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//Per: Period 12
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//The Reservation Class

```
package StufafterArrays;
```

```
public class Reservation {
    private String name;
    private String roomNum;
    public Reservation( String n, String rn) {
        name = n;
        roomNum = rn;
    }
    public String getRoomNumber() {
        return this.roomNum;
    }

    public String getName() {
        return this.name;
    }

    public String toString() {
        return name + " " + roomNum;
    }

}
```

//The HotelReservation Class

```
package StufafterArrays;
```

```
import java.util.*;
```

```
public class HotelReservation {
    private Reservation [] rooms;
    private final String[] roomNumbers = {"100A", "101A", "102A", "103A", "104A", "105A"};
    private ArrayList <String> waitList;

    public HotelReservation () {
        rooms = new Reservation [6];
        waitList = new ArrayList <String> ();
    }
}
```

```

public Reservation requestRoom (String name) {
    for (int k = 0; k < rooms.length; k++) {
        if (rooms[k] == null) {
            rooms[k] = new Reservation (name, roomNumbers[k]);
            return rooms[k];
        }
    }
    waitList.add(name);
    return null;
}

public Reservation cancelReassign (String name) {
    for (int j = 0; j < rooms.length; j++) {
        if (rooms[j] != null && rooms[j].getName().equals(name)) {
            if (waitList.size() == 0) {
                rooms [j] = null;
                return null;
            }

            else {
                rooms [j] = new Reservation (waitList.get(0), rooms[j].getRoomNumber());
                waitList.remove(0);
                return rooms[j];
            }
        }
    }
    return null;
}

public String toString () {
    String ret = " ";
    for (int d = 0; d < roomNumbers.length; d++) {
        ret += roomNumbers[d] + " ";
    }

    String ret2 = " ";
    for (int b = 0; b < roomNumbers.length; b++) {
        ret2 += rooms[b] + " ";
    }

    String ret3 = " ";
    for (int f = 0; f < waitList.size(); f++) {
        ret3 += waitList.get(f) + " ";
    }
}

```

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    }

    return " Rooms: " + ret + " \n\n Reservations: " + ret2 + " \n\n Waitlist: " + ret3;

}

}

```

//The HotelReserationTester Class

```

package StufafterArrays;
public class HotelTester {

    public static void main(String[] args) {
        // TODO Auto-generated method stub

        HotelReservation Hotel = new HotelReservation ();

        Hotel.requestRoom("Allen");
        Hotel.requestRoom("Brown");
        Hotel.requestRoom("Carlson");
        Hotel.requestRoom("Davis");
        Hotel.requestRoom("Edwards");
        Hotel.requestRoom("Frost");
        Hotel.requestRoom("Grant");
        Hotel.requestRoom("Harris");
        Hotel.cancelReassign ("Carlson");
        Hotel.cancelReassign ("Davis");
        Hotel.cancelReassign ("Brown");
        Hotel.cancelReassign ("Allen");
        Hotel.cancelReassign ("Grant");
        Hotel.cancelReassign ("Harris");
        Hotel.cancelReassign ("Edwards");
        Hotel.cancelReassign ("Frost");

        System.out.print(Hotel);

    }
}

```

```
}
```

Console:

Rooms: 100A 101A 102A 103A 104A 105A

Reservations: null null null null null null

Waitlist: