

# Test Plan and Strategy Document

## Project: Ezra Seminary

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### 1. Introduction

This document outlines the testing plan and strategy for the Ezra Seminary E-learning Platform. The goal is to ensure the platform's stability, usability, and reliability across all browsers and devices. Testing focuses primarily on end-to-end (E2E) functionality to validate real-world user workflows.

### 2. Objectives

- Conduct end-to-end testing to ensure all critical user journeys—including registration, course and lesson access, assessments, and devotion/Sabbath school features—function as intended.
- Ensure smooth performance and consistent user experience across browsers and devices.
- Identify functional, UI, and UX bugs prior to production release.
- Maintain product quality through structured testing and clear reporting.

### 3. Scope

#### In Scope:

- User Authentication (Register, Login, Password Reset)
- Course Management (View, Enroll, Start Lessons)
- Lesson Viewing and Quiz Functionality
- Devotion Management (View, Share devotions)
- Sabbath School Module (View)
- Admin Dashboard (Course Uploads, User Management, Devotion Upload, Sabbath School fetching)
- Notifications and Progress Tracking

**Out of Scope:**

- External integrations like analytics and email automation

#### 4. Test Levels

**End-to-End (E2E) Testing:**

- Conducted using Cypress.
- Covers complete user journeys such as registration, course enrollment, accessing devotions, and engaging with Sabbath School content.
- Ensures all components (frontend, backend, and database) work together as intended.

**Integration Testing:**

- Performed implicitly through E2E flows.
- Validates that APIs, backend logic, and frontend components interact correctly.

**System Testing:**

- Conducted on the staging environment to ensure full platform functionality.
- Includes testing accessibility, responsiveness, and navigation across modules.

**User Acceptance Testing (UAT):**

- Conducted with a small group of real users.
- Ensures the platform meets user needs and learning expectations.

#### 5. Testing Methodology

- Manual Testing: For UI/UX validation, usability checks, and exploratory testing.
- Automated Testing: Using Cypress for end-to-end workflows and regression tests.
- Smoke Testing: After new deployments to ensure key features are functional.
- Regression Testing: Conducted before major releases to ensure new changes don't break existing features.

## 6. Test Environment

Environment	Purpose	Setup / Tools
Staging	Primary testing	Deployed staging URL with production-like data
Local	Developer and QA testing	Localhost setup with test credentials
Production	Final validation (post-deployment)	Real user data for smoke and sanity testing

## 7. Tools Required

Category	Tool	Purpose
Automation	Cypress	End-to-End and Regression Testing
Bug Tracking	Trello	Reporting and tracking issues
Cross-browser Testing	Chrome, Edge, Firefox, Safari (manual)	Browser compatibility checks
API Testing	Postman	Verify API responses and data integrity
Performance Testing	Lighthouse	Measure page speed and performance

## 8. Test Deliverables

- Test Scenarios and Test Cases Document
- Cypress Test Reports (screenshots, videos, and results)
- Bug Reports in Trello
- Final Test Summary Report

## 9. Schedule

Phase	Duration	Responsible
Test Planning	2 days	Yeabtsega Yeshidnber
Test Case Preparation	Continuous	Yeabtsega Yeshidnber
Test Execution (Manual + E2E)	Continuous	Yeabtsega Yeshidnber
Bug Reporting & Retesting	Continuous	Full Team
Final Test Summary	1 day	Yeabtsega Yeshidnber

## 10. Risks & Mitigation

Risk	Impact	Mitigation
Inconsistent test environment	Medium	Maintain synced staging database
Frequent backend changes	High	Align testing cycle with latest build
Limited test data	Medium	Create reusable mock data for Cypress tests
Browser-specific UI issues	Low	Conduct manual tests on all major browsers

## 11. Approval

Role	Name	Signature
QA Engineer	Yeabtsega Yeshidnber	
Project Manager	Amanuel Worku	
Product Owner	Pr. Melak	

## Summary

This Test Plan and Strategy ensures that the Ezra Seminary E-learning Platform delivers a seamless learning experience across devices, browsers, and user roles through structured E2E testing and consistent issue tracking in Trello.