CPE301 – FALL 2019

Design Assignment 1B

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Primary Github address: https://github.com/bkokubun99/Submission\_DesignAssignments

Directory: https://github.com/bkokubun99/Submission\_DesignAssignments/tree/master/DesignAssignment\_1B

Submit the following for all Labs:

1. In the document, for each task submit the modified or included code (only) with highlights and justifications of the modifications. Also, include the comments.
2. Use the previously create a Github repository with a random name (no CPE/301, Lastname, Firstname). Place all labs under the root folder ESD301/DA, sub-folder named LABXX, with one document and one video link file for each lab, place modified asm/c files named as LabXX-TYY.asm/c.
3. If multiple asm/c files or other libraries are used, create a folder LabXX-TYY and place these files inside the folder.
4. The folder should have a) Word document (see template), b) source code file(s) and other include files, c) text file with youtube video links (see template).

1. **COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS**

Atmel Studio 7.0

- Assembler

- Simulator

- Debugger

1. **INITIAL/MODIFIED/DEVELOPED CODE OF TASK 1/A**

A screenshot of a cell phone

Description automatically generated

A screenshot of text

Description automatically generated

A screenshot of a cell phone

Description automatically generated

1. **DEVELOPED MODIFIED CODE OF TASK 2/A from TASK 1/A**

N/A

1. **SCHEMATICS**

N/A

1. **SCREENSHOTS OF EACH TASK OUTPUT (ATMEL STUDIO OUTPUT)**

A screenshot of a cell phone

Description automatically generated

When the program is done running, this image shows the memory location of the X pointer. (0x0200) Within this memory locations are the stored values from 1 to 250.

A close up of a keyboard

Description automatically generated

When the program is done running, this image shows the memory location of the Y pointer. (0x0300) Within this memory locations are the values divisible by 5. Ranging from 1 to 250.

A screen shot of a computer

Description automatically generated

When the program is done running, this image shows the memory location of the Z pointer.

(0x0500) Within this memory locations are the values NOT divisible by 5. Ranging from 1 to 250.

A screenshot of a cell phone

Description automatically generated

This picture shows the values of Registers R17 & R16. These registers hold the summation of all the values divisible by 5 from 1 to 250.

Value of the 2 registers are as follows



A screenshot of a cell phone

Description automatically generated

This picture shows the values of Registers R19 & R18. These registers hold the summation of all the values NOT divisible by 5 from 1 to 250.

Value of the 2 registers are as follows

A close up of a logo

Description automatically generated

This image is a C++ program that verifies the values within the registers shown above are storing the correct summation value.

A screenshot of a cell phone

Description automatically generated

A screenshot of a cell phone

Description automatically generated

If you compare the values generated in Atmel and this C++ program, you will in fact see that the values are the same.

1. **SCREENSHOT OF EACH DEMO (BOARD SETUP)**

N/A

1. **VIDEO LINKS OF EACH DEMO**

N/A

1. **GITHUB LINK OF THIS DA**

https://github.com/bkokubun99/Submission\_DesignAssignments/tree/master/DesignAssignment\_1B

**Student Academic Misconduct Policy**

<http://studentconduct.unlv.edu/misconduct/policy.html>

“This assignment submission is my own, original work”.

Brysen Kokubun