Overview of the Simulator

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1. How does it Work?

Firstly, our simulator reads the certain .mc file given from the args in console. It should be a file with machine code in it. It will print the result to the console.

Next, simulator is going to understand the decimal numbers by translating them into binary.

Then, simulator will do a specific work depended on the instruction code (opcode). For example, does addition or loads something into a register from memory. Simultaneously, it will update the PC and increment instructions in total.

Finally, simulator will print how register file and memory looks like after executing each instruction. It will print them to the console. It will exit if any errors are catched.

2. Any Difficulties?

1. Change decimal into binary is tough, also exponential calculation is difficult. Since we don't have '^' like java in C.

2. Think about catching all errors which could happen in the future is a tough work. Sometimes we need to modify our codes so that it could detect the errors. For instance, different positions of unused bits in different types.