weekly | Project status report, Issue requiring clarifications, escalation, if any | PM |
| Project Milestone Review | By email and via project milestone review meeting | End of every stage | Project objective review, evaluate project performance (quality, schedule, effort), Causal analysis, update project plan for next stage | PM |

# Configuration Management

The detail configuration management is available in fileBUSS\_CMPlan\_v1.1\_EN.docx.