Design Assignment 0:
Due Date: 2/15/2016 < 11:59 PM

Q: Write and simulate using AVRStudio6 a ASM code for the AVR ATMEGA 328 microcontroller that performs the following functions:

a. Write an assembly code to add five random numbers >30 and <60. If the sum produces an overflow set PORTB.2 pin = HIGH else PORTB.2 pin = LOW.
b. Determine the execution time/#cycles of your algorithm using the simulation, set CLOCK speed = 8 MHz.

Submission:

The following are required for successful completion of the design assignment:
a. AVR assembly code that has been assembled and working.
b. The assembly code should be well documented with explanation of every instruction.
c. A word document that contains the assembly code along with the screenshots of the AVRStudio6 during debugging at the beginning and end of Task a.
d. All documents should be submitted online. The repository should be emailed by the due date to get an grade for this assignment.

Points:
Task a: 20%, Submissions: 80%.