Course:	**INFO-6045 - Animation, Winter 2024**
Project # 2:	**Bone Animation**
Due Date:	**March 4, 2024 (2.5 weeks)**
Weight:	**20% - 25% (Depending on # of projects)**

Note: This project must be done alone. No groups allowed.

Description and Purpose

For this project, you will create a program that demonstrates a model being animated through a bone shader.

Load in a model that either already has bones in the model or hack in the bones yourself. *(We did both examples during class)*. Create an animation sequence that animates the object via the shader.

Plagiarism

- ➢ While you may freely "borrow" mine (or anyone else's) code, ***but*** your code should be "sufficiently" different from mine.

- ➢ In other words, you *cannot* simply use an existing game engine (or part of a game engine) to complete this assignment; it should be either completely new or **significantly modified**.

Grading Scheme

1. 15% marks will be deducted per day if the project is submitted late.
2. If your code does not compile, I will not mark it. This will get you a mark of zero (0).
3. If your code does not build (i.e. linker error) and run (i.e. no crazy run-time crash that is unexpected), I may investigate this further, but only if there is some simple problem and/or very slight and/or very obvious (and easy to fix) configuration error.

	Item	Marks
1	**Model - Loading** Vertices are assigned to bones when loading the mesh	5
2	**Shader - Data**. Your shader is able to accept at least 1 bone id per vertex	10
3	**Shader - Transformation** Your shader is capable of modifying the following for the bone: - Rotation - Scale - Position	30
4	**Animation - Playing** Your animation should have all vertices properly transform in respect to their assigned bone.	10
5	**Animation - Repeat** Your animation should play on repeat. *(Once the animation ends, reset the time to 0.)*	5
6	**BONUS:** Have multiple animation sequences that can be toggled by pressing the number keys (1-5)	10
7	**BONUS:** Set a different colour for vertices assigned to different bones. (Vertices assigned to bone 1 are red, bone 2 blue, etc)	10
	TOTAL:	60+20

Project Submission

The following are **required** for submitting your project:

- ReadMe.txt
  - Describe how to build your project.
  - Describe how to run your project.
  - Describe the user input options

Project Corrections

If any corrections or changes are necessary they will be posted to the course web site and you will be notified of any changes in class. It is your responsibility to check the site periodically for changes to the project. Additional resources relating to the project may also be posted.

Project Feedback

	Item	Marks
1	**Model - Loading**	/ 5
2	**Shader - Data**.	/ 10
3	**Shader - Transformation**	/ 30
4	**Animation - Playing**	/ 10
5	**Animation - Repeat**	/ 5
6	**BONUS #1**	/ 10
7	**BONUS #2**	/ 10