Spencer Booth-Jeffs, Mason Watson, Joshua Driver, Lachlan Reid

SmiJle Team

Project Handbook

FDLMARKS 131

FANCY LOGO

# Revision

*Use whichever style of versioning you prefer.*

*You may also include the main authors of each change, and the list of pages that have been changed*

|  |  |  |  |
| --- | --- | --- | --- |
| Version Number | Date approved | Approved by | Description |
| 1.0 | 2016-01-01 | Team Member | Initial release of plan |
|  |  |  |  |

# Preface

*Describe the purpose and audience of this document, in your own words.*

The purpose of this document is to provide a clear direction of the project, it will help us keep track of what kind of tests we have done previously to prevent any kinds of tests to be repeated again, thus, less loss of time, it is also a tool used to help share ideas with other team mates, to improve better efficiency, it helps provide a clear understanding of what kind of resources/ materials you might currently have.

The kind of audience we will be targeting towards are involved in the university are students, teachers/professors/lecturers, typically within federation, since other universities use other programs to display their grades for their assessments, exams, practicals, trails, etc. HR managers will also want to view a employee’s grades to determine the academic performance of the overall participant. This will also be used for other project users that can help them provide a direction.

Table of Contents

[Revision 1](#_Toc34729069)

[Preface 1](#_Toc34729070)

[List of Figures 3](#_Toc34729071)

[List of Tables 3](#_Toc34729072)

[Vision Statement 4](#_Toc34729073)

[1. Introduction 4](#_Toc34729074)

[1.1 Project Overview 4](#_Toc34729075)

[1.2 Project Deliverables 4](#_Toc34729076)

[1.3 Evolution of the Handbook 4](#_Toc34729077)

[1.4 Reference Materials 4](#_Toc34729078)

[1.5 Definitions and Acronyms 5](#_Toc34729079)

[2. Organization 5](#_Toc34729080)

[2.1 Process Model 5](#_Toc34729081)

[2.2 Organizational Structure 5](#_Toc34729082)

[2.3 Organization Boundaries and Interfaces 5](#_Toc34729083)

[2.4 Project Responsibilities 5](#_Toc34729084)

[3. Managerial Process 6](#_Toc34729085)

[3.1 Management Objectives and Priorities 6](#_Toc34729086)

[3.2 Assumptions, Dependencies, and Constraints 6](#_Toc34729087)

[4. Technical Process 6](#_Toc34729088)

[4.1 Methods, Tools, and Techniques 6](#_Toc34729089)

[4.2 Software Documentation 6](#_Toc34729090)

[5. High level Project Plan 7](#_Toc34729091)

[6. Non-functional Requirements 7](#_Toc34729092)

[6.1 Platform 7](#_Toc34729093)

[6.2 Communication 7](#_Toc34729094)

[6.3 Performance 7](#_Toc34729095)

[6.4 Security and Privacy 7](#_Toc34729096)

[6.5 Audience, Usability and Accessibility 8](#_Toc34729097)

[6.6 Reliability 8](#_Toc34729098)

[6.7 Modifiability 8](#_Toc34729099)

[6.8 Economic 8](#_Toc34729100)

[6.9 Legal 8](#_Toc34729101)

[6.10 Standards 8](#_Toc34729102)

[6.XX Other Non-Functional Requirements 8](#_Toc34729103)

[7. Software and Systems Architecture 8](#_Toc34729104)

[7.1 Architecture objectives 8](#_Toc34729105)

[7.2 High-level architecture 8](#_Toc34729106)

[7.X System context 8](#_Toc34729107)

[7.X User Interface / Interaction Design 9](#_Toc34729108)

[7.X Data model and software design 9](#_Toc34729109)

[7.X Assumptions 9](#_Toc34729110)

[7.X External Dependencies 9](#_Toc34729111)

[7.X Concept art, storyboards 9](#_Toc34729112)

[Additional Components 9](#_Toc34729113)

[Index 9](#_Toc34729114)

[Appendices 9](#_Toc34729115)

# List of Figures

# List of Tables

# Vision Statement

*Overview*

*The purpose of the vision statement is to clearly identify the project goals. How will the product you are producing benefit your client/stakeholders? Who will use this product? What features are critical? How will this product be differentiated in the market (if applicable). Keep it short and concise however, make sure that you identify everything that the product will accomplish. You can expand upon this in the introduction. (See Satzinger et al. page 13)*

The goal of this project is to help improve the Fdl marks website and to help create a new phone app for good convenience, the people at the university will help us provide the data required to help us simulate the overall final product and will be providing code for the web browser edition of the latest product. Fdl marks also helps provide a study plan which can only be accessed through the web browser, the downfall of this is that the amount of time that it takes to get to opening your laptop and to getting to the actual application itself would take such a long time in which students wouldn’t have that kind of attention span that they would not bother continuing.

