

## Programming Activity 5

### Function to validate an input (range check)

(Unit 2 Programming: pages 70–71 and 82–87)

#### Learning objectives

- Write code that validates user input
- Write code that accepts and responds appropriately to user input
- Create subprograms that use parameters

#### Assessment objectives

AO1, AO2, AO3

#### Spec alignment

Page 12, Sections 2.3.4, 2.3.5, 2.4.1, 2.4.2, 2.6.2, 2.6.3

#### Task

Write a pseudocode function that will have a minimum and maximum value passed into it. It will ask the user for input and once a valid number has been inputted it will return it to the calling function.

#### Misconceptions/barriers

Some students may struggle with the idea of writing a function for this task. You could initially ask them to write a program that uses a range check to validate input and then move/modify the code to work in a function. An example range check (not in a function) can be found on page 70 of the student book but this example has a fixed minimum and maximum.

#### Differentiation

Low ability:

- A flowchart could help students understand how a range check works.
- As mentioned in the misconceptions section, an example range check can be found on page 70 of the student book.

High ability:

- Ask students to implement their pseudocode solution to the task in the programming language they are doing. After completing this they can discuss with a partner what changes they had to make and why they needed to make them.
- Ask students to write functions for other types of validation, such a length or presence check.