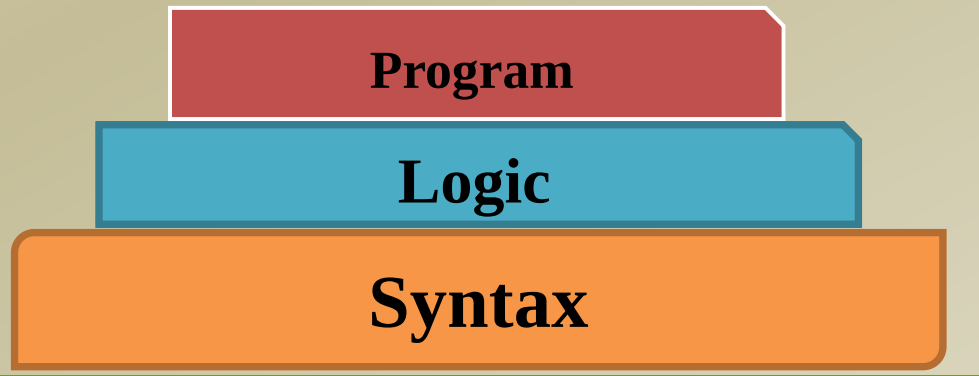
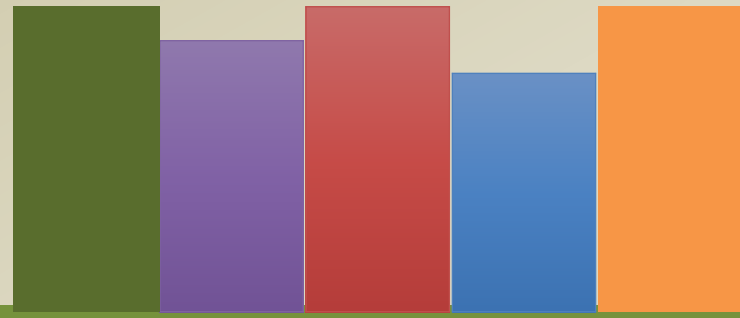
Code at Random (OPC) PVT. LTD.

Module 7: Board Questions- Functions Based





- Design a class name **ShowRoom** with the following description:

Instance variables / Data members:

String name - To store the name of the customer

long mobno - To store the mobile number of the customer

double cost - To store the cost of the items purchased

double dis - To store the discount amount

double amount- To store the amount to be paid after discount

Member methods:

ShowRoom() - default constructor to initialize data members

void input () - To input customer name, mobile number, cost

void calculate () -To calculate discount on the cost of purchased items, based on following criteria **[2019]**

Cost	Discount (in percentage)
Less than or equal to ₹ 10000	5%
More than ₹10000 and less than or equal to ₹ 20000	10%
More than ₹ 20000 and less than or equal to ₹ 35000	15%
More than ₹ 35000	20%

Void display () - To display customer name, mobile number , amount to be paid after discount.

Write a main method to create an object of the class and call the above member methods.

```
import java.util.*;
class ShowRoom
{
 String name;
 long mobno;
 double cost , dis, amount;
  ShowRoom( ) {
    name = " ";
    cost=0;
    mobno=0;
    dis = 0.0;
    amount=0.0;
 }
 void input()  {
   Scanner sc = new Scanner(System.in);
   System.out.println("enter name, mobile no and cost");
   name=sc.next();
   mobno=sc.nextLong();
  cost=sc.nextDouble();
 }
  void calculate() {
    if(cost <=10000)
      dis=0.05*cost;
 else if(cost >10000 && cost <=20000)
    dis=0.1*cost;
 else if(cost >20000 && cost <=35000)
     dis=0.15*cost;
 else
    dis=0.2*cost;
amount = cost - dis;
 }
 void display()  {
   System.out.println("Name is :"+name);
   System.out.println("Mobile no is :"+mobno);
   System.out.println("Amount :"+ amount);
 }
 public static void main (String arg[])  {
   ShowRoom ob =new ShowRoom();
   ob.input();
   ob.calculate();
   ob.display();
 }
}
```

- Design a class ***RailwayTicket*** with the following description :

Instance variables/data members:

String name - To store the name of the customer

String coach - To store the type. of coach customer wants to travel long mobno - To store customer's mobile number

int amt - To store basic amount of ticket

int total_amt - To store the amount to be paid after updating the original amount

Member methods:

void accept( ) - To take input for name, coach and amount.

void update( ) - To update the amount as per the coach selected (extra amount to be added in the amount as follows)

Types of Coaches	**Amount**
First AC	700
Second AC	500
Third AC	250
sleeper	None

void display( ) - To display all details of a customer such as name, coach, total amount and mobile number.

