KOÇ UNIVERSITY

COMP 201 - Fall 2021
Lab 6 - Machine Programming with Assembly

1 Exercises

There are 2 functions to implement in this lab assignment. For each function, you are given `*.asm` file. This file contains a function in assembly language. Try to interpret this function and write equivalent C language function. You are also provided with `*.c` file.

1.1 sumAndProd

You are provided with Assembly Language code of this function in sumAndProd.asm. There are 2 arguments to the function and both are of type `int`. It returns an integer.

1.1.1 Tasks

Fill in the respective function in the main.c file. Compile the main.c file using makefile. If you have implemented the code correctly, you will see ”sumAndProd test passed!”

1.2 first10

For this part you are provided with Assembly code in the file first10.asm. There are no arguments to the function. The return type is `int`.

1.2.1 Tasks

Write the equivalent C language function for the corresponding Assembly Language function. Compile the main.c file using makefile. If you have implemented the code correctly, you will see ”first10 test passed!”

Explain briefly what does line 7 and 8 in the assembly language represent in your code.

1.3 twothree

For this task, consider the link here .

1.3.1 Tasks

Answer the following questions as the comments in the main.c file.

a) In line 6 of the assembly code, why add or addl functions are not used?

b) What happens to variable a and b after the last two lines in assembly code are executed?

2 Submit Your Work

Please submit your work on Blackboard.