

USER GUIDE TO OPERATE SIMULATOR

STEPS to operate Simulator:

1. Install Java SE 17 version to run the Jar file.
cs6461_project.jar - this jar file is attached to the blackboard assignment local file.
2. Store the boot.txt or program1.txt file in the same directory as the Jar file. (The input files are attached in the blackboard assignment local file).
3. Execute the Jar file which opens a simulator window.
4. Click the IPL button this will ask for the file you want to load.

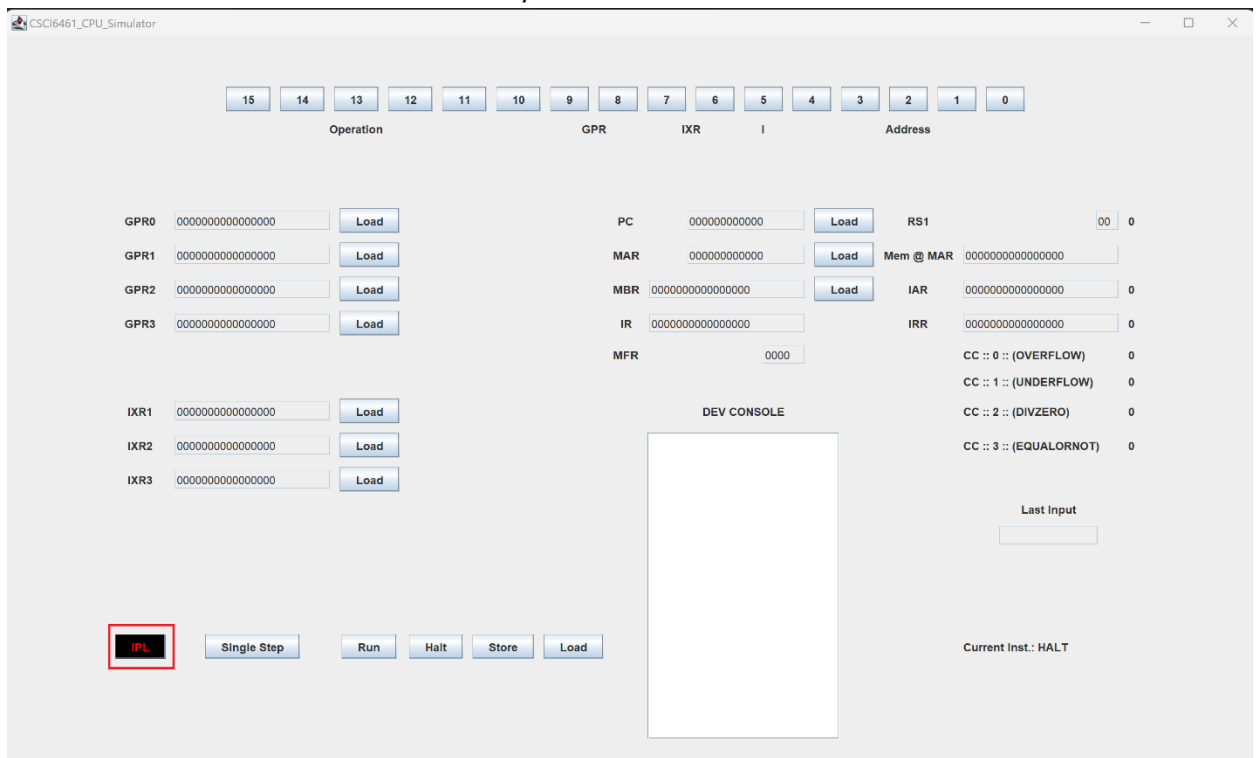


Fig 1: IPL Button

5. This will cause a pop-up that asks for which file you want to run. Here you can type in program1.txt, boot.txt or even a separate program that would work. However, the text files need to be in the same folder as themselves.

