Swinburne University Of Technology

Faculty of Science, Engineering and Technology

Subject Code:	SWE20004
Subject Title:	Technical Software Development
Lab number and title:	Lab 1 Exercises

Task 1.1: Perform the following programming activities

Open the three C++ programs provided (Hello.cpp, RepeatHello.cpp and FullName.cpp) in your preferred text editor (eg. Crimson or Notepad++). In each case, study the code carefully, reading the comments, and then ***compile*** and then ***run*** the programs from the command window. Observe the output with respect to the source code you've read previously.

How to run C++ program on Lab PC

1. Go to MinGW folder available in **C:\apps** folder

2. Open msys.bat (available in C:\apps\MinGW\msys\1.0)

3. Navigate to the directory where your program is saved.

eg: assume you have saved your program Hello.cpp in C:\week1 folder, you can move to that folder by typing

cd /c/week1 (here cd (change directory) command is used)

Use ls (list) command to list files and folders in the current directory

Compile C++ program

```
g++  Hello.cpp  -o  Hello
```

Run:

```
./Hello
```

If MinGw compiler is not installed on lab computers then you may have to use Visual Studio (VS) to complete this exercise. Read the VS tutorial provided if you have not used it before.

Task 1.2: Making use of what you've learnt so far, complete the following programming exercises, first using a text editor (eg. Crimson, Notepad++) and the C++ compiler OR Visual Studio, making use of the code provided in Part 2.

A. Write a C++ program which:
   a) Starts up correctly (include, main).
   b) Sets up a string variable called "name".
   c) Sends "type in your name" to the screen.
   d) Reads what user types into the name variable.
   e) Sends the message "Welcome to my world!" followed by user's name back to the screen.
   f) Shuts down correctly (returns).

B. Now extend the program above to:
   a) After reading the user's name (step d above), declares an *int* variable called count
   b) Ask the user "how many greetings"
   c) read in the count
   d) use a loop to repeatedly print the same greeting message to the screen count number of times

Task 1.3 Write a statement (or comment) to accomplish each of the following (assume that *using* declarations have been used for cin, cout and endl):

a) State that a program calculates the product of three integers.
b) Declare the variables *x, y, z* and result to be of type int (in separate statements).
c) Prompt the user to enter three integers.
d) Read three integers from the keyboard and store them in the variables *x, y* and *z.*
e) Compute the product of the three integers contained in variables *x, y* and *z*, and assign the result to the variable result.
f) Print "The product is " followed by the value of the variable result.
g) Return a value from main indicating that the program terminated successfully.

Task 1.4 Using the statements you wrote in Task 1.3, write a complete program that calculates and displays the sum of three integers. Add comments to the code where appropriate. [Note: You'll need to write the necessary *using* declarations.]