**LIBRARY APPLICATION**

**TEST PLAN**

**BY: Anushka Kaushik**

**TABLE OF CONTENT**

**S.NO. CONTENT PAGE NO.**

**1. Introduction 1**

**2. Scope 1**

**3. Objectives 1**

**4. Testing Approach 2**

**5. Test Environment 2**

**6. Roles and responsibilities 3**

**7. Test Deliverables 3**

**8. Test Schedule 3**

**9. Risks and mitigation 3**

**Change Log**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Change date | BY | Description |
| 1.0 | 27/02/25 | Anushka Kaushik | Creation of test plan |

1. **Introduction:**

The Library Application enables students to request books for rent and librarians to manage requests. This test plan provides a structured approach for testing the system to ensure it meets functional and non-functional requirements.

1. **Scope:**

The **scope** of testing includes functional, UI, security, and database testing for student and librarian modules, ensuring book requests, approvals, and inventory management work correctly. Features like payment processing and third-party integrations are out of scope.

1. **Objectives:**

The **objectives** of testing the **Library Application** are:

* **Verify** that students can browse, search, request books, and manage their profiles.
* **Ensure** librarians can approve/reject book requests and manage the inventory.
* **Validate** secure login, authentication, and user access control.
* **Identify & fix defects** early to enhance system reliability and performance.
* **Ensure** a smooth user experience and data integrity through UI and database testing.

**1.**

1. **Testing Approach:**

|  |  |
| --- | --- |
| Types of testing | Description |
| Manual and automated testing | Validate UI, functionality, and user interactions and Perform regression and performance testing. |
| Functional and security testing | Ensure core features like book search, rental requests, and approvals work as expected and Validate user authentication, data protection, and access control. |
| Black box testing | Focus on expected inputs/outputs without internal code knowledge. |
| Database testing | Verify data integrity, retrieval, and consistency. |
| Regression and performance testing | Re-test after bug fixes to prevent new issues and Assess system response under load and multiple users. |

1. **Test Environment:**

* **Browsers:** Chrome, Firefox, Edge
* **Database:** MySQL/PostgreSQL
* **Devices:** Desktop, Mobile
* **Test Data:** Sample student and librarian accounts, predefined book list

**2.**

1. **Roles & Responsibilities:**

| Role | Responsibilities |
| --- | --- |
| Test Lead | Manages testing process, ensures test coverage |
| QA Tester | Executes test cases, reports bugs |
| Developers | Fix defects and support testing |
| Database Admin | Ensures data consistency |

1. **Test Deliverables:**

* Test Plan
* Test Scenarios
* Test Cases
* Summary Report

1. **Test Schedule:**

|  |  |
| --- | --- |
| Task | Duration |
| Requirement Analysis | 30 mins |
| Test Plan Preparation | 2 hours |
| Test Scenario Identification | 1 hour |
| Test Case Writing | 2 hours |
| Test Execution | Ongoing |

1. **Risks and mitigation:**

* **Requirement Delays**: Early discussions.
* **Environment Issues**: Backup test setups.
* **High Defect Rate**: Continuous testing cycles.

**3.**