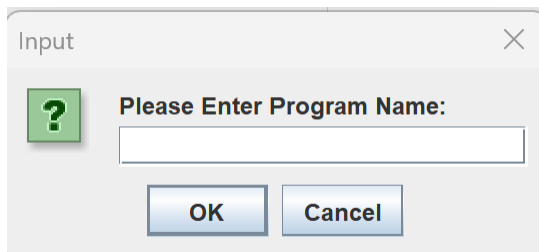


Fig 2: IPL Request

- Then there is Single Step button in which you can run through the program once

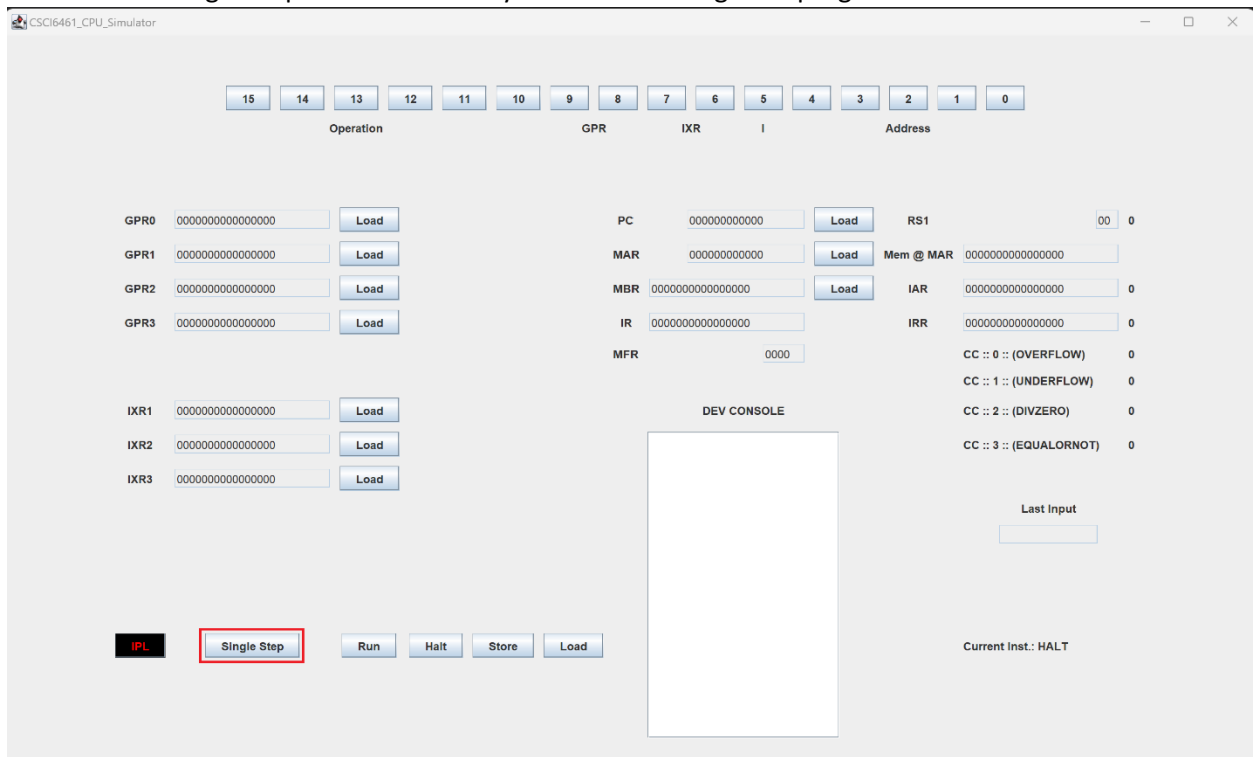


Fig3: Single Step

