

Report for the Assignment in IC project I

No more than 20 pages

For the report we expect that you write about your implementation (ASMD), synthesis results, verification, and physical routing. Only ONE pdf file will be accepted.

First page is your name and student-ID

Figures and waveforms that are not readable are considered as non-existent.

Implementation:

Include the architecture and ASMD and explain what is happening in words. It is not enough to provide the ASMD figure without explaining it. If you are unsure about the ASMD have a look at chap 11 from the VLSI course book

Synthesis: Present your synthesis results in table(s).

Discuss area cost, critical path. It is expected that you provide results for a “low area” and a “high-speed” synthesis. Do not use screen dumps from the synthesis tool.

Which constraints were set? How many adders and multipliers and DFF were inferred by the synthesis tool? Detail where they were instantiated in your RTL

Verification: Provide an excerpt of the (post synthesis or post layout) Modelsim wave-window, where you show functionality. Change to decimal representation of the numbers. Explain what can be seen on the curves.

How many clock cycles were required?

If you do post-synthesis simulation you need to do it without pads, since the clock pad will not be able to drive the registers without a synthesized clock tree.

Routing: Provide a screen dump of the layout. Compare the final area with the estimated area from the synthesis tool. Only compare the core area. Appendix: VHDL code: Use landscape format, and “2 pages” on one page!! Clean synthesis script. Clean routing (cmd) script.

Finally, do spell checking.