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# TEST PLAN DOCUMENT

for

## Attendance Application

Version 1.0 approved

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# 1 References

None Identified.

## 2 Introduction

This Master Test Plan outlines the testing approach for the Attendance Application, a software tool intended to be used by educational institutions, businesses, and organizations to track the attendance of students, employees, or members.

For a more detailed understanding of the Attendance Application's functionality, please refer to the accompanying Software Requirements Specification document.

## 3 Software Risk Issues

Even though our implementation severely reduces the chance of students giving fake attendances (proxies), it is still not completely safe from proxies, and proxies may to inaccurate attendance records and ultimately affect the credibility of the application. Therefore, the risk of proxies taking place should be considered in the testing process to ensure that the application can detect and prevent such instances as much as possible.

## 4 Features to be Tested

The following is a list of the areas to be focused on during testing of the application, along with their levels of risk, with H standing for High Risk, M standing for Medium Risk, and L standing for Low Risk

- New User Registration (M)
- Existing User Login (M)

- Attendance-giving Feature for Student (H)
- Attendance-taking Feature for Teacher (H)
- Detection of fake attendances (proxies) (L)
- Viewing of Detailed Attendance Report for Teacher and Student (L)
- Notification Alert on Low Attendance for Teacher and Student (L)
- Ability of Admin to modify Course Details (L)
- Importing/Exporting Attendance Data (L)

## 5 Approach

### 5.1 Testing Levels

The testing for the Attendance will consist of Unit, System/Integration (combined) and Acceptance test levels. It is hoped that there will be at least one full time independent test person for system/integration testing. However, with the budget constraints and time line established; most testing will be done by the test manager with the development teams participation.

- UNIT Testing will be done by the developers and will be approved by them as a team. All unit test information will also be provided to the tester.
- SYSTEM/INTEGRATION Testing will be performed by the test manager and development team with assistance. No specific test tools are required for this project. Programs will enter into System/Integration test after all critical defects have been corrected. A program may have up to two Major defects as long as they do not impede testing of the program (I.E. there is a work around for the error).
- ACCEPTANCE Testing will be performed by the actual end users with the assistance of the test manager and developers. They will be informed of the acceptance test cases beforehand. Programs will enter into Acceptance test after all critical and major defects have been corrected. A program may have one major defect as long as it does not impede testing of the program (I.E. there is a work around for the error). Prior to final completion of acceptance testing all open critical and major defects MUST be corrected.

## **6 Item Pass/Fail Criteria**

The test process will be completed once the initial set of data has been collected of the students and teachers enrolled in the institution . The administration staff is responsible for ensuring that every piece of data about students and teachers is correct and updated. Once this is done, the application is considered live. New data must be collected every semester, while current data must be updated based on requests. Once a new batch of data is collected and verified, it will also be added to the database.

## **7 Suspension Criteria and Resumption Requirements**

## **8 Test Deliverables**

- Acceptance test plan
- Systemtest plan
- Unit test plans
- Test cases document

## **9 Environmental Needs**

The following elements are required to support the overall testing effort at all levels within the application:

- Access to testing data set
- Access to the nightly backup/recovery process

## 10 Staff and Training Needs

It is preferred that there will be at least one (1) full time tester assigned to the project for the system/integration and acceptance testing phases of the project. This will require assignment of a person at the beginning of the project to participate in reviews, etc. If a separate test person is not available, the project manager/test manager will assume this role. In order to provide complete and proper testing, the following areas need to be addressed in terms of training:

- The developers and testers(s) will need to be trained on the basic understanding of OOPS along with knowledge of the software used such as React and MongoDB
- The staff administration will require training on handling csv files which will have student and teachers' data
- The admin must be trained on handling the student data and the application's admin interface

## 11 Responsibilities

	Dev Team	Test Team	Client
Acceptance test Documentation & Execution		x	x
System/Integration test Documentation & Execution	x	x	
Unit test Documentation & Execution	x	x	
System Design Reviews	x	x	x
Test Procedures & Rules	x	x	

# **12 Planning Risks and Contingencies**

## **12.1 Delay in Data Collection**

If data is not collected or verified within the given timeframe, it will result in a delay in updating the application. During this period, manual attendance will be necessary and will need to be uploaded to the database after verification. If the cause of the delay is due to understaffing, current staff members may be required to work overtime as hiring and training temporary staff is not feasible within the given time frame.