

Exercise 2

Group Number:	19
Group members:	
1191302794	Ahmad Ayaan
1201303219	Shaon, Tanzir Ahmed
1201303220	Shaily, Fahima Hassan
1201303035	Salah Faye Y Al Haismawi
1201101872	Anis Balqis Binti Rizaludin

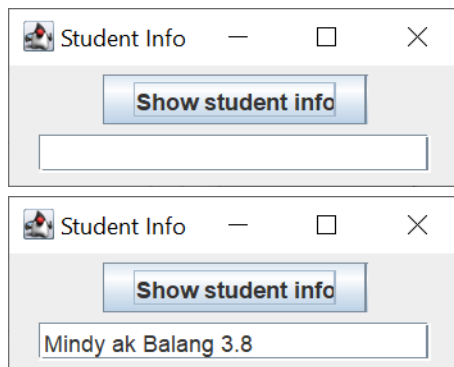
Submission instructions:

- This is a group exercise, 1 submission per group. Early submission is allowed. You can submit as many times as you wish, but only keep 1 submission in the Google drive.
- Please submit in PDF file format, other file type will have marks deducted.
- Name your file name in the format (Ex#_Group##.pdf) with your group number, eg: Ex2_Group01.pdf (Case sensitive).
- All submission after the deadline will be granted ZERO mark.
- Plagiarism will be penalised with ZERO marks.

Deadline: Week 6 Sunday, 12.00am (midnight)

Questions:

1. Create a *GUI* class to display information from your Exercise 1 (the *Student* and *Person* classes).
2. In the *GUI* class, create a *student* class variable that is initialized to a new student you construct with a *name* and *CGPA*.
3. When the button is pressed, it should use the getters to retrieve the student's name and CGPA and display in a *JTextField*. You **must** get the student's name and CGPA from the student object. The expected output is as shown in the example below.



You may use BlueJ to create the classes and then copy & paste the code below, or you may just type your code directly below. The Person and Student class might be 100% the same as your previous application classes if you already have getters for them.

Person class

```
public class Person{
    private String name;

    //default constructor
    Person() {}

    Person(String name){
        this.name = name;
    }

    //setters
    public void setName(String name){
        this.name = name;
        System.out.println(("The name has been updated to " + name));
    }

    //getters
    public String getName(){
        return name;
    }
}
```

Student class

```
public class Student extends Person {
    private double cgpa;

    //default constructor
    Student() {}

    //overloaded constructor
    Student(String name, double cgpa) {
        super(name);
        this.cgpa = cgpa;
    }

    //setters
    public void modifyCgpa(double cgpa) {
        this.cgpa = cgpa;
        System.out.println("The cgpa has been updated to " + cgpa + "for the student named " + this.getName());
    }

    //getters
    public double getCgpa() {
        return cgpa;
    }
}
```

GUI class

```

import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

public class GUI extends JFrame{
    Student student1 = new Student ("Mindy ak Balang", 3.8);
    JTextField textInfo = new JTextField ("",20);
    JButton btnInfo = new JButton ("Show student info");

    public GUI()
    {
        super("Student Info");
        JPanel jp=new JPanel(new FlowLayout());
        add(jp);

        textInfo.setPreferredSize(new Dimension (200,20));
        btnInfo.addActionListener(new ActionListener());

        jp.add(btnInfo);
        jp.add(textInfo);

        setSize(250,110);
        setVisible(true);
        setDefaultCloseOperation(EXIT_ON_CLOSE);
    }

    private class ButtonActionListener implements ActionListener{
        @Override
        public void actionPerformed(ActionEvent e){
            textInfo.setText(student1.getName() + " " + student1.getCgpa());
        }
    }

    public static void main(String[] args){
        new GUI();
    }
}

```