Natalia Palej

A00279259

Year 3 Semester 1

Software Design with Artificial Intelligence for Cloud Computing

Software Dev Project

Project 1

Contents

[Part 1 Code 2](#_Toc148449339)

[Console output 3](#_Toc148449340)

[Part 2 Code 4](#_Toc148449341)

[Console Output 6](#_Toc148449342)

[Part 3 Code 7](#_Toc148449346)

[Console output 8](#_Toc148449347)

# Part 1 Code

package gui;

import java.awt.Container;

import java.awt.Dimension;

import java.awt.GridBagConstraints;

import java.awt.GridBagLayout;

import javax.swing.\*;

@SuppressWarnings("serial")

public class PartOne extends JFrame {

// Create container for buttons

Container cp;

// Create three buttons

JButton b1 = new JButton();

JButton b2 = new JButton();

JButton b3 = new JButton();

/\*\*

\* Constructor

\*/

public PartOne() {

// Setting frame to exit on window close

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

// Set title

setTitle("Natalia Palej A00279259 - Part 1");

// Set buttons size

b1.setPreferredSize(new Dimension(50, 20));

b2.setPreferredSize(new Dimension(50, 20));

b3.setPreferredSize(new Dimension(50, 20));

GridBagLayout gridBag = new GridBagLayout();

GridBagConstraints c = new GridBagConstraints();

// Assign cp to getContentPane() for better efficiency

cp = getContentPane();

// Set layout to grid bag layout

cp.setLayout(gridBag);

c.fill = GridBagConstraints.HORIZONTAL;

c.gridx = 0;

c.gridy = 0;

gridBag.setConstraints(b1, c);

cp.add(b1);

c.gridx = 1;

c.gridy = 1;

gridBag.setConstraints(b2, c);

cp.add(b2);

c.gridx = 3;

c.gridy = 0;

gridBag.setConstraints(b3, c);

cp.add(b3);

setVisible(true);

setSize(400, 400);

}

public static void main(String[] args) {

new PartOne();

}

}

## Console Output

A screenshot of a computer

Description automatically generated

# Part 2 Code

package gui;

import java.awt.\*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import javax.swing.\*;

@SuppressWarnings("serial")

public class PartTwo extends JFrame implements ActionListener {

// Create container

Container cp;

JButton b1 = new JButton();

JButton b2 = new JButton();

JButton b3 = new JButton();

JCheckBox cb1 = new JCheckBox("Give Colors", false);

public PartTwo() {

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

// Set title

setTitle("Natalia Palej A00279259 - Part 2");

cb1.addActionListener(this);

b1.setPreferredSize(new Dimension(50, 20));

b2.setPreferredSize(new Dimension(50, 20));

b3.setPreferredSize(new Dimension(50, 20));

GridBagLayout gridBag = new GridBagLayout();

GridBagConstraints c = new GridBagConstraints();

cp = getContentPane();

cp.setLayout(gridBag);

c.fill = GridBagConstraints.HORIZONTAL;

c.gridx = 0;

c.gridy = 0;

gridBag.setConstraints(b1, c);

cp.add(b1);

c.gridx = 1;

c.gridy = 1;

gridBag.setConstraints(b2, c);

cp.add(b2);

c.gridx = 2;

c.gridy = 0;

gridBag.setConstraints(b3, c);

cp.add(b3);

c.gridx = 3;

c.gridy = 0;

gridBag.setConstraints(cb1, c);

cp.add(cb1);

setVisible(true);

setSize(400, 400);

}

public static void main(String[] args) {

new PartTwo();

}

@Override

public void actionPerformed(ActionEvent e) {

if (e.getSource().equals(cb1)){

if (cb1.isSelected()) {

b1.setBackground(Color.green);

b2.setBackground(Color.blue);

b3.setBackground(Color.red);

}

else {

b1.setBackground(Color.lightGray);

b2.setBackground(Color.lightGray);

b3.setBackground(Color.lightGray);

}

}

}

}

## Console Output

## A screenshot of a computer Description automatically generated

Output when program first runs

## A screenshot of a computer Description automatically generated

Output when check box is ticket

## A screenshot of a computer Description automatically generated

Out when checkbox is unticked

# Part 3 Code

package gui;

public class House {

private String surname;

private int bedrooms, bathrooms;

public House() {

this.surname = null;

this.bedrooms = 0;

this.bathrooms = 0;

}

public House(String surname, int bedrooms, int bathrooms) {

this.surname = surname;

this.bedrooms = bedrooms;

this.bathrooms = bathrooms;

}

public String getSurname() {

return this.surname;

}

public int getBedrooms() {

return this.bedrooms;

}

public int getBathrooms() {

return this.bathrooms;

}

public void setSurname(String surname) {

this.surname = surname;

}

public void setBedrooms(int bedrooms) {

this.bedrooms = bedrooms;

}

public void setBathrooms(int bathrooms) {

this.bathrooms = bathrooms;

}

public void printDetails() {

System.out.println("Owner: " + this.surname + " | Number of Bedrooms: " + this.bedrooms + " | Number of bathrooms: " + this.bathrooms);

}

public static void main(String[] args) {

House h1 = new House("Smith", 5, 1);

House h2 = new House("Jones", 3, 1);

House h3 = new House();

h3.setSurname("Burke");

h3.setBedrooms(5);

h3.setBathrooms(2);

h1.printDetails();

h2.printDetails();

h3.printDetails();

}

}

## Console Output

