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Course: Object Oriented Programming using Java

Experiment no. 12

Aim: To implement basic Swing programs with event handling

Problem Statement 1:

Write java program to create a registration form. Take Login id and Password from the user and display it on the third Text Field which appears only on clicking OK button and clear both the Text Fields on clicking RESET button.

Code:

```
import javax.swing.*.*;
import java.awt.*.*;
import java.awt.event.*;
class Hello implements ActionListener
{
    JLabel l1,l2,l3;
    JButton b1,b2;
    JTextField t1,t2,t3;
    JFrame f;
    JPasswordField p;
    public Hello()
    {
        f=new JFrame();
        l1=new JLabel("UserName: ");
        f.add(l1);
        t1=new JTextField(20);
        f.add(t1);
        t2=new JTextField(20);
        l2=new JLabel("Password: ");
        f.add(l2);

        p=new JPasswordField(20);
        f.add(p);
        f.setLayout(new FlowLayout());
        b1=new JButton("Enter");
        f.add(b1);
        t3=new JTextField(30);
        b1.addActionListener(this);
        b2=new JButton("Reset");
        f.add(b2);
        b2.addActionListener(this);
        f.setLayout(new FlowLayout());
        f.setVisible(true);
        f.setSize(500,500);
        f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }
    public void actionPerformed(ActionEvent e){
        if(e.getSource()==b1){
```



```
String name,pass;
name=t1.getText();
pass=p.getText();
if(name.equals("Anish") && pass.equals("pass@123"))
    t3.setText("Welcome "+name);
else
    t3.setText("Incorrect");
f.add(t3);
}
else if(e.getSource()==b2){
    t1.setText("");
    p.setText("");
}
}
}
class Swing2
{
    public static void main(String[] args)
    {
        Hello h=new Hello();
    }
}
```

Output

UserName: Anish

Password:

Enter Reset

Welcome Anish

After Reset

UserName:

Password:

Enter Reset



Problem Statement 2:

Write a program to create a basic calculator.

Code:

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

class Hello implements ActionListener
{
    JFrame f;

    JLabel l1;

    JButton b0,b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11,b12,b13,b14;

    JTextField t1;

    String[] str=new String[3];

    String s1,s2;

    int total;

    public Hello()
    {

        f=new JFrame();

        l1=new JLabel("Basic Calculator:");

        f.add(l1);

        t1=new JTextField(20);

        f.add(t1);

        b0=new JButton("0 ");
        b1=new JButton("1 ");
        b2=new JButton("2 ");
        b3=new JButton("3 ");
        b4=new JButton("4 ");
        b5=new JButton("5 ");
        b6=new JButton("6 ");
        b7=new JButton("7 ");
        b8=new JButton("8 ");
```



```
b9=new JButton("9 ");
```

```
f.add(b0);f.add(b1);f.add(b2);f.add(b3);f.add(b4);f.add(b5);f.add(b6);f.add(b7);f.add(b8);f.add(b9);
```

```
b0.addActionListener(this);b1.addActionListener(this);b2.addActionListener(this);b3.addActionLi  
stener(this);b4.addActionListener(this);
```

```
b5.addActionListener(this);b6.addActionListener(this);b7.addActionListener(this);b8.addActionLi  
stener(this);b9.addActionListener(this);
```

```
b10=new JButton("+ ");
```

```
b11=new JButton("- ");
```

```
b12=new JButton("* ");
```

```
b13=new JButton("/ ");
```

```
f.add(b10);f.add(b11);f.add(b12);f.add(b13);
```

```
b10.addActionListener(this);b11.addActionListener(this);b12.addActionListener(this);b13.addActionLi  
stener(this);
```

```
b14=new JButton("=" );
```

```
f.add(b14);
```

```
b14.addActionListener(this);
```

```
f.setLayout(new FlowLayout());
```

```
f.setVisible(true);
```

```
f.setSize(500,500);
```

```
f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
}
```

```
public void actionPerformed(ActionEvent e){
```

```
    if(e.getSource()==b0)
```

```
    {
```

```
        t1.setText(t1.getText().concat("0"));
```

```
    }
```

```
    if(e.getSource()==b1)
```

```
    {
```

```
        t1.setText(t1.getText().concat("1"));
```

```
    }
```

```
    if(e.getSource()==b2)
```

```
    {
```



```
t1.setText(t1.getText().concat("2"));