“The aim of this project is to enhance the functionality and accessibility of fdlMarks via the development of a mobile app, to refactor the code that is currently utilised, and ensure that both the current web-based application and the new mobile app are secure.”

To solve this problem, the administrators have come up with an idea of a mobile app that can not only provide a quick service to the study plan, but to be able to create a faster service to view your grades as soon as the marks are out (maybe a notification for quicker access) we also want to enhance the look of the overall web based Fdl marks as it does look a little bit out of date.

The people that will be using this product are students (To view their overall progress, to be able to view their descriptions), lecturers (to be able to edit grades or to create a new grade bio or criteria) , and HR managers (To view the academic progress of the persons performance).

I think this will help with providing the students the capabilities of being able to organise certain objectives faster and efficiently, plus, this will help with saving students a lot of money, since students are statistically broke so there wouldn’t be any kind of requirements of buying a book or an “organiser”, this will also help boost the universities rankings and staff morale between the stakeholder and the teacher.

The most critical features that are most required is the code refracturing, which can help the project make the program more effective and faster, it will also take the longest to complete since we don’t exactly know what ticks or how things are effective. We also need it to be able to display grades based on the data on the Database, when we update the data, the latest data should be able to be displayed on the UI.

[*https://web.microsoftstream.com/video/25dbe3bf-3f29-4950-a1bc-9b76aa506ed6*](https://web.microsoftstream.com/video/25dbe3bf-3f29-4950-a1bc-9b76aa506ed6)

1. Problem Description
2. System Capabilities
3. Business Benefits

# Introduction

## 1.1 Project Overview

*Give a* ***summary*** *of the project objectives and deliverables, and any other work that required as part of the project.*

*Include a brief description of the resources required, deadlines, and budget.*

## 1.2 Project Deliverables

*Describe what items are to be delivered to the client, approximate dates, and quantities (if any).*

*You do not need to include process documentation (such as sprint documentation, design documents, or similar) here, but should include a user manual, an installation manual, and technical documentation.*

## 1.3 Evolution of the Handbook

*Plan for making scheduled and unscheduled updates to this handbook. How will you keep it up to date?*

*Consider:*

* *When will scheduled updates happen?*
* *Who is responsible for updates?*
* *How will you put the handbook in change control?*
* *How will everybody be notified of handbook changes?*

## 1.4 Reference Materials

*This is a complete list of materials referenced elsewhere in the handbook, such as style guides, coding standards, documentation standards, methodologies, etc.*

*Indicate if you haven't used any external references.*

*Use any style that you like. If you don't know any good ones, then use IEEE or APA style*

[*http://www.ieee.org/documents/ieeecitationref.pdf*](http://www.ieee.org/documents/ieeecitationref.pdf)

[*http://www.apastyle.org/*](http://www.apastyle.org/)

## 1.5 Definitions and Acronyms

*Define, or provide references to the definition of, terms, acronyms, or abbreviations used in the handbook.*

|  |  |
| --- | --- |
| Term | Definition |
|  |  |
|  |  |

# Organization

## 2.1 Process Model

*This section should describe how the project functions and activities (ie. the work you are doing) work together to build your project.*

*You should include a high-level breakdown of the activities, with a rough timeline. Include a chart, diagram, or timetable. You should indicate this at the level of* ***each sprint****. For each sprint, clearly state the outcomes and deliverables to be produced.*

*Include preliminary agreed dates for sprint review meetings for demonstrations to your client.*

*As this is an agile project, this is necessarily a projection/estimate rather than a binding timeline.*

