SUMMARY: LAB_9

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

public class Lab2021_9 {
    public static void main(String[] args) {
        JFrame frame = new JFrame ("First Frame");
        //frame.setSize(200,200);
        //frame.setLocation(100,500);
        JButton firstButton = new JButton("FirstButton");
        frame.add(firstButton,BorderLayout.NORTH);
        JPanel panel = Panel(5);
        frame.add(panel);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.pack();
        frame.setVisible(true);
    }
    public static JPanel Panel(int n){
        JPanel panel = new JPanel();
        GridLayout gridLayout = new GridLayout(n,n);
        panel.setLayout(gridLayout);
        for (int i=0; i<n; i++){
            for (int j=0; j<n; j++){
                JButton jb = new JButton("" + (i + j));
                jb.setForeground(Color.WHITE);
                jb.setBackground(new Color(250-20*(j+i),j*8,250-8*j));
                panel.add(jb);
            }
        }
        return panel;
    }
}
```

location   size

frame.setBounds(int x, int y, int width, int height)

green
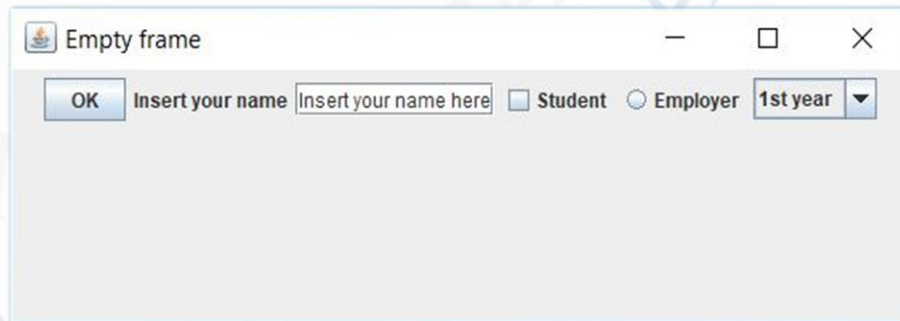
red   blue

SUMMARY: LAB_9

```java
import javax.swing.*;

public class Lab2021_9_1 {
    public static void main(String[] args) {
        JFrame frame = new JFrame("Empty frame");
        frame.setLocation(100, 150);

        JPanel panel = new JPanel();
        JButton ButtonOK = new JButton("OK");
        JLabel name = new JLabel("Insert your name");
        JTextField field = new JTextField("Insert your name here");
        JCheckBox student = new JCheckBox("Student");
        JRadioButton employer = new JRadioButton("Employer");
        JComboBox combobox = new JComboBox(new String[] {"1st year", "2nd year", "3rd year"});

        panel.add(ButtonOK);
        panel.add(name);
        panel.add(field);
        panel.add(student);
        panel.add(employer);
        panel.add(combobox);

        frame.add(panel);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.pack();
        frame.setVisible(true);
    }
}
```
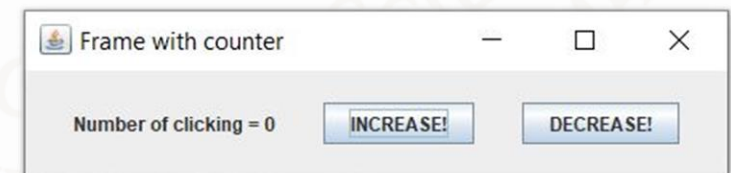
```java
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

public class Lab2021_9_2{
    static int counter;
    static JLabel label = new JLabel("Number of clicking = 0");
    public static void main(String[] args) {
        JFrame frame = new JFrame();
        frame.setTitle("Frame with counter");
        frame.setSize(700, 100);
        frame.setLayout(new FlowLayout(FlowLayout.CENTER, 30, 20));
        frame.add(label);
        JButton button = new JButton("INCREASE!");
        frame.add(button);
        button.addActionListener(lambdaExpression -> {
            counter++;
            label.setText("Number of clicking on button is: "+counter);
        });
        JButton button1 = new JButton("DECREASE!");
        frame.add(button1);
        button1.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                counter--;
                label.setText("Number of clicking on button is: "+counter);
            }
        });
        frame.pack();
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
    }
}
```

SUMMARY: LAB_9

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

class Lab2021_9_3{
    static Random rand = new Random();
    public static void main(String[] args) {
        int n = 10;
        JFrame frame = new JFrame("Change size and color after performing a click on buttons");
        frame.setLayout(new FlowLayout(FlowLayout.CENTER,50,50));
        for (int i=0; i<n; i++){
            if(i<n/2) {
                JButton button = new JButton();
                char letter = (char) (rand.nextInt(25)+'A');
                button.setText(String.valueOf(letter));
                button.addActionListener(e -> {
                    button.setBackground(Color.RED);
                    button.setForeground(Color.WHITE);
                });
                frame.add(button);
            }
            else{
                JButton button = new JButton();
                button.setText(String.valueOf(rand.nextInt(10)));
                button.addActionListener(new ActionListener() {
                    public void actionPerformed(ActionEvent e) {
                        button.setBackground(Color.BLUE);
                        button.setForeground(Color.WHITE);
                        button.setSize(new Dimension(50, 50));
                    }
                });
                frame.add(button);
            }
        }
        frame.pack();
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
    }
}
```

Random letters from English Alphabet (Capital letters)