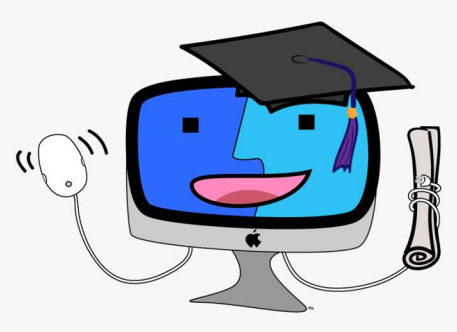
ICS4U Summative

Overview:



Your summative is worth 30% of your overall grade this semester. It includes 2 parts:

1. 10% **-- 20 Question Multiple-Choice Quiz** covering units 1 → 3 of the Vik-20 material we have completed this semester. There will be **no** questions on unit 4 (Swing) and **no** communication section.

   Quiz Date: Monday, January 16th

2. 20% **-- Coding Project** involving creating a Java application with a graphical user interface using Swing. The project aims to demonstrate your mastery of the concepts covered this year and serve as an example for future job/co-op interviews. For example, you may choose to add a GUI to your grid-based game from unit 3, enhance our paint program from unit 4, or create something completely new!

   Proposal Date: Wednesday, January 11th (or earlier if you are ready)

   Demo Date: Friday, January 20th (or earlier if you are ready)

There are two "milestones" for your project:

1. **Wed Jan 11th:** You will submit a (printed) proposal. The main point of the proposal is to demonstrate that you have a clear picture of what you are planning to make **before** you get too far into coding.

   Your proposal **must** include:

   a. A brief (1-2 paragraph) **written description** of your application that explains its purpose – i.e., "What are you planning to make?".
   b. A **sketch** that shows how the main window for your GUI will look like, with call-outs explaining what various widgets will do.
   c. A **detailed list of steps** that you plan to follow to develop the application starting with the most basic functionality.

2. **Fri Jan 20th:** You will submit and discuss your final code with Mr. Rao. Your final code **must**:

   a) **Be your <u>original</u> code!** Copied code will receive a grade of zero (0) and there will not be enough time for a "make-up" summative project.

   b) **Include a GUI using the Swing framework.** For a simple app, you can hand-code the GUI in Dr. Java (you do not need to use NetBeans).

   c) **Meet all (20) of the coding style rules** covered this semester, including complete Javadocs for all classes and methods.

   d) **Be demonstrated using Dr. Java or NetBeans, <u>not</u> Coding Rooms.** I will not install another IDE to evaluate your code.

   e) **Include at least 2 technically challenging features such as:**

      I. Use NetBeans to create a more complex GUI

      II. Incorporate some File Input/Output (e.g., preferences, high scores)

      III. Use one of **our** dynamic data structures (linked list, stack, or queue) or the JCF HashMap.

      IV. Suggest something else (talk about it in your proposal!)

Reflecting on Your Project

A. What part of your project are you most proud of?

B. Are there any known issues/bugs? Explain.

C. If you had more time, what would you add?

ICS4U Summative: Marking Rubric

App: _____ **Student Name: _____**

Marking Criteria	Level (1 → 4)	Comments
APP PROPOSAL: Due (printed) January 11th (or sooner)		
Clear and comprehensively written app description, GUI sketch, and implementation steps. Proposal demonstrates a deep level of thought about app design and implementation planning **before** coding starts.		
FINAL APP SUBMISSION AND DEMO: January 20th (or sooner)		
Code is efficient, demonstrates solid knowledge of Java syntax, useful classes in the Java API, the Swing framework, and effective OOP techniques (i.e., encapsulation, inheritance, and polymorphism).	**(K)**	
Application runs bug free and compiles without warnings or errors.	**(A)**	
All 20 style rules have been applied correctly. Code shows great attention to detail.	**(C)**	
Overall level of effort compared to peers. App includes (at least) 2 challenge features.	**(T)**	
Overall Mark:	**/ 20**	