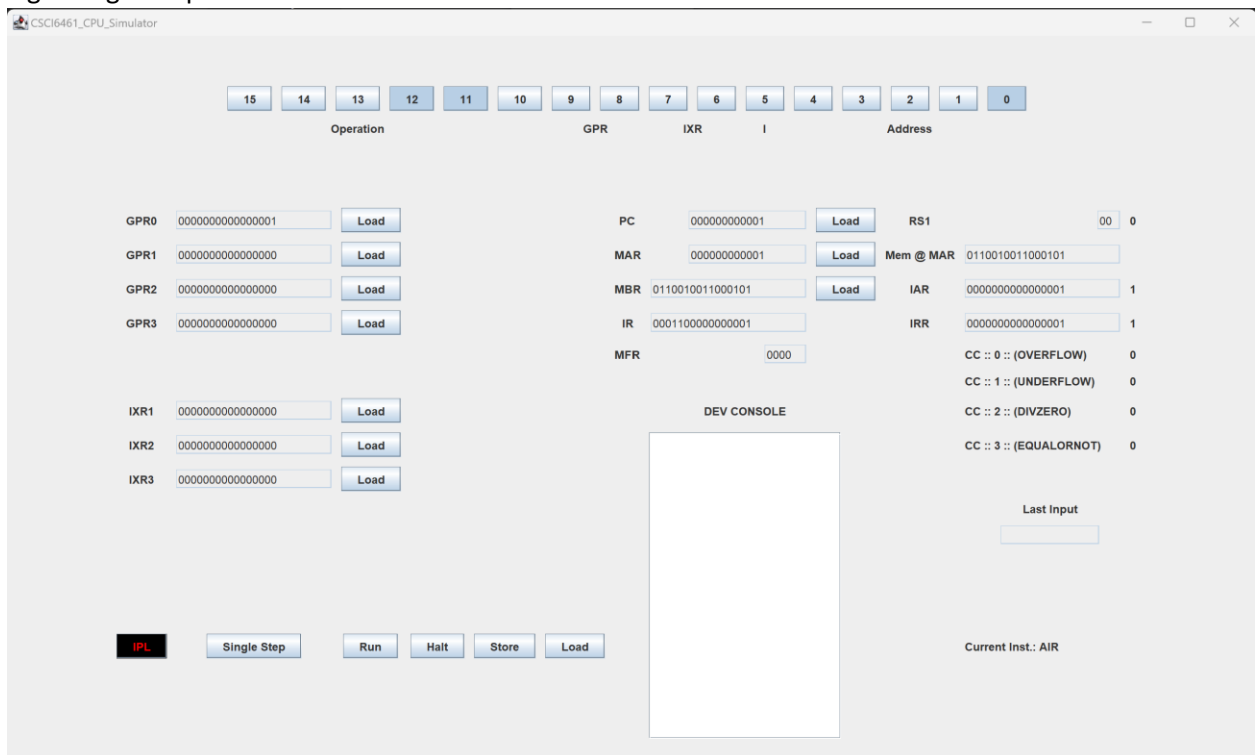


Fig4: Single Step being pressed using boot.txt once and changing the values that appear including MBR and IR

- Run allows you to iterate through Single Step until you reach the max limit for PC at 2048.

