Scan Chain Expt. ReadMe

- You need to show RTL and gate level simulation of your ALU design to your RA using the pattern "alu_TRACEFILE.txt" in the zip file "ALU Experiment Tracefiles" uploaded on Moodle last week. This is an exhaustive pattern file which contains all input combinations.
- Proceed to scan chain system **only** after you **complete** the above step.
- Read Chapter 6 from the lab manual for all details related to scan chain environment.
- Download the zip file "alu_scan_chain" from Moodle.
- This framework requires your hardware design to be wrapped with the scan chain. The code for the same is present in the folder "vhdlfiles".
- In case, any of your lab machines asks for sudo access while running the python file "scan.py", then follow the steps mentioned in the readme file in the "permission" folder, to avoid this happening for further runs. Get this **done** from your respective **RA**.
- The zipped file contains five pattern files for testing using scan chain. You shall run the scan chain system using the file "test.txt" which contains cases of all four arithmetic operations (takes 2 mins for the file to run). Once this test runs successfully, your ALU system is tested successfully using scan chain. **Stop**.
- If your "test.txt" fails, then check the output file for failures. At the same time, you can run the individual operations' trace files which are in the same folder. Patterns in these files are exhaustive and shall test whether a particular operation is performed correctly for all possible combinations (takes 4-5 mins for each file to run). This will help you in troubleshooting your designs.