



System programming and Assembly language

Project

Dr. Esfandiari

Design something to run assembly code!

In this project your job is to design a program with your chosen programming language that reads a text file containing assembly code as input and writes the result of registers and flags in another text file as output.

In order to reduce complexity:

- Only 5 instructions need to be implemented. (And, Or, Sub, Add & Mov)
- There is no need of data segment.
- Registers are: (EAX, EBX, ECX, EDX), note: “Your design should be able to understand the smaller registers of these registers.”
- Flags are: (Carry, Zero, Negative & Overflow)

And here is some point to be concerned:

- Numbers can be negative.
- Assembly language is **free-form** (the positioning of characters on the programming page is insignificant), so be careful.
- Assembly language is not case sensitive.
- Input's syntax is assumed to be correct.

Bonus:

- Implementation of Jump
- More flags and register
- Proper UI
- And anything based on your creativity

- Upload the expected files in a zipped file to the page of the course on Quera.
- Do NOT copy from your classmates' answers :)
- Feel free to ask any questions.

Good Luck!

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