

Completing the Programming of a JavaFX Application Using Lambda Expressions

In this assessment, you will complete the programming of a lambda expression event handler of a JavaFX application. The application registers students for courses in a term of study. The application does compile and does run, but it does not produce the expected result as stated in its requirements.

You have been hired to complete the source code of this lambda expression event handler such that the application meets its stated requirements. Specifically, your added code should:

- Validate the user course selection for registration against the given registration business rules
- Display either an error with explanation or a registration confirmation message based on your validation of user selection
- Update and display the current list of valid registered courses and their total credit hours

The requirements of this application are as follows. The application is register students for courses in a term of study.

The assumptions used by the application are:

- Each course carries 3 credit hours
- The program terminates only when the student closes it

The program must follow these registration business rules:

- No registration more than once for the same course
- No registration for more than 9 credit hours (e.g. no more than 3 courses)

The application uses the JavaFX GUI platform for its implementation. Students select from a JavaFX ComboBox menu of courses for which they wish to register.

The program use a lambda expression event handler to validate user selection and act accordingly. If the user selection is valid against the registration business rules, the program displays a registration confirmation message to the student for the selected course. Otherwise, the program displays an error message explaining the reason of the invalidation of the selection. The application maintains and displays a current list of registered courses. Additionally, the application maintains and displays a cumulative total credit hours the student has registered for thus far.

Use these course codes, in this order, to test your application:

- IT2230
- IT3349
- IT2230
- IT4782
- IT4784

Successful completion of this assignment will display a valid message or an invalid message, with reason, for the selected course code. In addition, the application should display and update current list of registered courses and their cumulative total credit hours. Your program interaction should look like the sample interaction video, “JAVA FX Register for Course” in the Resources.

Follow these steps to complete this assignment:

1. Unzip the attached NetBeans project zip file (U4A1_JavaFXRegisterForCourse.zip) and load it into your NetBeans IDE.
2. Complete the application programming (lambda expression event handler) to meet the stated requirements.
3. Compile and test your application using the provided input data.
4. Make sure to document the result of your testing by taking screenshots of the result of running your application similar to the provided sample output. Five screenshots are required for this assignment (one for each course code of the provided input data).
5. Explain your approach you took to complete this assignment and the major decisions you made