Team Members:

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Usage Instructions:

i. Convert the Assembly Code to Machine Code using the encoding format given in the file “Encoding Scheme.pdf”.
ii. Open the “miniCPU.circ” file in Logisim.
iii. Click on the clear buttons as required. If using for the first time, click on all the buttons in that section. It will clear any previous data in the processor.
iv. Input the machine code instruction into the memory unit present in the main file. Make sure that the program starts from address 00 and it ends with a HLT instruction, otherwise the program would stop execution. This step can also be done using hardcoded inputs, as mentioned below.
v. Feed the data into the register file, if required, by using hardcoded inputs.
vi. Enable the ticks in Logisim to run the machine program. The program finished execution once it receives the HLT instruction.

For hardcoded inputs:

This is function is built-in for effective memory writing without having to manipulate components and effectiveness.

This functionality is implemented for Register File and Memory as they are hard to overwrite.

Note that this functionality is to be used when the processor is not at any stage or it will abnormally manipulate some values in Memory and Register File.

For usage of this functionality it is advised to always turn on EN-HARDCODE.

After doing that move to the hardcode section.

Enable the EN-HARDCODE.

After this, either we change memory or register files-

1) Enter the memory or register file address

2) Enter the values desired.

3) Then trigger memory or register triggers respectively for your choice of operation.

4) Turn off the enable.