Faculty of Science

Course:	CSCI 4160U: Interactive Media
Major Project:	#1
Weight:	25% of your final grade
Topic:	2D Game Development

***Note**: This project is expected to be submitted individually. Collaboration should be limited to non-technical, non-programming discussions only, and sharing of code is prohibited.*

Overview

This project is a major body of work. You are expected to turn in a completed game experience, though you may not have time to develop more than one level or simple enemies. You will be expected to combine all of the 2D graphics concepts (as well as user interfaces) into your project.

The nature of the project is entirely up to you, but you should choose a project that gives you the opportunity to demonstrate the concepts learned in this course. Games like top-down RPGs, side-scrolling shooters, side-scrolling platformers are ideal as they use many of the course concepts. However, if you have a different type of game in mind, contact the instructor just to be sure you won't be missing anything critical.

The only approved game engine (by default) is Unity, and the language should be C#. If you have any other ideas, contact the instructor for approval before beginning work.

Getting Started

You will create a GitHub or BitBucket repository for both of your CSCI 4160U projects. This project will be a single sub-directory within that repository, called `project1/`. Your repository should be private, and the instructor should be added.

Note: By default, free GitHub accounts do not allow private repositories. You can either sign up for an academic account, or use BitBucket, which does provide private repositories.

Assets

You can obtain the assets for your game anywhere, as long as you have permission to use them (via the license). If the license requires attribution, be sure to include a file called ATTRIBUTION.txt in your base folder which includes all of the asset authors.

Keep in mind that if you download an animated character from the Asset Store, it isn't going to count for as much as someone who used a graphic file to rig and animate their own character. Similarly, someone who downloads a platforming physics script isn't going to get as much credit as someone who created their own.

Evaluation

The project will be evaluated both objectively and subjectively.

The objective evaluation, which amounts to 13/25 of the marks, will account for each of the major course concepts. If you have implemented a particular course concept yourself, then you will get full marks. If you have implemented it incorrectly, or have used someone else's code to complete it, you will receive partial marks. If you have not implemented it, you will receive zero for that course concept. These major concepts are:

- (3 marks) Level creation
- (3 marks) Sprite animation (via sprite sheets and/or rigging)
- (1.5 marks) Physics/collision system
- (1 mark) User input
- (1.5 marks) Game state loading/saving
- (1 mark) Menus
- (2 marks) HUD and other gameplay interfaces (e.g. health bars)

The subjective evaluation amounts to 12/25 marks. This will further be broken down into three categories:

- (6 marks) An assessment of the estimated amount of work done on the project
- (3 marks) An assessment of the quality of the code and design of the project, including adherence to best practices discussed in the course
- (3 marks) An assessment of the aesthetic and gameplay quality, as well as creativity, of the project

Advice

It is strongly recommended that you work on parts of your project, immediately after completing the relevant labs and/or assignment. For example, we'll learn how to develop a level using Tilemap in lecture. The following week there will be a lab assignment related to this. There will then be a related assignment, which includes level development with Tilemap. After you've finished the lab assignment and the assignment, it is recommended that you develop a preliminary level for your project. Working in this way, you will stay on track to finish on time.

In courses such as this, the most common source of disappointing marks is a result of students waiting until far too late to begin their major projects.

How to Submit

Submit your project GitHub/BitBucket URL to the Project 1 drop box on Blackboard.