

Lab 0: FPGA Tutorial and Board Test

Submission Due Dates:

Report: 2021/10/17 23:59

Objective

1. Going through the Vivado tutorial for FPGA implementation.
2. Testing the Basys 3 FPGA board..

Action Items

1 Vivado tutorial

Follow the Lecture 03, Vivado Tutorial for FPGA Implementation, with the source files in [tutorial.zip](#).

2 FPGA Board Test

Refer to "[lab0-2 board test.pdf](#)". Program the FPGA with [test.bit](#).

- a. Find the board number on the back side.
- b. Check if the Power LED works.
- c. Check if the Program LED works.
- d. Check if the LEDs (LD15-LD0) and slide switches (SW15-SW0) work well.
- e. Check if the 7-segment display works well.
- f. Check if the pushbuttons (BTNU, BTND, BTNL, BTNR, BTNC) work well.
- g. Complete the checklist in "[lab0_report_template_v1.docx](#)".
- h. Submit the checklist as your lab0 report.
- i. Contact TA if any components don't function well.

Demo:

Attention

- ✓ Hand in your report as **lab0_report_StudentID.pdf** (i.e., lab3_report_108080001.pdf).
- ✓ No need to demo this lab.