Programming Activity 1
Write a shopping list to a text file
(Unit 2 Programming: pages 73–80)

Learning objectives
- Write code that accepts and responds appropriately to user input
- Write code that reads to and writes from a text file

Assessment objectives
AO2, AO3

Spec alignment
Page 12, Sections 2.4.1, 2.4.3

Task
Write a pseudocode program to read in shopping list items one at a time from a user and then write to a text file.

Misconceptions/barriers
Students need to understand that files can be read from, written to or appended to. Some students seem to struggle with the idea of what a text file is, and this could be remedied by using something like Notepad to explain what can and cannot be stored in a text file.

Differentiation
Low ability:
- Students struggling with this task could break it down into two parts, getting the information and writing the information.
- Students could write a program that simply reads in the items from the keyboard and stores them in an array.
- The next step could be to output to the screen and then this could be modified to write to a file instead of the screen.

High ability:
- Students should create a program that asks if they want to read or write a shopping list.
- The user's response to this menu would result in items being read in from the user and stored in a text file or the text file being displayed on screen.
- Students could expand the above program to ask the user for a filename for the file to be read from or written to. This means that multiple shopping lists could be stored, such as food shopping or DIY items needed.
- 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.