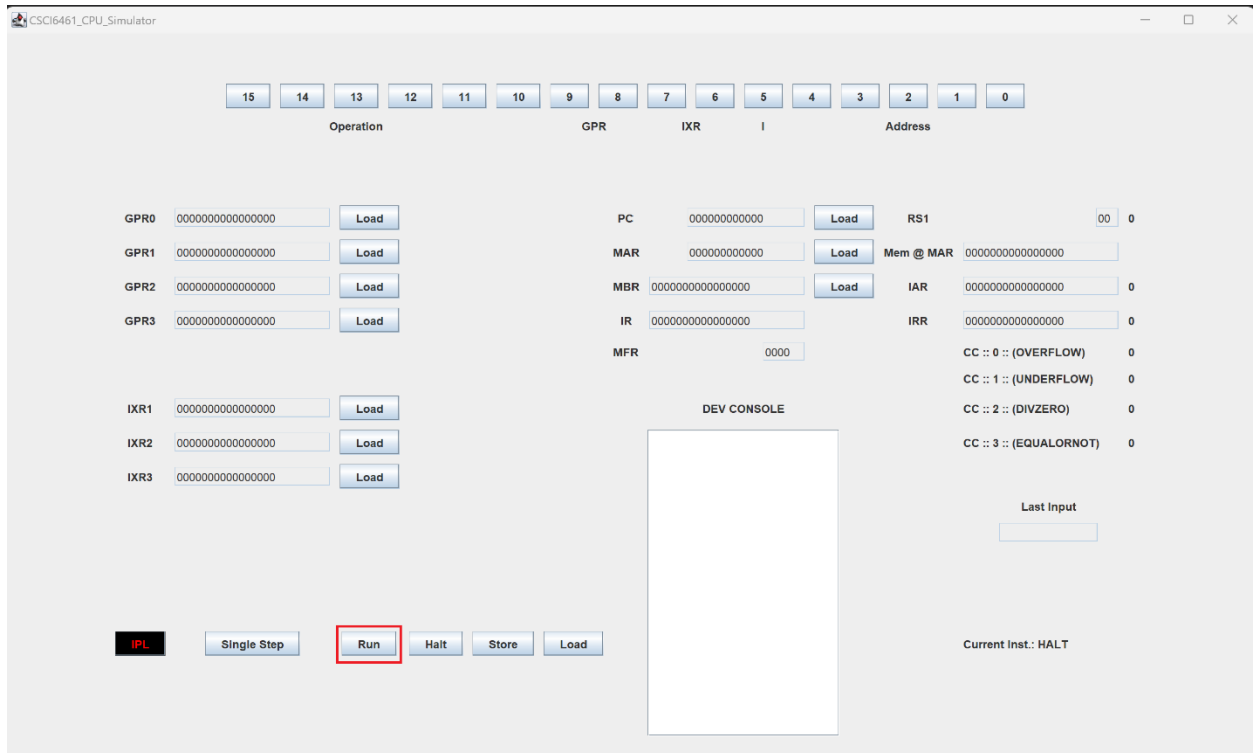


Fig5: Run Button

8. The Halt button allows you to stop running the program as a result of the Run button. This can occur before you would run out of cache due to running the program. However, the Halt button can also automatically occur as a result of clicking the Single Step button or the Run button if you run out of cache.

