NAME: SAALIM RASHID BHATKAR

SYBSC-IT

ROLL NO: 46 SEAT NO: SSIT-1207

SUBJECT: JAVA ASSIGNMENT

A.E. KALSEKAR DEGREE COLLEGE

Q. 1. Write a program in java to print area & perimeter of a circle.

Program:-

```
public class Circle
{
public static void main(String[] args)
{

System.out.println(" Enter a radius to find
area and perimeter of a circle ");
int radius = Integer.parseInt(System.console().
readLine());
Double area = 3.14 * radius * radius;
Double perimeter = 2 * 3.14 * radius;
System.out.println(" The area of a circle
is: " + area);
System.out.println(" The perimeter of a circle
is: " + perimeter);

}
}
```

Output:

```
Enter a radius to find area and perimeter
of a circle
5
The area of a circle is: 78.5
The perimeter of a circle is: 31.400000000000002
```

Q.2. Write a program in java to find the smallest and largest element from the array.

Program:-

```
public class Array
{
public static void largest(int arr[])
{
 int max = arr[0];

 for(int i=1 ; i< arr.length; i++)
    {
    if (max<arr[i])
      {
       max= arr[i];
      }
    }
  System.out.println("Largest element is:"+max);
 }
public static void smallest(int arr[])
   {
    int min= arr[0];
  for(int i=1 ;;i< arr.length ;i++)
    {
     if(min>arr[i]
       {
       min =arr[i];
       }
    }
```

```
    System.out.println(" Smallest element is:"+min);
}
public static void main(String[] args)
 {
  int arr[] = {21,14,15,24,0};
  largest(arr);
  smallest(arr);
 }
}
```

Output:

```
Largest element is: 24
Smallest element is: 0
```

Q. 3: Write a program in java to add 2 matrices & print the resultant matrix.

Program:-

```
public class MatrixAddition
{
public static void main(String args[])
{
int a[][] = {{1,3,4},{2,4,3},{3,4,5}};
int b[][] = {{1,3,4},{2,4,3}
int c[][] = new int[3][3];
System.out.println("Addition of 2 matrix is:");
for(int i=0; i<3; i++)
{
for(int j=0; j<3; j++)
{
c[i][j] = a[i][j] + b[i][j];
System.out.println(c[i][j] + " ");
}
System.out.println();
}
}
}
```

Output:

```
Addition of 2 matrix is:
2 6 8
4 8 6
4 6 9
```

Q.4. Write a program in java to implement exception handling.

program:-

```
class Division
{
public static void main(String args[])
{

int x = 10, a = 0;
System.out.println("Before division");
System.out.println(x + "dividing by" +a);

try
{
int p= x/a
System.out.println("division is:" +p);
}

catch(ArithmeticException ae)
{
System.out.println("Dividing by zero error");
}

System.out.println("Division not done");
}
}
```

Output:-

```
Before division
10 dividing by 0
Dividing by zero error
Division not done
```

Q.5. Write a program in java to design a basic calculator using AWT.

Program:-

```
import java.awt.*;
import java.awt.event.*;
class Calculator1 implements ActionListener
{
Frame f = new Frame();
Label l1 = new Label("First number");
Label l2 = new Label("Second number");
Label l3 = new Label("Result");

TextField t1 = new TextField();
TextField t2 = new TextField();
TextField t3 = new TextField();

Button b1 = new Button("Add");
Button b2 = new Button("Sub");
Button b3 = new Button("Mul");
Button b4 = new Button("Div");
Button b5 = new Button("Cancel");

Calculator1()
{
l1.setBounds(50,100,100,20);
l2.setBounds(50,140,100,20);
l3.setBounds(50,180,100,20);
```

```
t1.setBounds(200,100,100,20);
t2.setBounds(200,140,100,20);
t3.setBounds(200,180,100,20);

b1.setBounds(50,250,50,20);
b2.setBounds(110,250,50,20);
b3.setBounds(170,250,50,20);
b4.setBounds(230,250,50,20);
b5.setBounds(290,250,50,20);

f.add(l1);
f.add(l2);
f.add(l3);

f.add(t1);
f.add(t2);
f.add(t3);

f.add(b1);
f.add(b2);
f.add(b3);
f.add(b4);
f.add(b5);

b1.addActionListener(this);
b2.addActionListener(this);
b3.addActionListener(this);
b4.addActionListener(this);
b5.addActionListener(this);
```

```
    f.setLayout(null);
    f.setVisible(true);
    f.setSize(400,350);
}

public void actionPerformed(ActionEvent e)
{

int n1 = Integer.parseInt(t1.getText());
int n2 = Integer.parseInt(t2.getText());
if(e.getSource()==b1)
 {
 t3.setText(String.valueOf(n1+n2));
 }
if(e.getSource()==b2)
 {
 t3.setText(String.valueOf(n1-n2));
 }
if(e.getSource()==b3)
{
 t3.setText(String.valueOf(n1*n2));
}
if(e.getSource()==b4)
{
t3.setText(String.valueOf(n1/n2));
}
if(e.getSource()==b5)
{
 System.exit(0);
 }
}
```

(9)

```
public static void main(String args[])
  {
   new Calculator1();
  }
}
```

Output: