**Name of the Product:** BIdding Online System (BIOS)

**Prepared by:** Ethan Yang

Kwon Soo Yeon

Nanda Gian

Qi Haodi

Sia Yan Rui

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7. **Introduction**

The purpose of this document is to outline the test strategy and overall test approach we will be taking for the BIOS project. This includes test methodologies, resources required and estimated schedule.

This section describes the objectives, as well as roles and respective responsibilities of each member. The goal is to provide a framework that can be used by project managers and testers to plan and execute the necessary tests in a cost-effective manner.

* 1. **Objectives**

The objective of this project is to build a user-friendly BIOS for the students of Merlion University such that it is easy and simple to use.

* 1. **Roles and Responsibilities**

We will be having 5 iterations in total. For each iteration, the role of the project manager will rotate. The rotation plan is as follows:

|  |  |
| --- | --- |
| **Iteration** | **Name** |
| 1 | Kwon Soo Yeon |
| 2 | Nanda Gian |
| 3 | Sia Yan Rui |
| 4 | Ethan Yang |
| 5 | Qi Haodi |

*Table 1: Rotation of PM for each iteration*

1. **Testing Strategy**
   1. **User Acceptance Testing**

The purpose of acceptance test is to confirm that the system is ready for operational usage. During UAT, end users of the BIOS will compare the system to its initial requirements provided by the client.

All members will take part in acceptance test and monitor any user feedback as well as testcases that are not achieved.

* 1. **Regression Testing**

Regression testing is the selective retesting of existing functionalities to verify that past codes can still run and are not affected.

All members will take part in regression testing as pair programmers subdivisions. The following is the list of pair programmers for each iteration.

|  |  |
| --- | --- |
| **Iteration** | **Pair Programmers** |
| 1 | Ethan and Yan Rui  Nanda and Haodi |
| 2 | Soo Yeon and Yan Rui  Ethan and Haodi |
| 3 | Nanda and Ethan  Soo Yeon and Haodi |
| 4 | Soo Yeon and Nanda  Yan Rui and Haodi |
| 5 | Nanda and Yan Rui  Soo Yeon and Ethan |

*Table 2: List of pair programmers for each iteration*

* 1. **Functional Testing**

The purpose of functional testing is to test the system against the functional requirements by feeding them inputs and examining the outputs. This ensures that the requirements are properly satisfied by the application.

1. **Hardware Requirements**

The following are hardware we will need to employ in our project:

* Laptops

1. **Software Requirements**

The following are software we will need to employ in our project:

* Windows 10 OS
* GitHub
* Google Sheets (Daily Update, Team Schedule)

1. **Test Environment**

The test environment that we will use consists of user environment, as well as physical environments, such as server and front-end running environment. We will take measures to ensure we simulate environments that are as identical to the actual environment that end users will experience.

1. **Estimated Test Schedule**

The milestones we will set to achieve are:

* PM Review
* Application Demo and Progress Update
* UAT
* Internal Code Review
* Final Presentation

The project deadline is on 17 November 2019 2359 and we plan to have 4 14-days iterations (Iterations 1-4) and 1 7-days iteration (Iteration 5). By taking into account slack days acting as buffers, we are confident we can complete the project by the project deadline.

1. **Control Procedures**

Problems we face during the project process will be documented in our daily update excel file, stating what we did daily and any issues we faced. In addition, bugs faced will be documented in our bug metric excel file to keep track of all the bugs and fixes we have made thus far. Our schedule file on Google Sheets will detail all the planned and actual tasks we did for every iteration, as well as the members involved. These procedures ensure the continued validity and accuracy of our tasks and activities.

1. **Risks/Assumptions**

Any delay in delivery of tasks might require increased night shift scheduling to meet the task delivery deadline. Changes to the original requirements is a risk associated with this project and we aim to mitigate them by using a combination of iterative process and agile process. Additionally, clashes in members’ available times will be tackled by having buffer time for each iteration.