COL 216: Assignment 1
II Semester 2019-20

Release Date : 5th January, 2020
Submission Deadline : 11:55 pm, 12th January, 2020

General Instructions:

1) You will be using QtSpim Simulator that was installed in Assignment 0 for this Assignment.
2) The assignment has to be done in groups of 2. Only one member of each group should submit the assignment on Moodle.
3) Each group member should understand the problem and equally contribute to the solution. Demos would be held for each lab for evaluation.

Problem:
Write a MIPS Assembly Program for comparing two matrices using Root Mean Square Error.

Input: 2 matrices of size 3x3 stored in the memory. The matrices can have any random integer values.

Output : The root mean square difference between the two matrices should be stored in the memory. The code should print the result.

Your code should read the values from the memory and compute, print and store the result in the memory.
Example:

Compute

$$\sum_{i=1}^{3}\sum_{j=1}^{3}\frac{1}{9}(x_{ij}-y_{ij})^2$$

where x_{ij}, y_{ij} is the i^{th} row and j^{th} column in the matrix.

Other instructions:
Please refer to this document for help on MIPS Assembly language and QtSpim.
http://www.egr.unlv.edu/~ed/MIPStextSMv11.pdf

Please post your doubts on Piazza and we would be able to get back to you as soon as possible.

We will be announcing office hours for asking your doubts for this assignment.
The demos for this assignment would be held during the Week 3 Lab.