**Title:** Test Plan and Test Strategy for Student Information System (SIS) and Admin System

**1. Introduction**

This document outlines the Test Plan and Test Strategy for the Student Information System (SIS) and Admin System. The purpose of this document is to describe the testing approach, scope, resources, schedule, and activities required to ensure the quality and reliability of the SIS and Admin System.

**2. Objectives**

The primary objectives of the testing are to:

1. Ensure the SIS and Admin System meets the specified requirements.
2. Identify and fix defects in the system.
3. Verify that the system functions correctly and efficiently.
4. Ensure the system is secure and reliable.

**3. Scope**

The scope of testing includes the following modules and functionalities:

1. Student Registration
2. Student Login
3. Student Profile Management
4. Course Management (Enrolment, Drop, Schedule)
5. Assignment Submission
6. Grade Viewing
7. Transcript Requests
8. Attendance Viewing
9. Admin Operations (Course, Student, Instructor Management)
10. Report Generation
11. Notifications
12. Database Backup and Restore

**4. Test Strategy**

**4.1 Test Levels**

The testing process will include the following levels:

1. Unit Testing: Testing individual components by developers.
2. Integration Testing: Testing the integration of different components and modules.
3. System Testing: End-to-end testing of the entire system to verify it meets the requirements.
4. User Acceptance Testing (UAT): Testing by end users to ensure the system meets their needs and requirements.

**4.2 Test Types**

The following test types will be performed:

1. Functional Testing: Verify that the system performs its intended functions correctly.
2. Non-functional Testing: Verify system performance, security, usability, and other non-functional aspects.
3. Regression Testing: Ensure that new changes do not negatively affect existing functionalities.
4. Smoke Testing: Perform preliminary testing to check the basic functionality of the system.

**4.3 Test Environments**

Testing will be conducted in the following environments:

1. Development Environment: Used by developers for unit and initial integration testing.
2. Test Environment: Used by the QA team for system and integration testing.
3. Production Environment: Used for UAT and final acceptance testing.

**4.4 Test Data**

Test data will be prepared to cover various test scenarios, including edge cases and typical use cases. Test data will include student information, course details, assignment submissions, grades, and other relevant data.

**5. Test Schedule**

The test schedule will be as follows:

1. Test Planning: [Start Date] - [End Date]
2. Test Design: [Start Date] - [End Date]
3. Test Execution: [Start Date] - [End Date]
4. Defect Reporting and Retesting: [Start Date] - [End Date]
5. Test Closure: [Start Date] - [End Date]

**6. Resources and Responsibilities**

The testing team will include the following members:

1. Test Manager: Responsible for overall test planning and coordination.
2. Test Lead: Responsible for test design, execution, and reporting.
3. Testers: Responsible for executing test cases, reporting defects, and retesting.

**7. Entry and Exit Criteria**

**Entry Criteria:**

1. Requirements are clearly defined and approved.
2. Test environment is set up and ready.
3. Test data is prepared and available.

**Exit Criteria:**

1. All planned tests have been executed.
2. All critical and major defects have been fixed and verified.
3. Test summary report is prepared and reviewed.

**8. Risk and Mitigation**

**Potential Risks:**

1. Delays in test environment setup.
2. Unavailability of test data.
3. High number of defects found late in the testing cycle.

**Mitigation Strategies:**

1. Plan and set up test environment in advance.
2. Prepare test data early in the project.
3. Conduct regular defect triage meetings and prioritize defect fixing.

**9. Approval**

This Test Plan and Test Strategy document is approved by:

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