

FPT University

Library Management System

Project Plan

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SIGNATURE PAGE

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Project Manager

TABLE OF CONTENTS

[1. Project Overview 6](#_Toc315810876)

[1.1. Project description 6](#_Toc315810877)

[1.2. Assumptions and constraints 7](#_Toc315810878)

[1.3. Project Risk 8](#_Toc315810879)

[1.4. References 8](#_Toc315810880)

[2. Project deliverables and dependencies 9](#_Toc315810881)

[2.1. Deliverables 9](#_Toc315810882)

[2.2. Critical Dependencies 10](#_Toc315810883)

[3. Project Lifecycle 11](#_Toc315810884)

[3.1. Stage description 11](#_Toc315810885)

[3.2. Iteration objectives 12](#_Toc315810886)

[3.3. Project schedule 14](#_Toc315810887)

[4. Process tailoring/deviation 15](#_Toc315810888)

[5. Resource plan 16](#_Toc315810889)

[5.1. Project Organization 16](#_Toc315810890)

[5.2. External interfaces 17](#_Toc315810891)

[5.3. Project communication 18](#_Toc315810892)

[5.4. Training plan 18](#_Toc315810893)

[5.5. Tools and Infrastructure 19](#_Toc315810894)

[5.6. Project Finance 19](#_Toc315810895)

[6. Quality Management 21](#_Toc315810896)

[6.1. Quality objectives 21](#_Toc315810897)

[6.2. Quality activities 21](#_Toc315810898)

[7. Configuration management 23](#_Toc315810899)

Definitions and Acronyms

Table : Definitions and Acronyms

| Acronym | Definition | Note |
| --- | --- | --- |
| PM | Project Manager |  |
| PTL | Project Technical Leader |  |
| TL | Team Leader |  |
| QA | Quality Assurance Officer |  |
| CC | Infrastructure Configuration Controller |  |
| DV | Developer |  |
| URD | User Requirement Document |  |
| SRS | Software Requirement Specification |  |
| ADD | Architecture Design Document |  |
| DDD | Detail Design Document |  |
| TP | Test Plan |  |
| TC | Test Case |  |
| SC | Source Code |  |
| CM | Configuration Management |  |
| CSCI | Computer Software Configuration Items |  |
| CI | Configuration Item |  |
| PVCS VM | PVCS Version Manager |  |
| VSS VM | Visual SourceSafe Version Manager |  |
| PI | Project Instructor |  |
| PS | Project Supporter |  |
| CCB | Configuration Control Board |  |

# Project Overview

## Project description

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Project name : | FPT LIBRARY SYSTEM | | | | | |
| Project Code: | LIB | | | | | |
| Contract Type: | -- | | | | | |
| Customer: | FPT University | | | | | |
| 2nd Customer: | -- | | | | | |
| Project level: | 🞎 Company | | 🞎 Branch | | | 🗹 Group |
| Project rank: | Not rank | | | | | |
| Group: | Group 4 | | | | | |
| Division: | SE0425 | | | | | |
| Project type: | 🞎 External | | | 🗹 Internal | | |
| Project manager: | TaiNT | | | | | |
| Project category: | 🗹 New development | | 🞎 Maintenance | | | 🞎 Other |
| Business domain: | Library Management System | | | | | |
| Application type: | Winform and webform application | | | | | |
| Scope and Objective | * Aim of the project is to create software that has a capability to manage a large amount of data (books) in a library. * The output from the project will have 2 interfaces:   + The interface for the librarians to manage the library information.   + The interface for the user from the outside to access the library system and perform transactions or requests. * The main scopes of the project are:   + The capability to manage books by cataloging and titling. (compromise to some standards that been applied for library)   + The capability to manage users and the transactions made by users, the books has been borrowed…   + The capability to manage requests and new books transactions that has been imported to library or transported from library. | | | | | |
| Committed billable effort |  | | | | | |
| Committed calendar effort |  | | | | | |
| Committed effort usage (man-month[[1]](#footnote-1)): | 16 | | | | | |
| In which:  Management activities (%) | 19.41% | | | | | |
| Development activities (%) | 57.65% | | | | | |
| For Quality activities (%) | 22.94% | | | | | |
| Project start date: | 03/01/2012 | Expected end date: | | | 29/04/2012 | |
| Planned duration: | 4 months |  | | |  | |

