Software Engineering and Project

Software Project Management Plan

PG5

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1.0

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Version History

Date	Version	Changer	Description
13/8/2019	0.1	Xuankai Feng	Initialized the structure and deciding supporting involved.
15/8/2019	0.2	Junjie Zhao	Finished the scope part
16/8/2019	0.3	Xuankai Feng	Finished the draft of supporting plans, included overview of specific activities

16/8/2019	0.4	Junjie Zhao	Finished the intended audience, reference and glossary parts
18/8/2019	0.5	Xuankai Feng	Finished supporting plan part, written description of each supporting activities with details
19/8/2019	0.6	Sai Dheeraj Reddy Pallavolu	Finished process part with an overview of the whole process
19/8/2019	0.7	Xuankai Feng	Combine three parts of the draft SPMP plan, and reorganize the structure and logic
20/8/2019	1.0	Xuankai Feng	Review the whole plan and correct errors

Introduction

Scope

The main purpose of this project is to develop a system which can check whether the coding ability if interviewees could match MapTek's requirements. The system is a web-based application and obtained for both administrators and interviewees. This system allows administrators to select topics to assess intended interviewees. Moreover, the system is able to generate and send a access link, which would be unique to every candidate and expired when time-out, to the intended candidate for joining in tests. Finally, interviewees can submit their code to our system. As a result, our system can evaluate the coding ability of the intended interviewee efficiently with a measure of administrator audit.

In current stage, developers will not focus on evaluating the quality of the code by the interviewee. Also, this project does not need to build a mail system.

Intended audience

This document can be read by all related stakeholders.

All development team members are intended audiences. This management plan can be a guide for all members to comply with the management principles and follow the schedule. Moreover, both the scope part and the process part are helpful for developers to ensure all functions that they build can meet the requirements and expectation of the client to a great extent. And supporting plans included in this document will be favorable for group members to finish further documents with guarantee that all processes are catching up with the timetable.

Clients from MapTek are audiences of this report as well. Clients will be interested in all sections of this document since they need to understand our management plan that can help the project get success. Specifically, they may focus on the process section because this part introduces the process model this project will apply and the time frame of this project. Therefore, they can supervise the whole project.

References

Software Engineering and project- software plan and management plan template
The client specification

Glossary

SPMP Software Project Management Plan

Process

Process Model

The process model we are following is SCRUM. SCRUM is an implementation of Agile methodology which consists of more complex set of development principles. Our clients will associate with the development team to collect and harness the function of system throughout the whole development period and maintain communications. A product backlog will be determined by the clients in the early stage, then the development team will finish the workload estimation and allocation. In this project, the whole development period will be divided into several sprints and each sprint refers to two weeks. Both group sprint report and individual sprint report are helpful document to show all stakeholders' the current status of this project after finishing each sprint. Further to this, those reports are useful when the stakeholders need to make a review of this project. Certainly, a sprint retrospective meeting will be held to discuss about previous performance and problems met in last sprint, all group members will participate in and share ideas of the next sprint.

