Cuyugan, Karl Francis P.
BSCS – C203

Midterm Paired Task 1.

Step 1. IDENTIFY all the necessary **OBJECT** within the problem domain

1. Patient
2. Hospital Room
3. Hospital System

Step 2. IDENTIFY all the properties and methods/behaviors in the problem

statement Class: Patients

Properties

- patientId: Int
- patientName: String
- patientDateofBirth: String

Methods

- viewPatientInfo()

Class: Room

Properties

- roomNumber: Int
- roomType: String (private/semi-private)
- roomFee: double
- patientHistory: List<ResidentPatient>

Methods

- viewAllRooms() - Void

Class: Hospital System

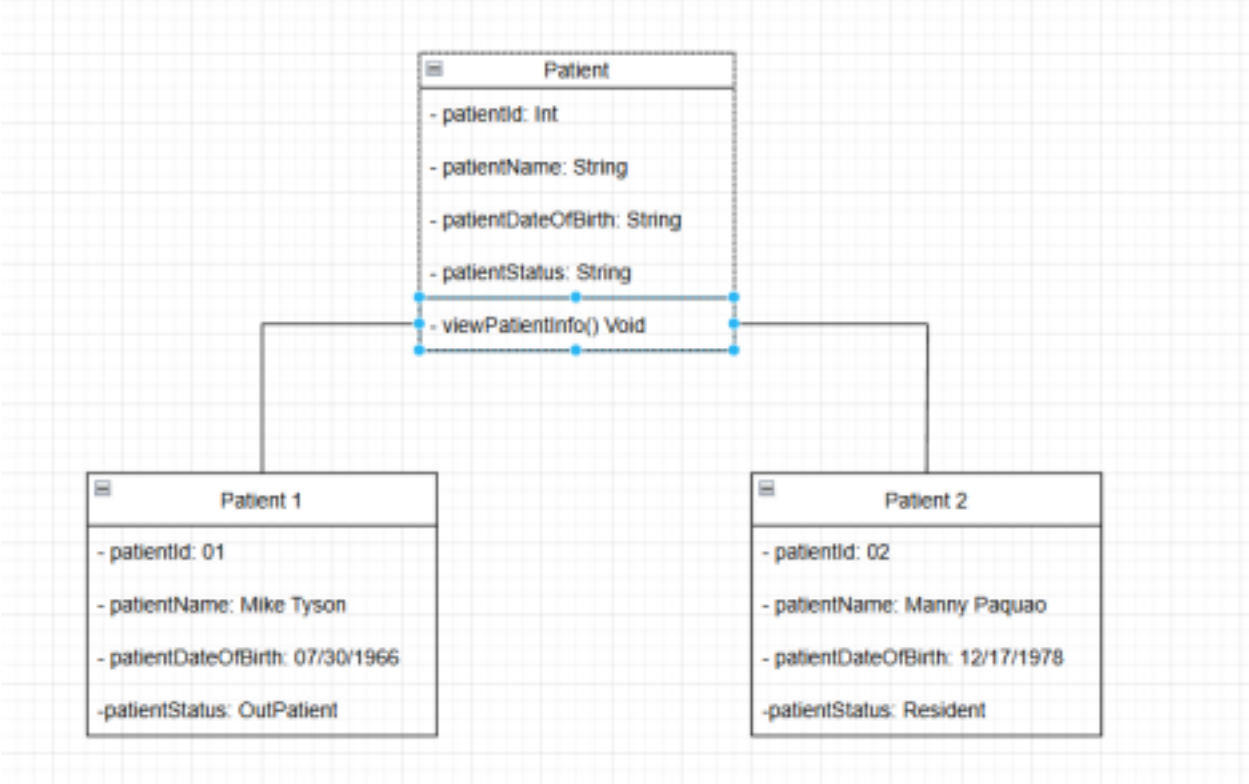
Properties

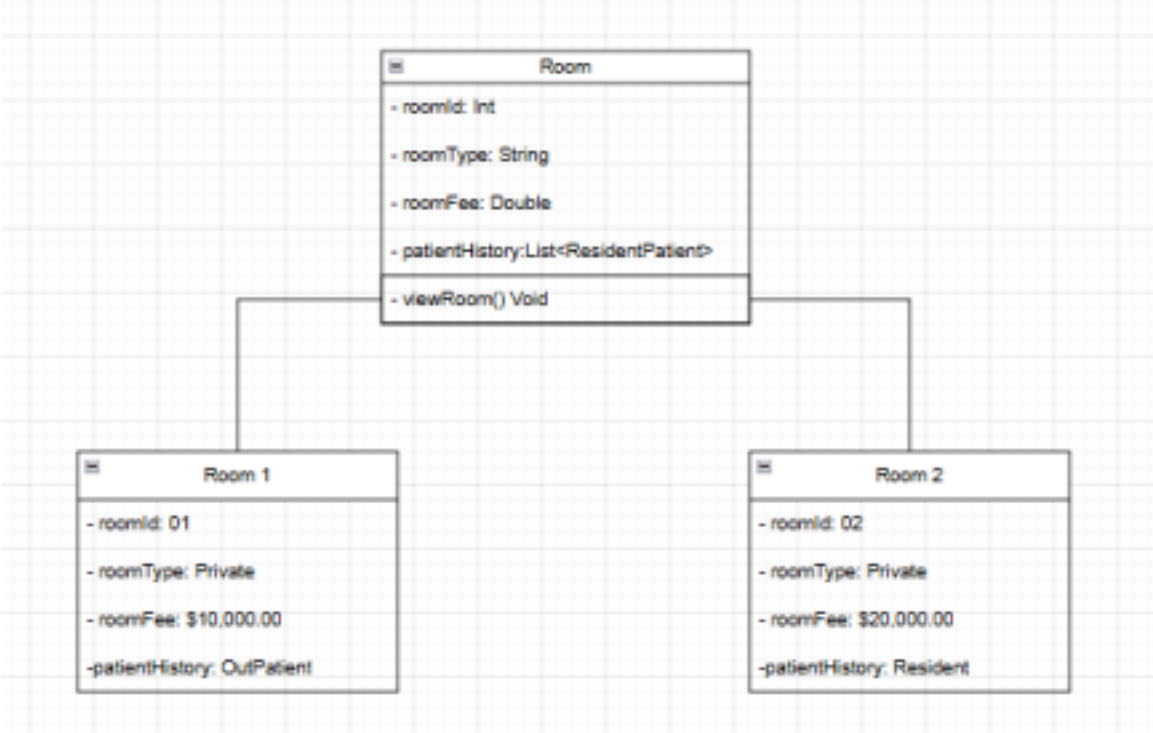
- List<Patient> patients
- List<Room> rooms

Methods

- viewAllPatients() Void
- viewAllRooms() Void

Step 3. Design the MODEL using a Class Diagram (You may use draw.io to represent the Blueprint of all the class that you need to create)





STEP 4. Implement the **class using Java code** construct of each interacting entities that you have identified.

```
public class Patient {
 public int patientId;
 public String patientName;
 public String patientDateOfBirth;
 public String patientStatus;

 public void viewPatientInfo() {
```

```
 System.out.println("Patient ID: " + patientId);
 System.out.println("Name: " + patientName);
 System.out.println("Date of Birth: " + patientDateOfBirth);
System.out.println("Status: " + patientStatus);
 }
}



public class Room {
 public int roomId;
 public String roomType;
 public double roomFee;
 public String patientHistory;

 public void viewRoomInfo() {
 System.out.println("Room ID: " + roomId);
 System.out.println("Room Type: " + roomType);
