**CSC212 Practical 1: Evaluating Expressions [20 Marks]**

For all the practical exercises, you must use the resources given in the Practicals folder on ikamva. The due date for this Practical Exercise is Monday, **30th September, 2019, 23h59.** Submit your codes as well as screenshots of your work. Make sure that your codes are properly commented.

Assuming $x$ is in *R1*, $y$ in *R2*, $z$ in *R3* and the result in *R0*, write and test an ARM assembly language program to evaluate the following expressions:

a) $f(x,y)=5x^2+3x+10$
b) $f(x,y)=2x^2+7xy+5y^2-7$
c) $f(x,y)=x^3-2x^2+2x+5$
d) $f(x,y,z)=2x^4-6x-5y^3z+10$

All four problems must be solved, one after another in the same code. Your code must be tested by using $x=10$ , $y=5$ and $z=2$

**CSC212 Practical 2: Evaluating Fibonacci Numbers [20 Marks]**

For all the practical exercises, you must use the resources given in the Practicals folder on ikamva. The aim of this practical exercise is to ensure that you are able to write Assembly language code that carries out recursive computations by using loops. The due date for this Practical Exercise is Monday, **30th September, 2020, 23h59.** Submit your codes as well as screenshots of your work. Make sure that your codes are properly commented.

The *n*-th Fibonacci number $F_n$ is defined recursively as $F_n=F_{n-1}+F_{n-2}$ where $F_0=0$ and $F_1=1$ . For instance, $F_2=F_1+F_0=1+0=1$ , $F_3=F_2+F_1=1+1=2$ and $F_4=F_3+F_2=2+1=3$ . Write an ARM Assembly Language program to compute the *n*-th Fibonacci number $F_n$ . Test your program by computing $F_{15}$ and $F_{30}$ . Your progam must write the outputs for the two computations on the screen.