CSCE 212: Intro to Computer Architecture
Project #4

Write a MIPS assembly code that accepts four positive integers **A**, **B**, **C**, and **D** as input parameters and compute the below **f** and **g** expressions:

$$f=(0.1\times A^4)-(0.2\times B^3)+(0.3\times C^2)-(0.4\times D)$$

$$g=(0.1\times AB^2)+(0.2\times C^2D^3)$$

The code should be executed in MARS to prompt the user to enter four positive integers, each separated by the **Enter** key. The program should calculate **f** and **g** using multiplication procedures and output **f** and **g** as floating-point numbers by using **syscall** routines for each output.

Note: No multiplication, division, and shift instructions {**mul, mul.d, mul.s, mulo, mulou, mult, multu, mulu, div, divu, rem, sll, sllv, sra, srav, srl, srlv}** are allowed to be used. Thus, it is necessary to compose your own multiplication by using loops. In addition, you **must use procedures** to realize the multiplications.

Sample output is:

```
Enter 4 integers for A,B,C,D respectively:

15
9
21
3
f= 5050.392
g= 2502.6116
```

To receive full credit, the submitted program shall provide outputs as shown above.

Important: The code comments include 10% of your project grade as below:

- Header Comments: 3%
- Block Comments: 5%
- Line Comments: 2%