Task 4   Lab: Data Structure Basics

Summary

In later lab and spike work you will need to make use of standard collections from the C++ STL, as well as create your own data structures that are appropriate for games.

In this lab you will learn about and use standard data collection types as a good building block for later work. Of particular interest to us are the std array, vector, stack, queue and list containers. We are also able to utilise standard algorithms to do handy work on our collections for us.

Task Description

1. **Run the Code.** There is a single file of C++ code in the sample folder. Make sure you can compile and run the code in your IDE that supports debugging.
2. **Read Code, Tweak, Inspect, Write Notes and Answer Questions:**
   a. Go through each section of code (numbered), read the comments, follow the instructions.
   b. Change the Boolean "false" values to "true" for each "if" section as needed. Uncomment particular lines if they are relevant to what you are trying to do.
   c. In your lab report, clearly state your answer to each question.
      i. There are some optional extra questions you might want to answer as well.
      ii. You can use screenshot images (suitably cropped) as evidence for key points, particularly when you are inspecting variables.
3. **Create a simple report.** Create a lab report document that will contain your notes about what you have done for this lab, and your answers to questions.
   a. Include your name, student id, the unit code, the task number and the date at the start of the report.
   b. We suggest using MS Word this time for easy image inclusion, but you could use markdown with images if you want a new challenge or prefer to do that.

Expected Output

Repository
1. Code (in repository) for data structure demonstration program (#2)

Canvas
1. Report responding to the questions in the provided source code (#3)
2. Commit logs