HOMEWORK 2

CMPE 102, Assembly Language Programming, Çokgör

Total points towards grade: 5/100

Homework are submitted electronically on the Canvas. E-mail submissions will not be accepted. Assembly programming part must be submitted in text format.

Add comments to your code to explain your work. Work that is not commented will not earn full credit.

Use Keil uVision to test your assembly program.

Each question is 2.5 Point.

You can use the following pseudo instruction to load values to any register: LDR *Rd*, =*value*

Often, we deal with numbers that are greater than the available registers can represent. A register is 32-bits. A 64-bit integer needs two registers.

1) For addition of two 64-bit numbers, we can split 64-bit addition into two 32-bit additions.

> Consider the following two 64-bit integers:
> A = 0x00000002FFFFFFFF
> B = 0x0000000400000001
> Write an assembly program to do 64-bit addition. Add these two numbers.
> *Hint:* Consider using the ADC instruction.

2) You have a 64-bit number 0xCCCCCCCCAAAAAAAA. Write an assembly program to implement 64-bit Logic Shift Right. Shift this 64-bit number right by 4.