Programming Activity 10
Organising class results
(Units 1 and 2: Problem Solving and Programming)

Learning objectives
- Analyse a problem, investigate requirements and design solutions
- Understand how to create an algorithm to solve a particular problem
- Use sequencing, selection and iteration constructs in your programs
- Use of loops
- Use of functions
- Writing to and reading from text files

Assessment Objectives
AO2, AO3

Spec alignment
Pages 10–12, 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5

Task:
Your teacher has asked you to create a program that will help them organise class results.
The program should allow teachers to:
- enter sets of class results with each entry having the student's name and score
- save each set of results and re-load the scores when needed.

Misconceptions/barriers
Students often have problems with creating and calling a function with a parameter.

Differentiation:
Low ability:
Students will need help such as:
- The program should have a menu similar to the one below:
  1. enter new class results
  2. save results
  3. load results.
- Functions should be used for each of the menu options.
- an array
- Low-ability students could create just the menu system. They should then attempt the functions for creating and saving a new list. The final function, to load a saved file, requires more coding skills.

High ability:
Students should be able to create the program using a menu system linked to separate functions.