CPSC 240: Computer Organization and Assembly Language

Assignment 06, Fall Semester 2024

CWID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Quiz Questions:**

From the textbook "X86-64 Assembly Language Programming with Ubuntu," study quiz questions 4 and 5 on page 149. Students do not need to submit answers to the quiz questions as they are found in Appendix D of the textbook.

**Programming:**

1. Download the “CPSC-240 Assignment06.docx” document.
2. Design the "print.asm" program to calculate the sum of "1+2+3+…+99" and displays the result in a terminal window. NOTE: variable sizes and program functions should be equivalent to C/C++ instructions.

Calculates 1+2+3+...+99 and displays the result in a terminal window

char str1[] = "1+2+3+...+99="; // use db to declare 8-bit string array

short sum = 0; // use dw to declare 16-bit variable

char ascii[5] = "0000\n"; // use db to declare 8-bit string array

register short cx = 1; // no need to declare register cx

for(cx=1; cx<=99; cx++)

sum += cx;

ascii = itoa(sum);

cout << str1 << ascii;

1. Assemble the "print.asm" file and link the "print.o" file to get the "print" executable file.
2. Run the "print" file to display the conversion results of ascii in Terminal Emulator window.
3. Insert source code (print.asm) and simulation results (Terminal Emulator window) at the bottom of the document.
4. Save the file in pdf format and submit the pdf file to Canvas before the deadline.

[Insert print.asm source code here]

[Insert print simulation result (Terminal Emulator Window) here]

[Insert the simulation result verification here]