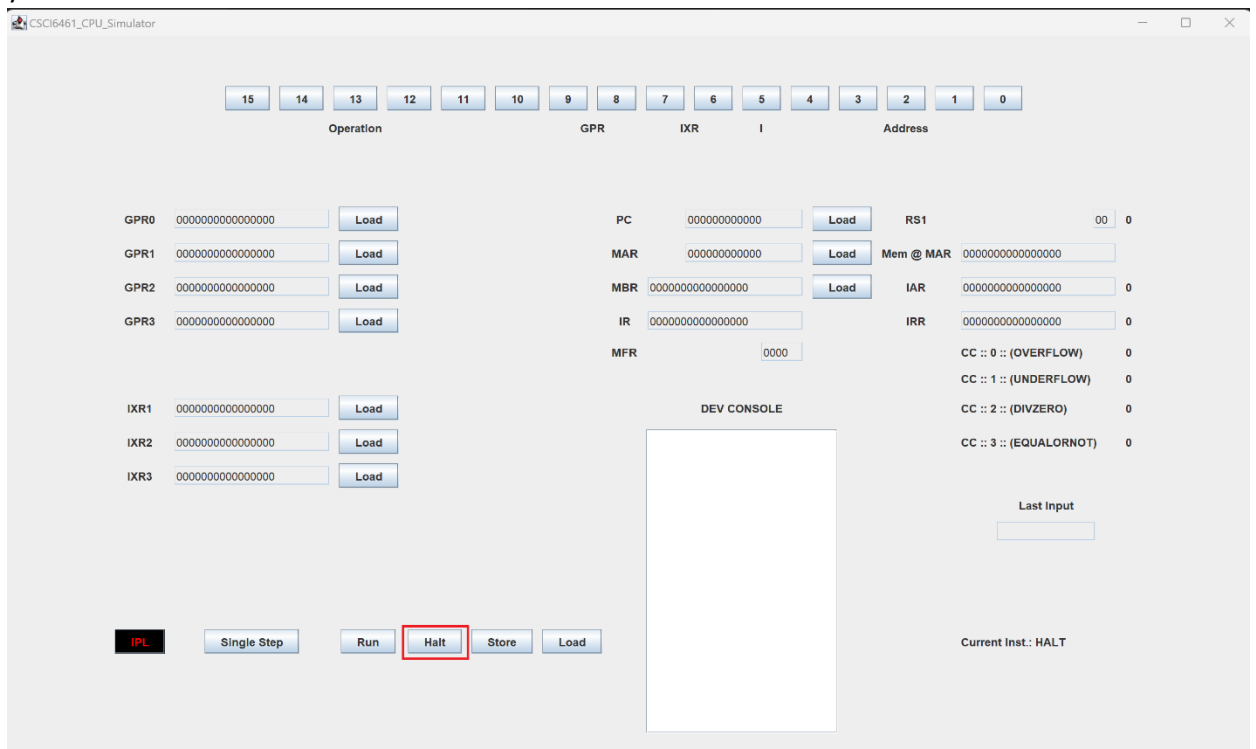


Fig6: Halt Button

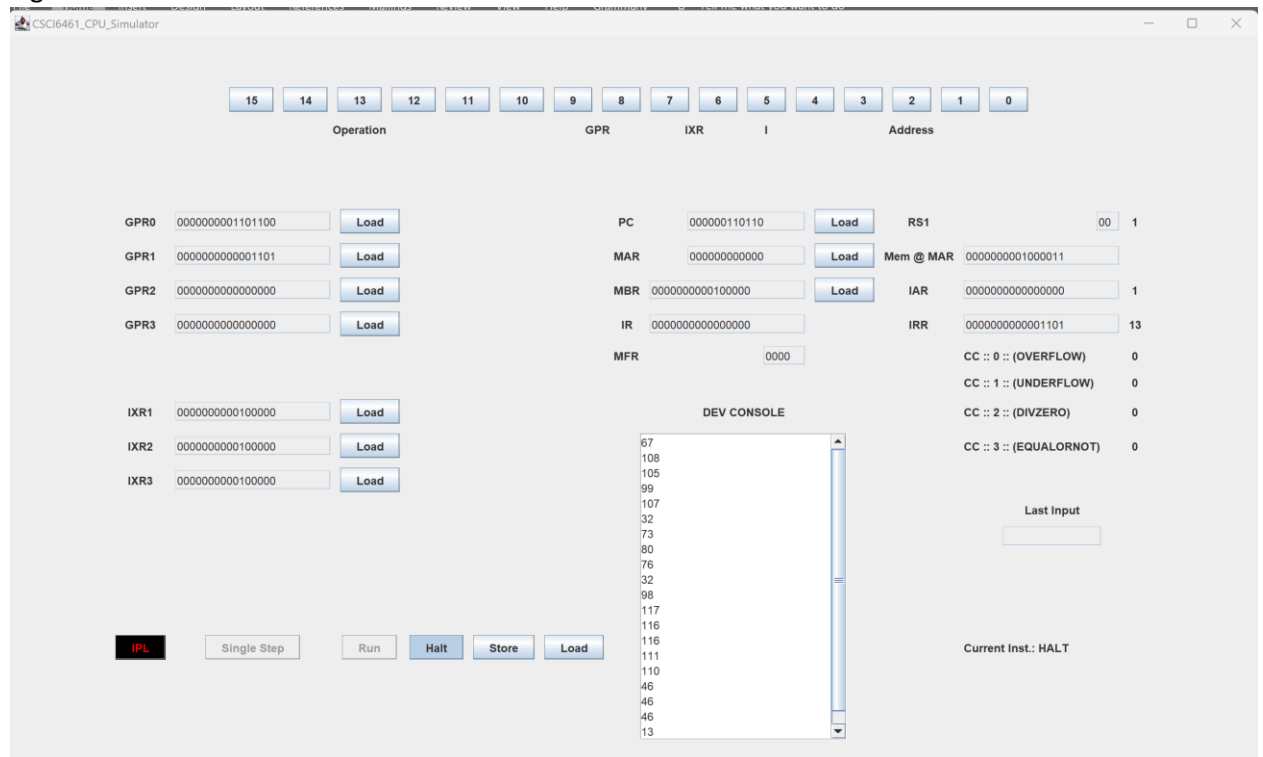


Fig7: Halting because of running out of cache

- Now the load buttons that appear allow you to manually input values in those locations using the toggle buttons (0-15).

