CIS 331
University Management System
Group Project Part 3: JavaFX System

The client was pleased with the prototype Console based system your team developed. Particularly, your PM was please with the design and functionality of your classes. After further discussions with the University staff representing this project, your PM would like you to develop a JavaFX-based Graphical User Interface version of your system. Below are the requirements:

Part 3 Requirements:

- The GUI version of your application should be written in JavaFX. Use your GUI wireframes from Part 1 as a **starting point** to plan, design, and implement your system. It is recommended that the team refresh on the functionality they developed for Part 2 and in a team meeting, sketch out new wireframes for Part 3 that keep the Part 2 functionality in mind. Decisions on what forms for creating and editing the entities might look like, where the reports will print, etc.
- The team should review both Ch. 11 and the Ch. 11 Supplemental for a tour of what common types of JavaFX controls are available. The team is also encouraged to go out and view some videos or tutorial materials on JavaFX to further gain an idea of what controls are available and how they are implemented in code.
- All functionality from Part 2 should be available via the GUI in your Part 3 application:
    - Creating and Editing Students, Faculty, and Courses.
    - Enrolling students in Courses (Enrollment) in a certain semester.
    - Assigning Faculty to teach a course (Schedule) in a certain semester.
    - Reports for
        - All courses a faculty is teaching in a semester.
        - All courses a student is taking in a semester.
        - All students in a single course in a semester.
- The user **should not** have to type in a name to for the Enrollment or Schedules. The user should be able to select options to association using JavaFX Controls. Displays of Students, Faculty, Courses, and Semesters **should not** show ID numbers of any kind, but plain text names/descriptions.
- Pick **one form** where an entity is being created (Student or Faculty or Course or Semester). Employ **data validation** where if any of the forms are empty or missing input, do not allow the creation of the entity to occur. Rather, prompt the user with a displayed message that instructs them to correct the issue.

Things to Keep in Mind:

- Do not print anything to the output console. All interaction with the client should occur through your JavaFX form (messages and input).

- **Try** not to “cram” too many controls for too many functional areas onto one JavaFX form. Use Tabs (Ch. 11 Supplemental) or multi-windows (In Lecture PDF) to let your applications’ layout “breathe.”
- **HINT:** There is an Alert class in the JavaFX library that makes prompting messages for the user easy. Or you could create your own class that displays message windows.

Deliverable Requirements:

- Create a new JavaFX NetBeans Project for Part 3. Import / Copy over into the same package folder as App.java all your Class files from Part 2. (drag and drop or navigate the file structure and copy/paste there).
- Zip up your entire NetBeans folder and submit that for your Part 3 submission.
- Choose **one** team member to submit.
- **Make sure** all team member names are listed in the comment header of your App.java JavaFX application file.
- **Make sure** all team member names are listed in the Canvas Comments of the submission.