## Assumptions and constraints

### Constraints

Table : Constraints

|  |  |  |
| --- | --- | --- |
| No | Description | Type[[2]](#footnote-2) |
| 1 | This application has been developed specialized for FPT University Library (HCM Branch) | Business |
| 2 | Every activity will have to meet the schedule | Schedule |
| 3 | All of the requirements will have to be provided and interpreted clearly from the project sponsor | Requirement |

### Assumptions

Table : Assumptions

|  |  |  |
| --- | --- | --- |
| No | Description | Type[[3]](#footnote-3) |
| 1 | The FPT University Library will provide all needed business process information to the project team | Business |
| 2 | The project sponsor & customer will attend to all stages of the development process and provide help on the project requirement | Business & Requirement |

## Project Risk

## References

Table : Document’s References

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Document | Issued date | Source | Note |
|  |  |  |  |  |
|  |  |  |  |  |

# Project deliverables and dependencies

## Deliverables

[[4]](#footnote-4)Table : Project deliverables to customer

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Deliverable | Delivery date | Delivery location | Note |
| 1 | Introduction Document | January 9th, 2012 | FU – CMS | Soft version  Final version |
| 2 | Software Project Management Plan | January 30th, 2012 | FU – CMS | Soft version  Beta version |
| 3 | Software Requirements Specification | February 11th, 2012 | FU – CMS | Soft version  Beta version |
| 4 | Software Design Description | February 20th, 2012 | FU – CMS | Soft version  Beta version |
| 5 | Software System Database Design | February 24th, 2012 | Google – SVN | Soft version  Beta version |
| 6 | Release Document and Test Document for R1 | March 2nd, 2012 | Google – SVN | Soft version  Final version |
| 7 | Release Document and Test Document for R2 | March 9th, 2012 | Google – SVN | Soft version  Final version |
| 8 | Release Document and Test Document for R3 | March 16th, 2012 | FU – CMS  Google – SVN | Soft version  Final version |
| 9 | Software Test Documentation | March 19th, 2012 | FU – CMS | Soft version  Final version |
| 10 | Software User’s Manual and Training Document | March 31st, 2012 | FU – CMS | Soft version  Hard version  Hard-cover version  Final version |

## Critical Dependencies

Table : Critical dependencies

|  |  |  |  |
| --- | --- | --- | --- |
| No | Critical dependency | Expected Delivery Date | Note |
|  |  |  |  |

# Project Lifecycle

## Stage description

Table : Project stage summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Stage | No. of iterations | Start | End | Elapsed time |
| Initiation Stage |  | Week 1 | Week 1 | 6 days |
| Definition Stage | 1 | Week 2 | Week 3 | 12 days |
| Solution Stage | 1 | Week 4 | Week 5 | 12 days |
| Construction Stage | 3 | Week 6 | Week 12 | 42 days |
| Transition Stage | 2 | Week 13 | Week 14 | 12 days |
| Termination Stage |  | Week 14 | Week 14 | 6 days |