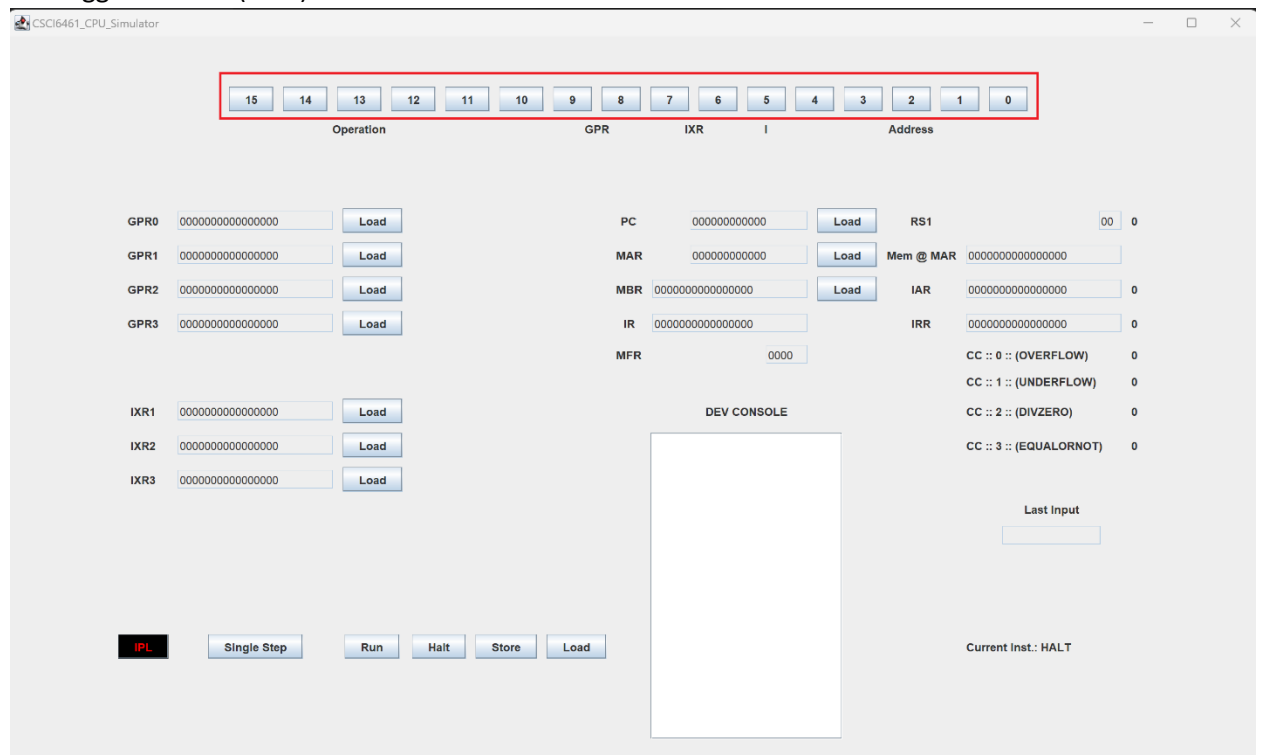


Fig8: ToggleButtons

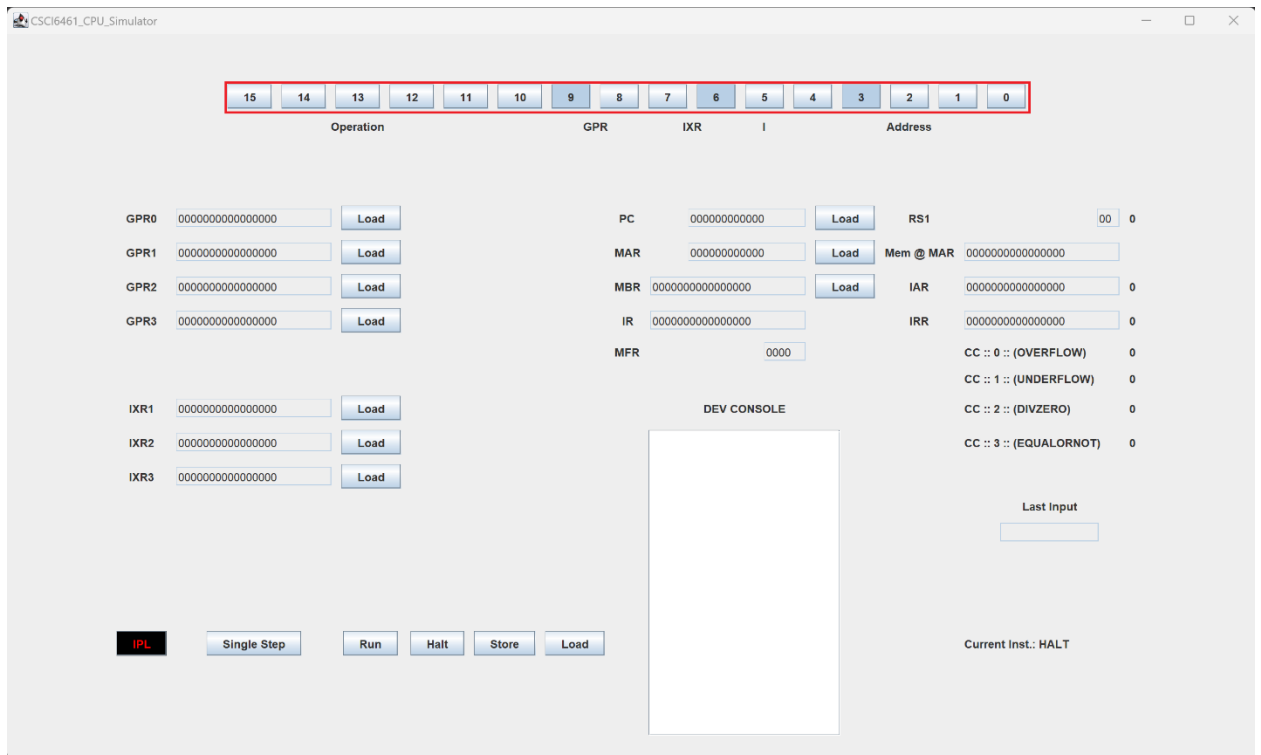


