IBM22CS219

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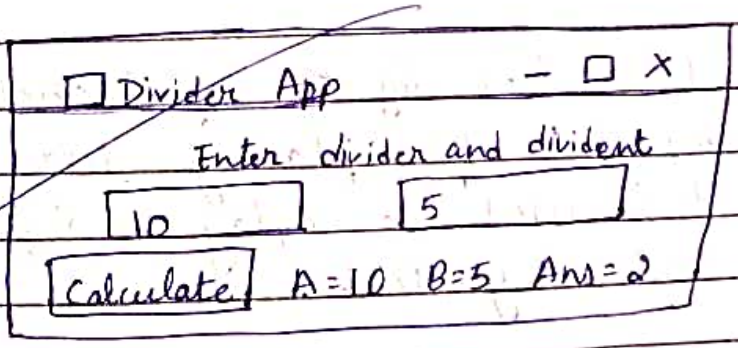
LAB 9

WAP that creates a user interface to perform integer divisions.

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

class SwingDemo{
  SwingDemo(){
    // create jframe container
    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 the
          divider and divident :");

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

    JButton button = new JButton("Calculate");

    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(button);
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);

button.addActionListener(new ActionListener(){
    public void actionPerformed(ActionEvent
                                evt){
        try{
            int a = Integer.parseInt(ajtf.getText());
            int b = Integer.parseInt(bjtf.getText());
            int ans = a/b;

            alab.setText("\n A = " + a);
            blab.setText("\n B = " + b);
            anslab.setText("\n Ans = " + ans);
        }
```

```
        catch (NumberFormatException e){
            alab.setText(" ");
            blab.setText(" ");
            anslab.setText(" ");
            err.setText("Enter Only Integers!");
        }
    }
});
    jfrm.setVisible(true);
}

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



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- 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 lay out the components held by this container.
- setDefaultCloseOperation( ) - methods is used 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 components that allows the editing of a single line text. It inherits JTextComponent class.

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- 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 against 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.