



CPET- 233 Digital Systems Design Lab Fall 2019

Educational Objective:

The educational objective of this laboratory is to review schematic capture using Altera's Quartus Prime CAD system and to introduce simulation using Altera's waveform simulator.

Pre-Laboratory:

1. Read the "Quartus_II Introduction" tutorial found in MyCourses to understand what you will be doing in this lab.
2. Get swipe access for the ESD lab (70-1360)

Lab-Procedure:

1. Complete the "Quartus_II Introduction" tutorial found in MyCourses.
 - It is easiest to open the tutorial instructions on one monitor and open Quartus Prime on the other monitor (save a tree – don't print).
 - Obtain sign-offs and print a hardcopy of your work at the following Points:
 - i. After successful compilation of the schematic
 - ii. After successful functional simulation

Documentation:

A formal lab report is not required for this lab. Please submit a report that contains a cover page, an abstract, the two printouts and signoffs obtained during the procedure and a summary that discusses what simulation is and its importance in the design process. An abstract is an overview. It should start with the purpose of the lab (in your own words), discuss what was done in the lab and finally report on the results. In the discussion section answer specific questions and summarize what you learned.

A note on documentation: whenever you submit a waveform as part of a written report, **it MUST be annotated with comments** such that a reader can understand what is being verified by the waveform.



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Signoffs and Grade:
Please submit with final report

Name: _____

Component	Signoff	Date	Time
Schematic (35 pts)			
Functional Simulation (35 pts)			

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Component	Received	Possible
Signoffs		70
Report		20
Annotated Waveforms		10
Penalties <ul style="list-style-type: none">• after the first 15 minutes of lab session 2: -10• after the first 15 minutes of lab session 3: -25• no signoffs after the first 15 minutes of lab session 4:	-	
Total		100