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CCS/00046/022.

Take Away Assignment.

1. Calculator.

package amakaluvitalisccs00046022;

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

public class Amakaluvitalisccs00046022 {

public static void main(String[] args) {

Frame f=new Frame("Calculator");

f.setSize(300,300);

f.setLayout(null);

f.setVisible(true);

final TextField a=new TextField();

a.setBounds(150,40,130,40);

f.add(a);

final TextField b=new TextField();

b.setBounds(150,80,130,40);

f.add(b);

final Label c=new Label("First Number");

c.setBounds(20,40,130,40);

f.add(c);

final Label d=new Label("Second Number");

d.setBounds(20,80,130,40);

f.add(d);

final Label answer=new Label("Result");

answer.setBounds(20,120,130,40);

f.add(answer);

final JLabel ans=new JLabel();

ans.setBounds(150,120,130,40);

f.add(ans);

Button add=new Button("+");

add.setBounds(20,160,130,40);

f.add(add);

Button sub=new Button("-");

sub.setBounds(150,160,130,40);

f.add(sub);

Button mul=new Button("\*");

mul.setBounds(20,200,130,40);

f.add(mul);

Button div=new Button("/");

div.setBounds(150,200,130,40);

f.add(div);

Button percent=new Button("%");

percent.setBounds(20,240,130,40);

f.add(percent);

Button clear=new Button("clear");

clear.setBounds(150,240,130,40);

f.add(clear);

add.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e){

try {

double FirstNum = Double.parseDouble(a.getText());

double SecondNum = Double.parseDouble(b.getText());

double sum = FirstNum + SecondNum;

ans.setText(String.valueOf(sum));

} catch (NumberFormatException ex) {

ans.setText("Invalid input");

}

}

});

sub.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e){

try {

double FirstNum = Double.parseDouble(a.getText());

double SecondNum = Double.parseDouble(b.getText());

double diff = FirstNum - SecondNum;

ans.setText(String.valueOf(diff));

} catch (NumberFormatException ex) {

ans.setText("Invalid input");

}

}

});

mul.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e){

try {

double FirstNum = Double.parseDouble(a.getText());

double SecondNum = Double.parseDouble(b.getText());

double product = FirstNum \* SecondNum;

ans.setText(String.valueOf(product));

} catch (NumberFormatException ex) {

ans.setText("Invalid input");

}

}

});

div.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e){

try {

double FirstNum = Double.parseDouble(a.getText());

double SecondNum = Double.parseDouble(b.getText());

if (SecondNum != 0) {

double divide = FirstNum / SecondNum;

ans.setText(String.valueOf(divide));

} else {

ans.setText("Cannot divide by zero");

}

} catch (NumberFormatException ex) {

ans.setText("Invalid input");

}

}

});

percent.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e){

try {

double FirstNum = Double.parseDouble(a.getText());

double SecondNum = Double.parseDouble(b.getText());

double percentage = ((FirstNum\*SecondNum)/100);

ans.setText(String.valueOf(percentage));

} catch (NumberFormatException ex) {

ans.setText("Invalid input");

}

}

});

clear.addActionListener(new ActionListener(){

public void actionPerformed(ActionEvent e){

ans.setText("");

a.setText("");

b.setText("");

}

});

}

}

1. Currency Converter.

package amakaluvitalisccs00046022;

import java.awt.\*;

import java.awt.event.\*;

public class Amakaluvitalisccs00046022 {

TextField singapof, usdf, eurosf;

Amakaluvitalisccs00046022() {

Frame f = new Frame("Currency Converter");

f.setSize(400, 250);

f.setLayout(null);

// Labels and TextFields

Label singapol = new Label("Singapore Dollars");

singapol.setBounds(30, 80, 120, 20);

singapof = new TextField();

singapof.setBounds(160, 80, 120, 20);

Label usdl = new Label("US Dollars");

usdl.setBounds(30, 120, 120, 20);

usdf = new TextField();

usdf.setBounds(160, 120, 120, 20);

Label eurosl = new Label("Euros");

eurosl.setBounds(30, 160, 120, 20);

eurosf = new TextField();

eurosf.setBounds(160, 160, 120, 20);

// Convert Button

Button bt = new Button("CONVERT");

bt.setBounds(100, 190, 100, 30);

// ActionListener to the button

bt.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

// Convert the input values and display the results in the other text fields

// Determine which text field has input and convert accordingly

if (!singapof.getText().isEmpty()) {

double singaporeDollars = Double.parseDouble(singapof.getText());

usdf.setText(String.format("%.2f", singaporeDollars / 1.36));

eurosf.setText(String.format("%.2f", singaporeDollars \* 0.69));

} else if (!usdf.getText().isEmpty()) {

double usDollars = Double.parseDouble(usdf.getText());

singapof.setText(String.format("%.2f", usDollars \* 1.36));

eurosf.setText(String.format("%.2f", usDollars \* 1.36 \* 0.69));

} else if (!eurosf.getText().isEmpty()) {

double euros = Double.parseDouble(eurosf.getText());

singapof.setText(String.format("%.2f", euros / 0.69));

usdf.setText(String.format("%.2f", euros / 0.69 / 1.36));

}

}

});

//MouseListener to clear all text fields on double-click

MouseAdapter mouseAdapter = new MouseAdapter() {

public void mouseClicked(MouseEvent e) {

if (e.getClickCount() == 2) {

singapof.setText("");

usdf.setText("");

eurosf.setText("");

}

}

};

singapof.addMouseListener(mouseAdapter);

usdf.addMouseListener(mouseAdapter);

eurosf.addMouseListener(mouseAdapter);

f.add(singapol);

f.add(singapof);

f.add(usdl);

f.add(usdf);

f.add(eurosl);

f.add(eurosf);

f.add(bt);

f.setVisible(true);

}

public static void main(String[] args) {

Amakaluvitalisccs00046022 f = new Amakaluvitalisccs00046022();

}

}