Test Plan ID:

STU\_ALERT\_001

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# Introduction

## Purpose

The intent of this Test Plan is to define the scope, approach, and schedule of testing as it relates to the Student Schedule Alert project.

The plan establishes the items and features to be tested, as well as the types of testing to be performed. It also identifies the personnel responsible for performing the tests as well as the schedule that should be followed. Finally, it exposes any potential risks that may be associated with the plan.

## Project Overview

The Student Alert is a desktop application that is intended to provide a platform that makes it easy for children to prioritize their schedule and alerts them when they should be working on assignments. It allows them to enter their availability and assignment details and it builds a schedule for them to follow in order to complete their assignments by the due date.

There are two roles within the application with one being a user who maintains schedules and an admin who has the ability to maintain user accounts.

## Audience

The intended audience include the following groups:

|  |  |
| --- | --- |
| **Project Team Members** | This group makes recommendations regarding testing and performs specified testing tasks. |
| **Project Manager** | This person creates the testing plan and assigns tasks according to the schedule. They also monitor and control the progress of the test plan. |
| **Technical Team** | This group creates the testing environment and ensures that the testing supports the application design. They are also responsible for correcting any issues that may arise during testing. |

# Test Strategy

## Test Objectives

The objective of the test is to confirm that the functionality within the Student Alert desktop application performs as defined in the system requirements documentation.

The test will verify each menu item of the desktop application. It will identify, correct, and retest all high and medium severity defects. Lower severity defects will be prioritized to be addressed in the future. Upon completion of the testing, the application will be ready for release.

## Test Assumptions

* No data is required before testing as data file are created upon first use of the application
* Any issues discovered will be recorded in the specified project folder in Google Drive on the Google Sheet along with a screenshot of the issue as appropriate
* Preparation of the test environment will be performed by the Technical Team
* The test environment described in Section 5 will be available by the start date given in the schedule
* Test case activities will be performed by the Project Team Members
* The Technical Team will provide plans to correct any issues
* The Project Manager will review and sign-off on all test cases prepared by the Project Team Members prior to beginning testing
* Any fixes to address issues will be shared with the Project Team Members prior to being applied in the test environment
* Project Manager will review and sign-off on all test deliverables
* Project Team Members have knowledge of system requirements and possess the necessary experience to adequately test the system
* Downtime for severe issues has not been accounted for

## Test Principles

* Testing will be focused on satisfying proposed system requirements and ease of use
* Testing processes will be defined, but may be changed during testing
* Testing environment will mimic a production environment
* Testing will be a repeatable activity and will either be successful or not
* Entrance and exit criteria will be defined

## Data Approach

* In functional testing, no data or pre-configuration is required since the Student Alert application is a stand-alone desktop application.

## Scope and Levels of Testing

### Exploratory

**Purpose**: The purpose of this test is to ensure that critical issues have been eliminated prior to the next level of testing.

**Scope:** Menu navigation and admin module

**Assignee**: Project Management Team

**Method**: This exploratory testing is performed without the need for any input.

**Schedule**: This testing is to be performed as the first phase of testing.

### Functional Test

**Purpose:** Functional testing will be performed to ensure that the functions are working properly and providing the expected results. This is done by entering input and evaluating the results.

**Scope:** The below excel sheet details about the scope of Functional test. Note: The scope is high level due to changes in the requirement.

**Assignee**: Project Team Members

**Method**: The test will be performed manually using test case scenarios as determined prior to testing. A high-level outline is provided below.

**Schedule**: This testing will be completed after exploratory testing.

#### *Test Acceptance Criteria*

1. Approved project specification documentation and use case documentation must be available prior to start of testing
2. Test case scenarios are approved and signed-off prior to the start of testing
3. Development is complete and Project Team Members are ready to proceed
4. Application has been installed in the test environment

#### *Test Deliverables*

|  |  |  |
| --- | --- | --- |
| Deliverable Name | Author | Reviewer |
| Test Plan | Project Team | Project Manager |
| Functional Test Cases | Project Team | Project Manager |
| Reporting Issues | Project Team (acting as Test Team) | Project Manager |
| Weekly Status Report | Project Team (acting as Test Team) | Project Manager |
| Testing Completion Report | Project Team (acting as Test Team) | Project Manager |

# Execution Strategy

## Entry and Exit Criteria

* The software is complete and ready to be tested
* The requirements have been defined and are available to the test team
* Test cases have been created and are available
* Test environment is set up and available

|  |  |  |  |
| --- | --- | --- | --- |
| Exit Criteria | Test Team | Technical Team | Notes |
| Complete execution of test cases |  |  |  |
| Sufficient coverage of requirements and functionalities have been achieved |  |  |  |
| All Critical and High severity issues have been addressed |  |  |  |
| All Medium severity issues have been either closed or properly addressed |  |  |  |
| All test case results have been documented in Google Drive |  |  |  |
| All issues have been logged in Google Drive |  |  |  |
| Test Completion Memo completed and signed off |  |  |  |
| Test environment cleanup completed |  |  |  |

## Validation and Issue Management

* It is expected that the test team perform all test case scenarios as defined. However, if additional testing is deemed necessary by the test team, they are free to do so.
* Issues will be tracked using a Google Sheet in Google Drive. The team will review the issues on a daily basis and consult with the necessary team members to develop an appropriate response to the issue.
* The person who is testing the application will be responsible for finding the issue, recording the issue in Google Drive, saving a screenshot if appropriate, and assigning a severity.
* The Project Manager will be responsible for monitoring the issues and ensuring that each issue is being addressed by the technical team.
* The technical team is responsible for reviewing the issues on a daily basis and requesting additional details if needed. They are responsible for addressing the issue, recording the actions, and communicating with the test team.

