CONCEPTUAL MODEL

ATTENDANCE TRACKING SYSTEM

- Devices
  - Mobile Phones
  - Laptops
- Security
  - Role-Based Control(RBC)
  - Data Encryption
  - Multi-Factor Authentication
  - HTTPS with SSL Encryption
- Database
  - MySQL/ MongoDB Atlas
  - Cloud-based Server
- No API integration
- Authorized Users
  - Students
  - Instructors
  - Admin
- Functions
  - User Management
    - Register instructor devices
    - Register courses and it's details
    - Register Students
    - Register Instructors
    - Track and locate the lost device of instructors
    - Enroll students in classes
    - Access Student Portal
  - Generate Reports
  - Attendance Tracking
    - ID Barcode Scanning
    - Dropping students after 3 consecutive absences
    - Allow Instructors to cancel classes
    - Generate Detailed Attendance Reports

HIGH LEVEL USE CASE DIAGRAM

Automated Attendance Tracking System

Admin

Instructor

Student

LOGIN — Verify User Login

User Management
- Register Students and Instructors
- Remove Students and Instructors

Manage Devies
- Register Devices
- Track local device
- Unregister Device

Security Management
- Enforce RBAC
- Encrpytion Sensitive data

User Authentication
- Multi-Factor Authentication

Attendance Tracking
- Take Attendance
- Drop Student
- Generate Attendance Reports
- View Attendance Records