Table : Project stage and milestones

| Stage | Description | Milestone |
| --- | --- | --- |
| Initiation Stage | The Initiation stage will intend to get project requirements and review those, estimate project size and effort, creates the internal work order and team building. | Kick-of meeting |
| Definition Stage | The Definition stage will develop the product requirements and establish the business case for the LIB System. The major use cases will be developed as well as the high level Project Plan. | Business Case Review Milestone.  In this stage, the LIB project plan document will also be created.  In this stage, the LIB SRS document will also be created. |
| Solution Stage | The Solution Stage will analyze the requirements and will develop the architectural prototype. At the completion of the Solution Stage all use cases selected for Release 1.0 will have completed analysis and design. In addition, high risk use cases for Release 2.0 will have been analyzed and designed. The architectural prototype will test the feasibility and performance of the architecture that is required for Release 1.0.  A User-Interface Prototype will also be developed. | The Architectural Prototype Milestone marks the end of the Solution Stage. This prototype signifies verification of the major architectural components which comprise the R1.0 Release.  The User-Interface Prototype Milestone enables early user feedback on the user interface.  In this stage Project SDD document will be released. |
| Construction Stage | During the Construction Stage, remaining use cases will be analyzed and designed. The Beta version for Release 1.0 will be developed and distributed for evaluation. The implementation and test activities to support the R1.0 and R2.0 releases will be completed. | The R2.0 Operational Capability Milestone marks the end of the Construction Stage. Release 2.0 software is ready for packaging. |
| Transition Stage | The Transition Stage will prepare the R1.0 and R2.0 releases for distribution. It provides the required support to ensure a smooth installation including user training. | The R2.0 Release Milestone marks the end of the Transition Stage. At this point all capabilities, as defined in the SRS, are installed and available for the users. |
| Termination Stage | The Termination Stage has objectives to summarize and evaluate project results, and closure the project. | Post mortem meeting |

## Iteration objectives

Table : Project iterations objectives

| Stage | Iteration | Description | Associated Milestones | Risks Addressed |
| --- | --- | --- | --- | --- |
| Definition Stage | Preliminary Iteration | Defines business model, product requirements, project plan, and business case. | Business Case Review  Project Plan Review  SRS Review | Clarifies user requirements up front.  Develops realistic project plans and scope.  Determines feasibility of project from a business point of view. |
| Solution Stage | E1 Iteration – Develop Architectural Prototype | Completes analysis & design for all R1 use cases. Develops the architectural prototype for R1.  Complete Analysis and Design for all high risk R2 use cases. | Architectural Prototype  SDD Review | Architectural issues clarified.  Technical risks mitigated.  Early prototype for user review. |
| Construction Stage | C1 Iteration – Develop R1 Beta | Implement and test R1 use cases to provide the R1 Beta Version.  This stage will implement all the basic functionalities of the project.  Database will be revised and reconstructed to be compromised with the need of the project. | R1 Beta  DB Review | All key features from a user and architectural prospective implemented in the Beta.  User feedback prior to release of R1.  User feedback prior to the release of the system database version. |
|  | C2 Iteration – Develop R1 Release | Implement and test remaining R1 use cases, fix defects from Beta, and incorporate feedback from Beta.  Develops the R1 system.  Revises all the early stage R1 system, the functionality of the management feature will be implemented according to the need of managing DB for testing and reviewing. | R1 Software  DB Test data reviewed  Unit Test document review | R1 fully reviewed by user community.  Product quality should be high.  Defects minimized.  Cost of quality reduced.  Effort for maintaining the documents from the project. |
|  | C3 Iteration – Develop R2 Release | Design, implement, and test R2 use cases.  Incorporate enhancements and defects from R1.  Develops the R2 system.  Improves the R2 stage of the software, the ability to communicate with the other system will be implemented in R2 to make R3. | R2 Software  Unit Test document Review  Integration Test Review  System Test Review | Quick release of R2 addresses customer satisfaction.  All key functionality provided in System by R2 Release.  Effort for maintaining and creating new documents will reduced the time for coding. |
| Transition Stage | T1 Iteration – R1 Release | Package, distribute, and install R1 Release. | R1 Released | Two stages release minimizes defects.  A two stages release provides easier transition for users. |
|  | T2 Iteration – R2 Release | Package, distribute, and install R2 Release. | R2 Released  User Manual Review | Two stages release minimizes defects.  Two stages release provides easier transition for users.  Training section for user will need to be planned. |

## Project schedule

Prefer to initial MS Project plan of the project that been attached to this document.

