Assignment 6

Create a new FXML project in NetBeans. Add the given class "Course" to this project. This will represent your Model (MVC pattern).

Create a simple UI that includes a ComboBox (this will eventually show a list of Course code) and also set of text fields for each data member in your model class (Course Code, Your Grade, and Maximum Grade). The GUI should also have Edit button (To edit any of the fields in the course record) and Exit button to stop the application (Fig 1). Also, you should put a label to show "Invalid data" Message if user try to put invalid data and try to Edit.

You need to read data from CourseList.txt (given with assignment) file and construct Course objects using the data, use these objects to populate list for ComboBox (Fig 2). [Hints: Check Lecture Slides for Session 11.2. Example 4 shows how to read data from File and create objects using the data and populate ArrayList of objects].

When user selects a course from ComboBox, the values (Course Id, Your Grade And Maximum Grade) will be displayed in the respective TextFields (Fig 3). In this case, user can edit the data in the TextFields. If they edit any of the data in the TextField and press Edit button, then that data would be edited for the corresponding course object (Fig 4). Here, if user put invalid value during editing (character for grade etc), then the GUI will show "Invalid Data" in a Label (Fig 5). After editing, you need to update the CourseList.txt file (Write the updated values to file) [In this case, remember, we are using sequential access file, therefore we need to write data sequentially].

Below the figures to show GUI and different actions.
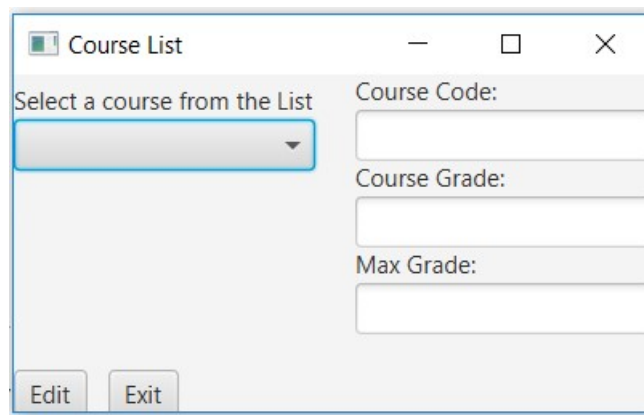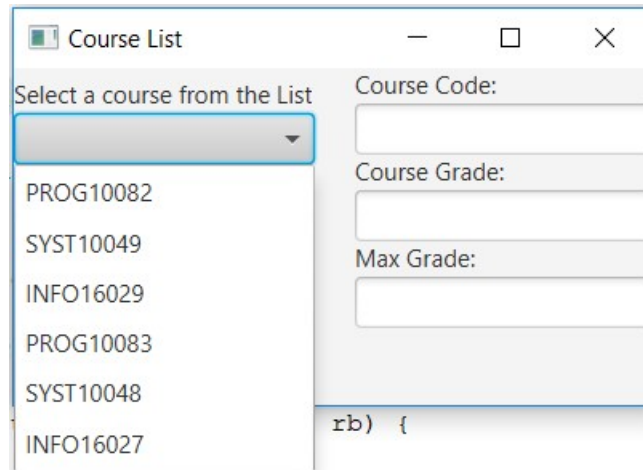

Fig1: Initial View

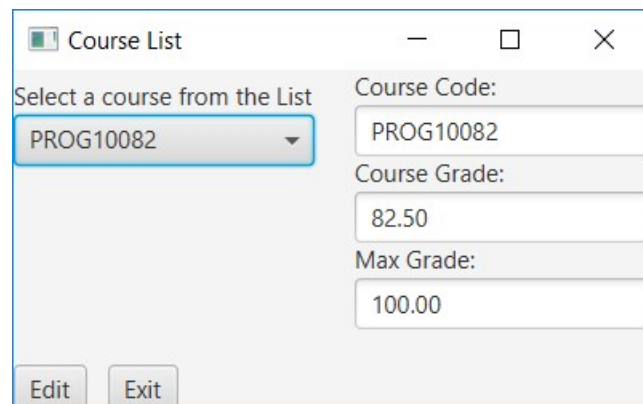Fig 2: After pressing the drop down arrow of ComboBox
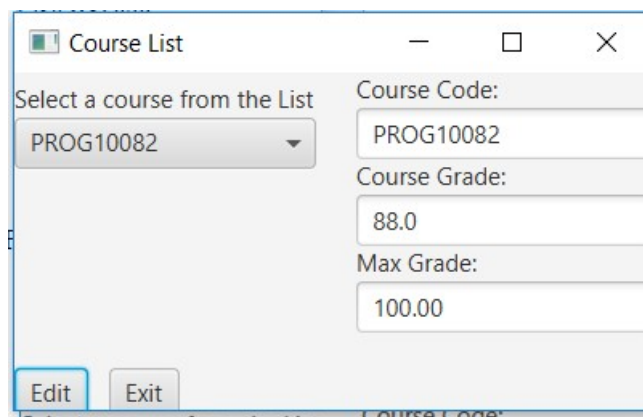

Fig 3: After selecting one course from ComboBox

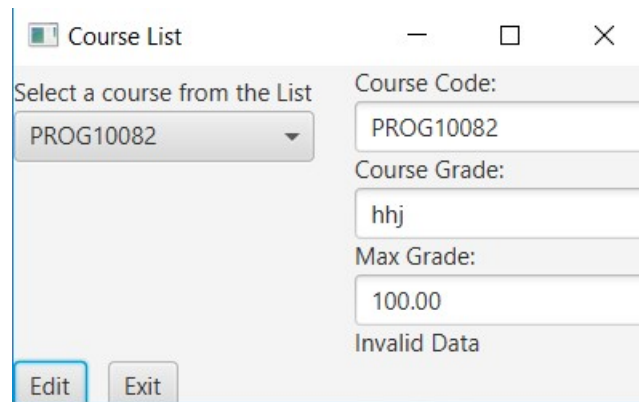Fig 4: User changed the value for course grade and pressed Edit Button.

Fig 5: User put invalid data for Course Grade and pressed Edit Button

Submission

You must submit :
1. The **NetBeans project** that contains your assignment, in a ZIP/RAR file.
2. A text (.txt) document containing all of your source code (code for FXML, Controller class, Model class, CourseList File and Main class)
3. The name of the Zip file should be YourLoginName_Assignment6.ZIP

Evaluation

Your submission will be evaluated based on the following criteria:

Efficient Code: Program uses variables where and only when necessary; program doesn't define variables that are never used, nor does it use too many variables for unnecessary tasks.

Functionality: The GUI includes all the components that were required and components should work as mentioned, also they should appears professional, neat, and intuitive. The components do not shift or resize unattractively when the user resizes or maximizes the screen. Code can read from File, and write to File efficiently.

Programming Style: proper indentation and spacing, use of comments/documentation; all identifiers are descriptive and valid; varibles are defined with appropriate types and converted when required. Component variable names use the proper prefixes (i.e. cmd, txt, lbl)

Other: all instructions regarding submissions and program specifications have been followed; submission was completed and submitted as requested in a timely fashion; techniques discussed in class have been used.