

# **Southern University Bangladesh**

**Department of Computer Science and Engineering**

**Faculty of Science and Engineering**



## **Object Oriented Programming Lab**

### **Lab Report: 09 (Group Project)**

**Course code : CSE 0613-108**

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# Object Oriented Programming Lab

## Spring 2024

### Lab 09

#### (AWT Program)

**Write a java AWT program to create a Frame window by extending Frame Class. It should have the following components, as given figure:**

**You suppose to create At least :**

**3 Labels, 3 TextFields, 3 CheckOption 3 CheckBox and 2 Buttons.**

#### **Code:**

```
import java.awt.*;
import java.awt.event.*;

public class SalaryCalculator extends Frame {
    SalaryCalculator() {
        setLayout(new GridLayout(10, 2)); // 10 rows, 2 columns

        Label welcomeLabel = new Label("Welcome to Raihan Garments Factory",
        Label.CENTER);

        Label nameLabel = new Label("Employee Name:");
        TextField nameField = new TextField(20);

        Label idLabel = new Label("Employee ID:");
        TextField idField = new TextField(20);

        CheckboxGroup genderGroup = new CheckboxGroup();
        Checkbox maleCheckbox = new Checkbox("Male", genderGroup, false);
        Checkbox femaleCheckbox = new Checkbox("Female", genderGroup, false);

        Label salaryLabel = new Label("Base Salary:");
        TextField salaryField = new TextField(20);

        Label transportLabel = new Label("Transportation Cost:");
        TextField transportField = new TextField(20);

        Label accommodationLabel = new Label("Accommodation Cost:");
```

```

TextField accommodationField = new TextField(20);

Label bonusLabel = new Label("Festival Bonus:");
TextField bonusField = new TextField(20);

Label totalSalaryLabel = new Label("Total Monthly Salary: ");
TextField totalSalaryField = new TextField(20);
totalSalaryField.setEditable(false); // This field is for display only

Button calculateButton = new Button("Calculate");
Button resetButton = new Button("Reset");

add(welcomeLabel);
add(new Label()); // Empty space
add(nameLabel);
add(nameField);
add(idLabel);
add(idField);
add(maleCheckbox);
add(femaleCheckbox);
add(salaryLabel);
add(salaryField);
add(transportLabel);
add(transportField);
add(accommodationLabel);
add(accommodationField);
add(bonusLabel);
add(bonusField);
add(totalSalaryLabel);
add(totalSalaryField);
add(calculateButton);
add(resetButton);

setSize(500, 500); // Frame size
setTitle("Employee Salary Calculation");
setVisible(true);

// Adding action listeners for the buttons
calculateButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        // Logic to handle salary calculation
        double baseSalary = Double.parseDouble(salaryField.getText());
        double transportCost = Double.parseDouble(transportField.getText());
        double accommodationCost = Double.parseDouble(accommodationField.getText());
        double bonus = Double.parseDouble(bonusField.getText());

        double totalSalary = baseSalary - transportCost - accommodationCost + bonus;
        totalSalaryField.setText(String.valueOf(totalSalary));
    }
});

```

```

resetButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        // Logic to reset the text fields
        nameField.setText("");
        idField.setText("");
        genderGroup.setSelectedCheckbox(null);
        salaryField.setText("");
        transportField.setText("");
        accommodationField.setText("");
        bonusField.setText("");
        totalSalaryField.setText("");
    }
});

// Adding a window listener to handle the window closing event
addWindowListener(new WindowAdapter() {
    public void windowClosing(WindowEvent we) {
        System.exit(0);
    }
});
}

public static void main(String[] args) {
    SalaryCalculator salaryCalculator = new SalaryCalculator();
}
}

```

# Screenshot of The Window:

Employee Salary Calculation

— □ ×

Welcome to Raihan Garments Factory

Employee Name:

Sharmistha

Employee ID:

666-61-60

☐ Male

☒ Female

Base Salary:

20000

Transportation Cost:

5000

Accommodation Cost:

15000

Festival Bonus:

10000

Total Monthly Salary:

50000.0

Calculate

Reset