1. Make sure you go through all the steps described in this tutorial. Once you finish the tutorial, save the simulation plot window for lab3\_TestBench.v file and include it in your report. You can press **Print Screen** button on your keyboard, which will capture the information displayed on your screen. You can past this image in the work document. Then double click on the pasted image and use the crop function in the Word document to only select the simulation results. Make sure that your results are easy to view and understand. (10 points)
2. Next, go to the **SIMULATION** bar in the *Flow Navigator* Left click on **Run Simulation** and select **Run Post-Implementation Timing Simulation.** This simulation is run on your design after the synthesis and implementation process is completed. Print the simulation results and include them in your report. List three differences that you observe between the results from the “Behavior Simulation” and “Post-Implementation Timing Simulation”? What are the reasons for these differences between the two simulations? Use the zoom button to help you find these differences in the simulation windows. (20 points)
3. Look at the waveform results at time 220ns from the start of the simulation. This is the time when the buttons change from state 4b’1111 to 4b’1011. Use the zoom in button to closely examine the results. How long does it take for the LEDs to change its output state measured from the time the buttons change from state 4b’1111 to 4b’1011? Do you see any erroneous states that the LEDs transition through? Use the zoom button and take a snapshot of these states. Include them in the report. Why do you have these erroneous states? (10 points)
4. Compare these timing results to the ones from the “Behavioral simulation”. Report the time it takes for the LEDs to change its output measured from the onset the buttons change from state 4b’1111 to 4b’1011. Why is this time different compared to the one from the “Post-Implementation Timing Simulation”? (10 points)

