

Java End Term Practical

Q1. Write an applet program which can perform the arithmetic operations like Sum, Subtract, Multiplication & Division.

Source Code:

Applet1.java

```
import java.awt.*;
import java.awt.event.*;
import java.applet.*;

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/*
<applet code="Applet1.class" width="300" height="300"> </applet>

*/

public class Applet1 extends Applet implements ActionListener
{
    Label label1, label2, label3;
    TextField tf1, tf2, tf3;
    Button b1, b2, b3, b4;
    String whichButtonClk;

    public void init()
    {
        System.out.println("Initializing an applet");

        label1 = new Label("Number1");
        tf1= new TextField(10);

        label2 = new Label("Number2");
        tf2= new TextField(10);

        b1 = new Button("Add");
        b2= new Button("Subtract");
        b3 = new Button("Multiply");
        b4= new Button("Divide");

        add(label1);
        add(tf1);
```

```
add(label2);
add(tf2);
```

```
add(b1);
add(b2);
add(b3);
add(b4);
```

```
tf1.addActionListener(this);
tf2.addActionListener(this);
b1.addActionListener(this);
b2.addActionListener(this);
b3.addActionListener(this);
b4.addActionListener(this);
```

```
}
```

```
public void actionPerformed(ActionEvent ae)
{
    if(ae.getActionCommand().equals("Add") || ae.getActionCommand().equals("Subtract")
    ||ae.getActionCommand().equals("Multiply") ||ae.getActionCommand().equals("Divide"))//
    checking if an event of clicking the add/subtract/multiply/divide button is generated
    {
        whichButtonClk=ae.getActionCommand();
        repaint();
    }
}
```

```
public void paint(Graphics g)
{
    g.drawString("Please enter two numbers to perform math operations", 10,130);

    if(tf1.getText().equals("") && tf2.getText().equals(""))
    {
    }
    else
    {
        Integer i1= new Integer(tf1.getText());
        Integer i2= new Integer(tf2.getText());
        int sum = i1+i2;
        int subtract=i1-i2;
        int multiply=i1*i2;
        float divide=(float)i1/(float)i2;
```

```

        if(whichButtonClk.equals("Add"))
            g.drawString("Your sum is "+ sum, 10,190);
        if(whichButtonClk.equals("Subtract"))
            g.drawString("Your subtract is "+ subtract, 10,190);
        if(whichButtonClk.equals("Multiply"))
            g.drawString("Your multiply is "+ multiply, 10,190);
        if(whichButtonClk.equals("Divide"))
            g.drawString("Your divide is "+ divide, 10,190);
    }
}
}
}

```

E:\java_programs\Applet1.java - Sublime Text (UNREGISTERED)

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Applet1.html Applet1.java CountWord.java

```

1  import java.awt.*;
2  import java.awt.event.*;
3  import java.applet.*;
4
5  // Nikhil Joshi 20711105 Haldwani Campus
6
7  /*
8  <applet code="Applet1.class" width="300" height="300"> </applet>
9
10 */
11
12 public class Applet1 extends Applet implements ActionListener
13 {
14     Label label1, label2, label3;
15     TextField tf1, tf2, tf3;
16     Button b1, b2, b3, b4;
17     String whichButtonClk;
18
19     public void init()
20     {
21         System.out.println("Initializing an applet");
22
23         label1 = new Label("Number1");
24         tf1= new TextField(10);
25
26         label2 = new Label("Number2");
27         tf2= new TextField(10);
28
29         b1 = new Button("Add");
30         b2= new Button("Subtract");
31         b3 = new Button("Multiply");
32         b4= new Button("Divide");

```

Line 32, Column 26

Tab Size: 4 Java

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```
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Applet1.html Applet1.java CountWord.java

33 add(label1);
34 add(tf1);
35
36 add(label2);
37 add(tf2);
38
39 add(b1);
40 add(b2);
41 add(b3);
42 add(b4);
43
44
45 tf1.addActionListener(this);
46 tf2.addActionListener(this);
47 b1.addActionListener(this);
48 b2.addActionListener(this);
49 b3.addActionListener(this);
50 b4.addActionListener(this);
51
52 }
53
54
55 public void actionPerformed(ActionEvent ae)
56 {
57     if(ae.getActionCommand().equals("Add") || ae.getActionCommand().equals("Subtract") || ae.getActionCommand().equals("Multiply") || ae.
58     {
59         whichButtonClk=ae.getActionCommand();
60         repaint();
61     }
62 }
63
64 public void paint(Graphics g)
```

```
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Applet1.html Applet1.java CountWord.java

59 whichButtonClk=ae.getActionCommand();
60 repaint();
61 }
62 }
63 public void paint(Graphics g)
64 {
65     g.drawString("Please enter two numbers to perform math operations", 10,130);
66
67     if(tf1.getText().equals("") && tf2.getText().equals(""))
68     {
69     }
70     else
71     {
72         Integer i1= new Integer(tf1.getText());
73         Integer i2= new Integer(tf2.getText());
74         int sum = i1+i2;
75         int subtract=i1-i2;
76         int multiply=i1*i2;
77         float divide=(float)i1/(float)i2;
78
79         if(whichButtonClk.equals("Add"))
80             g.drawString("Your sum is "+ sum, 10,190);
81         if(whichButtonClk.equals("Subtract"))
82             g.drawString("Your subtract is "+ subtract, 10,190);
83         if(whichButtonClk.equals("Multiply"))
84             g.drawString("Your multiply is "+ multiply, 10,190);
85         if(whichButtonClk.equals("Divide"))
86             g.drawString("Your divide is "+ divide, 10,190);
87     }
88 }
89 }
90 }
```

Applet1.html

```
<html>
<body>
<applet code="Applet1.class" width="300" height="300"> </applet>
</body>
</html>
```

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Applet1.html x Applet1.java x CountWord.java x

```
1 E:\java_programs\Applet1.html
2 <body>
3 <applet code="Applet1.class" width="300" height="300"> </applet>
4 </body>
5 </html>
```

Line 5, Column 10; Undo: Insert Characters

Tab Size: 4 HTML

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Output:

Command Prompt - appletviewer Applet1.html

Microsoft Windows [Version 10.0.19042.1110]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Wikhil>e:

E:\>cd java_programs

E:\java_programs>javac Applet1.java

E:\java_programs>appletviewer Applet1.html

Initializing an applet

Applet Viewer: Applet1.class

Applet

Number1 Number2

Please enter two numbers to perform math operations

Your sum is 50

Applet started.

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