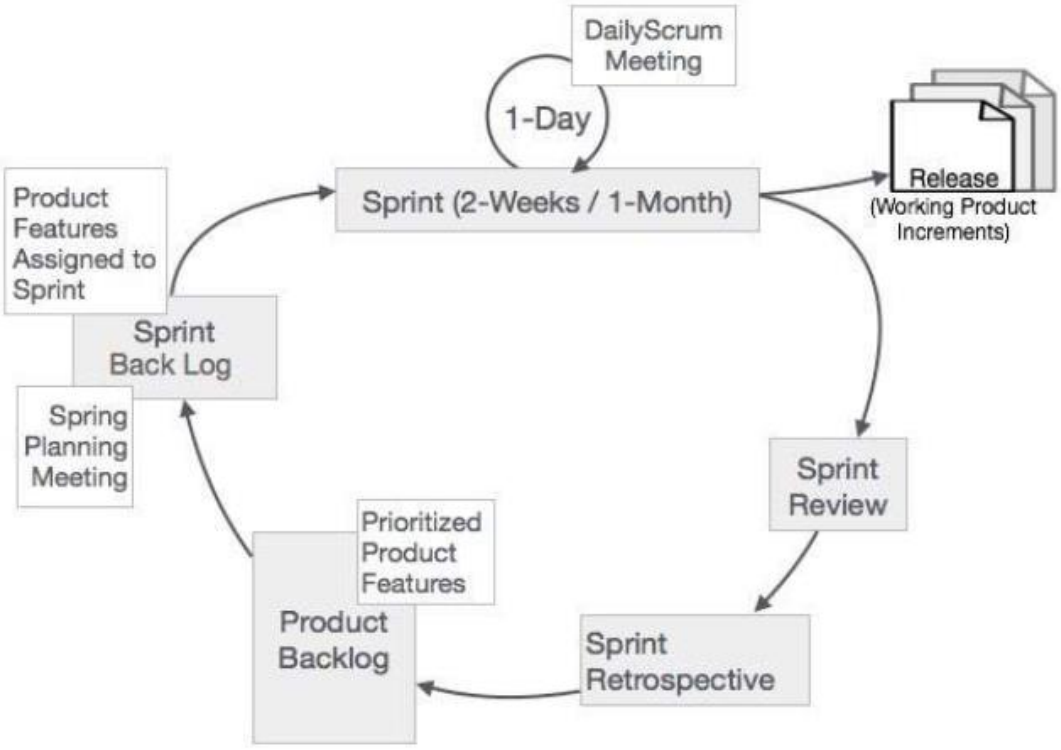

Figure 1. Scrum process model

Overview

This project uses the Object-oriented Programming for designing the project. Aim of the project is to develop the software to hire the developer to satisfy the requirements of MapTek. Every Wednesday there will be a weekly client meeting to achieve these goals and discuss the requirements of the projects and progress of the project. The task is assigned to each member in a team, we have three groups i.e., developer, documentation and testing groups. After the client meeting there is an internal group meeting and one extra meeting if needed per week. In addition to meetings, Slack and Trello used to follow up online for collaboration. Each task is tested and validated.

Supporting Plan

In order to achieve an effective and smooth development of this project, there are various plans and activities set up to support the development throughout the whole process. A certain portion of supporting plans are common in other developments that we had experienced, and some of them are designed to be suitable for our process model, Scrum model which is an implementation of Agile methodology. In the following part, all supporting plans and activities will be conducted during our development will be introduced with details.

Documentation

The documentation refers to all documents finished during the project development period. These documents aim at sharing the planning and actual progress to both stakeholders and group members. Therefore, stakeholders and group members can know the current progress and discuss about further steps. Each document will be finished by group members who are allocated to finish it. Then the draft will be uploaded to our GitHub repository before submission. This activity will run through the whole development process, started with the software project management plan and ended with a final presentation as well as demonstration.

Git configuration - structure & branching

In this project of Hire-me Coder, GitHub is the tool we use to store both project documents and program codes. The repositories on GitHub will be divided into two sections, one section named “doc” which used to store documents including group sprint reports and project plans, and another one named “code” to store both front-end and back-end programming codes.
As for the branching of git configuration, we will have a master branch to ensure all documents and finished codes. For each group member, they should have their own branches to store their work. Specifically, there will be two subordinate branches which refer to QA branch and development branch. For instance, developers will work on codes that they are responsible, and each of them will have a different development branch, after finishing development periodically, they will merge their branches into the master branch. This activity will be a persistent one during this project development.

Naming conventions

Camel-Case is the naming convention will be implemented in this project’s development, since it is easy for both developers and testers to distinguish different variables as well as functions. And for the naming convention of GitHub, all repositories will be named in lower cases.

Versioning

Documents of this project will be started from version 0.1 which indicates it is an internal version. Then for the public version will be started with version 1.0 and so on.

Task estimation

In each internal weekly meeting, all group members will share the latest progress of each part and discuss about the next step. So, we will estimate the workload and the next stage's tasks on every Wednesday when our weekly meeting will be held.

Task tracking

Trello is used for tracking tasks' processes throughout the development. Once a new task has been created and allocated, we will upload it to our Trello panel. Task owners will take responsibility for updating the status of tasks in cycles.

Quality Assurance

There are a code leader and a documentation leader in this project. In terms of documents, each member of documentation group will finish their part, then send to the documentation leader for a review. After that, the combined and modified document will be shared to the whole group for an internal review before submitting. As for the programming part, the code leader will be responsible that all developers are working on the correct functions. Besides, there are two testers in this project, and they will conduct various tests including function test and performance test before releasing new functions.

Risk Management

The risk management is a vital part of project process management, because there may be some emergencies occurring. We will prepare alternative scheme to each task in terms of different aspects of this project. Programming codes of the system will be stored in the GitHub repository and backup in developers and testers' computers. If someone delete some codes by mistake, we can easily roll-back to previous status with the feature of GitHub or from other branches.
Possible risks will be listed, and each risk will assign an owner, who will help solve when it does happen. And the probable influence on project will be discusses among group members before starting a new stage of development.

Meetings (internal and external)

The external meeting with our supervisor who can be regarded as our client occurs on Wednesday morning with all team members. The meeting is used to share project progresses with the supervisor and gain advices and feedback, then the group can make adjustments or conduct further development. Any actions to be made from the meeting will be followed up offline after the meeting, and corresponding minutes of meeting will be written and uploaded to the GitHub repository.
The internal meeting occurs on Wednesday after the external meeting. Each team members will come into discussion about the feedback from the supervisor and allocate tasks to each group

member. Furthermore, members can put forward problems they met during previous tasks and share experiences, which is helpful to provoke the progress of this project. Similarly, a minute of meeting will be finished and uploaded to the GitHub so that everyone knows the current situation of this project.

Appendix A

Figure 1. Scrum process model