# Revision and Sign-off Sheet

Document History - To maintain a list of changes being made

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Description of changes** |
| Iteration 1 | 30/09/2019 | Glen | Draft |
| Iteration 2 | 14/10/2019 | Mary | More function tests added |
| Iteration 3 | 28/10/2019 | Agnes | More function tests added |
| Iteration 4 | 11/11/2019 | Shourya | JSON & UAT test cases added |
| Iteration 5 | 17/11/2019 | Kwan Yang | More functional test added |

**Approvers List** - To track who has reviewed and signoff on the Test plan

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| --- | --- | --- | --- |
| **Name** | **Role** | **Approver/Reviewer** | **Date** |
| Glen | Product Manager | Kwan Yang | 30/09/2019 |
| Mary | Product Manager | Glen | 14/10/2019 |
| Agnes | Product Manager | Mary | 28/10/2019 |
| Shourya | Product Manager | Agnes | 11/11/2019 |
| Kwan Yang | Product Manager | Shourya | 17/11/2019 |
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**Reference Documents** - Clearly mark the document used as an input to create the test plan

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| --- | --- | --- |
| Version | Date | Document Name |
| 1.0 | 30/09/2019 | testcases.xlsx |
| 2.0 | 14/10/2019 | testcases.xlsx |
| 3.0 | 28/10/2019 | testcases.xlsx |
| 4.0 | 11/11/2019 | testcases.xlsx |
| 5.0 | 17/11/2019 | testcases.xlsx |
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# Introduction

## Purpose

This test plan will consist of our testing approach of how we did our testing for the Bidding Online System (BIOS). It will include our:

* Test Strategy: rules, objectives, assumptions, etc.
* Execution Strategy: conduction of the test and defect handling
* Test Management: logistics handling (e.g. communications, risk and mitigation)

## Project Overview

The students in Merlion University use BIOS (Bidding Online System) to enrol for their courses. They select the courses they wish to enrol and bid for it using virtual dollars (e$). A course can have multiple sections and a section is taught by an instructor. Additionally, an instructor can teach one or more sections.

## Audience

* The Project Team Members follow the tasks specified in this document and provide input and recommendations on this document
* The Product Manager supervises this entire process, decides the schedule of testing, reviews the document, keeps track of test performances and approves them in this document
* The Various Stakeholders and other participants may also take part in the UAT to ensure the business is aligned with the results of the test

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# Test Strategy

## Test Objectives

The objective of our test is to validate that the functionality of the BIOS works according to the functional requirements.

The test executes the test scripts to find, fix and retest all the defects in the system and finally get a:

* A production-ready software
* A set of test scripts that can be reused during functional and UAT tests

## Test Assumptions

Key Assumptions

Production like data is required and to be bootstrapped into the system prior to the start of Functional Testing.

Functional Testing

During Functional testing, testing team will use the loaded data which is available on the system

at the time of execution.

User Acceptance Testing

UAT test execution will be performed by end users (L1 and L2) and IS212 Teaching Team will provide the UAT script.

## Test Principles

* Testing will be focused on meeting the business objectives and quality.
* There will be common, consistent procedures for all teams supporting testing activities.
* Testing processes will be well defined, yet flexible, with the ability to change as needed.
* Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
* Testing will be repeatable, quantifiable, and measurable activity.
* Testing will be divided into distinct phases, each with clearly defined objectives and goals.
* There will be an entrance and exit criteria.

## Data Approach

The BIOS system will be loaded with different test data (bootstrap.zip) which is used for testing activities.

## Scope and Level of Testing

### Exploratory Testing

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| --- | --- |
| **Purpose** | The purpose of this test is to make sure critical defects are removed before the next levels of testing can start. |
| **Scope** | First level navigation, student and admin interface |
| **Testers** | Testing team |
| **Method** | This exploratory testing is carried out in the application without any test scripts and documentation |
| **Timing** | At the beginning of each testing cycle |

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### Functional Testing

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| --- | --- |
| **Purpose** | Functional testing will be performed to check the functions of application. The functional testing is carried out by feeding the input and validates the output from the application. |
| **Scope** | The below excel sheet details about the scope of Functional test. |
| **Testers** | Testing team |
| **Method** | The test will be performed according to Functional scripts in the excel sheet below |
| **Timing** | After Exploratory test is completed. |



### User Acceptance Test (UAT)

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| --- | --- |
| **Purpose** | This test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment. |
| **Scope** | The below word document details about the scope of Functional test. |
| **Testers** | The UAT is performed by the end users (L1 and L2). |
| **Method** | IS212 Teaching Team will provide the UAT test cases and the testing team will gather inputs and feedback from the end users (L1 and L2). |
| **Timing** | After Exploratory test is completed. |

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## Milestone List

The milestone list is tentative and may change due to below reasons

1. Any issues in the System environment readiness
2. Any change in scope/addition in scope
3. Any other dependency that impacts efforts and timelines

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| --- | --- | --- |
| **Milestone Description** | **Iteration** | **Venue** |
| Project Management Review | Iteration 2 – Week 7 | In-Class |
| Application Demo and  Progress Update | Iteration 3 – Week 9 | Online (WebEx) |
| User Acceptance Test (UAT) | Iteration 4 – Week 12 | In-Class |
| POST Review on UAT | Iteration 4 – Week 13 | Team Meeting |
| Final Presentation | Iteration 5 – Week 14 | In-Class |

## Test Cycles

There will be two cycles for functional testing. Each cycle will execute all the scripts.

The objective of the first cycle is to identify any blocking, critical defects, and most of the high defects. It is expected to use some work-around in order to get to all the scripts.

The objective of the second cycle is to identify remaining high and medium defects, remove the work-around from the first cycle, correct gaps in the scripts and obtain performance results.

Functional test will be conducted at the end of Iteration 1-5.

UAT test will consist of one cycle at the start of Iteration 4.

## Bug Metric and Management

Bugs found during functional testing will be logged and grouped into the following categories according to level of severity as well as the action required to be taken at the end of each iteration.

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| --- | --- |
| **Severity** | **Description** |
| Low Impact (1 point) | Unimportant. Typo error or small user interface alignment issues. |
| High Impact (5 points) | The system runs. However, some non-critical functionalities are not working. |
| Critical Impact (10 points) | The system is down or is un-usable after a short period of time. We have to fix the bugs to continue. |

|  |  |
| --- | --- |
| **Points in Iteration** | **Action** |
| Point < 10 | Use the planned debugging time in the iteration. |
| Point >= 10 | Stop current development and resolve the bug immediately. Project Manager reschedules the project. |