}

if(e.getSource()==b3)
{

    t1.setText(t1.getText().concat("3"));

}

if(e.getSource()==b4)
{

    t1.setText(t1.getText().concat("4"));

}

if(e.getSource()==b5)
{

    t1.setText(t1.getText().concat("5"));

}

if(e.getSource()==b6)
{

    t1.setText(t1.getText().concat("6"));

}

if(e.getSource()==b7)
{

    t1.setText(t1.getText().concat("7"));

}

if(e.getSource()==b8)
{

    t1.setText(t1.getText().concat("8"));

}

if(e.getSource()==b9)
{

    t1.setText(t1.getText().concat("9"));

}

if(e.getSource()==b10)
{

    t1.setText(t1.getText().concat("+"));
```



```
}  
if(e.getSource()==b11)  
{  
    t1.setText(t1.getText().concat("-"));  
}  
if(e.getSource()==b12)  
{  
    t1.setText(t1.getText().concat("*"));  
}  
if(e.getSource()==b13)  
{  
    t1.setText(t1.getText().concat("/"));  
}  
if(e.getSource()==b14)  
{  
    if(t1.getText().contains("+"))  
    {  
        str=t1.getText().split("\\+");  
        s1=str[0];  
        s2=str[1];  
        total=Integer.parseInt(s1)+Integer.parseInt(s2);  
        t1.setText(total+"");  
    }  
    else if(t1.getText().contains("-"))  
    {  
        str=t1.getText().split("\\-");  
        s1=str[0];  
        s2=str[1];  
        total=Integer.parseInt(s1)-Integer.parseInt(s2);  
        t1.setText(total+"");  
    }  
    else if(t1.getText().contains("*"))  
    {
```

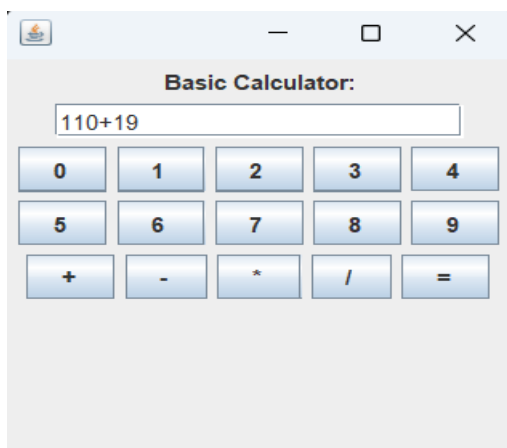


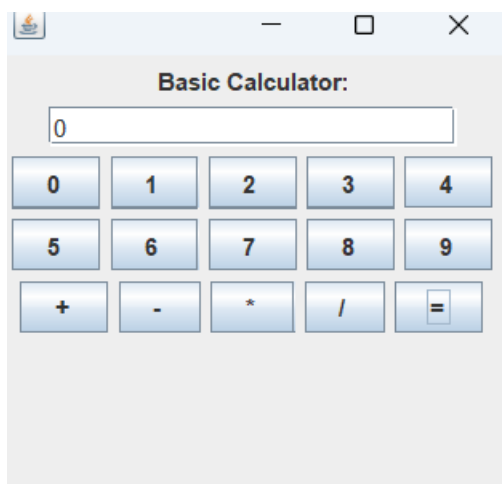
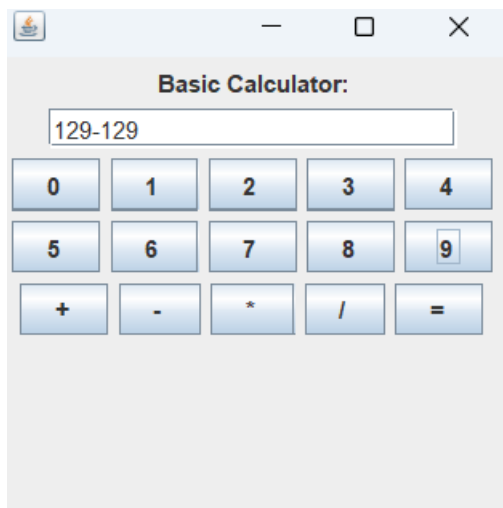
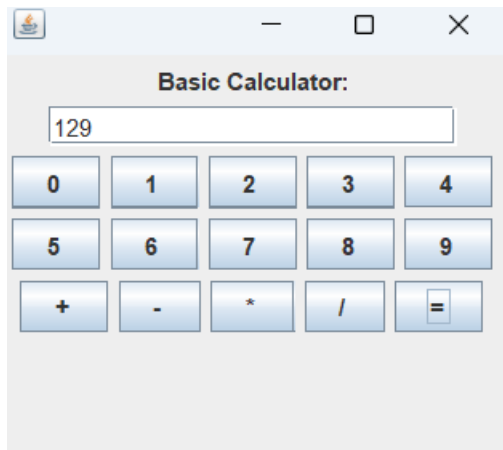
```
        str=t1.getText().split("\\*");
        s1=str[0];
        s2=str[1];
        total=Integer.parseInt(s1)*Integer.parseInt(s2);
        t1.setText(total+"");
    }
    if(t1.getText().contains("/"))
    {
        str=t1.getText().split("\\/");
        s1=str[0];
        s2=str[1];
        total=Integer.parseInt(s1)/Integer.parseInt(s2);
        t1.setText(total+"");
    }
}

