Computer Architecture - **MIPS programming assignment #2**

**Due: 5/24 (Thur.). No late delivery is allowed. Upload your source codes to Portal.**

1. **Description**

   In this assignment, you are going to write a MIPS **recursive** program.

   A simple recursive function F(n) is defined as follows:

$$F(n) = \begin{cases} n\%10, \text{if } (n\%10) > 0 \\ 0, \text{if } n = 0 \\ F\left(\frac{n}{10}\right), \text{otherwise} \end{cases}$$

   Another function S(p, q)

$$S(p,q) = \sum_{i=p}^{q} F(i)$$

   In this assignment, you have to calculate S(p,q) on the given values of p and q.

2. **Input**

   Two decimal numbers p and q.

   Sample:

   1

   10

3. **Output**

   S(p,q)

   Sample:

   46

4. **MIPS simulator**

   MARS MIPS simulator: http://courses.missouristate.edu/kenvollmar/mars/