PLSOM LMS Web Application - Frontend Product Requirements Document

1. Executive Summary

This Frontend PRD defines the user interface specifications and user experience requirements for the PLSOM Learning Management System **web application only**. The web app is a private, authenticated platform serving students, lecturers, and administrators with role-based interfaces for ministry training management.

2. Web Application Scope

2.1 Application Boundaries

- **In Scope**: Private web application for authenticated users post-invitation
- **Out of Scope**: Public landing page, backend API development, application submission process
- **Dependencies**: Backend API endpoints, email invitation system, user authentication service

2.2 User Entry Point

Users enter the web application exclusively through:

1. **Email invitation links** (for new users)
2. **Direct login** (for existing users)
3. **Password reset links** (for account recovery)

3. Authentication & Onboarding Flow

3.1 Application Entry Points

3.1.1 Invitation Link Flow
Email Invitation → Token Validation → Onboarding Process → Dashboard Access

3.1.2 Existing User Flow
Login Page → Credentials Validation → Dashboard Access

3.1.3 Password Reset Flow
Forgot Password → Email Link → Reset Form → Login Redirect

3.2 User Onboarding Process

Step 1: Invitation Validation

- **Token Verification**: Validate invitation link and expiry
- **User Status Check**: Confirm user hasn't already completed onboarding
- **Error Handling**: Invalid/expired token redirect to contact admin
- **Success State**: Proceed to welcome screen

Step 2: Welcome & Program Confirmation

- **Ministry Branding**: PLSOM logo and welcome message
- **Program Display**: Show assigned program (Certificate/Diploma)
- **Cohort Information**: Display assigned cohort details
- **Expectations Setting**: Brief overview of onboarding steps
- **Progress Indicator**: Step 1 of 4

Step 3: Account Security Setup

- **Password Creation**:
  - Minimum 8 characters
  - Must include uppercase, lowercase, number, special character
  - Real-time strength indicator
  - Password confirmation field
- **Security Questions**: Optional backup security questions
- **Terms Acceptance**: Platform usage terms and ministry guidelines
- **Progress Indicator**: Step 2 of 4

Step 4: Profile Information

- **Personal Details**:
  - Full Name (pre-filled from backend)
  - Email (display only, non-editable)
  - Phone Number (with country code selector)
  - WhatsApp Number (with country code selector)
  - Date of Birth (date picker)
  - Gender (dropdown selection)
  - Profile Photo Upload (drag & drop, 2MB limit)
- **Address Information**:
  - Street Address
  - City
  - State/Province (dropdown)
  - Country (dropdown with search)
  - Postal Code
- **Validation**: Real-time form validation with error messages
- **Progress Indicator**: Step 3 of 4

Step 5: Ministry & Educational Background

- **Church Information**:
    - Church Name
    - Pastor's Name
    - Church Address
    - Years of Attendance (dropdown)
    - Church Phone/Email
- **Ministry Experience**:
    - Previous Ministry Roles (multi-select)
    - Years in Ministry (dropdown)
    - Areas of Interest (checkbox list)
    - Leadership Experience (text area)
- **Emergency Contact**:
    - Contact Name
    - Relationship to Student
    - Phone Number
    - Email Address
- **Educational Background**:
    - Highest Education Level
    - Previous Bible School Experience
- **Progress Indicator**: Step 4 of 4

Step 6: Onboarding Completion

- **Profile Summary**: Review all entered information with edit options
- **Welcome Message**: Personalized welcome with student name
- **Getting Started Guide**: Quick tips for using the platform
- **Dashboard Access**: "Enter Learning Platform" primary button
- **Support Information**: Contact details for technical help

4. Role-Based Dashboard Interfaces

4.1 Student Dashboard

4.1.1 Main Dashboard Layout

Header: Logo | Navigation | User Menu | Notifications
Sidebar: Quick Links | Course Progress | Upcoming Events
Main Content: Dashboard Widgets
Footer: Support Links | Ministry Information

4.1.2 Dashboard Widgets

- **Welcome Panel**:
    - Personalized greeting with student name and program
    - Current cohort information
    - Overall program progress bar (percentage completion)

- **Upcoming Classes Widget**:
  - Next 3 scheduled classes
  - Date, time, course name, lecturer
  - "Join Class" button (if within 15 minutes of start)
  - "Add to Calendar" functionality
- **Recent Activity Widget**:
  - Last 5 activities (class attendance, test submissions, grades received)
  - Timestamps and quick action links
- **Pending Tasks Widget**:
  - Outstanding assignments with due dates
  - Priority indicators (urgent, due soon, normal)
  - Quick access buttons
- **Performance Summary Widget**:
  - Current GPA/average grade
  - Recent test scores
  - Attendance percentage
- **Quick Actions Panel**:
  - Join Live Class (if active)
  - Access Latest Recording
  - Submit Pending Test
  - Message Lecturer
  - View Schedule

