EXPERIMENT NUMBER: 18

AIM

Program to find maximum of three numbers using AWT.

ALGORITHM

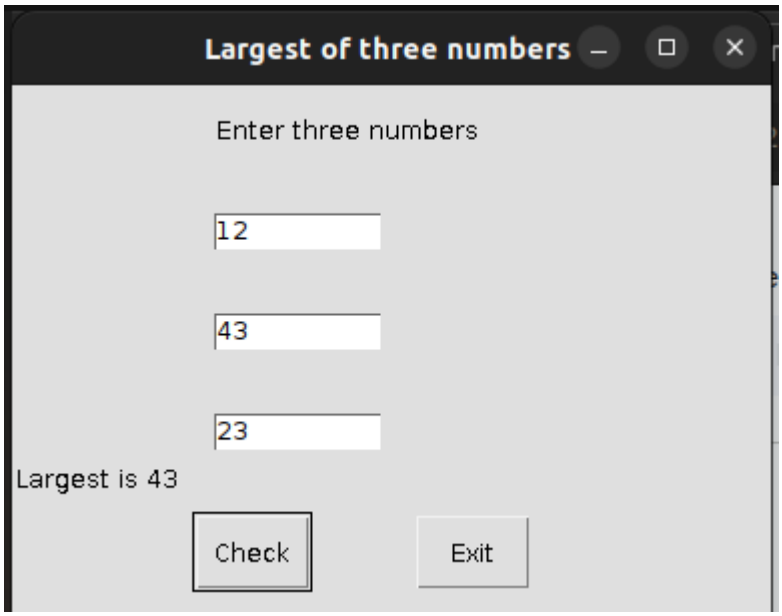
PROGRAM CODE

```
import java.awt.*;
import java.awt.event.*;
public class LearnAWT extends Frame {
  TextField tf1;
  TextField tf2;
  TextField tf3;
  Label l,l1,label;
  Button b,b1;
  LearnAWT() {
  setTitle("Largest of three numbers");
 label = new Label("Enter three numbers");
  label.setBounds(100, 50, 150, 20);
  add(label);
  tf1 = new TextField();
  tf1.setBounds(100, 100, 85, 20);
  add(tf1);
  tf2 = new TextField();
tf2.setBounds(100, 150, 85, 20);
add(tf2);
tf3 = new TextField();
  tf3.setBounds(100, 200, 85, 20);
  add(tf3);
b = new Button("Check");
b.setBounds(90,250,60,40);
add(b);
b1 = new Button("Exit");
b1.setBounds(200,250,60,40);
```

```
add(b1);
l1 = new Label();
l1.setBounds(100, 120, 85, 20);
add(l1);
setSize(400,400);
setVisible(true);

b.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e) {
int a = Integer.parseInt(tf1.getText());
int b = Integer.parseInt(tf2.getText());
int c = Integer.parseInt(tf3.getText());

if ( a>b&& a>c)
{
l1.setText("Largest is " + String.valueOf(a));
}
else if (b>c)
{
l1.setText("Largest is " + String.valueOf(b));
}
else
{
l1.setText("Largest is " + String.valueOf(c));
}
}
});
```

```
b1.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e) {
System.exit(0);
}});
}
public static void main(String []args) {
new LearnAWT();
}
}
```

OUTPUT


Largest of three numbers
Enter three numbers
12
43
23
Largest is 43
Check
Exit

EXPERIMENT NUMBER: 19

AIM

Program to implement a simple calculator using AWT components.

