INTRODUCTION TO MODELSIM AND GATE LEVEL

MODELING

LAB # 01



Spring 2025

CSE-308L

Digital System Design Lab

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Submitted to:

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Introduction To Modalism and Gate Level Modeling

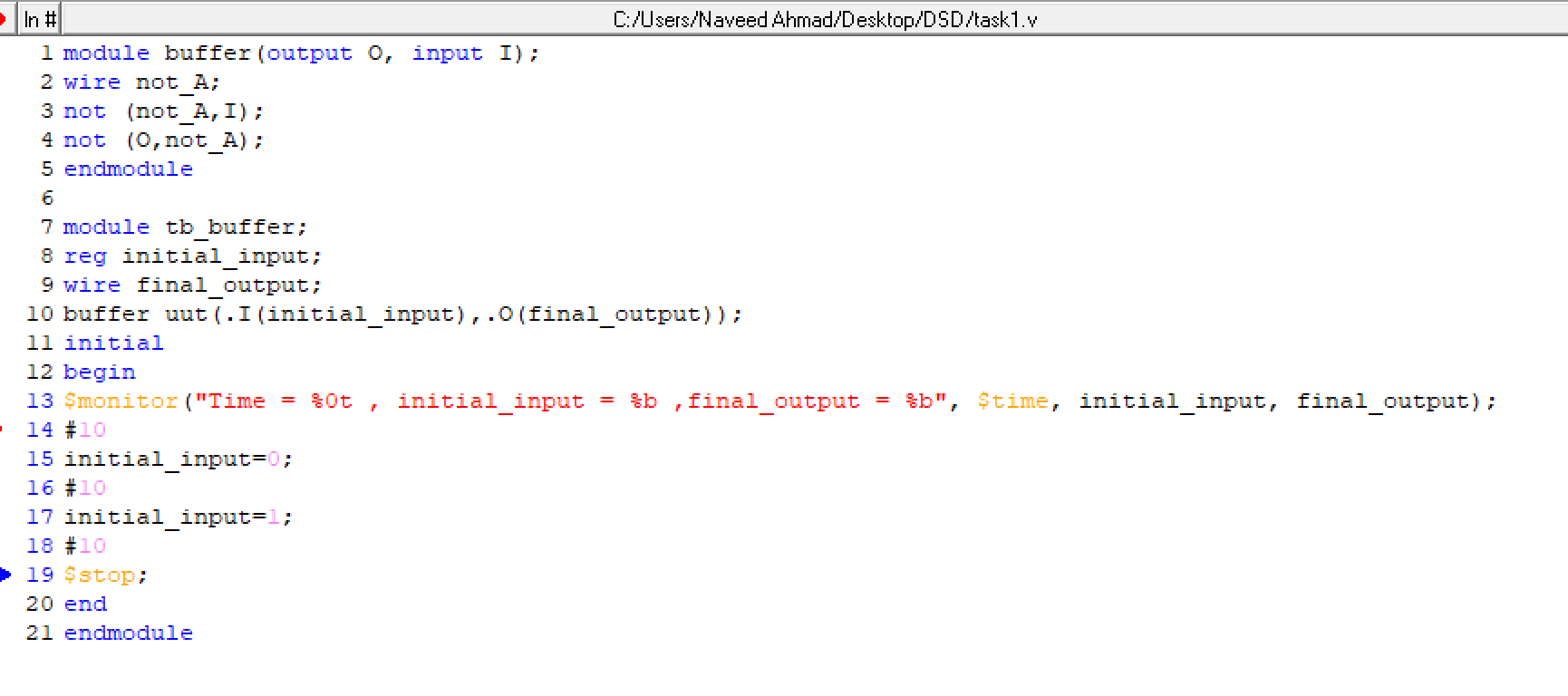
OBJECTIVES

* Introduction to MODELSIM
* Introduction to gate level modeling

Lab Tasks:

