Software Interface Specification Document - AttendCRM Unified Attendance System (SRS 2)

**Submitted To:- Created By:-**

**N/A Kshitij Sharma**

**Note-** This document will address all the functionalities that need to be present in the website.

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# Revision and Sign off sheet

**Document History -** To maintain a list of changes being made

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## **1. Introduction**

### **1.1 Purpose**

This document specifies the functional and non-functional requirements for the Unified Attendance System (Phase 1) extending AttendCRM to support healthcare and educational institutions.

### **1.2 Scope**

**Hospital/Clinic Module:**

* Attendance tracking for doctors, nurses, and staff.
* Patients can book appointments via receptionist, which are synced to the doctor's email/calendar.
* Leave notifications sent to HR, Payroll, HOD, and relevant staff.

**School Module:**

* Attendance tracking for teachers and students.
* Notifications to HODs, Principals, Teachers, and Parents based on absence.

Future scope includes prescription management, medicine-disease mapping, and pharmacy tie-ups.

### **1.3 Definitions & Acronyms**

| **Term** | **Description** |
| --- | --- |
| HOD | Head of Department |
| HR | Human Resources |
| CRM | Customer Relationship Management |
| SHA2 | Secure Hash Algorithm |
| SMS | Short Messaging Service |

## **2. System Overview**

### **2.1 User Roles and Access**

| **Role** | **Hospital/Clinic Module** | **School Module** |
| --- | --- | --- |
| Admin | Full system access | Full system access |
| Receptionist | Appointment scheduling | N/A |
| Doctor/Nurse/Staff | View/mark attendance, view schedule | Teacher attendance |
| Patient | N/A (appointment via call) | N/A |
| Teacher | Mark student attendance | N/A |
| Student | View attendance (optional) | N/A |
| Parent | Receive absence alerts | N/A |
| Principal | Receive alerts and reports | Receive alerts and reports |

## **3. System Features**

### **3.1 Hospital/Clinic Module**

* Mark attendance for all staff categories (doctor, nurse, admin).
* Appointment system where receptionist logs booking and syncs with doctor's email (Google/Outlook).
* Leave alert workflow: Email to HR, Payroll, HOD, and doctor (if dependent).
* Optional dashboard for patient appointment history.

### **3.2 School Module**

* Mark attendance for teachers and students.
* Absent teacher → Email + SMS to HOD and Principal.
* Absent student → Email to Parent, Class Teacher, Principal, HOD.
* Attendance reports exportable by admin.

## **4. Functional Requirements**

### **4.1 Common Requirements**

| **ID** | **Description** |
| --- | --- |
| FR1 | Secure login and session management for all roles |
| FR2 | Attendance dashboard with date filters |
| FR3 | Export attendance as CSV (admin only) |
| FR4 | REST API for mobile access and notifications |

### **4.2 Hospital/Clinic Requirements**

| **ID** | **Description** |
| --- | --- |
| HFR1 | Admin and HR can view/edit attendance for all staff |
| HFR2 | Receptionist logs appointment (patient name, contact, doctor, time) |
| HFR3 | Appointments sync to doctor’s Google/Outlook calendar |
| HFR4 | Leave triggers email to HR, Payroll, HOD, concerned doctor |

### **4.3 School Requirements**

| **ID** | **Description** |
| --- | --- |
| SFR1 | Teacher can mark student attendance |
| SFR2 | Absentee alerts for teachers sent to HOD and Principal |
| SFR3 | Absentee alerts for students sent to Parent, HOD, Teacher, Principal |
| SFR4 | Admin views summary attendance report per class or teacher |

## **5. Non-Functional Requirements**

| **Type** | **Description** |
| --- | --- |
| Usability | Simple dashboard with responsive UI |
| Security | Role-based access, SHA2 password hashing, encrypted tokens |
| Performance | Handle 100+ concurrent users |
| Maintainability | Modular folder structure, API-first approach |
| Scalability | Support multi-branch hospitals/schools |
| Integration | Email (SMTP) + SMS gateway (Twilio, MSG91) |

## **6. Database Schema (Conceptual)**

* **users**: id, name, email, role (doctor, teacher, etc.), department, login credentials
* **attendance**: id, user\_id, date, status (present/absent/late), remarks
* **appointments**: id, patient\_name, doctor\_id, time, status, synced (boolean)
* **leaves**: id, user\_id, leave\_type, date\_from, date\_to, status
* **notifications\_log**: id, user\_id, type (email/sms), content, timestamp

## **7. Future Enhancements (Phase 2)**

* For Hospitals:  
  + Disease-based medicine auto-suggestions based on past records
  + Seasonal disease mapping and pharmaceutical brand tie-in
  + Generic medicine suggestions for govt. hospitals
* For Schools:  
  + Integration with class schedules, homework, and exams
  + Parent and Teacher mobile portal

## **8. Conclusion**

This Phase 1 SRS extends AttendCRM into a robust attendance solution for both hospitals and schools. With a modular and scalable design, the system will offer seamless attendance, leave, and notification workflows. Phase 2 will focus on deeper healthcare integrations and academic features.