1. Implement the following GUI without any IDE.

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

public class CounterGUI extends JFrame {

private JTextField textField;

private int count = 0;

public CounterGUI() {

setTitle("Counter");

setSize(400, 100);

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

setLocationRelativeTo(null);

JLabel label = new JLabel("Counter");

textField = new JTextField("0", 10);

textField.setEditable(false);

JButton countUpBtn = new JButton("Count Up");

JButton countDownBtn = new JButton("Count Down");

JButton resetBtn = new JButton("Reset");

countUpBtn.addActionListener(e -> {

count++;

textField.setText(String.valueOf(count));

});

countDownBtn.addActionListener(e -> {

count--;

textField.setText(String.valueOf(count));

});

resetBtn.addActionListener(e -> {

count = 0;

textField.setText(String.valueOf(count));

});

JPanel panel = new JPanel();

panel.setLayout(new FlowLayout());

panel.add(label);

panel.add(textField);

panel.add(countUpBtn);

panel.add(countDownBtn);

panel.add(resetBtn);

add(panel);

setVisible(true);

}

public static void main(String[] args) {

new CounterGUI();

}

}

2. Write a GUI program to find the reverse of a given number using Swing (with IDE).

import javax.swing.\*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener

public class ReverseNumberGUI extends JFrame {

private JTextField inputField;

private JButton reverseButton;

private JLabel resultLabel

public ReverseNumberGUI() {

setTitle("Reverse Number");

setSize(300, 150);

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

setLayout(null);

JLabel inputLabel = new JLabel("Enter number:");

inputLabel.setBounds(20, 20, 100, 25);

add(inputLabel);

inputField = new JTextField();

inputField.setBounds(120, 20, 140, 25);

add(inputField);

reverseButton = new JButton("Reverse");

reverseButton.setBounds(90, 50, 100, 30);

add(reverseButton);

resultLabel = new JLabel("Reversed: ");

resultLabel.setBounds(20, 90, 250, 25);

add(resultLabel);

reverseButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

try {

int number = Integer.parseInt(inputField.getText());

int reversed = 0;

while (number != 0) {

int digit = number % 10;

reversed = reversed \* 10 + digit;

number /= 10;

}

resultLabel.setText("Reversed: " + reversed);

} catch (NumberFormatException ex) {

resultLabel.setText("Invalid input.");

}

}

});

}

public static void main(String[] args) {

SwingUtilities.invokeLater(() -> {

ReverseNumberGUI frame = new ReverseNumberGUI();

frame.setVisible(true);

});

}

}

3. Write a GUI program to demonstrate the use of radio buttons (e.g., gender selection).

import javax.swing.\*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

public class GenderSelectionGUI extends JFrame {

private JRadioButton maleButton, femaleButton, otherButton;

private JButton submitButton;

private JLabel resultLabel;

public GenderSelectionGUI() {

setTitle("Gender Selection");

setSize(300, 200);

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

setLayout(null);

JLabel promptLabel = new JLabel("Select Gender:");

promptLabel.setBounds(20, 20, 100, 25);

add(promptLabel);

maleButton = new JRadioButton("Male");

maleButton.setBounds(30, 50, 80, 25);

add(maleButton);

femaleButton = new JRadioButton("Female");

femaleButton.setBounds(110, 50, 80, 25);

add(femaleButton);

otherButton = new JRadioButton("Other");

otherButton.setBounds(190, 50, 80, 25);

add(otherButton);

ButtonGroup genderGroup = new ButtonGroup();

genderGroup.add(maleButton);

genderGroup.add(femaleButton);

genderGroup.add(otherButton);

submitButton = new JButton("Submit");

submitButton.setBounds(90, 90, 100, 30);

add(submitButton);

resultLabel = new JLabel("Selected: ");

resultLabel.setBounds(20, 130, 250, 25);

add(resultLabel);

submitButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

if (maleButton.isSelected()) {

resultLabel.setText("Selected: Male");

} else if (femaleButton.isSelected()) {

resultLabel.setText("Selected: Female");

} else if (otherButton.isSelected()) {

resultLabel.setText("Selected: Other");

} else {

resultLabel.setText("Please select a gender.");

}

}

});

public static void main(String[] args) {

SwingUtilities.invokeLater(() -> {

GenderSelectionGUI frame = new GenderSelectionGUI();

frame.setVisible(true);

});

}

}