Name : Thisanga Thewanmi
Batch : GDSE 67

Institute of Software Engineering
Graduate Diploma in Software Engineering

Assignment 03

Java Swing Applications

01.

```
import javax.swing.*;
class firstFrame extends JFrame{
firstFrame(){
setTitle("my first frame");
setDefaultCloseOperation(3);
setLocationRelativeTo(null);
setSize(300,300);
}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();
f1.setVisible(true);
}
}
```

02.

```
import javax.swing.*;
class firstFrame extends JFrame{
private JButton btn1;
private JButton btn2;
private JButton btn3;
private JButton btn4;
private JButton btn5;firstFrame(){
setTitle("border layout window");
setDefaultCloseOperation(3);
setLocationRelativeTo(null);
setSize(300,300);
btn1=new JButton("button 1");
btn2=new JButton("button 2");
btn3=new JButton("button 3");
btn4=new JButton("button 4");
btn5=new JButton("button 5");
add("North",btn1);
add("South",btn2);
add("East",btn3);
add("West",btn4);
add("Center",btn5);
```

```
}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();
f1.setVisible(true);
}
}
```

03.

```
import javax.swing.*;
class firstFrame extends JFrame{
private JButton btn1;
private JButton btn2;
firstFrame(){
setTitle("border layout window");
setDefaultCloseOperation(3);
setLocationRelativeTo(null);
setSize(400,200);
btn1=new JButton("THIS IS THE NORTH BORDER");
btn2=new JButton("THIS IS THE SOUTH BORDER");
add("North",btn1);
add("South",btn2);
}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();f1.setVisible(true);
}
}
```

04.

```
import javax.swing.*;
import java.awt.*;
class firstFrame extends JFrame{
private JButton btn1;
private JButton btn2;
firstFrame(){
setTitle("border layout window");
setDefaultCloseOperation(3);
setLocationRelativeTo(null);
setSize(400,200);
btn1=new JButton("THIS IS THE NORTH BORDER");
btn1.setFont(new Font("Serif", Font.BOLD, 18));
btn2=new JButton("THIS IS THE SOUTH BORDER");
btn2.setFont(new Font("Serif", Font.BOLD, 18));
add("North",btn1);
add("South",btn2);}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();
f1.setVisible(true);
}
}
```

05.

```
import javax.swing.*;
import java.awt.*;
class firstFrame extends JFrame{
private JButton btn1;
private JButton btn2;
private JButton btn3;
private JButton btn4;
firstFrame(){
setTitle("border layout window");
setDefaultCloseOperation(3);
setLocationRelativeTo(null);
setSize(400,200);
setLayout(new FlowLayout());btn1=new JButton("button 1");
btn2=new JButton("THIS IS A BUTTON");
btn3=new JButton("button 2");
btn4=new JButton("EXECUTE");
add(btn1);
add(btn2);
add(btn3);
add(btn4);
}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();
f1.setVisible(true);
}
}
```

06.

```
import javax.swing.*;
import java.awt.*;
class firstFrame extends JFrame{
private JButton btn1;
private JButton btn2;private JButton btn3;
private JButton btn4;
firstFrame(){
setTitle("border layout window");
setDefaultCloseOperation(3);
setLocationRelativeTo(null);
setSize(400,200);
setLayout(new FlowLayout(FlowLayout.LEADING));
btn1=new JButton("button 1");
btn2=new JButton("THIS IS A BUTTON");
btn3=new JButton("button 2");
btn4=new JButton("EXECUTE");
add(btn1);
add(btn2);
add(btn3);
add(btn4);
}
}
class oop{
public static void main(String args[]){
```

```
firstFrame f1=new firstFrame();
f1.setVisible(true);}
}
```

07.

```
import javax.swing.*;
import java.awt.*;
class firstFrame extends JFrame{
private JButton btn1;
private JButton btn2;
private JButton btn3;
private JButton btn4;
firstFrame(){
setTitle("border layout window");
setDefaultCloseOperation(3);
setLocationRelativeTo(null);
setSize(400,200);
setLayout(new FlowLayout(FlowLayout.TRAILING));
btn1=new JButton("button 1");
btn2=new JButton("THIS IS A BUTTON");
btn3=new JButton("button 2");
btn4=new JButton("EXECUTE");
add(btn1);add(btn2);
add(btn3);
add(btn4);
}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();
f1.setVisible(true);
}
}
```

08.

```
import javax.swing.*;
import java.awt.*;
class firstFrame extends JFrame{
private JButton btn1;
private JButton btn2;
private JButton btn3;
private JButton btn4;
firstFrame(){
setTitle("border layout window");
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setLocationRelativeTo(null);
setSize(400,200);setLayout(new GridLayout(2,2,2,2));
btn1=new JButton("button 1");
btn2=new JButton("button 2");
btn3=new JButton("button 3");
btn4=new JButton("button 4");
add(btn1);
add(btn2);
add(btn3);
```

```
add(btn4);
}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();
f1.setVisible(true);
}
}
```

