Learning Aims

- Identify the points where a decision has to be taken
- Determine the logical conditions that affect the outcome of a decision
- Determine how decisions affect flow through a program

The structured approach

The structured programming approach aims to improve the clarity and maintainability of programs.

Using structured programming techniques, only three basic programming structures are used:

- **sequence** – one statement following another
- **selection** – if … then … else… endif and switch/case … endswitch statements
- **iteration** – while … endwhile, do… until and for … next loops

Languages such as Python block-structured languages which allow the use of just three control structures.

They may allow you to break out of a loop, but this is not recommended in structured programming.

Each block should have a single entry and exit point.

Thinking Logically

- It is important to identify where decisions need to be made within the program, and plan out the outcomes of the decision made.

This involves:

- Identifying decision points for branching or iteration.
- Determine the conditions of the decision.
- Determine the next steps depending on the outcome of the decision.
- A **flow chart and pseudocode** can be used to designing a solution to a problem.

Example of flow charting

Symbol	Name	Usage
	Line	Represents the flow from one component to the next
	Process	An action
	Subroutine	Calls a subroutine
	Input/ Output	An input or output
	Decision	A yes/no/true/false decision
	Terminator	The start or end of the process