 System.out.println("Room Fee: " + roomFee);
 System.out.println("Patient History: " + patientHistory);  }
}



import java.util.ArrayList;

public class HospitalSystem {
 public ArrayList<Patient> patients = new ArrayList<>();
 public ArrayList<Room> rooms = new ArrayList<>();

 public void addPatient(Patient p) {
 patients.add(p);
 }

 public void addRoom(Room r) {
 rooms.add(r);
 }

 public void viewAllPatients() {
 System.out.println("=== All Patients ===");  for
(Patient p : patients) {
 p.viewPatientInfo();
 System.out.println("--------------------");  }
 }

 public void viewAllRooms() {
 System.out.println("=== All Rooms ===");  for
(Room r : rooms) {
 r.viewRoomInfo();
 System.out.println("--------------------");  }
 }
}
```

```
public class Main {
 public static void main(String[] args) {

 HospitalSystem hospital = new HospitalSystem();

 Patient patient1 = new Patient();
 patient1.patientId = 1;
 patient1.patientName = "Mike Tyson";
patient1.patientDateOfBirth = "07/30/1966";
patient1.patientStatus = "OutPatient";

 Room room1 = new Room();
 room1.roomId = 1;
 room1.roomType = "Private";
 room1.roomFee = 10000;
 room1.patientHistory = "OutPatient";

 hospital.addPatient(patient1);
 hospital.addRoom(room1);

 Patient patient2 = new Patient();
 patient2.patientId = 2;
   patient2.patientName   =   "Manny   Pacquiao";
patient2.patientDateOfBirth     =     "12/17/1978";
patient2.patientStatus = "Resident";

 Room room2 = new Room();
 room2.roomId = 2;
 room2.roomType = "Private";
 room2.roomFee = 20000;
 room2.patientHistory = "Resident";

 hospital.addPatient(patient2);
 hospital.addRoom(room2);

 hospital.viewAllPatients();
hospital.viewAllRooms();  }
}
```