Practical 4

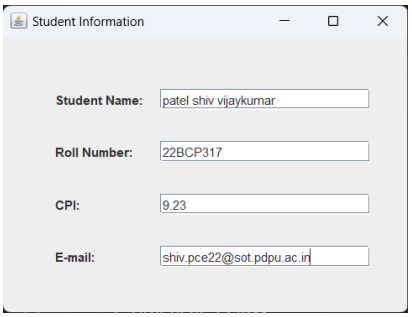
ROLL NO:	22BCP317	Batch	G8
NAME:	Patel shiv vijaykumar		
Practical	4/1		
Aim:	**WAP to create a GUI Frame that displays student Name, Student Roll No,CPI,E-mail.**		

Source code:

```
import javax.swing.*;

public class practical4_1{
   public static void main(String[] args) {
      JFrame frame = new JFrame("Student Information");

      JLabel nameLabel = new JLabel("Student Name:");
      nameLabel.setBounds(50, 50, 100, 20);

      JLabel rollNumberLabel = new JLabel("Roll Number:");
      rollNumberLabel.setBounds(50, 100, 100, 20);

      JLabel cpiLabel = new JLabel("CPI:");
      cpiLabel.setBounds(50, 150, 100, 20);

      JLabel emailLabel = new JLabel("E-mail:");
      emailLabel.setBounds(50, 200, 100, 20);

      JTextField nameField = new JTextField();
      nameField.setBounds(150, 50, 200, 20);

      JTextField rollNumberField = new JTextField();
      rollNumberField.setBounds(150, 100, 200, 20);

      JTextField cpiField = new JTextField();
      cpiField.setBounds(150, 150, 200, 20);

      JTextField emailField = new JTextField();
      emailField.setBounds(150, 200, 200, 20);

      frame.add(nameLabel);
      frame.add(rollNumberLabel);
      frame.add(cpiLabel);
      frame.add(emailLabel);
      frame.add(nameField);
      frame.add(rollNumberField);
      frame.add(cpiField);
      frame.add(emailField);
```

```
    frame.setSize(400, 300);
    frame.setLayout(null);
    frame.setVisible(true);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
  }
}
```

Output:



ROLL NO:	22BCP317	Batch	G8
NAME:	Patel shiv vijaykumar		
Practical	4/2		
Aim:	**WAP to handle KeyEvent and MouseEvent on the Frame**		

Source code:

Output:

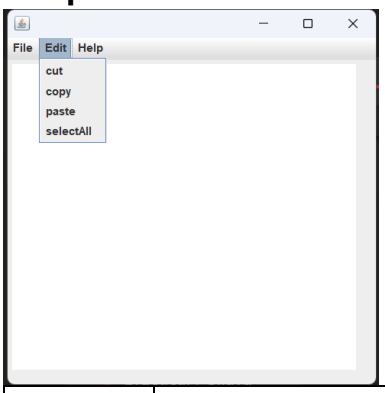
ROLL NO:	22BCP317	Batch	G8
NAME:	Patel shiv vijaykumar		
Practical	4/3		
Aim:	**WAP to create Menu Based GUI Application**		

Source code:

```
import javax.swing.*;
import java.awt.event.*;
public class practical4_3 implements ActionListener{
JFrame f;
JMenuBar mb;
JMenu file,edit,help;
JMenuItem cut,copy,paste,selectAll;
JTextArea ta;
practical4_3(){
f= new JFrame();
cut= new JMenuItem("cut");
copy= new JMenuItem("copy");
```

```
paste= new JMenuItem("paste");
selectAll= new JMenuItem("selectAll");
cut.addActionListener(this);
copy.addActionListener(this);
paste.addActionListener(this);
selectAll.addActionListener(this);
mb=new JMenuBar();
file=new JMenu("File");
edit=new JMenu("Edit");
help=new JMenu("Help");
edit.add(cut);edit.add(copy);edit.add(paste);edit.add(selectAll);
mb.add(file);mb.add(edit);mb.add(help);
ta=new JTextArea();
ta.setBounds(5,5,360,320);
f.add(mb);f.add(ta);
f.setJMenuBar(mb);
f.setLayout(null);
f.setSize(400,400);
f.setVisible(true);
f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}
public void actionPerformed(ActionEvent e) {
if(e.getSource()==cut)
ta.cut();
if(e.getSource()==paste)
ta.paste();
if(e.getSource()==copy)
ta.copy();
if(e.getSource()==selectAll)
ta.selectAll();
}
public static void main(String[] args) {
   new practical4_3();
}
```