## 2.2 Organizational Structure

*Describe the structure of the project team, from a* ***process perspective****. Identify scrum roles, and how you will determine changes in these roles.*

## 2.3 Organization Boundaries and Interfaces

*Describe the "administrative and managerial boundaries" between you and your client, and other stakeholders or contributors.*

*Be specific – indicate people and their roles – the more specific you can be the more useful you will find this document.*

*How will client communication be handled, who will be responsible, how often will you be in contact?*

## 2.4 Project Responsibilities

*Describe the* ***non-procedural*** *roles of each of the team members – for example who is responsible for design, programming, artwork, quality assurance and testing, user documentation, technical documentation, etc.*

*You can use a matrix if the team members share responsibility for each function (which is recommended).*

# Managerial Process

## 3.1 Management Objectives and Priorities

*What is the management philosophy? Are you aiming for high performance, high equity, flexibility, or learning new skills? Sometimes you will need to choose, so how?*

*This is also good place to address conflict resolution, consider how you will handle interpersonal problems and how you will resolve them.*

## 3.2 Assumptions, Dependencies, and Constraints

*State:*

* *The assumptions upon which this project is based*
* *The external events or inputs that the project depends on*
* *The constraints under which the project is operating, for example budgetary, staffing, availability, hardware.*

# Technical Process

## 4.1 Methods, Tools, and Techniques

*Detail the tools and techniques used to build the project – note that this isn't necessarily limited to the target platform, but includes your project management, documentation, and communication tools.*

*Describe your team's implementation of the Scrum framework. If you like, you may refer the reader to external documents.*

*What tools will you use to handle* ***communication*** *within your team?(e.g. MSTeams)*

*How will you specify and model your* ***software designs****?*

*Which* ***document and code management*** *systems are you using?(e.g. MSTeams, github)*

## 4.2 Software Documentation

*What is the plan for creating user and technical documentation?*

*You will need to plan for the creation of a User Manual and an Installation Manual*

*How will documentation be reviewed and tested for accuracy?*

*Will you use a style guide? If you use an external guide, be sure to include it in your references.*

# High level Project Plan

*Identify how many sprints are planned for the project. For each sprint, identify the sprint goal – the key objectives that you forecast achieving in that sprint. For each one,* ***indicate how you will evaluate it as successfully ‘done’*** *(this is a bit like a high level condition of satisfaction). “The sprint goal is an objective that will be met within the Sprint through the implementation of the Product Backlog, and it provides guidance to the Development Team on why it is building the increment.” (The Scrum Guide, p10)*

*You may decide that in the first sprint, you are doing some research and building a prototype to demonstrate what is possible with some particular technology, or you may plan that you will build a particular component of your product that is key and high priority. In true agile, in each sprint, you should be developing an increment or release of your product or some deliverables relating to your project. In the context of the learning experience and as you are students without significant experience, you may plan to focus on some early design decisions in your first sprint, but* ***please ensure you identify clear goals and outcomes for each sprint.*** *So, it may be that you are designing a database, but don’t stop at an E-R diagram, design the database and then create an implementation of the database and some queries that are useful for achieving key objectives relating to your product. Alternatively, it may be that you are designing a level for your game, so identify (some of) the characters, (some of) the scripts and behaviours and then implement (part of) that level.*

*At the beginning of each sprint, you will revisit this plan and then build your product backlog items to identify specific tasks to be completed during the sprint. During each sprint, you should be engaging in design, development and testing.*

*“Having set the Sprint Goal and selected the Product Backlog items for the Sprint, the Development Team decides how it will build this functionality into a “Done” product Increment during the Sprint. The Product Backlog items selected for this Sprint plus the plan for delivering them is called the Sprint Backlog… As the Development Team works, it keeps the Sprint Goal in mind. In order to satisfy the Sprint Goal, it implements functionality and technology. If the work turns out to be different than the Development Team expected, they collaborate with the Product Owner to negotiate the scope of Sprint Backlog within the Sprint.” (The Scrum Guide, p11)*

*You may provide a link referencing your online project board (e.g. in GitHub project board or Trello board) here.*

# Non-functional Requirements

*For each of the following section headings, identify any relevant non-functional requirements. For each one,* ***indicate importance*** *and* ***how you will evaluate it*** *(this is a bit like the conditions of satisfaction and makes sure you can measure your success)*

