

6.5-6.8: Hybrid Session 1

Prefer to complete this activity offline? Download the following documents:

* Full PowerPoint Slides: [Week 6 Hybrid Session 1 Full Slides.pptx](https://winchester.instructure.com/files/1686023/download?wrap=1)
* Flowcharts Crib Sheet: [6.7 Flowchart Symbols Crib Sheet.docx](https://winchester.instructure.com/files/1686024/download?wrap=1)

In this topic, we will be focussing on the following learning outcome for this week:

* Recall the various symbols which are used within flowcharts
* Present flowcharts for various problems which can be solved through software development

You will have the following learning opportunities:

* To outline the use of a flowchart
* To understand the different types of symbol which are utilised within flowcharts
* To develop flowcharts with appropriate use of symbols



For this session, you will be engaging in acquisition, discussion, practice, and production learning activities.

# 6.5: Welcome to the Session

In this part of the session, we will introduce the topics we are planning on covering during this online session. For this session we will be focussing on the following topics:

* Flowcharts
* Key Terminology of Flowcharts
* Designing Flowcharts
* Implementing Code from Flowcharts

The first thing we did in the session was to think about the mid-semester feedback. This is not something you will encounter in all modules as the end of semester feedback starts on week 9, but I like to get your feedback partway through to allow me to continue to review my teaching – I try to be a reflective practitioner, and part of that is to get feedback from you to help me assess how it is going. I use the Stop- Start-Continue feedback method, which allows me to get both positive and negative feedback in relation to how the teaching is going on this module. You will be able to access the Padlet for this here: <https://universityofwinchester.padlet.org/claire_Ancient/v4v6yjvqxgu4jcyd>. I will review all the posts and comments on this Padlet and respond to all suggestions, but I cannot guarantee that they will all be implemented – I will give them all due consideration and if they aren’t implemented, I will explain why.

# 6.6: Introduction to Flowcharts

In the pre-session materials, you looked at algorithms and considered their design. In this part of the session, we will look at how we can use flowcharts to represent our algorithms. Before we start developing these flowcharts, we will start with an introduction to what they are.

Throughout the flowchart part of this week, we focussed on two examples:

1. Adding two numbers together (demonstration)
2. The Fibonacci Number exercise from 6.2

Before we started looking at implementing and designing flowcharts, we talked about the concept of a flowchart and how it can be used to visually represent our algorithms.

# 6.7: Key Symbols of Flowcharts

To support your understanding and design of flowcharts, you will be completing another crib sheet. This crib sheet will include the key symbols which are used within flowcharts. This sheet will not be exhaustive but does include the main symbols you will be using to design your flowcharts.

Once we had discussed the purpose of flowcharts, we highlighted the various symbols which are used to represent the elements of a flowchart. We identified the key symbols and discussed their use. Once again you created a crib sheet of these symbols – this was not an exhaustive list of symbols but did include the key parts you would be using on a regular basis when drawing flowcharts.

# 6.8: Designing Flowcharts

In the final part of the first hybrid session we will be focussing on how we can use the key symbols you identified within the previous section to develop Flowcharts. We will complete a demonstration, then give you an exercise for you to implement your new knowledge.

In this section we developed flowcharts and went through the process of developing functioning code as a result. We started with the steps of the algorithm required. We then used these steps to recognise the symbols required in the flowchart and designed it. Once we had an initial flowchart, we identified ways in which we could simplify the diagram using pre-defined processes (which would become our functions).