Output:



ROLL NO:	22BCP317	Batch	G8
NAME:	Patel shiv vijaykumar		

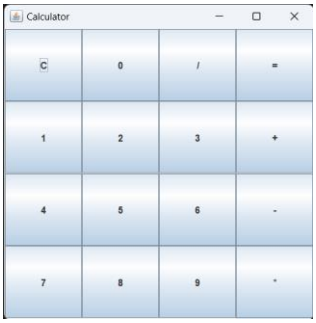
Practical	4/4
Aim:	**WAP to create GUI based math calculator, provide +,-,*,Clear functionality.(Use Flow,Grid,BorderLayout)**

Source code:

```
import java.awt.*;
import javax.swing.*;
public class practical4_4{
   public static void main(String[] args) {


   JFrame jf = new JFrame("Calculator");
   jf.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
   jf.setSize(400,400);
   JPanel jp = new JPanel(new GridLayout(4,4));
   JButton b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11,b12,b13,b14,b15,b16;
   b1=new JButton("C");
   jp.add(b1);
   b2=new JButton("0");
   jp.add(b2);
   b3=new JButton("/");
   jp.add(b3);
   b4=new JButton("=");
   jp.add(b4);
   b5= new JButton("1");
   jp.add(b5);
   b6= new JButton("2");
   jp.add(b6);
   b7= new JButton("3");
   jp.add(b7);
   b8=new JButton("+");
   jp.add(b8);
   b9= new JButton("4");
   jp.add(b9);
   b10= new JButton("5");
   jp.add(b10);
   b11= new JButton("6");
   jp.add(b11);
   b12=new JButton("-");
   jp.add(b12);
   b13= new JButton("7");
   jp.add(b13);
   b14= new JButton("8");
   jp.add(b14);
   b15= new JButton("9");
   jp.add(b15);
   b16=new JButton("*");
   jp.add(b16);
```

```
   Container c=jf.getContentPane();
   c.setLayout(new BorderLayout());
   c.add(jp,BorderLayout.CENTER);
   jf.setVisible(true);
}}
```

Output:



ROLL NO:	22BCP317	Batch	G8
NAME:	Patel shiv vijaykumar		
Practical	4/5		
Aim:	**WAP to create DialogBoxes.**		

Source code:

```
import javax.swing.*;

public class practical4_5{
   public static void main(String[] args) {
      JFrame frame = new JFrame("BoxLayout Example");
      frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
      JOptionPane.showMessageDialog(null, "This is a dialog box.", "Hello",
JOptionPane.INFORMATION_MESSAGE);
   }
}
```

Output:

ROLL NO:	22BCP317	Batch	G8
NAME:	Patel shiv vijaykumar		
Practical	4/6		
Aim:	**WAP to demonstrate BoxLayout.**		

Source code:

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

public class practical4_6{
   public static void main(String[] args) {
      JFrame frame = new JFrame("BoxLayout Demo");
      frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
      frame.setSize(300, 150);

      JPanel verticalPanel = new JPanel();
      verticalPanel.setLayout(new BoxLayout(verticalPanel, BoxLayout.Y_AXIS));

      JLabel label1 = new JLabel("Label 1");
      JLabel label2 = new JLabel("Label 2");
      JLabel label3 = new JLabel("Label 3");

      verticalPanel.add(label1);
      verticalPanel.add(label2);
      verticalPanel.add(label3);

      JPanel horizontalPanel = new JPanel();
      horizontalPanel.setLayout(new BoxLayout(horizontalPanel, BoxLayout.X_AXIS));

      JButton button1 = new JButton("Button 1");
      JButton button2 = new JButton("Button 2");
      JButton button3 = new JButton("Button 3");

      horizontalPanel.add(button1);
      horizontalPanel.add(button2);
      horizontalPanel.add(button3);
      frame.add(verticalPanel, BorderLayout.WEST);
      frame.add(horizontalPanel, BorderLayout.EAST);
      frame.setVisible(true);
   }
}
```

Output: