

# Lab6 documentation

## 1. Prerequisites

In order to be able to use this program efficiently, the user must enter:

- His cumulate grade for the **Practice activities**
- His cumulate grade for **Labs**
- His cumulate grade for the **Midterms**
- His grade for the **final**
- the grade he wants to get (**Goal**); which is supposed to be a character from **A to F** except **E**.

**Hint:** - For a field without a grade (for example the **final** has not been done yet) the user has to put **0**.  
- **cumulate grade:** the grade the user got so far.

## 2. Implementation

### Problem description:

Create a grade calculator to calculate your grade for this class. GUI interface is *optional*, however do consider the user experience for entering numbers.

Think about how you want to store numbers in data structures. There is no obvious answer, there are many ways to handle this. Consider the trade-offs when you choose.

A question you might want to try answering as the objective and test case for your program: *What do you need to score on the remaining assignments and exams to pass? To get the letter grade you seek.*

### How I wrote the program:

I used **JavaFx** to write a **GUI** program that computes a calculator.  
I created five input fields:

- The grade for the **Practice problems**
- The grade for **Labs**
- The grade for the **Midterms**
- The grade for the **final**
- The Alphabetic grade the user wants to get

Two buttons:

- The button for the addition “+”
- The button “**Clear**” to initialize the calculator

One output field:

- The output field “Result” to print the result

When the grades enter by the user reach his grade goal, the calculator prints:

Your current grade is: **Grade** Congratulations, you achieve your goal

Otherwise, the calculator prints:

Your current grade is: **Grade** and you need a minimum of `+(value of goal – grade enter) +` to achieve your goal. Good luck!