ALGORITHM

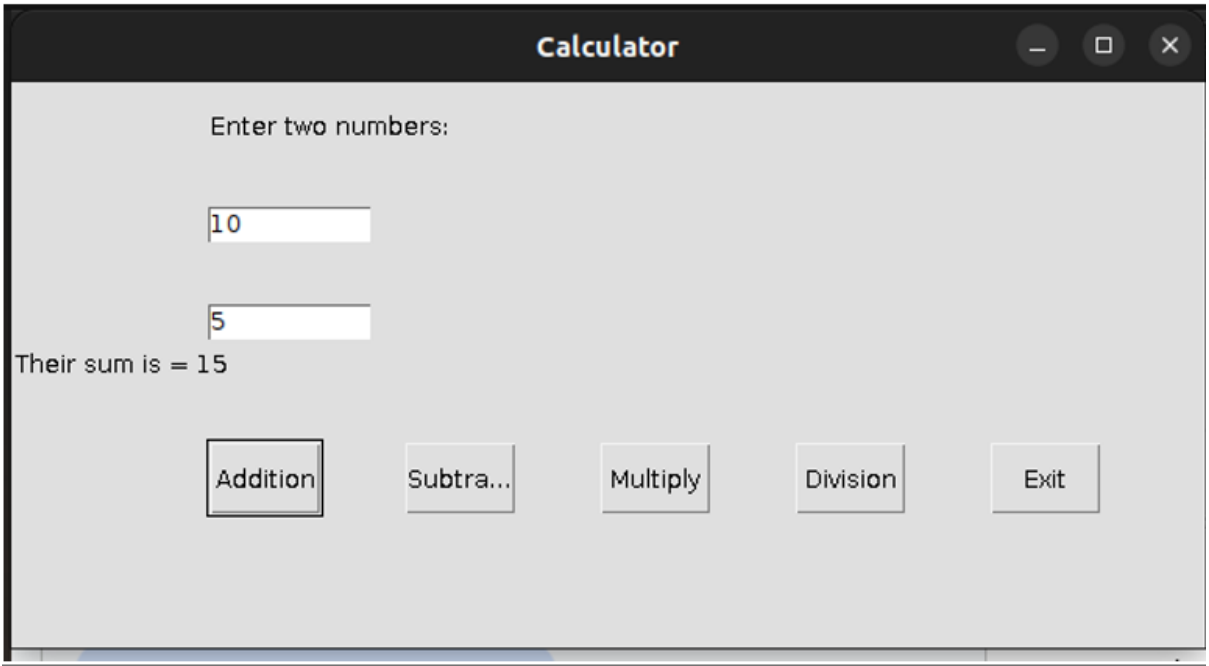
PROGRAM CODE

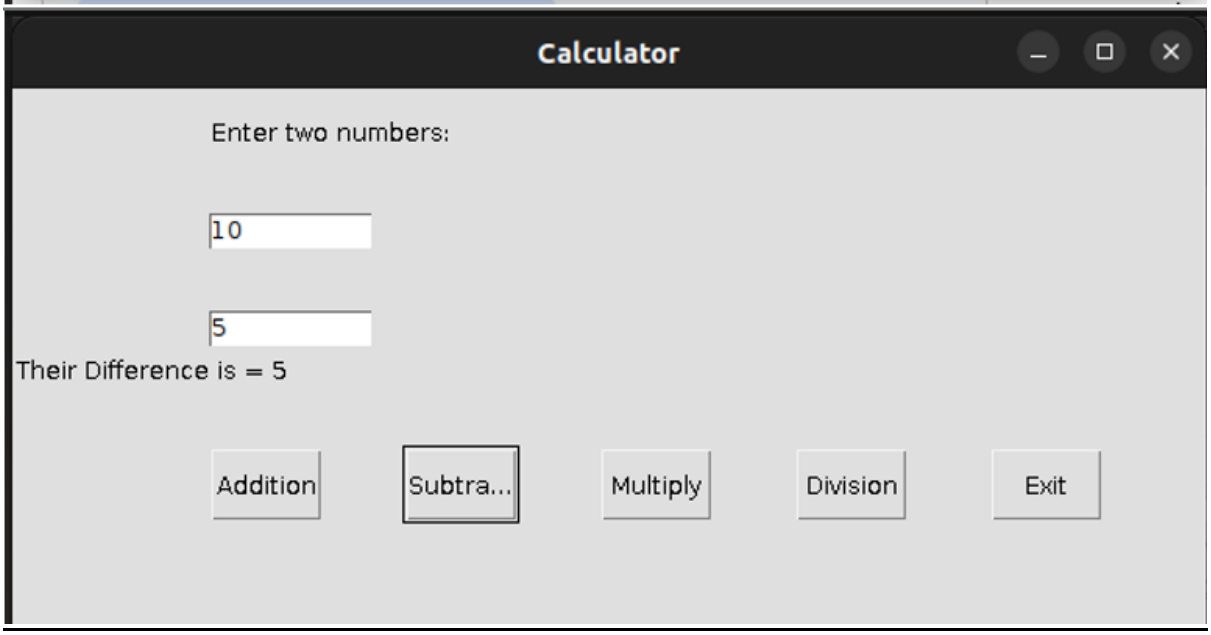
```
import java.awt.*;
import java.awt.event.*;
public class LearnAWT extends Frame {
  TextField tf1;
  TextField tf2;
  Label l,l1,label;
  Button b2,b3,b4,b1,b5;
  LearnAWT() {
  setTitle("Calculator");
 label = new Label("Enter two numbers:");
  label.setBounds(100, 50, 150, 20);
       add(label);
  tf1 = new TextField();
  tf1.setBounds(100, 100, 85, 20);
  add(tf1);
  tf2 = new TextField();
tf2.setBounds(100, 150, 85, 20);
add(tf2);
b1 = new Button("Addition");
b1.setBounds(100,220,60,40);
add(b1);
b2= new Button("Subtraction");
b2.setBounds(200,220,60,40);
add(b2);
b3 = new Button("Multiply");
b3.setBounds(300,220,60,40);
add(b3);
```

```
b4 = new Button("Division");
b4.setBounds(400,220,60,40);
add(b4);
b5 = new Button("Exit");
b5.setBounds(500,220,60,40);
add(b5);
l1 = new Label("");
l1.setBounds(100, 120, 85, 20);
add(l1);
setSize(300,300);
setVisible(true);

b1.addActionListener(new ActionListener(){
public void actionPerformed(ActionEvent e) {
int a = Integer.parseInt(tf1.getText());
int b = Integer.parseInt(tf2.getText());
int c = a + b;
l1.setText("Their sum is = " + String.valueOf(c));
}
});

b2.addActionListener(new ActionListener(){
public void actionPerformed(ActionEvent e) {
int a = Integer.parseInt(tf1.getText());
int b = Integer.parseInt(tf2.getText());
int c = a- b;
l1.setText("Their Difference is = " + String.valueOf(c));
}
```

```
});

b3.addActionListener(new ActionListener(){
public void actionPerformed(ActionEvent e) {
int a = Integer.parseInt(tf1.getText());
int b = Integer.parseInt(tf2.getText());
int c = a * b;
l1.setText("Their Product is = " + String.valueOf(c));
}
});

b4.addActionListener(new ActionListener(){
public void actionPerformed(ActionEvent e) {
int a = Integer.parseInt(tf1.getText());
int b = Integer.parseInt(tf2.getText());
int c = a / b;
l1.setText("Their quotient is = " + String.valueOf(c));
}
});
b5.addActionListener(new ActionListener(){
public void actionPerformed(ActionEvent e) {
System.exit(0);
}});
}
public static void main(String []args) {
new LearnAWT();
}
}
```

