Software Requirement Specification

Agile Software Development Project

Team Name

Team Coca Cola

Team Member
Lee Jia Jun

1. Introduction

1.1Purpose

The purpose of this document is to provide the software requirement specifications of the Agile Software Project Management System. The creation of the system includes various basic essential functionalities, requirements given by client and also non-functional requirements that supports the agile software development lifecycle.

1.2 Scope

The scope of the project is to improve by combining several task management and time tracking websites/application into the agile software project management system. Different role will have different level of access towards the system (Admin, project manager & project members). By accessing the system, they will need to register an account so that they can login and logout of the system. Admin will later appoint project manager , switch project manager (scrum master) and also delete user if neccessary. The system will also provide features like creating new project, add, edit requirements, assigning them to project members and delete requirements. Besides, progress can be tracked, due date can be adjusted and they will perform bug testing, reporting, fixing and lastly generating report. The system also includes requirements listed by our client which are upload PDF from system, mark off tasks as complete by project manager, give comments, capture timelines and sprints.

1.3 Definitions, Acronyms and Abbreviations

Below are definitions of term used within the domain of the Agile Software Project Management System. Definitions are further are covered in the next section (Business Rules) Terminology Definition Dependencies The software needed so the system will work without problems Responsive A design technique to ensure the software scales through different screen dimension and resolution Sprint Sprint is one timeboxed iteration of a continuous development cycle. Within a Sprint, planned amount of work has to be completed by the team and made ready for review. Product backlog items the Product Backlog is an ordered list of everything that is known to be needed in the product and constantly changes to identify what the product needs to be appropriate Progress Tracking A feature for all users to record and track their progress throughout certain period of time based on their actions in the task management and generate a graph or report to have an overview of their work progress. Scrum Master Scrum Master takes on the administrative, coaching and leadership roles that make Scrum development possible. In our system, project manager appointed with be the Scrum Master

1.4 Business Rules

Creating user account Account created by default will be set as Project members. Project manager is given the power by Project admin. Assigning tasks Only project manager will be able to assign tasks to project members. Exchanging task is not allowed between different project members. Project members will not be able to reject the tasks assigned once confirmed. One task can be assigned to multiple project members. Second member pushing the codes will result in updating the codes of the first member. A report should be generated indicating the codes added, updated or removed using respective colour indications. Completing task assigned Only tasks that are marked off as completed by project manager can be set as “Done” in the task management section. Project members can only move tasks assigned from “To Do” to “Doing”. A task that is completed after the due date will be considered incomplete. Task due dates Task due dates will be given to each task assigned depending on the workload and number of members working on it. However, under special conditions, due dates can be adjusted by the Project manager if reasons given are acceptable.

2. Overall Description

2.1 System Specification

Agile Software Management System is a improved project management system that allows project manager to assign tasks to each project members and all of the task management, progress tracking, codes storing & updates are done within the system. After each sprint, a complete documentation can be generated to summarized the progress for each project member. Project manager will also keep track of his/her project members' progress on the project and give comments if there is any bugs found or corrections to be made. The improved codes will then be pushed to the repositories which automatically updates and integrates into the demo system. Project manager and members will be able to communicate and discuss by using the comment feature on the tasks assigned. The task management concept will be somewhat similar to Trello board with “To do”, “Doing” and “Done”.

2.2 System Features

The functional requirements involved in the Agile Software Project Management System are listed down below: - Register an account - Login - Logout - Appoint project manager - Delete user - Create new project - Add requirements to project - Edit requirements - Delete requirements - Assigning tasks - Mark task as complete - Due dates adjustments - Add comment on requirements - Upload PDF files - Progress Tracking - Bug testing - Bug reporting - Bug fixing - Generating reports - Capture timeline and sprints - Switch project manager (Scrum master)

2.3 User Classes and Characteristics

? Client (Dr. Brian Loh) - Dr. Brian Loh is the lecturer in Faculty of Engineering, Computing & Science and in computer science, agile software project management is widely used to promote a disciplined project management process that encourages frequent inspection and adaptation. He would like to have a system that is created that supports the agile software development lifecycle. ? Admin - The admin will be able to appoint project manager to create new project and have new requirements added into the project. The rest of the job will then be done by the project manager. Admin will also have the power to remove the user's account from the system if there is a need. They are controlling the back end of the system and manages both project manager and project member ensuring that they are doing their job properly therefore having the ability to do progress tracking and generating weekly reports. ? Project Manager - The project manager appointed by the admin will have access to create new project and add, edit, delete requirements of the project. The created tasks are assigned to different project members. They will be in charged of the progress tracking of the project member ensuring that they are doing their job properly. ? Project Member - Project members will be assigned with tasks and their job is to finish their tasks within the expected due dates. They will push the codes and it will update automatically. After their task is done, they will perform bug testing to make sure that everything is working properly. The final product will then be mark off as complete after checked by the project manager.