Fig9: ToggleButtons being pressed

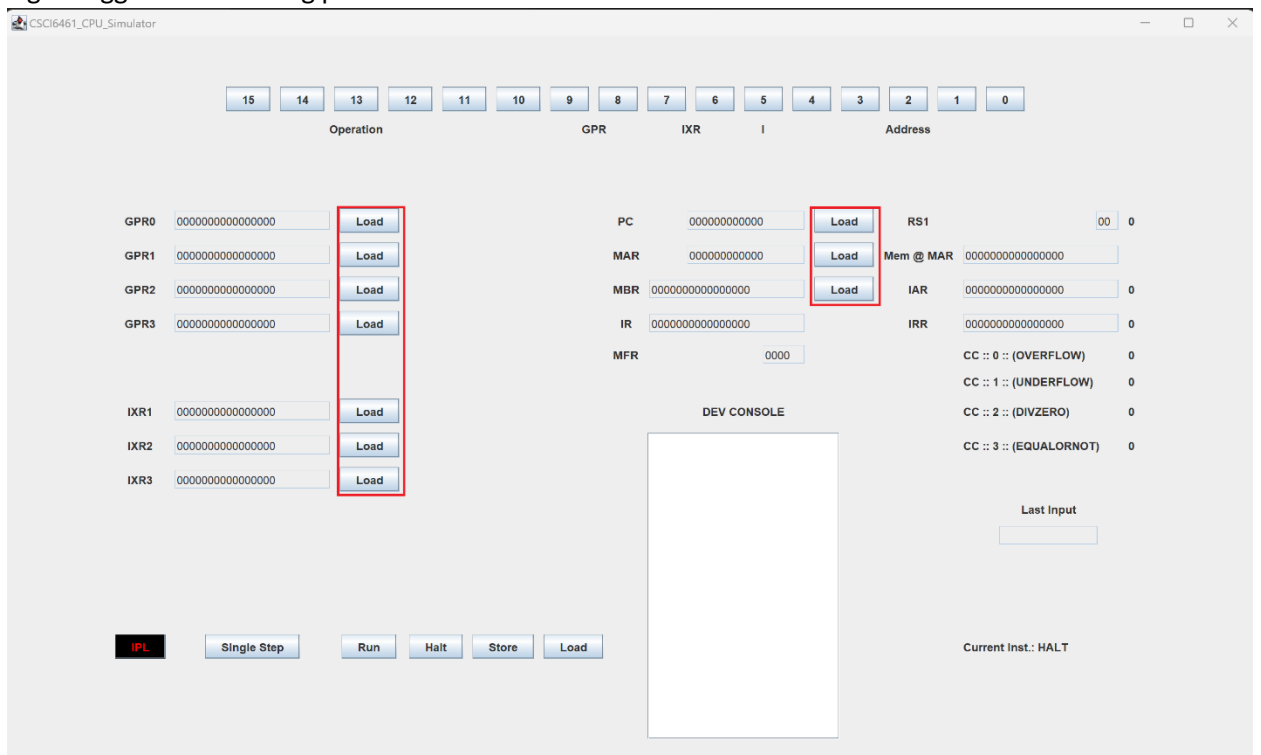