4.1.3 My Courses Interface

- **Course Grid Layout**:
  - Visual cards for each enrolled course
  - Course thumbnail, name, lecturer, progress bar
  - Module count (completed/total)
  - Next class date/time
  - Last activity timestamp
- **Course Detail View**:
  - Course description and objectives
  - Module breakdown with completion status
  - Class schedule for the course
  - Lecturer information and contact
  - Course materials and resources
  - Assessment schedule
- **Filter & Sort Options**:
  - All Courses, In Progress, Completed, Not Started
  - Sort by: Progress, Next Class, Alphabetical
  - Search functionality

4.1.4 Class Schedule Interface

- **Calendar View**:
  - Monthly/weekly/daily view options
  - Color-coded courses

- ○ Time zone display and selection
- ○ Class status indicators (upcoming, live, completed)
- **List View**:
  - ○ Chronological list of all classes
  - ○ Filter by date range, course, status
  - ○ Bulk calendar export option
- **Class Detail Modal**:
  - ○ Course name, module topic, lecturer
  - ○ Date, time, duration, time zone
  - ○ Class description/agenda
  - ○ Prerequisites or preparation materials
  - ○ Zoom meeting link (appears 15 minutes before)
  - ○ Recording link (available post-class)

4.1.5 Attendance & Recordings

- **Attendance History**:
  - ○ Tabular view of all attended classes
  - ○ Date, course, duration attended, status
  - ○ Attendance percentage by course
  - ○ Export attendance report
- **Recordings Library**:
  - ○ Course-wise organization
  - ○ Search and filter by course, date, topic
  - ○ Video player with speed controls, quality selection
  - ○ Bookmark favorite moments
  - ○ Download for offline viewing (if permitted)
  - ○ Watch progress tracking
  - ○ Note-taking functionality during playback

4.1.6 Assessments Interface

- **Active Tests Dashboard**:
  - ○ Available tests with due dates
  - ○ Test duration and attempt limits
  - ○ Instructions and requirements
  - ○ "Start Test" buttons with confirmation
- **Test Taking Interface**:
  - ○ Progress indicator (question x of y)
  - ○ Timer display (if time-limited)
  - ○ Question types: Multiple choice, essay, file upload
  - ○ Rich text editor for essay responses
  - ○ Auto-save functionality
  - ○ Review before submission
- **Test History**:
  - ○ Completed assessments with scores
  - ○ Grade breakdown and feedback
  - ○ Retake options (if allowed)

- ○ Performance analytics and trends

4.1.7 Student Settings Page

- **Profile Management Section**:
  - ○ Edit Personal Information (name, phone, WhatsApp)
  - ○ Update Address Information
  - ○ Change Profile Photo (crop and upload)
  - ○ Emergency Contact Updates
  - ○ Church Information Updates
- **Account Settings Section**:
  - ○ Change Password (current + new password)
  - ○ Email Preferences (frequency, types)
  - ○ WhatsApp Notifications Toggle
  - ○ Time Zone Selection
  - ○ Language Preference (future)
- **Privacy Settings Section**:
  - ○ Profile Visibility (lecturers only, all users, admin only)
  - ○ Contact Information Sharing Preferences
  - ○ Directory Listing Options
- **Communication Preferences Section**:
  - ○ Notification Types (Email, WhatsApp, SMS, In-app)
  - ○ Class Reminders (30 min, 1 hour, 24 hours before)
  - ○ Grade Notifications Toggle
  - ○ Assignment Due Date Reminders
  - ○ System Announcements Preferences
- **Learning Preferences Section**:
  - ○ Preferred Video Quality (Auto, HD, Standard, Low)
  - ○ Auto-download Recordings Toggle
  - ○ Playback Speed Default
  - ○ Session Timeout Preferences
  - ○ Accessibility Options (subtitles, high contrast)

4.2 Lecturer Dashboard

4.2.1 Main Dashboard

- **Course Overview Widget**:
  - ○ Assigned courses with student enrollment counts
  - ○ Overall student performance metrics
  - ○ Upcoming class preparation reminders
- **Today's Schedule Widget**:
  - ○ Today's classes with student counts
  - ○ Preparation status indicators
  - ○ Quick access to class materials
- **Pending Tasks Widget**:
  - ○ Tests awaiting grading (count and urgency)
  - ○ Recording uploads pending

- ○ Student queries needing response
- **Student Engagement Widget**:
  - ○ Recent attendance trends
  - ○ Assignment submission rates
  - ○ Student participation metrics

4.2.2 Course Management Interface

- **Course Dashboard**:
  - ○ Course details and curriculum overview
  - ○ Enrolled student roster with contact information
  - ○ Class schedule management
  - ○ Performance analytics for the course
- **Class Scheduling**:
  - ○ Calendar integration for scheduling
  - ○ Zoom meeting creation and management
  - ○ Recurring class setup
  - ○ Student notification automation
- **Content Management**:
  - ○ Upload course materials and resources
  - ○ Organize materials by module/topic
  - ○ Recording upload and management
  - ○ Access control for sensitive materials

4.2.3 Student Management

- **Student Roster**:
  - ○ Detailed student profiles and contact info
  - ○ Academic progress tracking
  - ○ Attendance history per student
  - ○ Communication log
- **Progress Tracking**:
  - ○ Individual student performance
  - ○ Class participation rates
  - ○ Assignment completion status
  - ○ Intervention alerts for struggling students

