**Practical A.4**

1. **Aim –**Write a program to create two textfield and four radiobuttons  
   (+,-,\*,%)and on selecting the radiobutton the operation should be performed and  
   result should be displayed in JOptionPane.

Code:-

import java.awt.BorderLayout;

import java.awt.EventQueue;

import javax.swing.JFrame;

import javax.swing.JPanel;

import javax.swing.border.EmptyBorder;

import javax.swing.JLabel;

import javax.swing.JOptionPane;

import javax.swing.JTextField;

import javax.swing.JRadioButton;

import javax.swing.ButtonGroup;

import java.awt.event.ActionListener;

import java.awt.event.ActionEvent;

public class P4 extends JFrame {

double n1,n2;

String msg;

private JPanel contentPane;

private JTextField txt1;

private JTextField txt2;

private final ButtonGroup buttonGroup = new ButtonGroup();

public static void main(String[] args) {

EventQueue.invokeLater(new Runnable() {

public void run() {

try {

P4 frame = new P4();

frame.setVisible(true);

} catch (Exception e) {

e.printStackTrace();

}

}

});

}

public P4() {

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

setBounds(100, 100, 450, 300);

contentPane = new JPanel();

contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

setContentPane(contentPane);

contentPane.setLayout(null);

JLabel lblNewLabel = new JLabel("Number 1");

lblNewLabel.setBounds(53, 36, 55, 13);

contentPane.add(lblNewLabel);

JLabel lblNewLabel\_1 = new JLabel("Number 2");

lblNewLabel\_1.setBounds(53, 87, 55, 13);

contentPane.add(lblNewLabel\_1);

txt1 = new JTextField();

txt1.setBounds(148, 33, 96, 19);

contentPane.add(txt1);

txt1.setColumns(10);

txt2 = new JTextField();

txt2.setBounds(148, 84, 96, 19);

contentPane.add(txt2);

txt2.setColumns(10);

JRadioButton btn1 = new JRadioButton("+");

btn1.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

input();

msg="Addition is "+(n1+n2);

JOptionPane.showMessageDialog(btn1,msg);

}

});

buttonGroup.add(btn1);

btn1.setBounds(43, 125, 103, 21);

contentPane.add(btn1);

JRadioButton btn2 = new JRadioButton("-");

btn2.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

msg="Substraction is "+(n1-n2);

JOptionPane.showMessageDialog(btn2,msg);

}

});

buttonGroup.add(btn2);

btn2.setBounds(185, 125, 103, 21);

contentPane.add(btn2);

JRadioButton btn3 = new JRadioButton("\*");

btn3.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

msg="Multiplication is "+(n1\*n2);

JOptionPane.showMessageDialog(btn3,msg);

}

});

buttonGroup.add(btn3);

btn3.setBounds(43, 179, 103, 21);

contentPane.add(btn3);

JRadioButton btn4 = new JRadioButton("/");

btn4.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

msg="Division is "+(n1/n2);

JOptionPane.showMessageDialog(btn4,msg);

}

});

buttonGroup.add(btn4);

btn4.setBounds(185, 179, 103, 21);

contentPane.add(btn4);

}

void input() {

n1=Double.parseDouble(txt1.getText());

n2=Double.parseDouble(txt2.getText());

}

}

Output:-

