



How To Execute A Program In My 8-Bit CPU

- 1) Start Logisim
- 2) Open file kan_8bit_CPU.circ
- 3) Right click on Program ROM (located bottom right of the circuit)
- 4) Click 'Load Image'
- 5) Select your program's raw coded file, ie: fibonacci.raw
- 6) Turn on 'Programming mode' 
- 7) Click 'Simulate' -> 'Ticks Frequency' -> '4.1KHz'
- 8) Click 'Simulate' -> 'Ticks Enabled'
- 9) Check if the pointer on Program ROM has read through the program's raw codes
- 10) Turn off 'Programming mode' 
- 11) Look for the result below the output register (left of Program ROM)

How To Write A Program For My 8-Bit CPU

In order to write a raw coded file (*.raw) for the 8-Bit CPU to execute, view my assembly program files (*.asm) and the op_code table file to understand how the program gets processed. The op_code table provides corresponding hexadecimal values for each instruction, parameter values for the instructions and memory addresses for stored values and stored instructions are also in hexadecimal. The format for *.asm file is as follows:

<Instruction Address*> <Instruction> <Numerical Parameter/Memory Address>

*starts with 0x00 and can skip by 2 or 1

The format for *.raw file is as follows:

<Instruction in hexadecimal from op_code_table> <Numerical Parameter/Memory Address in hexadecimal>