OUTPUT


Calculator
Enter two numbers:
10
5
Their sum is = 15
Addition
Subtra...
Multiply
Division
Exit


Calculator
Enter two numbers:
10
5
Their Difference is = 5
Addition
Subtra...
Multiply
Division
Exit

EXPERIMENT NUMBER: 20

AIM

Write a program to write to a file, then read from the file and display the contents on the Console.

ALGORITHM

PROGRAM CODE

```
import java.io.*;
import java.util.*;


public class FileRW {
public static void main(String[] args) {
try {


FileWriter writer = new FileWriter("file1.txt");
writer.write("Hello, Welcome to Ooty.\nNice to meet you.");
writer.close();
FileReader reader = new FileReader("file1.txt");
Scanner scanner = new Scanner(reader);
while (scanner.hasNextLine())
{
System.out.println(scanner.nextLine());
}
scanner.close();
} catch (IOException e) {
System.out.println("An error occurred: " + e.getMessage());
}
}
}
```

OUTPUT

```
developer@ccfl6-pc58:~$ javac FileRW.java
developer@ccfl6-pc58:~$ java FileRW
Hello, Welcome to Ooty.
Nice to meet you.
```

EXPERIMENT NUMBER: 21

AIM

Write a program that reads from a file having integers. Copy even numbers and odd numbers to separate files.

ALGORITHM

PROGRAM CODE

```
import java.io.*;
import java.util.Scanner;


public class EvenOddFC {
public static void main(String[] args) {
try {
FileWriter writer = new FileWriter("input.txt");
writer.write("11\n22\n33\n44\n55\n66\n77\n88\n99\n100\n");
writer.close();
FileReader reader = new FileReader("input.txt");
Scanner scanner = new Scanner(reader);
FileWriter evenWriter = new FileWriter("even.txt");
FileWriter oddWriter = new FileWriter("odd.txt");

while (scanner.hasNextInt()) {
int num = scanner.nextInt();
if (num % 2 == 0) {
evenWriter.write(num + "\n");
} else {
oddWriter.write(num + "\n");
}
}
scanner.close();
evenWriter.close();
oddWriter.close();
```

```
System.out.println("Even numbers:");
displayFileContents("even.txt");
System.out.println("Odd numbers:");
displayFileContents("odd.txt");
} catch (IOException e) {
e.printStackTrace();
}
}
private static void displayFileContents(String filename) throws IOException {
Scanner scanner = new Scanner(new FileReader(filename));
while (scanner.hasNextLine()) {
System.out.println(scanner.nextLine());
}
scanner.close();
}
}
```

OUTPUT

```
developer@ccfl6-pc58:~$ javac EvenOddFC.java
developer@ccfl6-pc58:~$ java EvenOddFC
Even numbers:
22
44
66
88
100
Odd numbers:
11
33
55
77
99
developer@ccfl6-pc58:~$
developer@ccfl6-pc58:~$
```