Lab-9

WAP that creates a user interface to perform integer divisions. The user enters two no's in the text fields, Num1 and Num2, The division of num1 and num2 is displayed in the result field when the divide button is clicked. If num1 & num2 were not an integer, the no° would throw a number format exception. If num2 were zero, the program would throw an arithmetic exception display the exception in a message box.

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

class SwingDemo {
    SwingDemo() {

        JFrame jfrm = new JFrame("Divider App");
        jfrm.setSize(275, 150);
        jfrm.setLayout(new FlowLayout());
        jfrm.setDefaultCloseOperation(JFrame.
                                      EXIT_ON_CLOSE);

        JLabel jlab = new JLabel("Enter divider and
                                  divident.");

        JTextField ajtf = new JTextField(8);
        JTextField bjtf = new JTextField(8);


        JButton button = new JButton("Calculate");
```
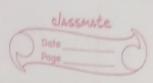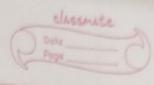
```java
JLabel err = new JLabel();
JLabel alab = new JLabel();
JLabel blab = new JLabel();
JLabel anslab = new JLabel();

jfrm.add(err);
jfrm.add(jlab);
jfrm.add(ajtf);
jfrm.add(bjtf);
jfrm.add(buttm);
jfrm.add(alab);
jfrm.add(blab);
jfrm.add(anslab);

ActionListener l = new ActionListener()
{
    public void actionPerformed(ActionEvent evt)
    {
        System.out.println("Action event from a
                            text field");
    }
};

ajtf.addActionListener(l);
bjtf.addActionListener(l);

buttm.addActionListener(new ActionListener()
{
    public void actionPerformed(ActionEvent evt)
    {
```

```java
try {
    int a = Integer.parseInt(ajtf.getText());
    int b = Integer.parseInt(bjtf.getText());
    int ans = a/b;

    alab.setText("\nA = " + a);
    blab.setText("\nB = " + b);
    anslab.setText("\n ans = " + ans);
}
catch(Number Format Exception e)
{
    alab.setText("");
    blab.setText("");
    anslab.setText(" ");
    err.setText("Enter mly integers!");
}
catch (Arithematic Exception e)
{
    alab.setText("");
    blab.setText("");
    anslab.setText(" ");
    err.setText("B should be NON zero!");
}
});
jfrm.setVisible(true);
}
```

```java
public static void main(String args[])
{
    SwingUtilities.invokeLater(new Runnable()
    {
        public void run(){
            new SwingDemo();
        }
    });
}
}
```

o/p:

Enter the divider and dividend:

| 50 | | 5 | | Calculate |

A=50 B=5 Ans=10

Enter the divider and dividend:

| 5 | | 0 | | Calculate |

B should be non zero!

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Functions used:

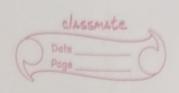- JFrame → The javax.swing.JFrame class is a type of container which inherits the java.awt.Frame class. JFrame works like the main window where components like labels, textfields are added to create a GUI.

- setSize(int width, int height) → used to Resize a frame using width and height parameters

- setLayout() – method allows you to set the layout of the container. The layout manager helps layout the components held by this container.

- setDefaultCloseOperation() – methods is to specify one of several options for the close button.
  JFrame.EXIT_ON_CLOSE – Exit the application.

- JLabel – The object of JLabel class is a component for placing text in a container. It is used to display a single line of read only text.

- JTextField – The object of a JTextField class is a text component that allows the

editing of a single line text. It inherits JText Component class.

- add (frame) — adds new frame in the existing frame

- ActionListener — The Java ActionListener is notified whenever you click on the button or menu item. It is notified aganist ActionEvent. This interface is found in java.awt.event package.

- setText() — This method substitutes new text for all or part of the text in the text field. This works only with the first line of multi-line text fields.

- setVisible() — is a method that has return type boolean.

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