

## EGCO 213

### Group Project 3 – GUI Program

The project can be done in a group of at most 4 students. Each group must do the project by themselves. This is a freestyle project, so no 2 groups should have the same (or similar) GUIs and code. **Everyone involved in cheating will get ZERO point**

1. Design and implement a GUI program. The program must open at least 2 frames or dialogs, **JOptionPane not counted**. Use **javax.swing** package for containers and components. **JavaFX forms and components are not allowed**.

- The class that opens the first frame/dialog must be named **MainApplication**

2. The following components must be included in any frame/dialog:

- JTextField, JPasswordField, or JTextArea
- JCheckBox or JRadioButton : at least 5 items
- JComboBox or JList : at least 5 items
- JButton : one frame/dialog must have a button that opens another frame/dialog
- An extra component (child class of JComponent) not taught in class, e.g. JSpinner, JSlider, JTable
- Names and IDs of everyone in your group, as any component

3. Implement at least 4 event handlers. The handlers are counted by method names, e.g.

A button with MouseListener and <u>mouseClicked(...)</u> method	}	Counted as 1 handler
A combo box with MouseListener and <u>mouseClicked(...)</u> method		
A button with MouseListener and <u>mouseDragged(...)</u> method	}	Counted as 2 handlers
A combo box with MouseListener and <u>mouseClicked(...)</u> method		

In order to be counted, the handlers must do something substantially (not just printing/showing message). Out of the 4 handlers, one of them must be to handle **KeyEvent** and another one to handle **MouseEvent**. The other 2 handlers can be to handle any event.

4. Make a demonstration clip (< 5 minutes) in .mp4, .m4v, .mov, .mpg or .mpeg, .wmv format. Run your program and explain what it is about. If it is a game, explain how to play it. After watching the clip, user should be able to use your program properly

5. Package and folder structure must be correct

5.1 Your source files (.java) must be in folder Project3\_XXX where XXX = ID of the group representative, assuming that this folder is under Maven's "src/main/java" structure. The first lines of all source files must be comments containing English names & IDs of all members.

5.2 Input files (images, sounds, etc.) must be read from Project3\_XXX. If they are placed in subfolders e.g. resources, all subfolders must be inside Project3\_XXX. Don't use absolute path that is valid only on your PC. Avoid too big image & sound files. They won't give you any extra point. Instead, you may lose points if they don't load & run properly on my PC

5.3 Add readme.txt containing English names & IDs of all members in Project3\_XXX

### Grading (20 points)

- 6 points Minimum requirements → 2 frames + 6 components + 4 event handlers
- 2 points Completeness → everything functions as it should, with correct output/calculation and proper exception handling
- 1 point Aesthetic and user interface, with adequate instructions on how to use your program
- 4 points Design and programming style, creativity, extra techniques such as thread, sounds, etc. Make sure that it runs on **Java 21** and **1366 x 768 resolution**. Avoid very large & unresizable frames/dialogs or very large images. Avoid placing components near the border of frames/dialogs (they may be cropped out if the frames/dialogs don't fit my screen)
- 2 points Demonstration clips. **YouTube link is not accepted** (I will keep some clips as examples for next year classes)
- 5 points Project presentation & QA

### Presentation – 20 minutes per group

1. Start the presentation by running your demo clip
2. Open your NetBeans (or other editors). Show your code and explain the following points
  - Extra component → its purposes, how it works
  - Each event handling → event & event handling method, listener, component (to which the listener is attached), how it works
3. Some QA to check your understanding & whether you did the project by yourselves
4. Any interesting point in your program
5. No need for slides. No need for everyone to present the project, but at least show some participation
6. Points are given based on
  - The smoothness of your demo & presentation (without technical problems or crashes)
  - Clear explanation of your project
  - Questions & answers
  - Others e.g. punctuality, group participation, etc.

### Submission

1. Source files (\*.java) + related files (images, sounds, etc.) + clip file + readme.txt
  - External libraries/packages (such as com.google, org.alicebot, etc.) are **strongly discouraged**. I won't have time to set up my NetBeans and won't bother trying. If your program doesn't compile or doesn't run properly on my PC due to the lack of such libraries, you may lose some points
2. Group representative zips and submits Project3\_XXX to Google classroom. Other members submit only readme.txt to Google classroom
  - If the submission file is too big, you may give a link to your Google drive. Make sure that you set permission for [rangsipan.mar@gmail.com](mailto:rangsipan.mar@gmail.com) to access your file
  - Before submitting the project, every member in your group should try downloading & running the project to make sure that it works on any computer