

EE1501 - Digital Systems Lab

Assignment - 1

Instructions:

- 1.) Please submit a report which includes the code, its testbench, results, and your approach.
- 2.) For verification, take two test cases of your choice for each question.

Q1.) Create an 8-bit full adder(Hint: Can use loop statements)

$$y = x_0 \cdot h_0 + x_1 \cdot h_1 + x_2 \cdot h_2 + x_3 \cdot h_3 + x_4 \cdot h_4 + x_5 \cdot h_5 + x_6 \cdot h_6 + x_7 \cdot h_7 + x_8 \cdot h_8 + x_9 \cdot h_9$$

Q2.) Compute y in one clock cycle.

Q3.) Compute y keeping in mind that no two arithmetic operations will take place in the same clock edge.