



## Faculty of Science

<b>Course:</b>	CSCI 2020U – Software Systems Development & Integration
<b>Due date:</b>	March 15 <sup>th</sup> , 2022
<b>Grade:</b>	30%
<b>Submission:</b>	via Canvas, <b>Canvas Quiz (Part 1) and .zip file (Part 2)</b>

### General Instructions

- This is an **individual** submission.
- You are **allowed to ask the instructor (Riley)** clarification questions via **private messages on Slack**. However, no answers that will directly solve your midterm will be provided.
- You should **not** post questions using **public channels**, neither in official nor unofficial course platforms.
- You must **not** share your questions nor your answers to this Midterm exam.
- Any form of academic misconduct detected will be treated accordingly to the university's procedures.
- You must name your midterm **ZIP** file **"csci2020umidterm-lastname-firstname-studentID"**

## Part 2: Coding (20 pts)

For this part of the Midterm, you will be required to create a JavaFX project. It is recommended that you use IntelliJ to create a base application that you can work off of. You can choose your environment and IDE of choice for JavaFX.

You will implement the necessary code to fulfill the action of each of the buttons shown in Figure 1. You are given specific instructions for each of the buttons (Animation, 2D Graphics, About).

However, the **general instructions** are

1. You may change the Scene, or the root object of the main scene (as you prefer) in order to change the application UI for each of the buttons accordingly.
2. You may create as many (if any) additional classes as needed.
3. You must keep coding best practices while you design your solution.
4. You may create the UI components programmatically, or via FXML/CSS according to your preference.
5. All 3 buttons different UI must contain a "Back to Main" link, which if clicked on, will allow the user to navigate back to the original main Scene as you see it on the screenshot in Figure 1.

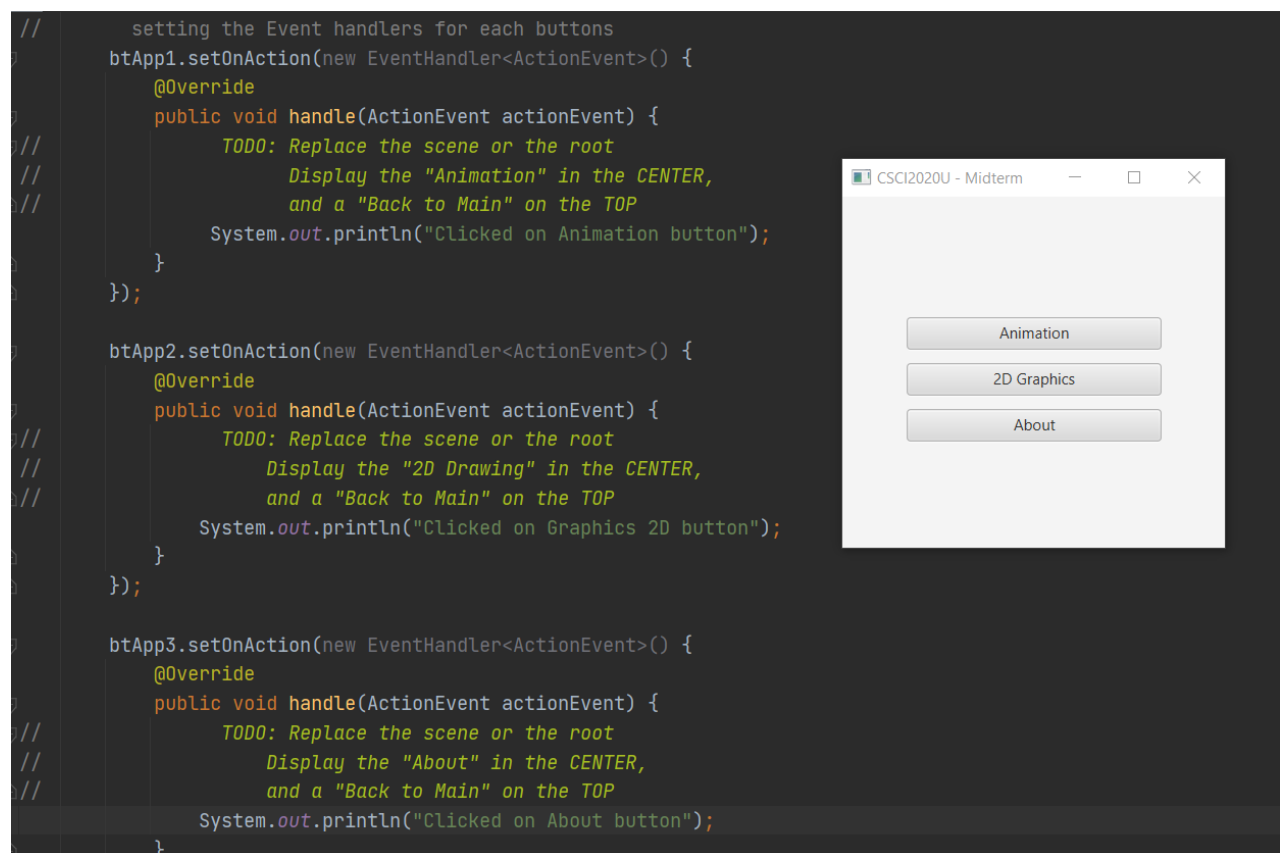


Figure 1. Event Handlers screenshot and the Main application UI.

### The “Animation” Option

This UI will display an animation to the user using any shape of your choice. This animation should show your shape moving from the left side of the window to the right of the window over **2 seconds**. When the shape reaches the right side of the window, it should move back to the left over 2 seconds.

### The “2D Graphics” Option

Using 2D graphics, you will draw your name initials (letters) without using a **Text** or **SVGPath** objects, you must only use other basic shapes like lines, ellipses, rectangles, etc. You may also use properties like fill, stroke, etc.

Feel free to make it personal and express your personality with colors and typeface style. Besides the requirements of not using Text or SVGPath, the initials should be readable using the Roman alphabet as the baseline.

For reference add a label with your initials, so the grader can know which letters you are supposed to draw.

### The “About” Option

This option will display information about you.

You may choose how to display the information (i.e. Text, Label, TextBox, Link).

The information displayed should be read from a XML file created by you in the “resources” folder following the template:

```
<info>
  <student id="">
    <name> </name>
    <email> <\email>
  </student>
  <software-description>
    Some description in text
  </software-description>
</info>
```

## Part 2 Submission

You will submit 1 zip file with your project named "CSCI2020U-Midterm-LastName-FirstName-studentID.zip".

Submit your solution including

- the "resources" folder with your info.XML file
- all the .java files
- README.md file with instruction on "How to run" your program.

*If you used IntelliJ you may save you project as .zip file (File/Export/Project as zip)*