VITM Web Application – Test Plan and Strategy

# 1. Project Overview

The VITM Web Application aims to provide digital access to academic results, fee management, transportation services, and administrative functions for students, staff, and conductors.

# 2. Objectives

• Ensure all core modules (Results, Fees, Transportation, Admin, Transport App) function as intended.  
• Validate user flows for students, faculty, and administrative staff.  
• Guarantee data integrity, security, and usability across all systems.

# 3. Scope of Testing

## In-Scope:

• Functional testing of each module and sub-feature.  
• UI/UX validation on web platforms (desktop & mobile).  
• Integration testing of modules (e.g., fee + exam registration).  
• Role-based access control validation (student, admin, conductor).

## Out-of-Scope:

• Performance or load testing (unless specified).  
• API-level testing unless APIs are directly exposed.  
• Mobile native app testing (assuming this is a web-only project).

# 4. Test Strategy

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| --- | --- |
| Type | Description |
| Functional Testing | Validate features like result check, fee payment, route display, etc. |
| UI/UX Testing | Ensure responsive design, proper alignment, input validation |
| Smoke Testing | Basic stability checks after each deployment |
| Regression Testing | Verify that new changes haven’t broken existing features |
| Negative Testing | Test how the app behaves with invalid inputs |
| Role-Based Testing | Ensure access is restricted/allowed appropriately per role (admin, student, etc.) |

# 5. Test Environment

• Browser support: Chrome, Firefox, Edge (latest 2 versions)  
• OS support: Windows, macOS, Android (mobile responsive test)  
• Test Data: Dummy data for student IDs, fee amounts, bus routes, etc.

# 6. Test Deliverables

• Test Plan (this document)  
• Test Case Checklist (Excel Sheet)  
• Test Report with Pass/Fail Status  
• Bug Report (if bugs found)  
• Final Sign-off Report

# 7. Test Schedule

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| Phase | Timeline |
| Test Planning | 1 day |
| Test Design | 1–2 days |
| Test Execution | 2–4 days |
| Bug Reporting & Retesting | As needed |
| Final Report & Sign-off | 1 day |

# 8. Roles & Responsibilities

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| --- | --- |
| Role | Responsibility |
| QA Engineer | Write & execute test cases, log bugs, create reports |
| Developer | Fix issues reported by QA |
| Project Manager | Monitor timelines and ensure delivery |
| Admin Tester | Test admin-level features (assign roles, verify documents) |

# 9. Risk & Mitigation

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| Risk | Mitigation |
| Tight testing time window | Prioritize smoke and core functional testing |
| Incomplete documentation | Coordinate with devs for clarifications |
| Environment not stable | Use staging server and communicate blockers early |

# 10. Exit Criteria

• All high-priority test cases have passed.  
• No critical or high-severity bugs are open.  
• All test reports and documentation have been submitted and reviewed.