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C204

Midterm Paired Lab Task

Hospital System

```
import java.util.ArrayList;

public class HospitalSystem {
    private ArrayList<Patient> patientList = new ArrayList<>();
    private ArrayList<Room> roomList = new ArrayList<>();

    public void addpatient(Patient patient) {
        patientList.add(patient);
    }

    public void updatePatient(int patientID, String newName, String newDOB){
        for (Patient p: patientList) {
            if(p.getPatientID() == patientID) {
                p.setName(newName);
                p.setdateofBirth(newDOB);
                return;
            }
        }
    }

    public Patient searchPatient(int patientID){
        for (Patient p : PatientList) {
            if (p.getPatientID() == patientID) {
                return p;
            }
        }
        return null;
    }

    public void updateRoom(int roomNumber, String newType, double newFee){
        for (Room r: roomList){
            if (r.getRoomNumber() == roomNumber){
                r.setOccupied(false);
                return;
            }
        }
    }

    public Room searchRoom(int roomNumber){
        for (Room r: roomList){
            if (r.getRoomNumber() == roomNumber) {
                return r;
            }
        }
        return null;
    }
}
```

Room

```
public class Room{
    private int roomNumber;
    private String roomType;
    private int roomFee;
    private String status;

    public Room(int roomNumber, String roomType, int roomFee, String status){
        this.roomNumber = roomNumber;
        this.roomType = roomType;
        this.roomFee = roomFee;
        this.status = status;
    }

    public void assignPatient(Patient patient);
    if (isOccupied){
        this.patient.add(patient);
        this.isOccupied = true;
        patient.assignRoom(this)
    }

}

    public void releasedPatient(){
        this.isOccupied = false;
    }

    public boolean isAvailable(){
        return !isOccupied;
    }

    public String getRoomNumber(){
        return roomNumber;
    }

    public String getRoomDetails(){
        return "Room: " + roomNumber + ", roomtype" + ", roomFee" + ", status" + status;
    }

}
```

Patient

```
public class Patient{
    private int patientID;
    private String name;
    private String dateOfBirth;
    private String patientStatus;
    private int patientRoom;

    public Patient(int patientID, String name, String dateOfBirth, String patientStatus, int patientRoom){
        this.patientID = patientID;
        this.name = name;
        this.dateOfBirth = dateOfBirth;
        this.patientStatus = patientStatus;
        this.patientRoom = patientRoom;
    }

    public String getDetails(){
        return "ID: " + patientID + ", name: " + name + ", DOB: " + dateOfBirth + ", PS: " + patientStatus + ", PR: " + patientRoom;
    }

    public void updateDetails(String name, String dob){
        this.name = name;
        this.dateOfBirth = dob;
    }

    public String getPatientID(){
        return patientID;
    }

}
```

Behavior

Patient

Properties

Name:

dateofBirth:

Patient Status

Patient Room

Behavior

updatePatient()

updatePatient()

updateStatus()

updateRoom()

Room

Properties:

Room Number:

RoomType:

RoomFee:

Room Status:

Behavior

updateRoom()

searchRoom()

viewRoomStatus()

TinyHospital

Properties:

Patient

Rooms

Behavior:

viewPatient()

viewRoom()

addRoom()

addPatient()

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