# Operators and Flow Control

## Overview

In this lab, you will write an application to make use of operators, conditional logic, and loops.

## Source folders

Student project: StudentFlowControl

Solution project: SolutionFlowControl

## Roadmap

There are 4 exercises in this lab, of which the last exercise is "if time permits". Here is a brief summary of the tasks you will perform in each exercise; more detailed instructions follow later:

1. Factorials
2. Prime numbers
3. Times-tables
4. Additional suggestions

## Exercise 1: Factorials

In the student project, write code to calculate the factorial of a number. For example, 6 factorial is 6 x 5 x 4 x 3 x 2 x 1.

## Exercise 2: Prime numbers

Write code to display all the prime numbers between 1 and 1000. A number is prime if it has no factors (other than 1 and itself).

## Exercise 3: Times-tables

Write code to display a grid on the screen, showing the times tables from 1 to 10. It should have 10 rows and 10 columns as follows:

* The 1st row should show the 1-times-table (i.e. 1x1, 1x2, 1x3… 1x10)
* The 2nd row should show the 2-times-table (i.e. 2x1, 2x2, 2x3… 2x10)
* Etc.

## Exercise 4 (if time permits): Additional suggestions

Enhance your code from Exercise 3 above, to display a border around all the cells in the table (e.g. using \* symbols). Also, be careful to align everything nicely on the screen ☺