Task 1: Implement a buffer at the gate level

Code



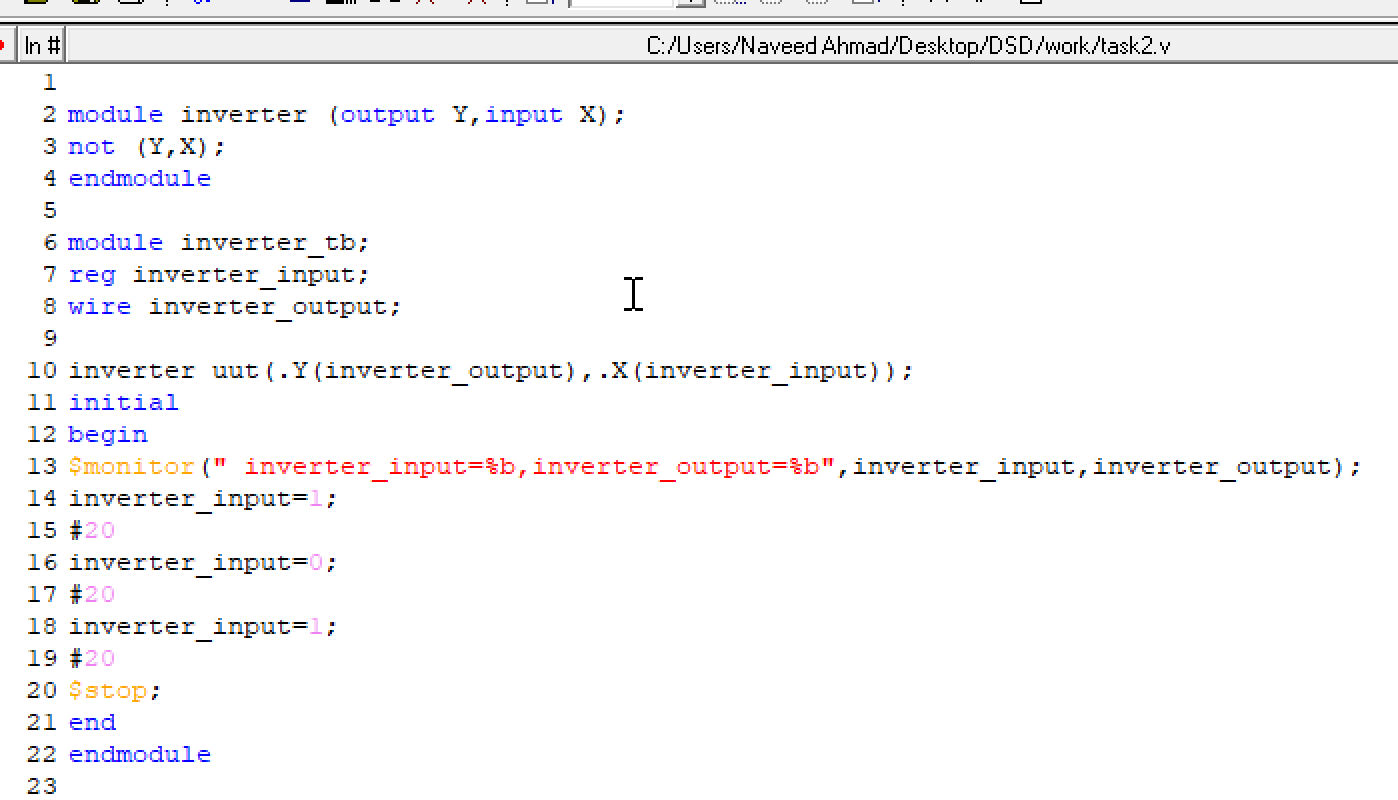
Output:

A screenshot of a computer

AI-generated content may be incorrect.

Task 2: Implement an inverter at the gate level.

Code



Output:



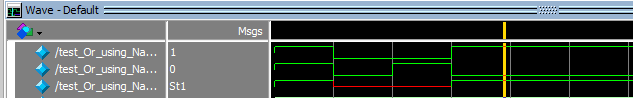
Task 3: Implement an OR gate using a NAND gates.

Code

A screenshot of a computer program

AI-generated content may be incorrect.

