Java GUI Programs

Lab-01: Write a JAVA Program to Display Image using JFrame

 # Source Code in JAVA:

```java
import java.awt.FlowLayout;

import javax.swing.ImageIcon;
import javax.swing.JFrame;
import javax.swing.JLabel;

public class Image extends JFrame {
        private ImageIcon image1;
        private JLabel label1;
        private ImageIcon image2;
        private JLabel label2;

        Image(){
                setLayout(new FlowLayout());
                image1 = new ImageIcon(getClass().getResource("ice.jpg"));
                label1 = new JLabel(image1);
                add(label1);

                image2 = new ImageIcon(getClass().getResource("pust.png"));
                label2 = new JLabel(image2);
                add(label2);

        }

        public static void main(String args[]) {

                Image gui = new Image();
                gui.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
                gui.setVisible(true);
                gui.pack();
                gui.setTitle("Image Program");
        }

}
```

 # Output:

Lab-02: Write a JAVA Program for generating Restaurant Bill

Source Code in JAVA:

```java
import javax.swing.*;
import java.awt.event.*;
public class BillGeneration extends JFrame implements ActionListener{
    JLabel l;
    JCheckBox cb1,cb2,cb3;
    JButton b;
    BillGeneration(){
        l=new JLabel("Food Ordering System");
        l.setBounds(50,50,300,20);
        cb1=new JCheckBox("Pizza @ 100");
        cb1.setBounds(100,100,150,20);
        cb2=new JCheckBox("Burger @ 30");
        cb2.setBounds(100,150,150,20);
        cb3=new JCheckBox("Tea @ 10");
        cb3.setBounds(100,200,150,20);
        b=new JButton("Order");
        b.setBounds(100,250,80,30);
        b.addActionListener(this);
        add(l);add(cb1);add(cb2);add(cb3);add(b);
        setSize(400,400);
        setLayout(null);
        setVisible(true);
        setDefaultCloseOperation(EXIT_ON_CLOSE);
    }
    public void actionPerformed(ActionEvent e){
        float amount=0;
        String msg="";
        if(cb1.isSelected()){
            amount+=100;
            msg="Pizza: 100\n";
        }
        if(cb2.isSelected()){
            amount+=30;
            msg+="Burger: 30\n";
        }
        if(cb3.isSelected()){
            amount+=10;
            msg+="Tea: 10\n";
        }
        msg+="----------------\n";
        JOptionPane.showMessageDialog(this,msg+"Total: "+amount);
    }
    public static void main(String[] args) {
        new BillGeneration();
    }
}
```

Output:
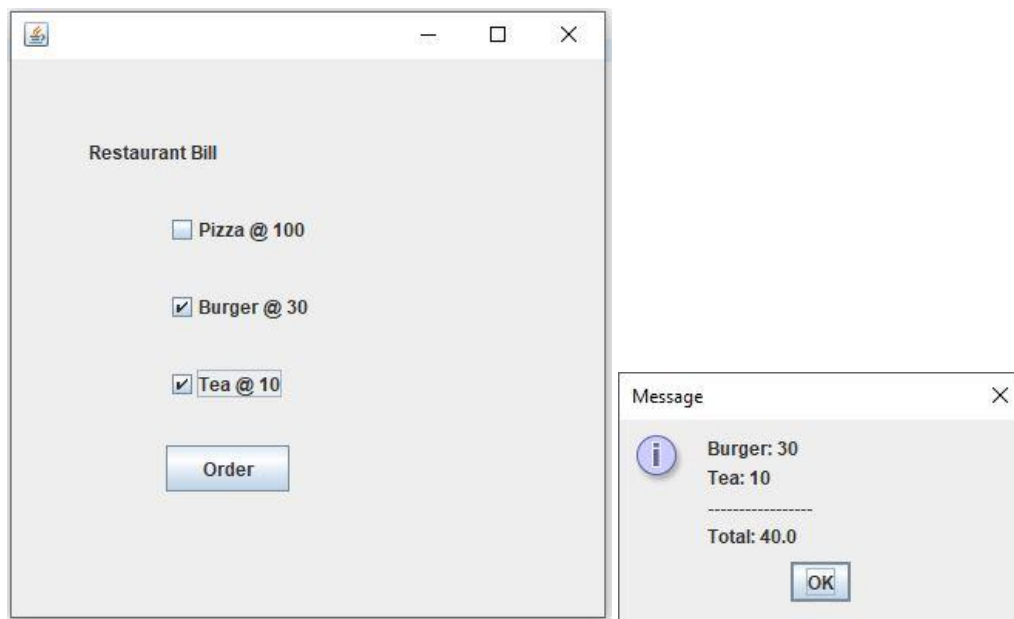
Lab-03: Write a JAVA Program to Create a Student form in GUI

