JAVA PROGRAMS

1.Create Class area and find area using constructor by passing arguments

```
import java.util.*;

import java.io.*;


public class Area

{

    int r;

    double pi=3.14;

    double length,breadth;



        Area(int radius)

        {

                this.r=radius;



        }

        Area(double l,double b)

        {

                this.length=l;

                this.breadth=b;

        }

        void areaCircle()

        {
```

```
        System.out.println("Area Of A Circle=\t"+pi*r*r);
    }
    void areaRectangle()
    {
        System.out.println("Area Of A Rectangle=\t"+length*breadth);
    }
        public static void main(String[] args)
        {
            Area a1=new Area(10);
            Area a2=new Area(2.5,5.0);
            a1.areaCircle();
            a2.areaRectangle();
        }
}
```

2.a Example For Overriding In java

```
class Dog{
    public void bark(){
        System.out.println("woof ");
    }
}
class Hound extends Dog{
    public void sniff(){
        System.out.println("sniff ");
    }
```

```
    public void bark(){
        System.out.println("bowl");
    }
}

public class OverridingTest{
    public static void main(String [] args){
        Dog dog = new Hound();
        dog.bark();
    }
}
```

2.b Examble For Overloading In java

```
class Overloading
{
    public void disp(char c)
    {
         System.out.println(c);
    }
    public void disp(char c, int num)
    {
         System.out.println(c + " "+num);
    }
}
```

```
class Sample
{
  public static void main(String args[])
  {
    DisplayOverloading obj = new DisplayOverloading();
    obj.disp('a');
    obj.disp('a',10);
  }
}
```

3. **Transpose Of A Matrix**

```
//Transpose Of A Matrix
import java.util.*;
class Transpose
{
        int row,column;

        public static void main(String[] args)
        {
                Scanner in=new Scanner(System.in);
                System.out.println("Enter The Number Of Rows\t");
                row=in.nextInt();
                System.out.println("Enter The Number Of Columns\t");
                column=in.nextInt();
                int matrix[][]=new int[row][column];
```

```
                Syste.out.println("Enter The Elements Of The Matrix\n");
                for(int i=0;i<row;i++)
                {
                        for(int j=0;j<column;j++)
                        {
                                matrix[i][j]=in.nextInt();
                                System.out.println(" ");
                        }
                }
System.out.println("The above matrix before Transpose is ");
          for(i = 0; i < row; i++)
          {
             for(j = 0; j < column; j++)
         {
          System.out.print(matrix[i][j]+" ");
         }
         System.out.println(" ");
      }
System.out.println("The above matrix after Transpose is ");
          for(i = 0; i < column; i++)
          {
             for(j = 0; j < row; j++)
         {
            System.out.print(matrix[j][i]+" ");
```

```
        }
        System.out.println(" ");
    }


     }

}
```

4. **//Write a java program to calculate the electricity bill as per the following details**

/*Given the number of units consumed, unit charges are as follows:

i) For first 50 units Rs. 0.50/unit

ii) For next 100 units Rs. 0.75/unit

iii) For next 100 units Rs. 1.20/unit

iv) For unit above 250 Rs. 1.50/unit*/

```
import java.util.*;
class Electricity
{
    public static void main(String args[])
    {
        long units;

        Scanner sc=new Scanner(System.in);
```

```
        System.out.println("enter number of units");


      units=sc.nextLong();


        double billpay=0;


      if(units<=50)
            billpay=units*0.50;


        else if(units<250)
            billpay=100*1.20+100*0.75(units-100)*2;


        else if(units>250)
            billpay=100*1.20+100*0.75+50*0.50(units-250)*3;


       System.out.println("Bill to pay : " + billpay);
  }
}
-============================================================================
```