C / C++

Before we can move on to organising our code, we need to switch programming language. In this task you will obtain the basics of the C/C++ programming language and consider how similar it is to what you have already learnt.

Learning Goals

To complete this task, you need to demonstrate that you can do the following:

- Compile and run C/C++ programs, including linking with external libraries.
- Code programs using C/C++ that involve sequence and data, and control flow.

Focus

- **Programming concepts:** Focus on how the programming concepts you have learnt are *so similar* in C/C++. Notice how you think and code things in almost the same way in this new language.
- **Programming process**: Focus on getting started with the new programming tools – the C/C++ compiler and the need to compile and run separately.
- **Coding**: Focus on memorising the control flow statements… though they will all be pretty much the same as what you have already been using. Make sure to pay attention to the new coding convention.
- **Professional Characteristics:** Focus on adaptability and the ability to see the similarities between programming languages and tools. As an IT professional, you will want to be able to work with a range of tools. Being able to use prior learning in related tools and languages will be essential.

Your Task

For this task you will need to submit the following:

- A PDF document containing:
  - Summaries and reflections.
  - At least one (1) screenshot of:
    - You compiling and running one of your C/C++ programs.
  - Learning journey and resources
- Source code for:
  - A C/C++ version of your Control Flow Test Your Knowledge activity

1. Complete Learning Activities

Work through these steps with the aim to achieve the learning goals.

1. Everything you need is in Chapter 0 Introduction and Chapter 1 Starting C/C++ from Part 2 of the Programmers Field Guide.
2. Demonstrate that you have the tools setup correctly on your computer by compiling and running at least two of these programs. **Capture** some screenshots, notes, and perhaps a cheat-sheet to include in your submission.
   - Change Calculator
   - Fly Catch
   - Stats Calculator
   - Map Explorer
3. Convert your **previously completed** Test Your Knowledge activity from the Control Flow topic to C/C++. Ensure that your new code follows the C/C++ coding convention used in the Field Guide.

4. Prepare your summary, making sure to cover all learning goals and related concepts. Remember that this is a personal summary that demonstrates your understanding of the concepts.
5. Prepare your reflections by responding to the following:
    - How do you know you have achieved the learning goals?
    - What is the most important thing you learned from this and why?
    - How does the content or skills learned here relate to things you already know?
6. Capture your learning journey and collate your evidence of study and practice.

2. Upload Your Submission & Engage with Feedback

Mark the task as **Ready for Feedback** and upload the required files. Make sure to keep copies of these in case you need to resubmit. Then engage with the feedback you receive and get the task Complete!

If you are asked to resubmit, make sure your subsequent submission includes a comment that describes how you have addressed the feedback you received. This needs to demonstrate how you have addressed all the aspects indicated by your tutor in their feedback on your learning. If you don't understand the feedback, ask for clarification. If it is too generic, ask specific questions, only you know what feedback you need, take charge of it.