Output*:*

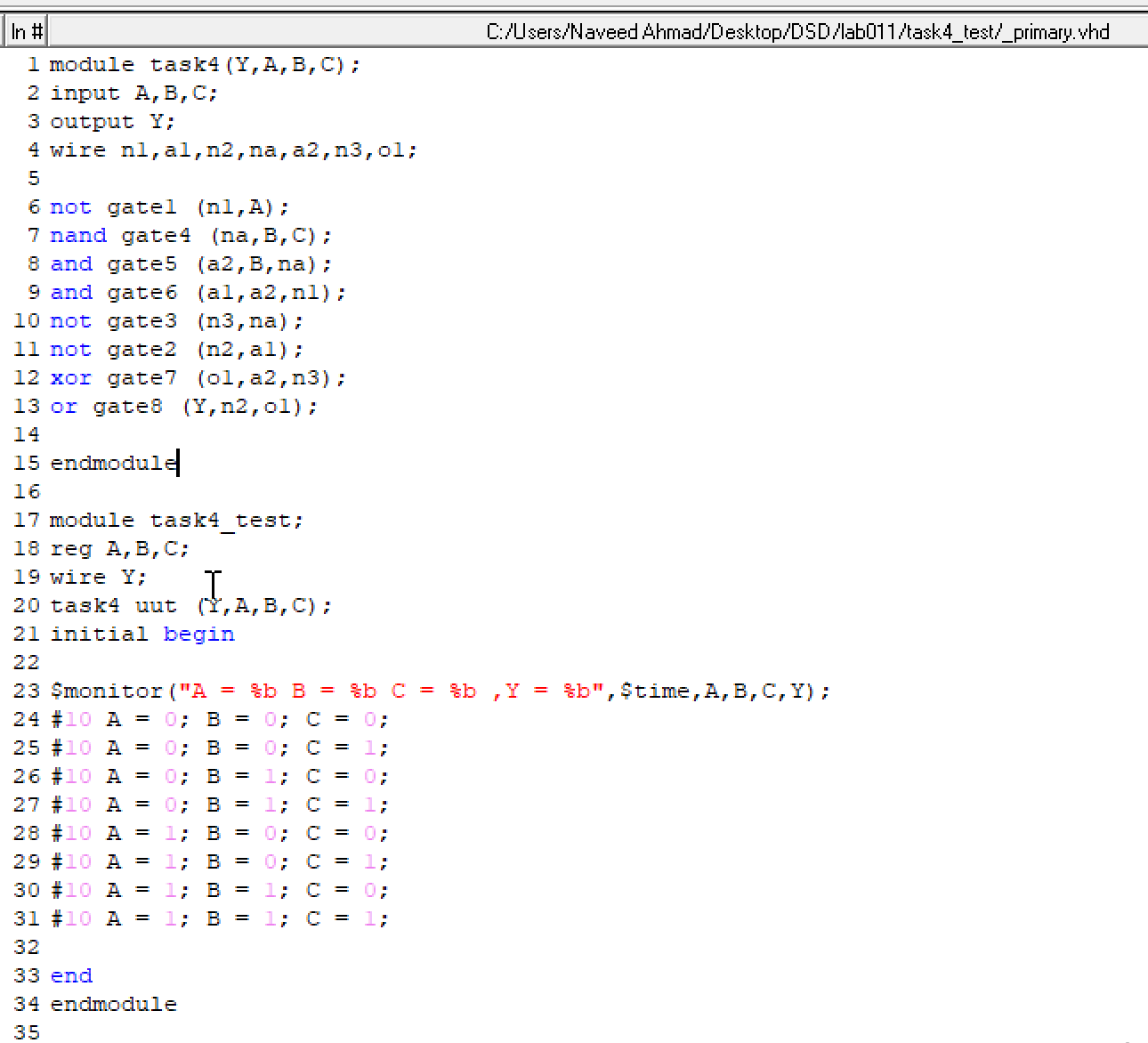


Task 4: Implement the following equation where z is output and x1, x2, x3, x4, and x5 are inputs of the circuit.

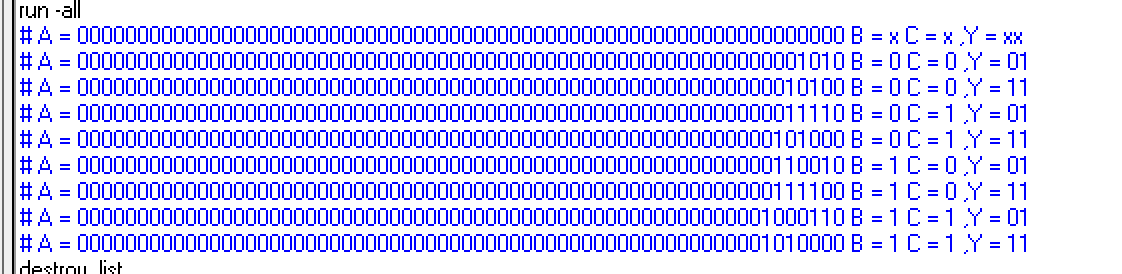
z = (y1 + y2)’

y1 = x1 . x2

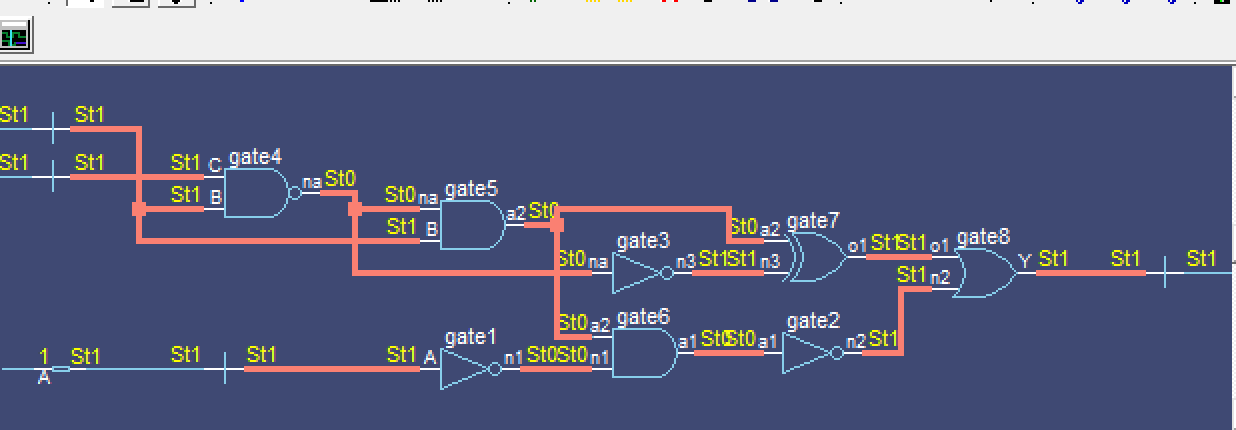
Code:



Truth table:



Data flow :



Output:

