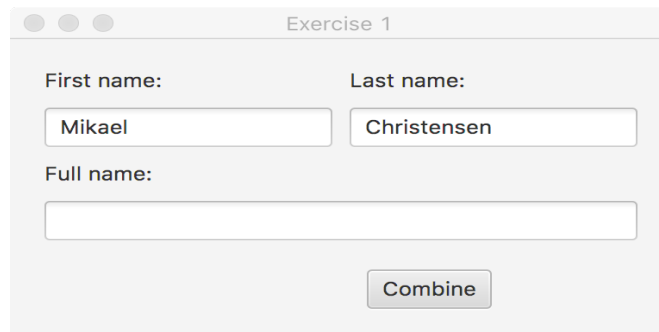


***Fredag d. 31. marts 2023***

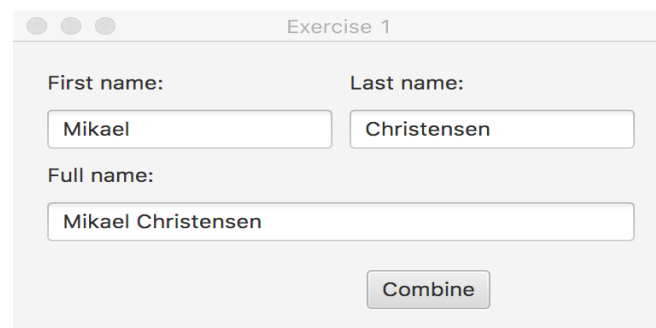
### Exercise 1

Make an application with the GUI below here:



The GUI for Exercise 1 is a window titled "Exercise 1". It contains three text input fields and one button. The first two fields are labeled "First name:" and "Last name:", with "Mikael" and "Christensen" entered respectively. Below these is a third field labeled "Full name:". A "Combine" button is located at the bottom right.

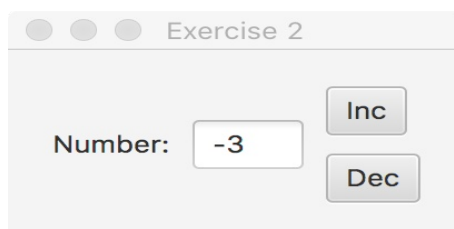
When the user clicks the button, the lower TextField must contain the combination of the two strings in the upper two TextFields. In the shown examples, the result is



The GUI for Exercise 1 is shown again, but now the "Full name:" field contains the text "Mikael Christensen". The "Combine" button is still present at the bottom right.

### Exercise 2

Make an application with the GUI:



The GUI for Exercise 2 is a window titled "Exercise 2". It contains a text input field labeled "Number:" with the value "-3" entered. To the right of the field are two buttons: "Inc" (increment) and "Dec" (decrement).

The application shows an int value in the TextField. The buttons must increment and decrement the value of the variable.

Hint: The method `Integer.parseInt(s)` takes a `String s` as parameter and returns an `int`.

### Exercise 3

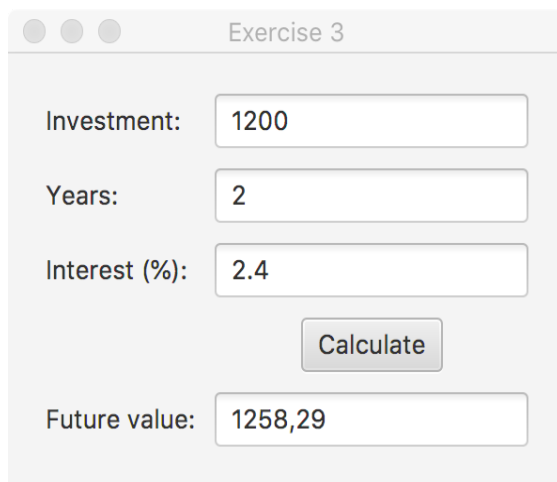
Write a program that calculates the future value of an investment.

Known values are: investment, number of years and monthly interest.

The formula for the future value is known from earlier education in math.

Use text fields to enter investment, interest and number years. Show the future value in a text field, when the user clicks a calculate button.

Below is shown a possible design of the window:



The screenshot shows a window titled "Exercise 3" with a light gray background. It contains three input fields with labels to their left: "Investment:" with the value "1200", "Years:" with the value "2", and "Interest (%):" with the value "2.4". Below these fields is a button labeled "Calculate". At the bottom, there is a text field labeled "Future value:" containing the value "1258,29".

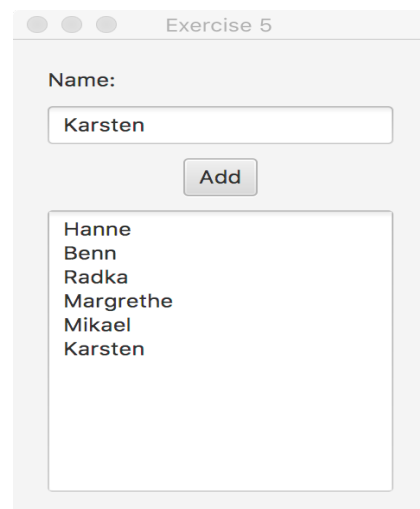
### Exercise 4

Write a GUI-based program that can convert temperatures between Celsius and Fahrenheit (both ways).

The formula is:  $F = 9/5 * C + 32$ .

### Exercise 5

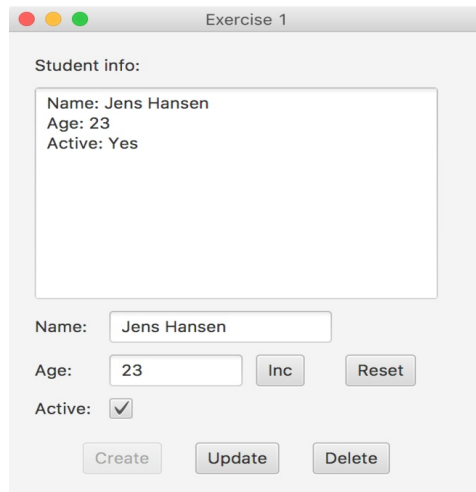
Make a program with the GUI shown to the right. When the Add button is pressed, the name in the text field must be added to the *text area* at the bottom.



The screenshot shows a window titled "Exercise 5" with a light gray background. It contains a label "Name:" followed by a text input field containing the name "Karsten". Below the input field is a button labeled "Add". At the bottom, there is a text area containing a list of names: "Hanne", "Benn", "Radka", "Margrethe", "Mikael", and "Karsten".

### Exercise 6

Make a program with a Student class and graphical user interface (e.g. in a class named GuiEx6).



The screenshot shows a graphical user interface window titled "Exercise 1". Inside the window, there is a section labeled "Student info:" containing a text area with the text "Name: Jens Hansen", "Age: 23", and "Active: Yes". Below this text area, there are three input fields: "Name:" with the value "Jens Hansen", "Age:" with the value "23", and "Active:" with a checked checkbox. To the right of the "Age:" input field are two buttons: "Inc" and "Reset". At the bottom of the window, there are three buttons: "Create", "Update", and "Delete".

The Student class has 3 fields: name, age and active. Make a constructor for student objects, and getters and setters for the fields.

The program manages information about one student. You can see the GUI in the picture above.

Your job is to program the GUI according to the following description.

At top there is a text area (non-editable) that is going to show all the information about a student. Then there are 3 input fields: 2 text fields used to type in name and age, and a check box to set the activity level of the student.

The Create button creates a Student object from the values in the input fields, shows the info about the student in the text area, and clears the input fields (and disables/enables buttons). Hint: Make a Student field in the GuiEx6 class to remember the student in.

The Update button updates the Student object with the values in the input fields, and shows the updated info in the text area..

The Delete button deletes the Student object and clears the text area and the input fields.

The Inc button updates the value in the Age text field with 1.

The Reset button updates the input fields with values from the Student object.

Remember to disable/enable buttons to help the user of the program to use the program in the correct way.