

Work Structure (Technical Report)

1. **Title:** Name and S.No. of the author and date.
2. **Summary:** Summary of the technical report in a few lines.
3. **Specifications:** Brief description of job specifications including operating modes, of interfaces and operating frequency.
4. **Architectural description:** Description of the block-level architecture. For each block, a description of the interfaces and their functionality.
5. **Detailed design:** Description of the design, verification and implementation.
 - o Design
 - 9 Description of the circuit units
 - 9 Description of unit processes
 - 9 Description of trade-offs made
 - 9 Brief overview of the basic parts of the code
 - o Verification
 - 9 Description of the verification plan, ie how the operational ones were verified requirements.
 - 9 Summary of the functional simulations (behavioral simulation) performed at the source VHDL source codes, of testbenches.
 - 9 Brief overview of the waveforms of the functional simulation you judge necessary to demonstrate the proper operation of the circuit.
 - 9 Comment on design problems that may have been highlighted by the functional simulation and description of how to solve them.
 - o Implementation
 - 9 Report on the resource utilization of FPGA after Implementation (Slices, LUTs, FFs, IOBs).
 - 9 FPGA timing report after Implementation (Clock Period, WNS, TNS, WHS, THS, Max Delay Path, Min Delay Path, Input Port Setup to Clk (Max), Output Port Clock-to-out (Max), Output Port Clock-to-out (Min)).
 - 9 Summary of the timing simulations made in the post implementation.
 - 9 A brief overview of the waveforms of the timing simulation you deem necessary to demonstrate the proper operation of the circuit.
 - 9 Commentary on design problems that the timing report and time simulation probably highlighted and a description of how to resolve them.
6. **Test on the Development Board**
 - 9 Description of possible differences between development board functionality and verification with time simulation.
 - 9 Comment on design problems that may have been highlighted by the development board test and description of how to solve them.
7. **Conclusions:** A brief description of the course of work, the challenges and difficulties and how they were addressed within a few lines.