2.4 Design and implementation Constraints

Language The primary language used in Agile Software Project Management System will be English. It has been the most popular languange and widely used all around the world. Community with different cultural backgrounds will most likely be using English to communicate before getting to know more about each other. The User Interface Design The user interface will be able to scale across different screen resolutions (responsive design). Important information will still remain on the screen when the browser is resized and navigation bar is shrunk into a hamburger. Security The system must be secure so that the project that users are working will be keep safe. Only project member will be able to mark off tasks and some features like appoint project manager is only restricted for the project admin. Other users that are not involved in the particular project will not be able to gain access to it, this is to prevent information leakage.

2.5 Assumptions

All users must have internet connection to access to the system. 2. All users must have basic knowledge about Agile software development so that they will be able to navigate throughout the system. 3. Admin are more experience individuals whom will be capable to have the rights to appoint project manager and delete user if neccessary.

4. Project manager also have the feature to remove project member from project if neccessary. 5. When user are removed from the system, their personal information will be totally removed. If they would like to participate in the project, they will need to create a new account. 6. If the performance of the project member is not acceptable, admin have the right to remove them from the project and take in new users to replace them. This is to ensure the quality and the efficiency of the project.

2.6 Operating Environment

The web application can be operated on any device that have a web browser support.

3. Use Cases Descriptions

3.1 Use Cases

Test

4. External Interface Requirements

4.1 User Interfaces

The Agile Software Project Management System applies certain rules of user interface design, such as simplicity, visibility, responsivity and consistency. The user interface will be designed to be user-friendly so that users can interact and works with the system without any technical Information Technology knowledge when using it. Simplicity principles will be applied on the system by removing all unnecessary elements from the system and having a clean layout and uniform colour scheme to maintain the consistency of the system. Proper colour scheme will be selected and used in the system for header, body and footer to show consistency and visibility of the system. The system will be designed to be responsive on the layout so that the system can be used on different device with different screen resolutions. Apart from that, proper heading will be provided for user in order for them to navigate to the correct screen on the system. Visible font size and font weight will be used in the system to maximize the consistency and visibility on the system.

4.2 Software Interfaces

As the Agile Software Project Management System is a web-based application, the system will be accessible through web browsers such as Internet Explorer, Safari, Mozilla Firefox, Google Chrome and other latest web browsers that supports web kit. In addition, the system can be accessed from any devices of different screen ratios and resolutions and also from any platforms including Windows, Android, iOS and Linux.

4.3 Communication Interfaces

Users will be using the Integrated Management System (IMS) through a PHP-based webpage which stores and extracts data from a MySQL-based database server over File Transfer Protocol (FTP). The browsers will be using Hyper Text Transfer Protocol (HTTP) and FTP as communication standards.

5. Non-functional Requirements

5.1 Usability

The system will be having a simple user interface to ensure user-friendliness for users, where technical Information Technology knowledge are not required to operate the system. • User Interface of the system will be designed according to the rules such as simplicity, visibility, responsivity and consistency. • The design of the system is consistent throughout the whole system. • The system will be designed to be responsive on the layout in order for user to operate the system in different devices that used different screen resolutions. • Proper heading will be provided for user to navigate to the correct part in the system. • User manual will be provided in another page of the system for users' guidelines on using the system and how the system works.

5.2 Reliability

The system shows accurate data from the database such as time completion of task and timelines set by manager. • The system shows analytical data and graph to user with a high level of accuracy by generating various type of reports according to users' needs. • The system shows analytical data according to the specific input of the user such as the period of time to generate reports on that period of time. • The system will be able to make comments and remind user on task completion. • The system will be able to capture the timeline, sprints and milestones correctly. • The system could perform testing for bug testing, reporting and fixing in order to notify user and generate report.

5.3 Security

The system can only be used by the users that had registered an account on the system and when they are signed in. • Users with different authority will be having different levels of access to perform different actions in the system.

5.4 Portability

The system's web application will be compatible with cross platform browsers such as Microsoft Edge, Google Chrome, Safari and Mozilla Firefox. • The system is able to

be run from any portable devices with different operation system responsively.

5.5 Maintainability

The system is able to be updated or modified based on different requirements. • Additional updates and features can be implemented to the system if required in future.

5.6 Availability

The system will have an uptime of more than 95% and it will be having a downtime of no more than an hour to fix or update in future.

6. Change Management Process

6.1 Management Process

The following actions would be taken in the event that the clients propose a new set of requirements or request to amend the proposed requirements: • Brainstorming will be carried out among the team in regards to the new set of requirements, after which the most feasible solution is determined. • The proposal for all amended and new requirements will be documented and presented to the clients for approval. • The team will proceed on implementing the changes upon the approval of the client. • The changes will be integrated into the existing system.