COMP30020: Introduction to Graphics

Individual Assignment 2

Animation

September 24, 2021

Table of Contents

In this lab you will be modelling a hierarchical character in OpenGL using simple geometric primitives. You may build any kind of a character you want, as long as it has a head, body, two arms and two legs.

You will also be animating your character. A simple animation such as moving your character around in a circle is a good place to start. Once you have done this you may move onto more complex animation, but your character must move around in a circle or along some other path. You can animate other objects in your scene also.

1 Objectives

The aim of this lab is to familiarise yourself with OpenGL. You will achieve this by building a character using simple spheres, cylinders and other geometric primitives if you wish. You should implement the animation hierarchy as seen in lectures so it is easier to animate your character. Begin by drawing the bones of the model on a page and figure out where you want everything to go. Your model should fulfil the following basic criteria.

Your model must have at a minimum:

- head
- body
- two arms with elbow joints
- two legs with knee joints

For full marks create a more complicated model of the character or create an environment for your character to live in, or both. An initial example of a character is provided in `GLWidget` - see `setupObjects()` and `drawObjects()` - but you may also model your character as a separate class / re-organize the code as you see fit.

Animation code goes in the `animate()` member function, your animation code should go there.

2 Submission

- Submit your project folder (all files - don't forget to include any textures you used!) in an archive named:

  `<Firstname>_<Surname>_<StudentNumber>.zip`