4. Define a class Employee having the following description:

Instance variables:

int pan	to store personal account number
String name	to store name
double tax_income	to store annual taxable income
double tax	to store tax that is calculated

Member functions:

input ( )	Store the pan number, name, taxable income
calc( )	Calculate tax for an employee
display ( )	Output details of an employee

Write a program to compute the tax according to the given conditions and display the output as per the given format.

Total Annual Taxable Income	Tax Rate
Upto ₹ 1,00,000	No tax
From 1,00,001 to 1,50,000	10% of the income exceeding ₹ 1,00,000
From 1,50,001 to 2,50,000	₹ 5000 + 20% of the income exceeding ₹ 1,50,000
Above ₹ 2,50,000	₹ 25,000 + 30% of the income exceeding ₹ 2,50,000

Output:

Pan Number	Name	Tax-income	Tax
—	—	—	—

Ans.

```
import java.util.*;

class Employee
{
   String pan, name;
   double tax_income,tax;
   void input()
   {
      Scanner sc=new Scanner(System.in);
      System.out.println("Enter your PAN no.:");
      pan=sc.nextLine();
      System.out.println("Enter your name:");
      name=sc.nextLine();
      System.out.println("Enter taxable income:");
```

```
    tax_income=sc.nextDouble();
  }
  void display()
  {
    System.out.println("Pan Number\t\tName\t\tTax-income\t\tTax");
    System.out.println(pan+"\t\t"+name+"\t\t"+tax_income+"\t\t"++ tax);
  }
  void calc()
  {
    if(tax_income<=100000)
      tax=0;
    else if(tax_income>100000 && tax_income<=150000)
      tax=10/100.0*(tax_income-100000);
    else if(tax_income>150001 && tax_income<=250000)
      tax=5000+20/100.0*(tax_income-150000);
    else
      tax=25000+30/100.0*(tax_income-250000);
  }
}
```

5. Define a class called Mobike with the following description:

Instance variables/ Data members:

bno	:	to store the bike's number
phno	:	to store the phone number of the customer
name	:	to store the name of the customer
days	:	to store the number of days the bike is taken on rent
charge	:	to calculate and store the rental charge

Member methods:

void input ()	:	to input and store the detail of the customer
void compute ()	:	to compute the rental charge. The rent for a Mobike is charged on the following basis
First five days	:	₹ 500 per day
Next five days	:	₹ 400 per day
Rest of the days	:	₹ 200 per day
void display ()	:	to display the details in the following format:

Bike No.	Phone No.	Name	No. of days	Charge
- - - - - - -	- - - - - - -	- - - - - -	- - - - - - - -	- - - - - - -

Ans.

```
import java.util.*;
class Mobike
{
   String bno,phno,name;
   int days;
   double charge;


  void input()
  {
     Scanner sc=new Scanner(System.in);
     System.out.println("Enter your bike no.:");
     bno=sc.nextLine();
     System.out.println("Enter your phone no.:");
     phno=sc.nextLine();
     System.out.println("Enter your name:");
     name=sc.nextLine();
     System.out.println("Enter no. of days taken for rent:");
     days=sc.nextInt();
  }
  void display()
  {
     System.out.println("Bike No.\t\tPhone No.\t\tName\t\tNo. of days\t\tCharge");
     System.out.println(bno+"\t\t"+phno+"\t\t"+name+"\t\t"+days+"\t\t"+charge);
  }
  void calc()
  {
     if(days<=5)
        charge=days*500;
     else if(days>5 && days<=10)
        charge=5*500+(days-5)*400;
     else
        charge=5*500+5*400+(days-10)*200;
  }
}
```

6. Write a program with the following specifications:

Class name	:	Student
Data members	:	
name	:	To store the name of a student
hindi	:	To store the marks in hindi subject
english	:	To store the marks in english subject
maths	:	To store the marks in mathematics
computer	:	To store the marks in computer
average	:	To store the avergae of the marks obtained
grade	:	To store the grade depending upon the average.

Member methods:

void accept( )	:	to accept name and marks in the 4 subjects.
void calcavg( )	:	to calculate and store the grade according to the following slabs:

Average marks	**Grade Obtained**
90 and above	A++
Between 75 to 89 (both inclusive)	A
Between 60 to75 (both inclusive)	B
Less than 60	C

Write the main method to create the object of the class and call the above method.

Ans.

```
import java.util.*;
class Student
{
   String name;
   int hindi,english,maths,computer;
   float average;
   String  grade;
   void accept()
   {
      Scanner sc=new Scanner(System.in);
      System.out.println("Enter your name.:");
      name=sc.nextLine();
      System.out.println("Enter marks in hindi:");
      hindi=sc.nextInt();
      System.out.println("Enter marks in english:");
      english=sc.nextInt();
      System.out.println("Enter marks in maths:");
      maths=sc.nextInt();
      System.out.println("Enter marks in computer:");
      computer=sc.nextInt();
   }
```

```
  void calcavg()
  {
     average=(hindi+english+maths+computer)/4f;
     if(average>=90)
        grade="A++";
     else if(average>75 && average<90)
        grade="A";
     else if(average>=60 && average<=75)
        grade="B";
     else
        grade="C";
  }
  public static void main(String args[])
  {
     Student ob=new Student();
     ob.accept();
     ob.calcavg();
  }
}
```

7. Design class called Bank with the following descriptions:

Data members:

name	:	to store the name of the depositor
acno	:	to store the account number
type	:	to store type of the account
bal	:	to store the balance amount in the account

Member functions:

initialise( )	:	to assign the data members with any value.
depo(int a)	:	where a is the amount to be deposited and the variable bal is to be updated.
withdraw(int a)	:	where a is the amount to be withdrawn after checking the balance (Minimum balance should be ₹ 1000) and the variable bal is to be updated.
print( )	:	to print all the details.

Write the main method to create the object of the class and call the above method.

Ans.

```
import java.util.*;
class Bank
{
   String name;
   long acno;
   float bal;
   String  type;
   void initialise()
   {
      name="Saurav Agarwal";
      acno=1001098721;
      bal=10000;
      type="Savings";
   }
   void depo(int a)
   {
      bal+=a;
   }

   void withdraw(int a)
   {
         if(bal-a<1000)
         System.out.println("Minimum balance should be 1000 rupees");
         else
         bal-=a;
   }
```

```
void print()
{
   System.out.println("Name:"+name);
   System.out.println("Account No.:"+acno);
   System.out.println("Balance:"+bal);
   System.out.println("Type of Account:"+type);
}
```

```
   public static void main(String args[])
   {
      Bank ob=new Bank();
      Scanner sc=new Scanner(System.in);
      ob.initialise();
      char c;int a;
      System.out.println("Enter (D)eposit/(W)ithdraw:");
      c=sc.next().charAt(0);
      if(c=='D')
      {
         System.out.println("Enter the amount to deposit:");
         a=sc.nextInt();
         ob.depo(a);
      }
      else if(c=='W')
      {
         System.out.println("Enter the amount to withdraw:");
         a=sc.nextInt();
         ob.withdraw(a);
      }
      else
         System.out.println("Invalid input");
      ob.print();
   }
}
```