09.

```
import javax.swing.*;
import java.awt.*;
class firstFrame extends JFrame{private JButton btn1;
private JButton btn2;
private JButton btn3;
private JButton btn4;
private JButton btn5;
private JButton btn6;
private JButton btn7;
private JButton btn8;
private JButton btn9;
private JButton btn10;
private JButton btn11;
private JButton btn12;
private JButton btn13;
private JButton btn14;
private JButton btn15;
private JButton btn16;
firstFrame(){
setTitle("calculator");
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setLocationRelativeTo(null);
setSize(400,300);
setLayout(new GridLayout(4,4,5,5));
btn1=new JButton("7");btn2=new JButton("8");
btn3=new JButton("9");
btn4=new JButton("*");
btn5=new JButton("4");
btn6=new JButton("5");
btn7=new JButton("6");
btn8=new JButton("/");
btn9=new JButton("1");
btn10=new JButton("2");
btn11=new JButton("3");
btn12=new JButton("+");
btn13=new JButton(".");
btn14=new JButton("0");
btn15=new JButton("=");
btn16=new JButton("-");
add(btn1);
add(btn2);
add(btn3);
add(btn4);
add(btn5);
```

```
add(btn6);
add(btn7);
add(btn8);
add(btn9);
add(btn10);
add(btn11);
add(btn12);add(btn13);
add(btn14);
add(btn15);
add(btn16);
}
}
class oop{
public static void main(String args[]){
firstFrame f1=new firstFrame();
f1.setVisible(true);
}
}
```

10.compiled, but not any result because it hasn't any location to relate that interface and it hasn't a title too.
11.

12.
"this is a large button" button is in the pannel.because that devloper has been used Jpannel method to do it.
13.14.
15.
This interface have 2 text fields .and Jbutton equl button.and Jlable .from this code we can take the total of two numbers.
16.
17.
18.
19.
By this I can choose a four colours..if I clicked green colour it will be display that "green".
20.
21.22.
If I touched toggle button it will be touched(marked as touch) after that I touched that button again it will be untouched(mark as untouched).
23.
24.
25.

```
import javax.swing.*;
import java.awt.*;
import java.text.SimpleDateFormat;
import java.util.Date;
public class oop {
public static void main(String[] args) {
SwingUtilities.invokeLater(() -> {
createAndShowGUI();
});
}
private static void createAndShowGUI() {
JFrame frame = new JFrame("Date Selection Interface");
```

```
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setLayout(new FlowLayout());
JLabel label1 = new JLabel("Selected Date:");
JLabel label2 = new JLabel("Month:");
JLabel label3 = new JLabel("");
String[] months = {"January", "February", "March", "April", "May", "June", "July",
"August", "September", "October", "November", "December"};JComboBox<String> monthComboBox
= new JComboBox<>(months);
monthComboBox.setMaximumRowCount(4); // Set maximum row count to 4
monthComboBox.setSelectedItem("April");
SimpleDateFormat dateFormat = new SimpleDateFormat("yyyy-MM-dd");
Date selectedDate = new Date(113, 3, 6);
label3.setText(dateFormat.format(selectedDate));
frame.add(label1);
frame.add(label3);
frame.add(label2);
frame.add(monthComboBox);
frame.pack();
frame.setVisible(true);
}
}
```

26.

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
import javax.swing.event.*;
class application extends JFrame{
private JSlider slider1;
private JSlider slider2;private JSlider slider3;
private JSlider slider4;
private JSlider slider5;
private JSlider slider6;
private JSlider slider7;
private JSlider slider8;
private JSlider slider9;
private JSlider slider10;
application(){
setTitle("STUDENT DETAILS");
setSize(400,300);
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setLocationRelativeTo(null);
setLayout(new GridLayout());
initComponents();
}
public void initComponents() {
slider1 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider2 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider3 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider4 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider5 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider6 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider7 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider8 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
slider9 = new JSlider(JSlider.VERTICAL, 0, 50, 10);slider10 = new JSlider(JSlider.VERTICAL, 0, 50, 10);
add(slider1);
add(slider2);
add(slider3);
```

```
add(slider4);
add(slider5);
add(slider6);
add(slider7);
add(slider8);
add(slider9);
add(slider10);
}
}
class oop{
public static void main(String args[]){
application a1=new application();
a1.setVisible(true);
}
}
27.
28.
29.
import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;import java.awt.event.ActionListener;
public class oop {
public static void main(String[] args) {
SwingUtilities.invokeLater(() -> createAndShowGUI());
}
private static void createAndShowGUI() {
JFrame frame = new JFrame("Menu and Toolbar Example");
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
JMenuBar menuBar = new JMenuBar();
JMenu fileMenu = new JMenu("File");
JMenuItem openMenuItem = new JMenuItem("Open");
JMenuItem saveMenuItem = new JMenuItem("Save");
JMenuItem exitMenuItem = new JMenuItem("Exit");
fileMenu.add(openMenuItem);
fileMenu.add(saveMenuItem);
fileMenu.addSeparator();
fileMenu.add(exitMenuItem);
menuBar.add(fileMenu);
frame.setJMenuBar(menuBar);
JToolBar toolBar = new JToolBar();JButton newButton = new JButton("New");
JButton cutButton = new JButton("Cut");
JButton copyButton = new JButton("Copy");
JButton pasteButton = new JButton("Paste");
toolBar.add(newButton);
toolBar.addSeparator();
toolBar.add(cutButton);
toolBar.add(copyButton);
toolBar.add(pasteButton);
frame.add(toolBar, BorderLayout.NORTH);
openMenuItem.addActionListener(new ActionListener() {
public void actionPerformed(ActionEvent e) {
JOptionPane.showMessageDialog(frame, "Open file clicked!");
}
});
saveMenuItem.addActionListener(new ActionListener() {
@Override
public void actionPerformed(ActionEvent e) {
```

