

# Postlab Exercise

“We Care Community Hospital” is a non-profit health care institution, provides intensive hospitality services to the elderly people who unable to manage themselves. The hospital provides four types of room with a reasonable price. Given the following super class named `Patient` and subclasses named `Room`.

Superclass	:	<code>Patient</code>
Attributes	:	<code>String patientName;</code> <code>// patient name</code> <code>int patientNumber;</code> <code>// patient number</code> <code>String patientAddress;</code> <code>// patient address</code>
Methods	:	<code>Constructor, mutator, retriever, printer</code>

Subclass	:	<code>Room</code>
Attributes	:	<code>String typeRoom;</code> <code>// type of room</code> <code>int noDay;</code> <code>// no of day</code>
Methods	:	<code>Constructor, mutator, retriever, printer</code>

- a) Write the definition for the following constructor and method:  
i) The normal constructor for superclass and subclass.

(4 marks)

The normal constructor for superclass – `Patient`

```
public Patient(String patientName, int patientNumber, String
patientAddress) {
    this.patientName = patientName;
    this.patientNumber = patientNumber;
    this.patientAddress = patientAddress;
}
```

The normal constructor for subclass- `Room`

```
public Room(String typeRoom, int noDay, String patientName, int
patientNumber, String patientAddress) {
    super(patientName, patientNumber, patientAddress);
    this.typeRoom = typeRoom;
    this.noDay = noDay;
}
```

- ii) A method named `calcPayment()` for the subclass to calculate and returns the payment that each patient has to pay. 25% of discount will be given to the patients who stay in the hospital for more than 20 days. Details of the charges for patients listed in the following table: (4 marks)

Type of Room	Price/Day (RM)
Diamond	200.00
Gold	100.00
Silver	80.00
Bronze	50.00

b) Write a program fragment for each of the following questions:

i) Declare an array of objects to store fifty (50) data. (1 mark)

ii) Count and display the number of patients who stay in the hospital for more than twenty (20) days.

(3 marks)

iii) Calculate and display the average payment per day collected from all patients.

(3 marks)