VL505 Lab Midterm Set A

Total: 40 marks

Duration: 1.5 hours

Objective:

We have provided a code to blink an LED, written in Verilog. Understand the code provided.

To Do:

1. Write a testbench. Test the code in simulation and make sure it works
2. Map the output to an LED on the FPGA. Observe the LED blinking. You may need to modify the code to observe the LED blink – every one second. The LED should turn on and off after a gap of nearly one second
3. Now, modify the code to blink two LEDs such that, LED1 blinks five times, followed by LED2 blinking five times and then both LEDs stop blinking. Show this output to the TA**- Demo 1 – 20 marks**
4. Create a counter that keeps track of the number of times both the LED blink. Store the final count (in this case 10) and display this on the 7-segment display- **Demo 2 – 20 marks**

What to upload:

1. Completed codes, xdc file

2. Demo to the TA the result during the exam

3, If you are unable to get the output, take a screenshot of the error you get, upload it along with the code

4. No need to upload photo of the blinking LED.