

Class Guest

```
public class Guest {
    private int id;
    private String name;
    private String nationality;
    private int age;
    public Guest(int id, String name, String nationality, int age) {
        this.id = id;
        this.name = name;
        this.nationality = nationality;
        this.age = age;
    }

    public int getId() {
        return id;
    }

    public String getName() {
        return name;
    }

    public String getNationality() {
        return nationality;
    }

    public int getAge() {
        return age;
    }

    public void displayGuestInfo(){
        System.out.println("Guest id: " + id);
        System.out.println("Guest name: " + name);
        System.out.println("Guest nationality: " + nationality);
        System.out.println("Guest age: " + age);
    }
}
```

Class Hotel

```
public class Hotel {
    private String name;
    private Guest arrGuests[];
    private int nbGuests;

    public Hotel(String name, int size){
        this.name = name;
        arrGuests = new Guest[size];
        nbGuests = 0;
    }
    public boolean addGuest(Guest g){
        if(nbGuests >= arrGuests.length)
            return false;
        arrGuests[nbGuests++] = g;
        return true;
    }
    public int countGuests(String n){
        int counter = 0;
        for(int i = 0; i < nbGuests; i++)
            if(arrGuests[i].getNationality().equalsIgnoreCase(n))
                counter++;
        return counter;
    }
    public Guest getOldestGuest(){
        Guest oldest = null;
        for(int i = 0; i < nbGuests; i++)
            if(oldest == null ||
                arrGuests[i].getAge() > oldest.getAge())
                oldest = arrGuests[i];
        return oldest;
    }
    public Guest[] getGuests(String n){
        int size = countGuests(n);
        Guest [] temp = new Guest[size];
        int counter = 0;
        for(int i = 0; i < nbGuests; i++){
            if(arrGuests[i].getNationality().equalsIgnoreCase(n))
                temp[counter++] = arrGuests[i];
        }
        return temp;
    }
}
```

```
public int splitGuests(Guest [] saudi, Guest expat[]){
    int countS = 0, countE = 0;
    for(int i = 0; i < nbGuests; i++)

    if(arrGuests[i].getNationality().equalsIgnoreCase("Saudi"))
        saudi[countS++] = arrGuests[i];
        else
            expat[countE++] = arrGuests[i];
    return countE;
}
}
```

Class Test

```
public class test {
    public static void main(String [] args){
        Hotel h = new Hotel("Mariott", 300);
        h.addGuest(new Guest(1, "Ahmad", "Saudi", 22));
        h.addGuest(new Guest(2, "Khalid", "Saudi", 28));
        h.addGuest(new Guest(1, "Omar", "Kuwait", 25));
        h.addGuest(new Guest(1, "Mohammed", "UAE", 21));

        System.out.println("Number of UAE guests: "
            + h.countGuests("UAE"));
        System.out.println("Oldest guest: ");
        h.getOldestGuest().displayGuestInfo();

        System.out.println("Guests from Kuwait: ");
        Guest [] kuwait = h.getGuests("Kuwait");
        for(int i = 0; i < kuwait.length; i++)
            kuwait[i].displayGuestInfo();

        Guest [] saudi = new Guest[2];
        Guest [] expat = new Guest[2];
        int nbExpat = h.splitGuests(saudi, expat);

        System.out.println("Saudi Guests: ");
        for(int i = 0; i < saudi.length; i++)
            saudi[i].displayGuestInfo();
        System.out.println("Non Saudi Guests: ");
        for(int i = 0; i < expat.length; i++)
            expat[i].displayGuestInfo();
        System.out.println("Number of Non-Saudi guests: "
            + nbExpat);
    }
}
```