

## **1- Project Name**

**Clinic Square**

## **2- Project Goal**

- Develop a user-friendly web and mobile platform for booking medical appointments with doctors and clinics.
- Provide a digital solution for patients to search, schedule, and manage their visits to healthcare providers.
- Equip doctors and clinics with tools to manage their schedules, appointments, and patient records effectively.
- Support secure payment, insurance integration, and real-time notifications.

## **3- Audience & Stakeholders**

- **Primary Users:**
  - Patients seeking medical services
  - Doctors managing their schedules
- **Secondary Users:**
  - Families booking recurring or dependent care
  - Health-conscious individuals managing their appointments
  - New residents needing quick access to local healthcare
- **Stakeholders:**
  - Clinic administrators
  - Health insurance providers
  - Software development team
  - System investors and sponsors
  - Government health regulators

## **4- Development Methodology**

### **Project Phases:**

1. Requirement analysis & competitive research
2. UX/UI design and wireframes
3. System architecture and UML modeling
4. Backend & frontend development
5. Integration with payment/insurance APIs
6. Testing (unit, integration, UAT)
7. Deployment and performance monitoring

## **5- Requirements**

### **Functional Requirements:**

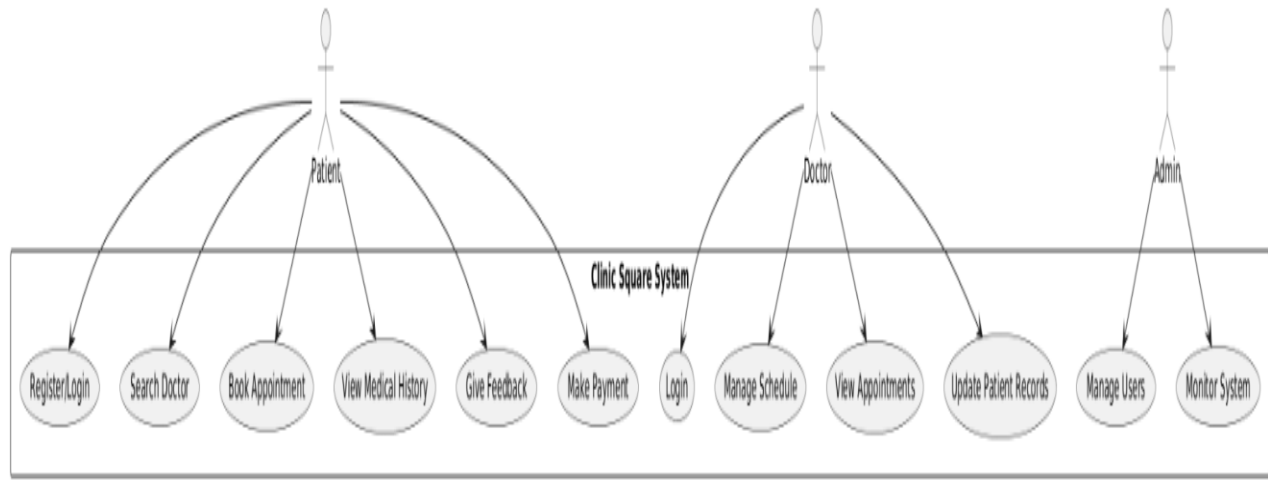
- FR1: Register/login for both patients and doctors
- FR2: Search doctors/clinics by specialty, location, availability
- FR3: Book, reschedule, or cancel appointments
- FR4: View appointment history and medical records
- FR5: Provide doctor ratings and feedback
- FR6: In-app communication with clinics
- FR7: Payment processing and insurance verification

### **Non-Functional Requirements:**

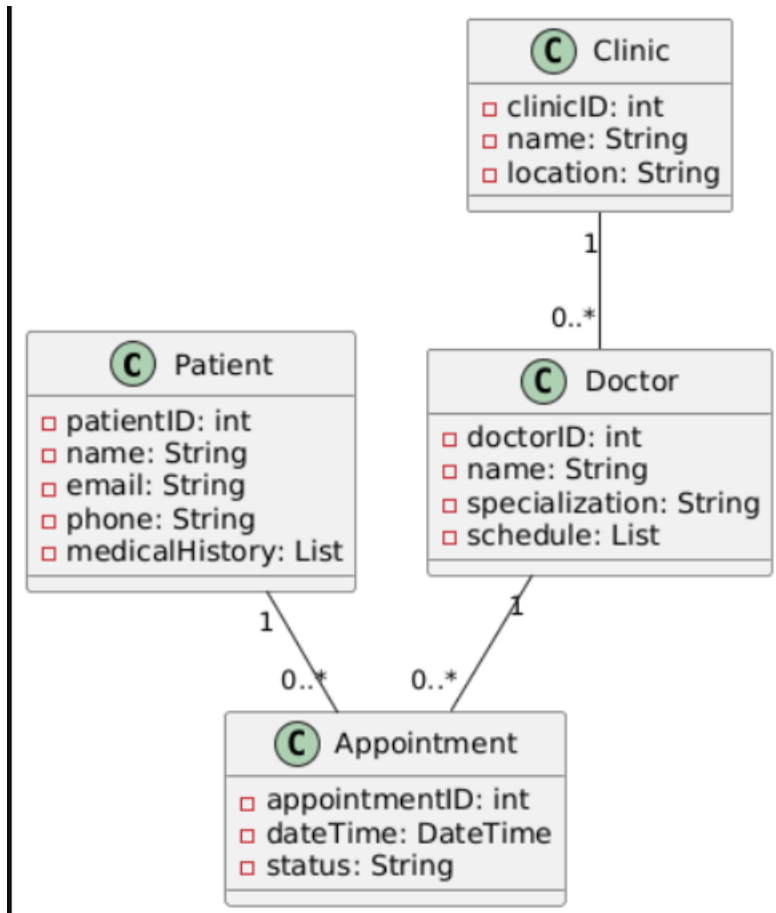
- NFR1: System response time under 3 seconds
- NFR2: Responsive design compatible with web and mobile
- NFR3: Data encryption for user privacy and medical compliance
- NFR4: Multilingual support (Arabic and English)
- NFR5: Scalable backend to support thousands of users
- NFR6: Deployable on AWS/GCP with load balancing