Write a main method to create an object of the class and call the above member methods. [2018]

```
import java.util.*;
class RailwayTicket
{
 String name , coach;
  int amt , total_amt;
 void accept( )  {
   Scanner sc = new Scanner(System.in);
   System.out.println(“Enter name, coach, amount");
   name = sc.next( );
   coach = sc.next( );
   amount = sc.nextInt();
  }
  void update( ) {
    if(coach.equalsIgnoreCase(“First AC”))
        total_amt = amount+700;
    else if(coach.equalsIgnoreCase(“Second AC”))
        total_amt = amount + 500;
    else if(coach.equalsIgnoreCase(“Third  AC”))
        total_amt = amount+ 250;
    else
       total_amt = amount;
}
 void display()  {
  System.out.println("Name is :"+name);
  System.out.println(“Coach is :"+mobno);
  System.out.println(“Total Amount :"+ total_amt);
}
public static void main (String arg[])  {
RailwayTicket ob =new RailwayTicket();
  ob.accept();
  ob.update();
  ob.display();
 }
}
```

- Define a class ***ElectricBill*** with the following specifications : class - ElectricBill

Instance variables/data members:

String n - to store the name of the customer

int units - to store the number of units consumed

double bill - to store the amount to be paid

Member methods:

void accept( ) - to accept the name of the customer and number of units consumed.

void calculate( ) - to calculate the bill as per the following tariff:

Number of units	Rate per unit
First 100 units	Rs 2.00
Next 200 units	Rs 3.00
Above 300 units	Rs 5.00

void print( ) - to print the details as follows:

Name of the customer :……

Number of units consumed :…….

Bill amount :……

Write a main method to create an object of the class and call the above member methods. **[2017]**

```
import java.util.*;
class ElectricBill
{
 String n ;
  int units;
  double bill;
 void accept( )  {
   Scanner sc = new Scanner(System.in);
   System.out.println(“Enter name and number of units");
   n = sc.next( );
   units = sc.nextInt( );
  }
  void calculate( ) {
    if(units<=100)
        bill = units *2;
   else if(units>100 && units<=300)
        bill = 100*2 +(units-100)*3;
  else
      bill = 100*2 +200*3 + (units-300)*5;
}
```

```
  void display()  {
   System.out.println("Name is :"+name);
   System.out.println(“Units Consumed  :"+units);
   System.out.println(“Total Bill :"+ bill);
  }
  public static void main (String arg[])  {
ElectricBill ob =new ElectricBill();
   ob.accept();
   ob.calculate();
   ob.display();
  }
}
```

- Define a class named ***movieMagic*** with the following description:

Instance variables/data members:

int year - to store the year of release of a movie

String title - to store the title of the movie

float rating - to store the popularity rating of the movie
(minimum rating = 0.0 and maximum rating = 5.0)

Member methods:

movieMagic( ) -Default constructor to initialize numeric data members to 0 and String data member to ""

void accept( ) - To input and store year, title and rating

void display( ) - To display the title of a movie and a message based on the rating as per the table below

[2015]

Ratings	Message to be displayed
0.0 to 2.0	Flop
2.1 to 3.4	Semi-hit
3.5 to 4.05	Hit
4.6 to 5.0	Super-Hit

- Define a class **taximeter** having the following description: **[Sample Paper]**

Data members/instance variables:

- int taxino - to store taxi number
- String name - to store passenger's name
- int km - to store number of kilometers travelled

Member functions:

- taximeter() -- constructor to initialize taxino to 0, name to " "and b to 0.
- input() - to store taxino , name, km
- calculate() - to calculate bill for a customer according to given conditions

Kilometres(km)	Rate/km
<= 1km	Rs 25
1 < km <= 6	Rs 10
6 < km <= 12	Rs 15
12 < km <= 18	Rs 20
>18km	Rs 25

- display()- To display the details in the following format

Taxino Name Kilometers travelled Bill amount

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Create an object in the main method and call all the above methods in it.

```
import java.util.*;
class taximeter
{
 String name ;
  int taxino , km;
  double bill;

 taximeter( ){
   name =“ “;
   taxino = 0;
    km=0;
  }

 void input( )  {
   Scanner sc = new Scanner(System.in);
   System.out.println(“Enter name, taxino, number of km");
   name = sc.next( );
   taxino = sc.nextInt( );
   km = sc.nextInt( );
  }
```

```
 void calculate\( ) {
    if(km <= 1)
        bill = km*25;
   else if(km >1 && km<=6)
        bill = 1*25+(km-1)*10;
  else if (km>6 && km<=12)
       bill = 25*1 + 5*10 + (km-6)*15;
  else if (km>12 && km<=18)
      bill = 25*1 +5*10 + 6*15 + (km-12)*20;
   else
     bill = 25*1 +5*10 + 6*15 + 6*20 + (km-18)*25;
}
  void display()  {
   System.out.println(“Taxino \t Name \t km \t Bill”);
   System.out.println(taxino+ “\t” + name “\t” +km+ “bill”);
   System.out.println(“Total Bill :"+ bill);
  }
 public static void main (String arg[])  {
  taximeter ob =new taximeter();
   ob.accept();
   ob.calculate();
   ob.display();
  }
}
```