4.2.4 Assessment Center

- **Test Creation Interface**:
  - ○ Dynamic form builder with drag-and-drop
  - ○ Question types: Multiple choice, essay, file upload
  - ○ Rich text editor with formatting options
  - ○ Time limits and attempt restrictions
  - ○ Auto-grading setup for objective questions
- **Grading Interface**:
  - ○ Queue of submitted tests for review
  - ○ Side-by-side answer comparison
  - ○ Rubric-based grading tools

- ○ Bulk feedback options
- ○ Grade export functionality

4.3 Admin Dashboard

4.3.1 System Overview

- **Platform Statistics**:
  - ○ Total users (students, lecturers, admins)
  - ○ Active cohorts and enrollment numbers
  - ○ System usage metrics
  - ○ Performance indicators
- **Recent Activity Feed**:
  - ○ New user registrations
  - ○ Course completions
  - ○ System alerts and notifications
  - ○ User support requests

4.3.2 User Management Interface

- **Send Invitations**:
  - ○ Bulk invitation system
  - ○ Program and cohort assignment
  - ○ Custom invitation message templates
  - ○ Invitation tracking and resend options
- **User Directory**:
  - ○ Searchable user database
  - ○ Advanced filtering options
  - ○ Bulk edit capabilities
  - ○ User activity monitoring
- **Role Management**:
  - ○ Assign and modify user roles
  - ○ Permission customization
  - ○ Access level configuration

4.3.3 Cohort Management

- **Cohort Dashboard**:
  - ○ Active and inactive cohorts
  - ○ Enrollment statistics
  - ○ Progress tracking across cohorts
  - ○ Graduation planning
- **Cohort Creation**:
  - ○ Program assignment
  - ○ Student enrollment management
  - ○ Lecturer assignment to cohorts
  - ○ Schedule coordination

5.3 Responsive Design

- **Breakpoints**:
  - Mobile: 320px - 768px
  - Tablet: 768px - 1024px
  - Desktop: 1024px+
- **Mobile Adaptations**:
  - Collapsible navigation
  - Touch-friendly button sizes (44px minimum)
  - Swipe gestures for carousels
  - Optimized form layouts

6. Technical Implementation Requirements

6.2 Performance Standards

- **Initial Load**: < 3 seconds on 3G
- **Route Transitions**: < 500ms
- **Form Submissions**: < 2 seconds with loading states
- **Image Loading**: Progressive loading with placeholders
- **Bundle Size**: Code splitting to keep initial bundle < 1MB

6.3 Browser Compatibility

- **Primary Support**: Chrome, Firefox, Safari, Edge (latest 2 versions)
- **Mobile Support**: iOS Safari 13+, Chrome Mobile 90+
- **Fallbacks**: Graceful degradation for older browsers

7. Security & Data Protection

7.1 Frontend Security

- **Authentication**: JWT token management with secure storage
- **Route Protection**: Role-based route guards
- **Input Sanitization**: XSS prevention on all user inputs
- **HTTPS**: All communications over secure connections
- **Session Management**: Automatic logout on inactivity

7.2 Data Handling

- **Sensitive Data**: No storage of passwords or sensitive info in browser
- **API Integration**: Secure API communication with proper error handling
- **File Uploads**: Client-side validation and secure upload handling
- **User Privacy**: Respect user privacy settings throughout the interface

8. Integration Requirements

8.1 Backend API Integration

- **RESTful Endpoints**: Standard CRUD operations
- **Real-time Features**: WebSocket for live class updates
- **File Management**: Secure file upload/download with progress
- **Error Handling**: Comprehensive error states and user feedback

8.2 Third-Party Integration Requirements

- **Zoom SDK**: Meeting integration for class management
- **Video Player**: Custom player for recorded content
- **Notification System**: Integration with email/SMS services
- **Analytics**: User interaction tracking for platform improvement

9. Success Metrics & Testing

9.1 User Experience Metrics

- **Task Completion Rate**: Users successfully completing key tasks
- **Time to Complete**: Onboarding and common task completion times
- **Error Rates**: Form submission and navigation errors
- **User Satisfaction**: Regular feedback collection and NPS scoring

9.2 Performance Monitoring

- **Core Web Vitals**: LCP, FID, CLS compliance
- **Real User Monitoring**: Actual performance in production
- **Error Tracking**: Frontend error monitoring and resolution
- **Usage Analytics**: Feature adoption and user flow analysis

10. Future Enhancements

10.1 Progressive Web App Features

- **Offline Capability**: Service worker for basic offline functionality
- **Push Notifications**: Browser notifications for important updates
- **App-like Experience**: Install prompt and standalone mode

10.2 Advanced Features

- **Dark Mode**: Alternative color scheme with user preference storage
- **Accessibility**: Enhanced WCAG 2.1 AA compliance
- **Internationalization**: Multi-language support framework
- **Advanced Analytics**: Detailed learning analytics for students and lecturers