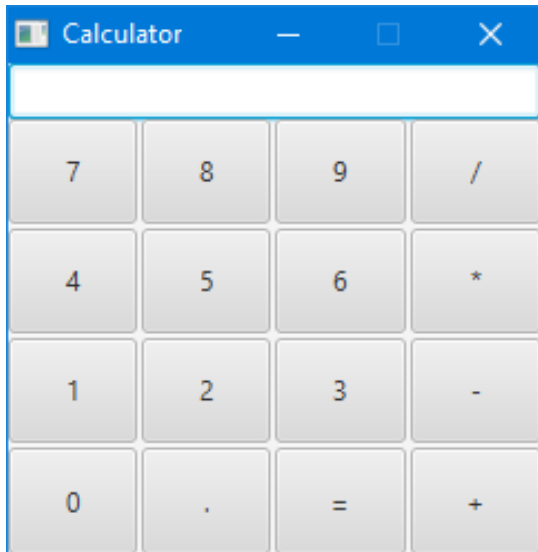


Programming Exercises - SDJ - Session 27

Exercise 27.01

Add calculator functionality to the GUI you created in Exercise 26.02 by adding action event handlers to the buttons.



Exercise 27.02

Add a new tab to the GUI in my “StudentManagementGUI” example (uploaded). The name of the new tab should be “Students from Country”, and it should contain a `Label`, a `TextField`, a `TextArea`, and a `Button`.

- The text in the `Label` should be something like “Country:”
- The `TextField` should be used to enter the name of a country
- The `TextArea` should be able to display a list of students
- The text on the `Button` should be something like “Get Students”, and when it is clicked, it should use the `StudentModelManager` class to retrieve a list of all students from the country specified by the text in the `TextField`.

Exercise 27.03

Add a new method called `getAllCountries` to the `StudentModelManager` class in the “StudentManagementGUI” example. The method should use the `MyFileHandler` class to retrieve all the different countries of the students (without duplicates). The method should return the countries in a `String[]`.

Then add a new `ComboBox` to the “Change Country” tab in the `StudentManagementGUI` class. The combo box should use the new `getAllCountries` method in the `StudentModelManager` class to display all the countries. When a new country is selected in the combo box, then the text in the `countryField` should be set to this country.

Now make the `countryField` read-only, but add a new `CheckMenuItem` to the edit menu where the user can choose whether or not it should be possible to write in the `countryField`. We might want to change the country to one that no current student already has, so this option to allow writing in the `countryField` is necessary.

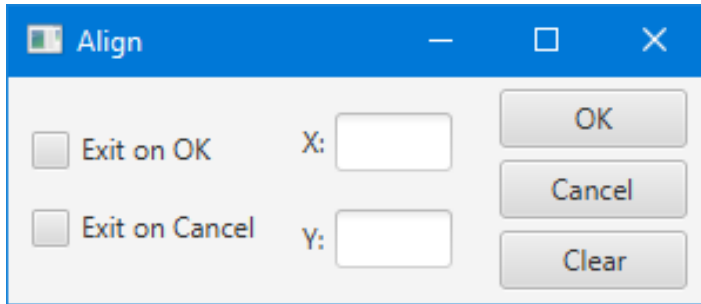
Exercise 27.04

Create an application with a GUI that can calculate the area and circumference of a circle.

- Create a GUI by making a class that inherits from `Application`
- Add a `TextField`, a `Button`, and two `Labels` to the window
- Implement an action event handler for the button, so that when the user clicks the button, the two labels will display the area and circumference of a circle with the radius given in the `TextField`.

Exercise 27.05

Add functionality to the GUI that you created in Exercise 26.01, by adding action event handlers to the buttons.



The functionality should be like this:

- If you click on “Cancel” and the checkbox “Exit on Cancel” is selected, then the program should exit (the statement `System.exit(0)` will take care of that)
- If you click on “Ok” the program should display a popup message with the x and y values listed in the two text fields (Use a `JavaFX Alert` like I do in the “StudentManagementGUI” example) and only if the checkbox “Exit on OK” is selected, the program should then exit.
- If you click on ”Clear” the values typed in the two text fields should be deleted (set to empty strings)