CSE331L_1 – Introduction to Assembly Language (Task_1)

TASK 1

Write the following code in emu8086 editor:

```
org 100H
mov ax,2
mov bx,2
add ax,bx
mov cx,ax
ret
```

- The first line of this program, org 100H, is a necessary requirement for all assembly programs written in emu8086. You should always start with this header.

  " ORG (abbr. for ORiGin) is an assembly directive (not an instruction). It defines where the machine code (translated assembly program) is to place in memory. As for ORG 100H this deals with 80x86 COM program format (COMMAND) which consist of only one segment of max. 64k bytes. 100H says that the machine code starts from address (offset) 100h in this segment, effective address is CS:100H. For com format the offset is always 100H. I suppose that addresses 0 to 100H could be used by bios, but I am not that sure. Another example is ORG 7C00H for intel exe program format."

- Your program should also always end with the RET instruction. This instruction basically gives back control of CPU and system resources back to the operating system. The RET statement will be used in further classes.

This program basically adds two numbers stored in two separate registers. The final result is stored in a third register. Assemble this program and run it. Follow the in-class lecture regarding the use of the emulator and its various features and debugging techniques.