Source Code in JAVA:

```java
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class form implements ActionListener {

    private static JLabel success;
    private static JFrame frame;
    private static JLabel label1,label2,label3;
    private static JPanel panel;
    private static JButton button;
    private static JTextField userText1, userText2, userText3;

    public static void main(String[] args) {

        frame = new JFrame();
         panel = new JPanel();
        frame.setSize(400, 300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        frame.add(panel);
        panel.setLayout(null);

        //Setting all Three Lebels
        label1= new JLabel("Name");
        label1.setBounds(10,10,80,25);
        panel.add(label1);
```

```java
        label2 = new JLabel("Roll");
        label2.setBounds(10,60,80,25);
        panel.add(label2);
        label3 = new JLabel("Department");
        label3.setBounds(10,110,80,25);
        panel.add(label3);

        //Creating all Textfields
        userText1 = new JTextField("Enter Your Name");
        userText1.setBounds(100,10,200,25);
        panel.add(userText1);
        JTextField userText2 = new JTextField("Enter Your Name");
        userText2.setBounds(100,60,200,25);
        panel.add(userText2);
        JTextField userText3 = new JTextField("Enter Your Name");
        userText3.setBounds(100,110,200,25);
        panel.add(userText3);

        button = new JButton("Save");
        button.setBounds(150, 160, 80, 25);
        button.addActionListener(new form());
        panel.add(button);

        success = new JLabel("");
        success.setBounds(130,210,300,25);
        panel.add(success);

        frame.setVisible(true);

    }

    @Override
    public void actionPerformed(ActionEvent e) {
        // TODO Auto-generated method stub
        success.setText("Saved Successfully");
    }

}
```

Output:

Lab-04: Write a JAVA Program to develop a simple calculator in GUI

Source Code in JAVA:

```java
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.*;
public class calculator extends JFrame implements ActionListener
{
    JButton b10,b11,b12,b13,b14,b15;
    JButton b[]=new JButton[10];
     int i,r,n1,n2;
     JTextField res;
     char op;
    public calculator()
  {
     super("Calulator");
      setLayout(new BorderLayout());
      JPanel p=new JPanel();
      p.setLayout(new GridLayout(4,4));
      for(int i=0;i<=9;i++)
      {
        b[i]=new JButton(i+"");
        p.add(b[i]);
        b[i].addActionListener(this);
      }
      b10=new JButton("+");
      p.add(b10);
      b10.addActionListener(this);

      b11=new JButton("-");
      p.add(b11);
      b11.addActionListener(this);

      b12=new JButton("*");
      p.add(b12);
      b12.addActionListener(this);

      b13=new JButton("/");
      p.add(b13);
      b13.addActionListener(this);

      b14=new JButton("=");
      p.add(b14);
      b14.addActionListener(this);

      b15=new JButton("C");
      p.add(b15);
      b15.addActionListener(this);

      res=new JTextField(10);
      add(p,BorderLayout.CENTER);
      add(res,BorderLayout.NORTH);
      setVisible(true);
      setSize(200,200);
     }
public void actionPerformed(ActionEvent ae)
```

```java
{
   JButton pb=(JButton)ae.getSource();
      if(pb==b15)
      {
       r=n1=n2=0;
       res.setText("");
      }
      else
            if(pb==b14)
            {
             n2=Integer.parseInt(res.getText());
             eval();
             res.setText(""+r);
            }

            else
            {
              boolean opf=false;
              if(pb==b10)
                    { op='+';
                       opf=true;
                    }
              if(pb==b11)
                    { op='-';opf=true;}
              if(pb==b12)
                    { op='*';opf=true;}
              if(pb==b13)
                    { op='/';opf=true;}

              if(opf==false)
              {
               for(i=0;i<10;i++)
                {
                    if(pb==b[i])
                    {
                    String t=res.getText();
                    t+=i;
                    res.setText(t);
                    }
                }
              }
              else
              {
                    n1=Integer.parseInt(res.getText());
                    res.setText("");
              }
            }
}
int eval()
{
      switch(op)
      {
      case '+':    r=n1+n2;  break;
      case '-':    r=n1-n2;   break;
      case '*':    r=n1*n2; break;
      case '/':    r=n1/n2; break;

      }
      return 0;
```

```
    }

    public static void main(String arg[])
    {
        new calculator();
    }
}
```

Output: