Software Requirements Specification (SRS)
Campus Connect Lite – Smart College Event Planner

1. Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) document is to define the functional and non-functional requirements of the Campus Connect Lite system. This document serves as a formal reference for stakeholders, developers, and testers to ensure a shared understanding of system objectives, features, constraints, and expected behavior.

1.2 Scope

Campus Connect Lite is a web-based application designed to centralize and simplify college event management. The system enables verified student clubs and institutions to create, manage, and promote events, collaborate with other colleges, and plan event layouts using AI-based suggestions.

Key benefits include:

- Centralized event management
- Reduced scheduling conflicts
- AI-assisted venue and layout planning
- Inter-college collaboration
- Simplified event registration and certification
- Enhanced student engagement

1.3 Definitions, Acronyms, and Abbreviations

SRS – Software Requirements Specification

AI – Artificial Intelligence

CRUD – Create, Read, Update, Delete

UI – User Interface

UX – User Experience

JWT – JSON Web Token

DB – Database

1.4 References

- IEEE 830 / IEEE 29148 Software Requirements Specification Standard

- Event Management System Design Guidelines

- Web Application Security Standards

- HTML, CSS, JavaScript, PHP, MySQL, Python Documentation

1.5 Overview

This document is divided into four main sections: Introduction, General Description, Specific Requirements, and Supporting Information.

2. General Description

2.1 Product Perspective

Campus Connect Lite is a standalone web application based on a client-server architecture. It integrates a lightweight AI module for image analysis and layout suggestions.

2.2 Product Functions

- User registration and authentication

- Club and institution verification

- Event creation and management

- Event discovery and registration

- AI-based venue analysis and suggestions

- 2D event layout visualization

- Inter-college event invitations

- Digital certificate generation

- User interaction through comments or chats

2.3 User Classes and Characteristics

Students – Register for events, view details, receive certificates

Club Coordinators – Create/manage events, upload venue images, send invitations

Institution Admins – Verify clubs and monitor system

System Admin – Manage users and system operations

2.4 Operating Environment

Client: Modern web browsers (desktop&mobile)

Server: PHP and Python runtime environments

Database: MongoDB

Network: Internet connectivity required

2.5 Design and Implementation Constraints

- Web technologies (HTML, CSS, JavaScript, PHP)

- MySQL as primary database

- Lightweight AI model

- Internet connectivity required

2.6 Assumptions and Dependencies

- Users provide accurate information

- AI provides approximate suggestions

- Institutions verify clubs

3. Specific Requirements

3.1 Functional Requirements

User Authentication&Roles

FR-01: System shall allow users to register as Student, Club Coordinator, Institution Admin, or System Admin.

FR-02: System shall authenticate users using valid login credentials.

FR-03: System shall enforce role-based access control.

Club Verification&Management

FR-04: Clubs can request verification.

FR-05: Institution Admins can approve/reject clubs.

FR-06: Only verified clubs can create events.

Event Creation&Management

FR-07: Verified clubs can create events.

FR-08: Events must include title, date, time, venue, and category.

FR-09: Organizers can edit or cancel events before event date.

AI-Based Venue Analysis

FR-10: System shall analyze venue images.

FR-11: System shall suggest capacity and suitable event type.

Event Layout Visualization

FR-12: System shall provide 2D layout planning.

FR-13: Users can save and modify layouts.

Event Registration

FR-14: Students can register for events.

FR-15: Duplicate registrations are prevented.

Inter-College Collaboration

FR-16: Clubs can send event invitations to other colleges.

FR-17: Invited colleges receive notifications.

Certificate Generation

FR-18: System shall generate digital certificates.

FR-19: Students can download certificates.

Communication&Interaction

FR-20: Users can comment on events.

FR-21: Users can message organizers.

FR-22: System shall send notifications.

3.2 Non-Functional Requirements

Performance

NFR-01: System shall respond within 2 seconds.

NFR-02: Support at least 500 concurrent users.

Security

NFR-03: Passwords encrypted.

NFR-04: HTTPS communication.

NFR-05: Role-based access control.

Reliability&Availability

NFR-06: 99% uptime.

NFR-07: No data loss during failures.

Scalability

NFR-08: System shall scale for future expansion.

Usability

NFR-09: Easy to use.

NFR-10: Mobile responsive UI.

Maintainability&Logging

NFR-11: Modular architecture.

NFR-12: Maintain logs.

Data Privacy&Integrity

NFR-13: Ensure data integrity.

NFR-14: User data used only for system purposes.

4. Supporting Information

4.1 Appendices

- Use Case Diagrams
- ER Diagrams
- Database Schema
- UI Mockups

4.2 Index