**Journals**

**N.B: the work on this project was mainly teamwork, by which the both of us were online and working together such that we can sync our understanding of the whole code and project. This is a merge of both journals since we both worked equally together and on the same tasks, we didn’t divide the work**

**Journal Entries**

**MOHAMED ASHRAF**

May7,2:00:PM: Started the Final Phase of the Project!

**OMAR MAHDY**

May7,2:00:PM: Started the Final Phase of the Project!

**MOHAMED ASHRAF:**

May7,3:00PM: Fixed an error with the forwarding unit, Now it is fully functional.

**OMAR MAHDY:**

May7,5:00PM: There was a bug and an error with the hazard detection unit that interfered with some instructions, but it was fixed.

**OMAR MAHDY:**

May7,5:30PM: implemented some minor test cases to check the functionality of the processor.

**MOHAMED ASHRAF:**

May8, 1:17AM: continued the testing that Omar started but with different scenarios of the instructions to check that they are fully functioning.

**OMAR MAHDY:**

May8,2:34AM: There was an error that the memory was always fetching instructions which produced some incorrect outputs, it was solved by a conditional if that fetches nops when the clock is not 1(NOT FETCHING)

**MOHAMED ASHRAF:**

May8, 3:37AM: finished instantiation of the other two pipelined registers EX/MEM and MEM/WB

**MOHAMED ASHRAF:**

May8,12:17PM: Continued testing several cases.

**OMAR MAHDY:**

May8,1:17PM: Developed more cases to test.

**MOHAMED ASHRAF:**

May9, 4:39AM: Fixed the functionality of the ecall as it was not working correctly especially when we introduced flushing.

**OMAR MAHDY:**

**MOHAMED ASHRAF:**

May10, 12:00PM: Started developing the final assembly code that we will use. We divided it into two parts, each converted his portion to binary to be able to test it in the memory.

**MOHAMED ASHRAF:**

May11,3:00AM: Designed a module comparator in order to implement the bonus feature of determining the branch outcome in the decode stage and added it to the top module, with some changes to the bits in the module.

**OMAR MAHDY:**

May11,3:40AM: Finished the forwarding unit that handles the hazards of moving branch to decode.

**MOHAMED ASHRAF:**

**OMAR MAHDY**

May11,8:00AM: Tested the functionality of the BONUS part

**MOHAMED ASHRAF:**

**OMAR MAHDY**

May11,8:30PM: Finished the project !