Y86 Emulator Project
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This assignment consists of the program:

Y86emul.c

About Y86emul.c

This programs is an attempt to recreate a Y86 emulator. The program takes in a Y86 file, as an argument in the command line. Once it finds the file, the emulator will load the file and parse through it and allocate enough memory for the program to operate. After that, it will execute the .y86 program.

Design

My implementation of the code uses a tokenizer to break the string into 2 smaller chars. The chars are then checked for what their first and second values are. The first value determines what function will be used. I have created several functions based on the given y86 instructions tables that was provided for us. After the whole string is analyzed the output is displayed on the screen.

The program also checks for if the correct number of arguments has been passed by the users, otherwise it will exit.

If the -h flag is passed then the user is informed of the the usage of the program and exits.

Challenges Faced

- Debugging the code was a challenge since there are so many parts to it
- Understanding the y86 registers and what their function was and implementing them in the code
- Figuring out how to allocate enough memory for the program
- Parsing through the file that was being input by the user

Runtime

The runtime for this is in linear time and occupies a linear amount of space.