}

class Swing5
{
    public static void main(String[] args)
    {
        Hello h=new Hello();
    }
}
```

Output







Problem Statement 3:

Display the selected fields in details after submit button is clicked.

Code:

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

class Hello implements ActionListener{

    JLabel l1, l2, l3, l4, l5;

    JButton b1, b2;

    JTextField t1, t2;

    JRadioButton r1, r2;

    JCheckBox c1, c2, c3;

    JTextArea a1, a2;

    JComboBox cb1;

    ButtonGroup g1;

    JFrame f;

    String[] fav={"Mumbai", "Goa", "Hyderabad", "Banglore", "Silicon Valley", "Gudgaon"};

    Hello(){

        f = new JFrame();

        l1=new JLabel("Name: ");

        f.add(l1);

        t1 = new JTextField(10);

        f.add(t1);

        l2=new JLabel("Gender: ");

        f.add(l2);

        r1=new JRadioButton("Male");

        f.add(r1);

        r2=new JRadioButton("Female");

        f.add(r2);

        g1= new ButtonGroup();
```



```
g1.add(r1);

g1.add(r2);

l3=new JLabel("Interest: ");

f.add(l3);

c1=new JCheckBox("Music");

f.add(c1);

c2=new JCheckBox("Gaming");

f.add(c2);

c3=new JCheckBox("Reading");

f.add(c3);

l4=new JLabel("Few Places ");

f.add(l4);

cb1= new JComboBox(fav);

f.add(cb1);

l5=new JLabel("Details: ");

f.add(l5);

a1= new JTextArea(10,10);

f.add(a1);

b1=new JButton("Submit");

f.add(b1);

b2=new JButton("Exit");

f.add(b2);

b1.addActionListener(this);

b2.addActionListener(this);

a2= new JTextArea(10,10);

f.setLayout(new FlowLayout());

f.setVisible(true);

f.setSize(200,600);

f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

}

public void actionPerformed(ActionEvent e){
```



```
String salutation;

String[] interest = new String[3];

if(e.getSource()==b1){

    String name=t1.getText();

    String details = a1.getText();

    if(r1.isSelected()==true){

        salutation="Mr. ";

    }

    else{

        salutation="Ms. ";

    }


    if(c1.isSelected()==true){

        interest[0]="Music, ";

    }

    else if(c2.isSelected()==true){

        interest[1]="Gaming, ";

    }

    else if(c3.isSelected()==true){

        interest[2]="Reading, ";

    }

}

String place = (String)cb1.getSelectedItem();

a2.setText("Name:"+salutation+name+"\nInterest:
"+interest[0]+interest[1]+interest[2]+"
\nFav Place:"+place+"\n Details: "+details);

f.add(a2);

}

else if(e.getSource()==b2){

    f.dispose();

}

}

}
```



```
class SwingDisplay{  
    public static void main(String[] args){  
        Hello h = new Hello();  
    }  
}
```

Output