

## Practical 4 (due 2023-03-17 @ 09:00)

This exercise aims to reinforce your understanding of flow-control structures.

This practical will further refine your use of flow control constructs. Please write a menu driven program which makes use of the following types of loops as appropriate: while, dowhile, for, for-each. You need to use each specific loop type at least once in the assignment.

### Problem description

- Option A: Your program must output the following sequence (the number of terms in the sequence is given by the user): 2, 4, 4, 8, 6, 12, 8, 16, 10, 20, 12, 24, 14, 28, 16, 32, 18, 36, 20, 40, ...
- Option B: Your program must allow the user to specify all of the parameters for a counting sequence by asking the user for the following:
  - a starting value
  - a stopping value
  - a step value
 Your program must then display the resulting sequence. For example if the user enters 0 ,10, and 2 the sequence must be: 0 2 4 6 8 10
- Option C: Your program must count the number of alphabetic characters (both upper and lower case) in a string input by the user.
- Option X: The program must exit.

The design should be based on Option C.

**Programs that do not compile successfully will be capped at 40%.**

Mark sheet		
	Coding style (comments, indentation, naming)	10
	Validating user inputs	10
	Option A logic	10
	Option B logic	10
	Option C logic	10
	Use of do-while loop	10
	Use of while loop	10
	Use of for loop	10
	Use of for-each loop	10
	Design	10
	Total	/100