Fig10: The load buttons

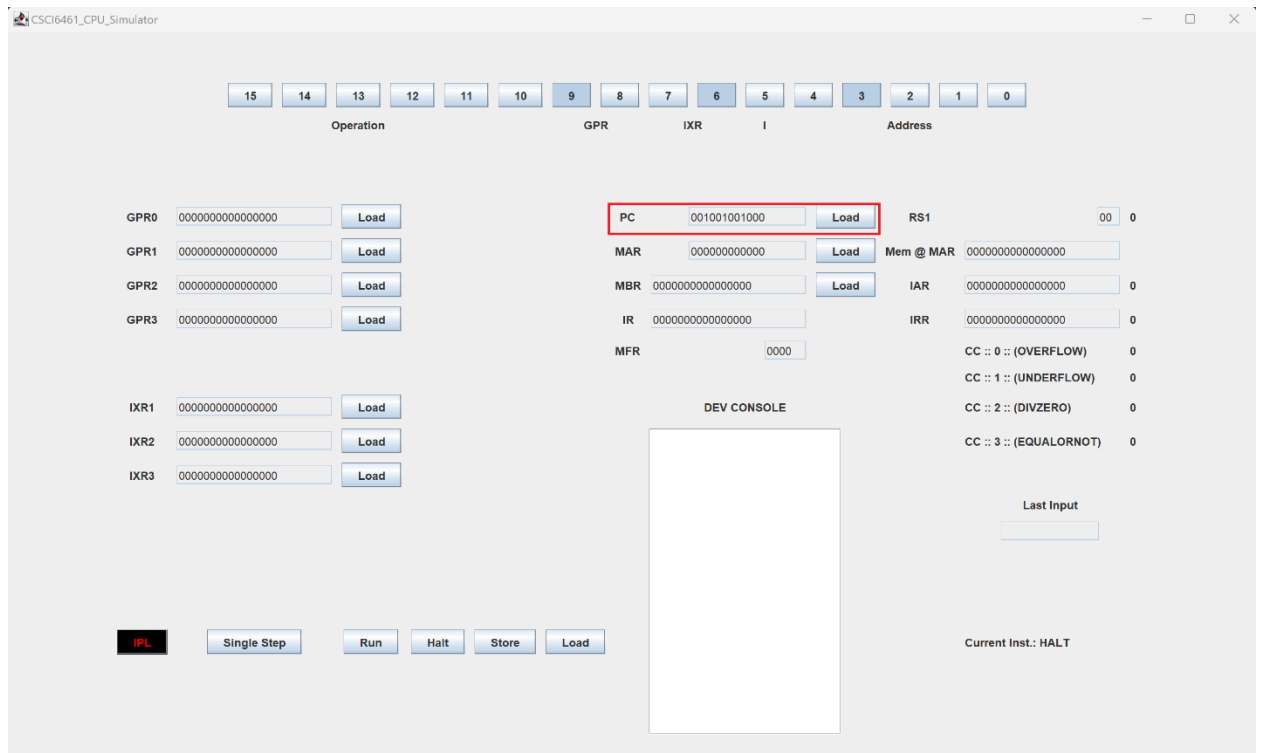


Fig11: Loading the toggle values into PC