# Process tailoring/deviation

The operational process for the project is based on the development process model defined in the FPT Software Process Handbook and F-soft guidelines.

Table : Process tailoring/deviation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Tailoring/deviation | Added/Modified/Deleted | Reason for tailoring/deviation | Tailoring or Deviation? |
|  |  |  |  |  |

# Resource plan

## Project Organization

### Organizational structure



### Project team

Table : Project team

| No. | Name | Position | Start Date | End Date | Working time[[5]](#footnote-5) |
| --- | --- | --- | --- | --- | --- |
| Management team | | | | | |
| 1 | Nguyễn Trọng Tài | PM | January 3rd , 2012 | April 28th , 2012 | 5 hours/week |
| Project team | | Has the responsibility to complete all phases of the project | | | |
| 2 | Lê Minh Quân | TL | January 3rd , 2012 | April 28th , 2012 | 20 hours/week |
| 3 | Trần Hồ Quốc Bảo | TM | January 3rd , 2012 | April 28th , 2012 | 20 hours/week |
| 4 | Trịnh Ngọc Điệp | TM | January 3rd , 2012 | April 28th , 2012 | 20 hours/week |
| 5 | Nguyễn Hùng Phú | TM | January 3rd , 2012 | April 28th , 2012 | 20 hours/week |

## External interfaces

### FPT interfaces

Table : FPT interfaces

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Name | Position | Responsibilities[[6]](#footnote-6) | Tel, Fax, Email |
| 1 | TaiNT | PI | Process control and audit, support on process related issues | [taint@fpt.edu.vn](mailto:taint@fpt.edu.vn) |
| 2 | FPT Lib | PS | Business process related issues supporter |  |
|  |  |  |  |  |

### Customer’s interfaces

Table: Customer’s interfaces

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Name | Position | Responsibilities[[7]](#footnote-7) | Tel, Fax, Email |
| 1 | TaiNT | Instructor | University’s representative |  |

### Subcontract

Table: Subcontract plan

| No. | Job | Deliverable | Delivery date | Note |
| --- | --- | --- | --- | --- |
|  | <NA if it’s not available> |  |  |  |

## Project communication

### Internal project communication

Every week, the project team has two regular meetings (face to face) at FPT University with project manager for reporting the progressing of the project, Q&A, reviewing … Beside that, the project team also can contact with the project manager via mobile phone or email for Q&A. And if needed, project team can book some meetings outside FPT University with the project manager.

Every week, the project team also has two regular meetings (face to face) for solving project’s problem, discussing about the project … From the developing phase, project team members have to write daily report about the project progressing to the project leader. Beside the regular meetings, the project team also has some other face to face meetings or online meetings; it’s up to the needs of the project.

### Communication with management board of department

N/A.

### Communication with customer

Project manager also plays the role as customer.

### Others

Contacts with the FPT University’s librarians for some information about the business scope of the project.

## Training plan

Table : Training plan

| No. | Topic | Description | Participants | Time | Waiver criteria |
| --- | --- | --- | --- | --- | --- |
| 1 | Training about ADO dot NET | Review all the technical knowledge that is needed for the project | All project team | 1 days at February 11th 2012 |  |
|  |  |  |  |  |  |

## Tools and Infrastructure

### Software

For developing phases:

* Microsoft Visual Studio 2008
* Microsoft Office 2007
* Microsoft SQL Server 2008
* Tortoise SVN (for managing resource)

For communications:

* Mail system of FPT University
* Mavenlink
* Skype chat system

### Hardware

Four laptops for project team with the processor is Intel Core 2 duo 1.8 GHz to higher, RAM for 2 GB to higher, VGA from 128 MB to higher, HDD from 160 GB to higher (these information up to the configuration of team members’ laptops)