```
JOptionPane.showMessageDialog(frame, "Save file clicked!");
}
});exitMenuItem.addActionListener(new ActionListener() {
@Override
public void actionPerformed(ActionEvent e) {
System.exit(0);
}
});
newButton.addActionListener(new ActionListener() {
@Override
public void actionPerformed(ActionEvent e) {
JOptionPane.showMessageDialog(frame, "New button clicked!");
}
});
frame.setSize(400, 300);
frame.setVisible(true);
}
}
```

30.

31.

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
import javax.swing.event.*;
class application extends JFrame{private JSlider slider1;
application(){
setTitle("STUDENT DETAILS");
setSize(400,300);
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setLocationRelativeTo(null);
setLayout(new GridLayout());
initComponents();
}
public void initComponents() {
slider1 = new JSlider(JSlider.HORIZONTAL, 0, 100, 10);
slider1.setMinorTickSpacing(2);
slider1.setMajorTickSpacing(10);
slider1.setPaintTicks(true);
slider1.setPaintLabels(true);
add(slider1);
}
}class oop{
public static void main(String args[]){
application a1=new application();
a1.setVisible(true);
}
}
```

32.

```
import javax.swing.*;
import java.awt.*;
class SliderDemo extends JFrame {
private JSlider horizontalSlider;
private JSlider verticalSlider;
private JSlider rangeSlider;
SliderDemo() {
setTitle("Slider Demo");
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
setSize(400, 300);
initComponents();
setLayout(new FlowLayout());
add(horizontalSlider);
add(verticalSlider);
add(rangeSlider);
pack();
setLocationRelativeTo(null);}
private void initComponents() {
horizontalSlider = new JSlider(JSlider.HORIZONTAL, 0, 100, 50);
horizontalSlider.setMajorTickSpacing(20);
horizontalSlider.setMinorTickSpacing(5);
horizontalSlider.setPaintTicks(true);
horizontalSlider.setPaintLabels(true);
verticalSlider = new JSlider(JSlider.VERTICAL, 0, 100, 75);
verticalSlider.setMajorTickSpacing(20);
verticalSlider.setMinorTickSpacing(5);
verticalSlider.setPaintTicks(true);
verticalSlider.setPaintLabels(true);
rangeSlider = new JSlider(JSlider.HORIZONTAL, 0, 100, 30);
rangeSlider.setMinorTickSpacing(5);
rangeSlider.setPaintTicks(true);
rangeSlider.setPaintLabels(true);
rangeSlider.setSnapToTicks(true);
rangeSlider.setPaintTrack(true);
rangeSlider.setInverted(true);
rangeSlider.setExtent(20);
}
}
class oop{
public static void main(String[] args) {
SwingUtilities.invokeLater(() -> {
new SliderDemo().setVisible(true);
});}
}
```

33.

```
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
import java.awt.*;
class TimetableApp extends JFrame {
private JTable timetableTable;
private DefaultTableModel tableModel;
public TimetableApp() {
setTitle("Simple Timetable");
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setSize(600, 400);
initializeTable();
add(new JScrollPane(timetableTable));
setLocationRelativeTo(null);
}
private void initializeTable() {
String[] days = {"Time", "Monday", "Tuesday", "Wednesday", "Thursday",
"Friday"};
String[][] data = {
{"8:00 AM - 9:00 AM", "", "", "", "", ""},
{"9:00 AM - 10:00 AM", "", "", "", "", ""},
{"10:00 AM - 11:00 AM", "", "", "", "", ""},{"11:00 AM - 12:00 PM", "", "", "", "", ""},
```

```
{"12:00 PM - 1:00 PM", "", "", "", "", ""},
{"1:00 PM - 2:00 PM", "", "", "", "", ""},
{"2:00 PM - 3:00 PM", "", "", "", "", ""},
{"3:00 PM - 4:00 PM", "", "", "", "", ""},
{"4:00 PM - 5:00 PM", "", "", "", "", ""},
};
tableModel = new DefaultTableModel(data, days);
timetableTable = new JTable(tableModel);
timetableTable.setRowHeight(50);
timetableTable.setFont(new Font("Arial", Font.PLAIN, 14));
timetableTable.getTableHeader().setFont(new Font("Arial", Font.BOLD, 16));
}
}
class oop{
public static void main(String[] args) {
SwingUtilities.invokeLater(() -> {
TimetableApp app = new TimetableApp();
app.setVisible(true);
});
}
}
```
34.