## **6- UML Diagrams**

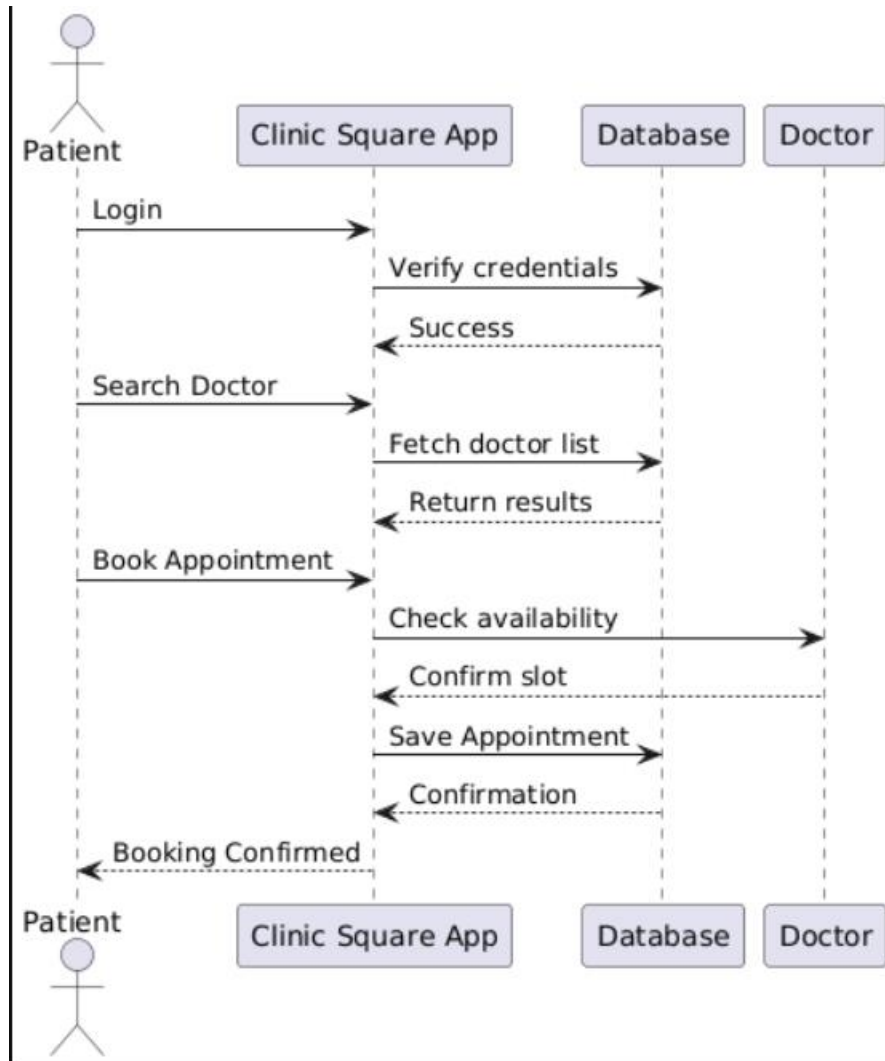
### **1. Use Case Diagram**



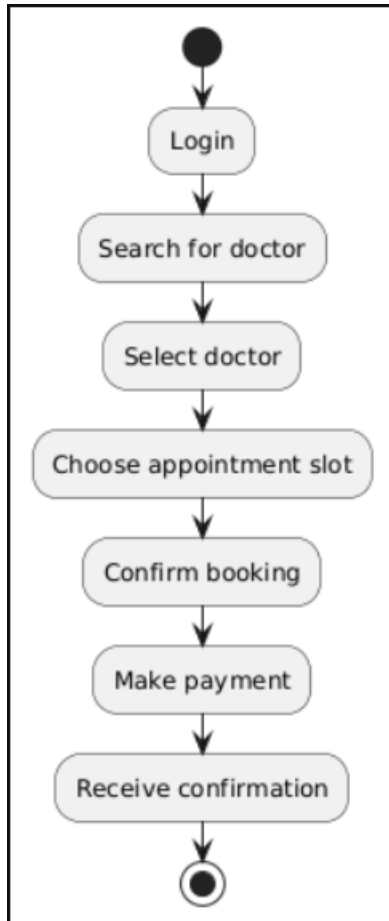
## 2. Class Diagram



### 3. Sequence Diagram (Booking an Appointment)



#### 4. Activity Diagram (Patient Booking Flow)



## 5. State Diagram (Appointment States)