*Don't include spurious requirements just for the sake of it!*

*If your project has no relevant non-functional requirements for any of the following domains, leave the section heading in-place and indicate that there are no applicable requirements.*

## 6.1 Platform

*Platform requirements relate to the hardware and software environments that your system must operate within*

## 6.2 Communication

*Your project may need to interact with other systems. Only include non-functional requirements here –* ***how*** *your system communicates, but not what it communicates or why. Protocols, frequency, message latency, maximum message sizes, flooding, or authentication considerations might belong here. Note that these requirements should be limited to communication with other systems – not with the user.*

## 6.3 Performance

*Indicate relevant performance requirements. Consider frame rate, response time or time budgets, input latency, network utilisation, CPU use, battery use.*

## 6.4 Security and Privacy

*Indicate any security and privacy requirements. Consider the security requirements around user authentication, what information you should/should not store, encryption, password storage, backups, what should/should not be included in log files or error reporting*

## 6.5 Audience, Usability and Accessibility

*Who is using your product? What requirements arise as a result of this audience? Consider language, internationalization/localization, pre-existing knowledge, familiarity with other tools. Usability and Accessibility are related to audience.*

## 6.6 Reliability

*Consider requirements around system availability, up/downtime, fault logging, redundancy, error tolerance, etc.*

## 6.7 Modifiability

*If your system must be modified or updated, how does this need to happen?*

## 6.8 Economic

*There are likely to be economic constraints/requirements on your project development. Indicate these requirements here.*

## 6.9 Legal

*Applicable regulatory or legal requirements. Consider also licensing, certification, etc.*

## 6.10 Standards

*In some cases, you will need to adhere to existing standards for file formats, network systems, or to be compatible with other systems or products. These requirements may apply to the project or the development process.*

## 6.XX Other Non-Functional Requirements

*Include any other non-functional requirements you identify here. Give each additional section an appropriate number and title.*

# Software and Systems Architecture

## 7.1 Architecture objectives

*Describe the desired properties and goals of your system architecture. You may refer to the above non-functional requirements where necessary. This section should be only a paragraph or so.*

## 7.2 High-level architecture

*Describe the overarching design of the system, or at least your current plans for the architecture. Examples of your software and systems architecture might be* ***n-Tier****,* ***distributed****,* ***microservice****,* ***monolithic, Model-View-Controller, Model-View-View-Model*** *or a combination of several of those.*

***The following sections are un-numbered as you may not need to include some, depending on your project. You should number sections appropriately***

## 7.X System context

*Where does your system fit in with other systems? How and why does it interface with them? How is responsibility for functionality split across systems?*

## 7.X User Interface / Interaction Design

*Include initial user flows, visual designs, mock-ups, concepts, sitemaps, or any other appropriate documentation to show how you anticipate users will interact with your system*

## 7.X Data model and software design

*Describe your initial database design, using diagrams or data dictionaries. Indicate if you are using any standard data design patterns or conventions.*

*If you are designing a file format or new data structures, describe the format, your justification for its design, and similar formats.*

*You may include other types of system design diagrams here too; choose whichever diagrams best suit both your project and your team's design process.*

## 7.X Assumptions

*You may make certain assumptions about your target platform/system when creating your design. Indicate those assumptions here.*

*Examples might include number of users, frequency of use, software libraries, available bandwidth, database size, hardware revisions (ie which phones does your app work on?)*

## 7.X External Dependencies

*These are external dependencies in the architectures – for example are you relying on third-party systems to remain available? Library or operating system code which you can install permanently is not a dependency for this section.*

## 7.X Concept art, storyboards

*For game and multimedia projects, include appropriate concept art, character designs, treatments, storyboards, etc.*

# Additional Components

*Include any other components here that you think are necessary, such as training plans, data conversion plans, maintenance plans, etc. Number each new section as above, starting at section 7*

# Index

*An index is optional. If you choose to include one, explore whether your word processor can do so semi-automatically for you.*

# Appendices

*Any supplemental items (such as change request forms, etc) that do not form part of the handbook proper should be included as appendices.*

*https://web.microsoftstream.com/video/25dbe3bf-3f29-4950-a1bc-9b76aa506ed6*