### Others infrastructures

## Project Finance

### Invoice schedule

Table : Invoice schedule

| No. | Item | Target date for Invoicing | Amount | % of total revenue | Conditions are required to raise an invoice |
| --- | --- | --- | --- | --- | --- |
|  | <N/A if it’s not available> |  |  |  |  |

### Project cost

Table : Project costing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Labor |  |  |  |  |  |
|  | Activities |  | EFFORT (md) |  | Cost |
|  |  |  |  |  |  |
|  |  | Total Effort: |  |  |  |
|  |  |  | TOTAL LABOR: |  |  |
|  |  |  |  |  |  |
| NonLabor | (attach supporting details) |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  | TOTAL NONLABOR: |  |  |
|  |  |  | TOTAL BUDGET: |  |  |

# Quality Management

## Quality objectives

Table : Quality objectives

| No | Quality objectives | Unit | Norm | Target | Notes |
| --- | --- | --- | --- | --- | --- |
| 1 | CMMI Level 5 | -- | -- | Quality Management process |  |
| 2 | C# Coding Convention | -- | -- | Coding process | <http://msdn.microsoft.com/en-us/library/ff926074.aspx> |

## Quality activities

### Strategy to achieve the quality objectives

* Defect Prevention: Defect prevention by using the standard process from the guideline of the QMS.
  + For the spec before coding stage: Make everything clear to improve the productivity in the coding stage.
  + For the coding before release: Double checks or reviews the code beforehand, takes the pair programming as the main coding process.
* Defect Compromising:
  + For the defect from the unclearness of the spec: if the defect has been state as not importance one, we can leave the defect as one of the system originator.
  + For the defect from the coding skill: This defect may lower the system performance, but for the future development may need this to make the system more functionality.

### Review and inspection

Table: Reviews and inspection

| No | Items under Review/Inspection | Conductor | Date | Approved by | Note |
| --- | --- | --- | --- | --- | --- |
| 1 | Project Plan | Team |  | TaiNT |  |
| 2 | SRS | Team |  | TaiNT |  |
| 3 | Design | Team |  | TaiNT |  |
| 4 | Code | Team |  | TaiNT |  |
| 5 | Test Document | Team |  | TaiNT |  |
| 6 | Test Result | Team |  | TaiNT |  |
| 7 | Documents in advance | Team |  | TaiNT |  |
| 8 | Release Package | Team |  | TaiNT |  |

### Other activities

Table: Others quality activities

| No. | Activity | Date/ frequency | Responsibility | Note |
| --- | --- | --- | --- | --- |
| 1 | Metric collection | At the end of Iteration (Development stage) | TL | LOC |
| 2 | Internal audits | Every Week (Development stage) | TL | To raise and close issues |
| 3 | Quality objective tracking | At the end of Working day | TM | To neatly follow the process as planed |

### Metrics Plan

|  |  |  |
| --- | --- | --- |
| Metric to be collected | Unit of Measurement | Tools used if any |
| Size | LOC | SVN |
| Effort | Person-days | Mavenlink project management system |
| Defects | Number of Defects | MS Excel |
| Schedule | Elapsed time | MS Project & Mavenlink project management system |

# Configuration management

Prefer to the LIB Project CMPlan.docx in the attachment to this document.

1. 1 man-month equals 25 man-day [↑](#footnote-ref-1)
2. These are type normally: staff, budget, equipment, schedule, infrastructure, business, ... [↑](#footnote-ref-2)
3. These are type normally: staff, budget, equipment, schedule, infrastructure, business, ... [↑](#footnote-ref-3)
4. This table and other tables in this project plan may be referred to appendixes. It’s permitted to replace tables by text but these information in table should be required. [↑](#footnote-ref-4)
5. Fill here any note about working time as % of total effort or how many hours per day or per week. [↑](#footnote-ref-5)
6. Including required deliverables and delivery time, if applicable [↑](#footnote-ref-6)
7. Including required deliverables and delivery time, if applicable [↑](#footnote-ref-7)