

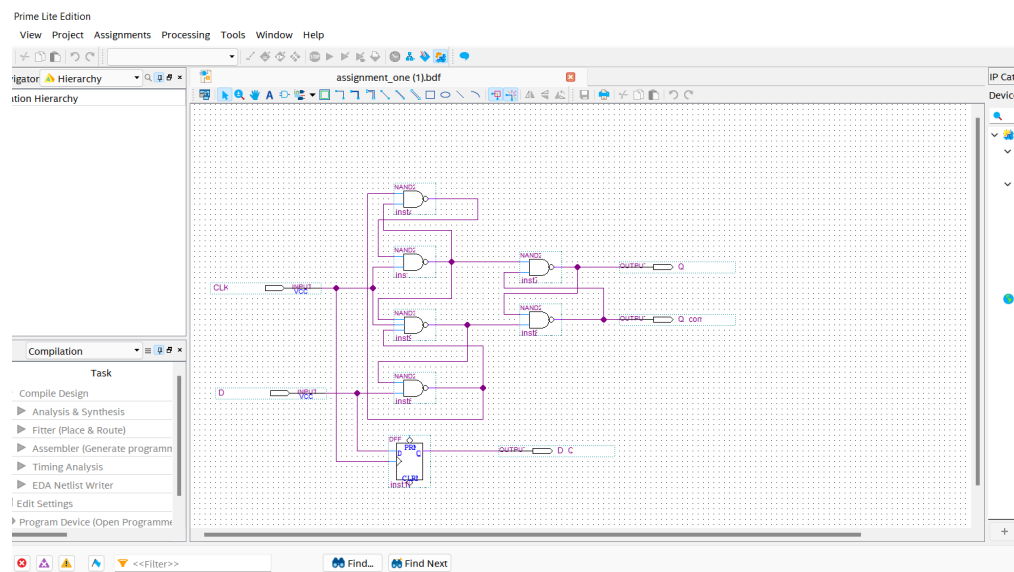
Lab 07

Shyang Kao

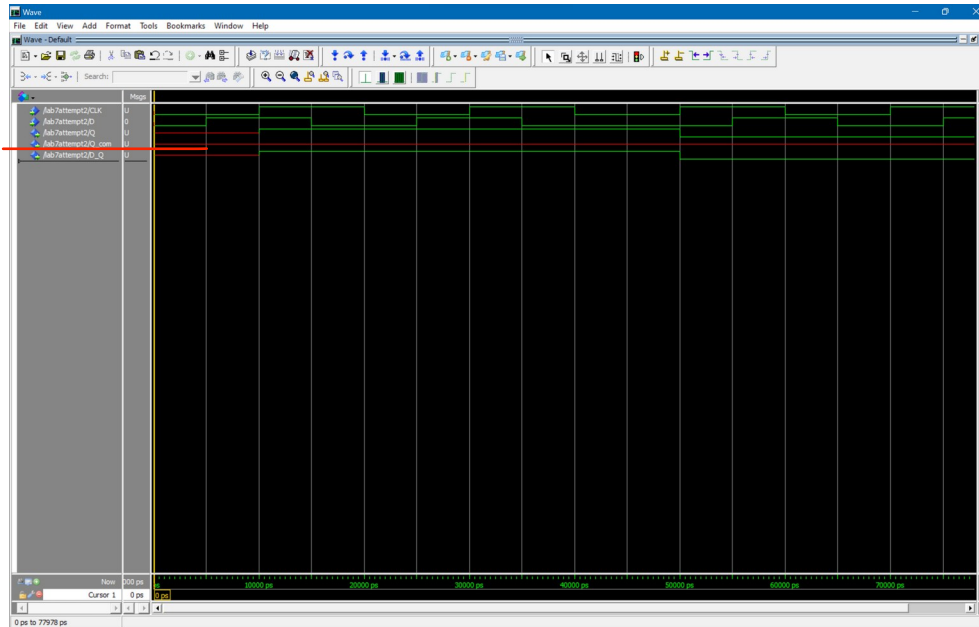
Purpose

This lab builds on the previous one by introducing the VHDL programming language and how to use it to model circuits. This demonstrates a different method of designing a circuit and a different way of utilizing ModelSim software. The student was given the responsibility of designing a circuit, translating it into VHDL code, and modeling it in ModelSim.

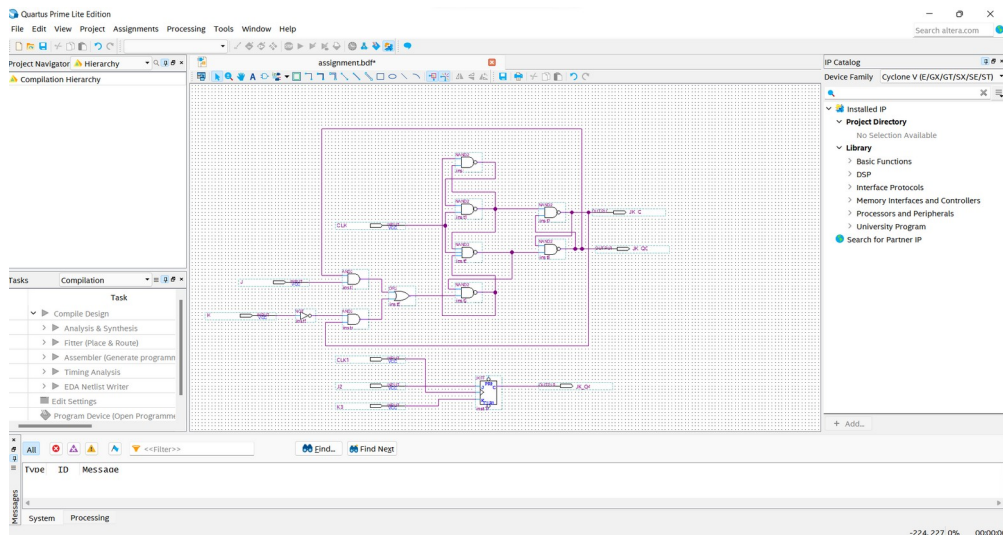
Part 1 Circuit



Part 1 Simulation



Part 2 Circuit:



Part 2 Truth Table:

truth table

J	K	CLK	Q
0	0	↑	No change
0	0	↑	1
0	1	↑	0
1	1	↑	$\overline{Q_0}$ toggles

Part 2 Simulation:

