Introduction to Computer Science 2
Lab 5: Advanced User Interfaces

Learning Goals:

• To learn how to build a complex GUI.

Exercise 1 (5 points)

Write a program with a graphical interface that allows the user to convert an amount of money between U.S. dollars (USD), euros (EUR), and British pounds (GBP). The user interface should have the following elements: a text box to enter the amount to be converted, two combo boxes to allow the user to select the currencies, a button to make the conversion, and a label to show the result. Display a warning if the user does not choose different currencies. Use the following conversion rates:

• 1 EUR is equal to 1.18 USD

• 1 GBP is equal to 1.32 USD

• 1 GBP is equal to 1.12 EUR

Exercise 2 (5 points)

Write a program with a graphical interface that implements a login window with text fields for the user name and password. When the login is successful, hide the login window and open a new window with a welcome message. Follow these rules for validating the password:

1. The user name is not case sensitive.

2. The password is case sensitive.

3. The user has three opportunities to enter valid credentials.

Otherwise, display an error message and terminate the program. The code must include two arrays storing (as strings) the database of usernames and corresponding passwords. Therefore, both arrays will contain the same number of elements.

NOTE: In Lecture 6 you will learn how to implement this process nicer using other files to store the username-password information.

Honor code, coding style, and deliverable:

Try to solve the exercises with what you already know. You are welcome to expand your program to do extra things but they are not mandatory.

Plagiarism is not allowed! We will run sophisticated software that automatically detects similarities on source code among students. All plagiarism incidents will be immediately reported to the Board of Examiners

Submission!

Submit your java files to Canvas.
Ask your instructor in case there is a problem with your submission.

DO NOT SEND SUBMISSIONS VIA EMAIL
YOUR LAB WILL NOT GET GRADED!