Hospital Management System in Java

```java
import java.util.ArrayList;
import java.util.Scanner;

class Patient {
    int id;
    String name;
    int age;
    String disease;

    Patient(int id, String name, int age, String disease) {
        this.id = id;
        this.name = name;
        this.age = age;
        this.disease = disease;
    }
}

class Doctor {
    int id;
    String name;
    String specialization;

    Doctor(int id, String name, String specialization) {
        this.id = id;
        this.name = name;
        this.specialization = specialization;
    }
}

public class Main {

    static ArrayList<Patient> patients = new ArrayList<>();
    static ArrayList<Doctor> doctors = new ArrayList<>();
    static Scanner sc = new Scanner(System.in);

    public static void main(String[] args) {
        int choice;

        do {
            System.out.println("\n--- Hospital Management System ---");
            System.out.println("1. Add Patient");
            System.out.println("2. View Patients");
            System.out.println("3. Add Doctor");
            System.out.println("4. View Doctors");
            System.out.println("5. Book Appointment");
            System.out.println("6. Exit");
            System.out.print("Enter choice: ");
            choice = sc.nextInt();

            switch (choice) {
                case 1:
                    addPatient();
                    break;
                case 2:
                    viewPatients();
                    break;
                case 3:
                    addDoctor();
                    break;
                case 4:
                    viewDoctors();
                    break;
                case 5:
                    bookAppointment();
                    break;
                case 6:
                    System.out.println("Program Ended.");
                    break;
                default:
                    System.out.println("Invalid choice!");
            }
        } while (choice != 6);
    }
    static void addPatient() {
```

```java
        System.out.print("Enter Patient ID: ");
        int id = sc.nextInt();
        sc.nextLine();

        System.out.print("Enter Name: ");
        String name = sc.nextLine();

        System.out.print("Enter Age: ");
        int age = sc.nextInt();
        sc.nextLine();

        System.out.print("Enter Disease: ");
        String disease = sc.nextLine();

        patients.add(new Patient(id, name, age, disease));
        System.out.println("Patient added successfully.");
    }

    static void viewPatients() {
        if (patients.isEmpty()) {
            System.out.println("No patients found.");
            return;
        }

        for (Patient p : patients) {
            System.out.println("ID: " + p.id + ", Name: " + p.name +
                    ", Age: " + p.age + ", Disease: " + p.disease);
        }
    }

    static void addDoctor() {
        System.out.print("Enter Doctor ID: ");
        int id = sc.nextInt();
        sc.nextLine();

        System.out.print("Enter Name: ");
        String name = sc.nextLine();

        System.out.print("Enter Specialization: ");
        String spec = sc.nextLine();

        doctors.add(new Doctor(id, name, spec));
        System.out.println("Doctor added successfully.");
    }

    static void viewDoctors() {
        if (doctors.isEmpty()) {
            System.out.println("No doctors found.");
            return;
        }

        for (Doctor d : doctors) {
            System.out.println("ID: " + d.id + ", Name: " + d.name +
                    ", Specialization: " + d.specialization);
        }
    }

    static void bookAppointment() {
        System.out.print("Enter Patient ID: ");
        int pid = sc.nextInt();

        System.out.print("Enter Doctor ID: ");
        int did = sc.nextInt();

        System.out.println("Appointment booked successfully!");
    }
}
```