Task 6 - Lab: Debugging

Summary:

Effective use of the debugger is essential for isolating and repairing code errors within a non-trivial project of source code. From the previous task (IDE Familiarity spike) you should now be comfortable with using Visual Studio to compile and run a project. You should also be able to create a break point, step in/over/out, and inspect the value of variables while debugging a running program.

In this lab you have been provided some basic code. Ideally you will learn from the code, but there are also some questions in the code that you must answer, and the debugging tools will help you to demonstrate your answers.

You will write a simple lab report that contains your observations, and answers with evidence.

What you need to do:

1. **Download the Code.** A single file of C++ code is available on the unit website. Download the code, make sure you can compile and run the code.

2. **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.
   - Include your name, student id, the unit code, the task number and the date at the start of the report.
   - 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.

3. **Read Code, Tweak, Inspect, Write Notes and Answer Questions:**
   - Go through each section of code (numbered), read the comments, follow the instructions.
   - Change the boolean “false” values to “true” for each “if” section.
   - Uncomment particular lines if they are relevant to what you are trying to do.
   - In your report, you need to clearly explain what is going on with the code, and issues that may or may not be there.
   - Use screen shot images (suitably cropped) as evidence for key points, paritcularly when you are inspecting variables.

4. **Update doubtfire status, show your tutor:** When your repository is ready (files you have created for this lab are saved and uploaded), update your doubtfire status and show your tutor.

Recommendations:

- We encourage you to discuss your answers with other students. Of course your report and final code with by your unique work, but sharing ideas is a very effective way to consolidate what you learn.
- Keep it simple. This lab is really just about making sure you are okay with inspecting variables with an IDE< while also helping those with less experience with some more C++ code examples that will help with later work.