Issues will be categorized as follows:

|  |  |
| --- | --- |
| Severity | Impact |
| 1 (Critical) | * Causes the application to stop working * Causes the operating system to stop working |
| 2 (High) | * Produces inaccurate results * Halts testing of further functions |
| 3 (Medium) | * An issue that affects a single functionality, but testing of other features can continue |
| 4 (Low) | * An unclear message or action that leaves the user wondering what to do next |
| 5(Cosmetic) | * Formatting or display issues |

## Test Metrics

The following test metrics will be used throughout the testing process.

|  |  |  |
| --- | --- | --- |
| Report | Description | Frequency |
| Daily Execution  Status | To report on new issues found as well as any resolved issues | Daily |
| Weekly Testing Status | To report percentage of test cases complete and percentage of cases requiring issue resolution. Also, to report status of any outstanding issues and estimated time of resolution. | Weekly |

## Issue tracking & Reporting

The following defines the issue tracking and reporting process.

1. The issue is discovered by the test team
2. The test team records the issue on Google Sheet in google Drive.
3. The Project Manager reviews the issues reported and directs to the appropriate team.
4. The Project Team Members review and address the issues by highest priority.
5. The Project Team Members communicate the resolution to the Project Manager.
6. Once the resolution is approved for use, it is implemented.
7. Once the resolution has been implemented, the functionality is tested again by the test team.

# Test Management Process

## Test Management Tool

Due to the small scale of this project, test management will be performed primary in Google Sheets. Test case scenario results and any issues found will be recorded on Google Sheets that will be shared among the team prior to testing.

## Test Design Process

* The tester will review and understand each requirement contained in the system requirements specification.
* The test case scenarios that are proposed will be reviewed by the Project Team Members.
* The test case scenarios will be rewritten to include any relevant suggestions before being approved by the Project Manager.
* Testers will review the test case scenarios and request clarification where necessary.
* Once everyone has reviewed and approved the test case scenarios, they will be finalized.
* Any changes after finalization of the test case scenarios will need to be communicated to and initiated by the Project Manager.

## Test Execution Process

* Once the test case scenarios are approved and the test environment is ready, the tester will begin with exploratory testing.
* The tester will utilize the Google Sheet to record testing status and/or issues
* Issues that are recorded will be reported to the Project Manager who will then direct to the appropriate team member.
* The tester will record a status or pass or fail for each test case scenario.
* In the event of a fail, the Tester will record the issue on the appropriate Google Sheet
* Daily testing status and Issue status will be reported to the Project Team
* This process is repeated until all test case scenarios have been assigned a pass or fail status.
* After the initial phase, the test team will test any issues as they are resolved.
* Once all issues have been resolved, a final phase of all test case scenarios will be executed to make sure that any fixes implemented did not break any related functions.

## Test Risks and Mitigation Factors

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Prob. | Impact | Mitigation Plan |
| Schedule  The testing window is small so any delays in testing can affect the project completion. | High | High | There are multiple project team members available to assist with testing if it is necessary to expedite the process. |
| Resources  Not enough members to work on the project due to sickness | Medium | Medium | There are alternate team members who could replace any sick team members. |
| Issues  Critical issues that may be complex to solve or issues found later in the testing phase that are created by bug fixes could delay the project. | Medium | High | Issue reporting and tracking has been defined in an effort to identify issues and get them resolved quickly. |
| Scope  Scope may change if requirements change | Low | Medium | Scope has been defined, but is susceptible to change. Google Drive is being used to keep communication delays  from occurring. |

## Role Expectations

The roles and the persons assigned to the roles are defined below. For the purpose of this project, the Project Team Members are acting as the Testing and Development Team as well.

|  |  |  |
| --- | --- | --- |
| Role | Name | Email |
| Project Manager | Antonio Ramirez | aeramirez999@gmail.com |
| Project Team Member | Jean Chong | jchong315@gmail.com |
| Project Team Member | Nikki Dalrymple | nldalrymple@smcps.org |
| Project Team Member | Fetya Muzeyn | fmuzeyn@gmail.com |

### Project Management

* The Project Manager reviews the test plan, communicates it to the Project Team Members, and ultimately approves the plan.

### Project Team Members

The Project Team Members act as the following:

### Testing Team:

* Follow the test plan according to specifications including proper entry and exit criteria.
* Attend status meetings via Google Hangouts
* Communicate any concerns regarding testing plan or deliverables to the Project Manager.
* Develop test case scenarios to support requirements
* Execute test case scenarios and record status
* Identify and document issues per the Issue Management Plan
* Execute test case scenarios again after issues have been resolved
* Provide testing status information for inclusion on Daily Execution Status Report and Weekly Status Report.
* Ensure that Project Manager is aware of any outstanding issues at the end of every day.

### Development Team:

* Review test plan and provide suggestions
* Participate in Issue Management by reviewing the Issue Log and communicating status of issues on a daily basis.
* Provide timely resolution to critical and High severity issues.
* Communicate readiness of resolutions and implement them in the test environment quickly and efficiently.

# Test Environment

The Student Alert application is a stand-alone desktop application. It can be installed on any computer with at least a Windows Window 7 or OS X 10.11 operating system. Each tester shall have at least 500 MB available on the hard drive to accommodate the installation of the application. The tester should also have administrative rights on the machine.

# Approvals

The Project Manager and all Project Team Members should sign below indicating their approval of the test plan.

|  |  |  |
| --- | --- | --- |
| Role | Name | Signature |
| Project Manager | Antonio Ramirez |  |
| Project Team Member | Jean Chong |  |
| Project Team Member | Nikki Dalrymple |  |
| Project Team Member | Fetya Muzeyn |  |