Final project

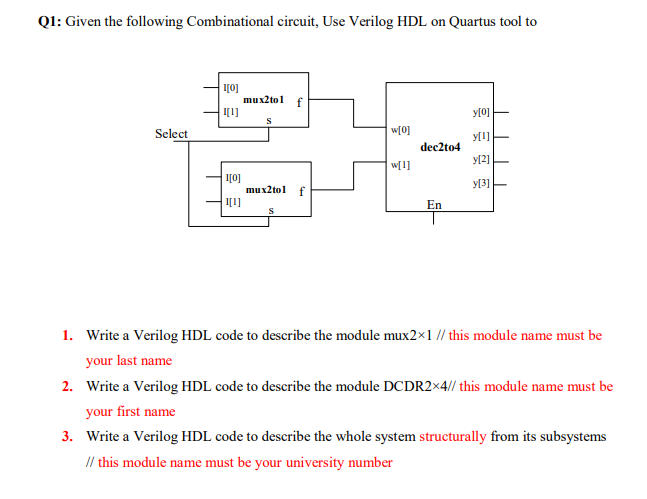
The report prepared by: Lana Al-Batnij

Instructor: Dr. Mohammed Hussein

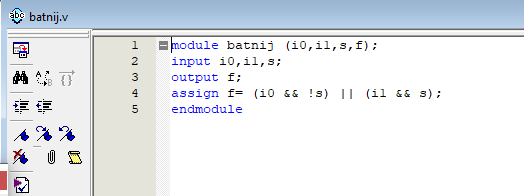
My ID: 1200308

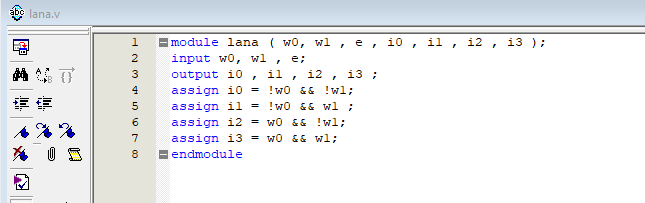
The date: 24/8/2021

The first system:



So firstly I write the code for the mux 2x1 and then the decoder 2x4

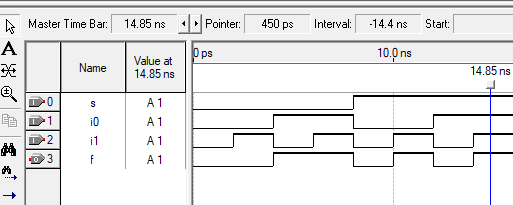




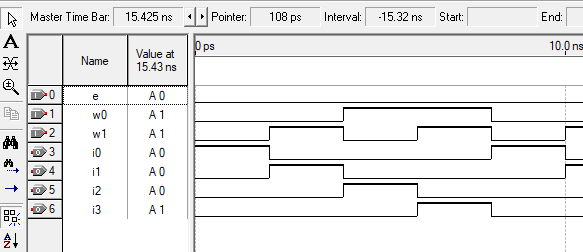
I write the two codes in data flow way.

Then I check my work by the wave form.

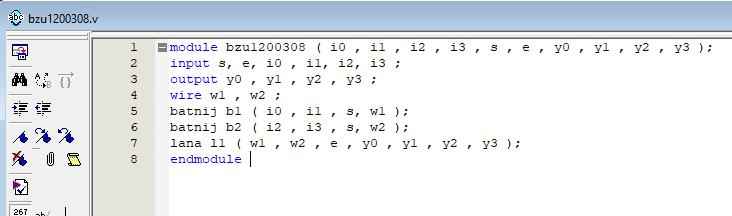
The mux:



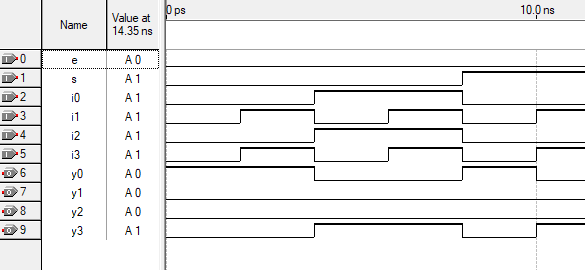
And then the decoder:



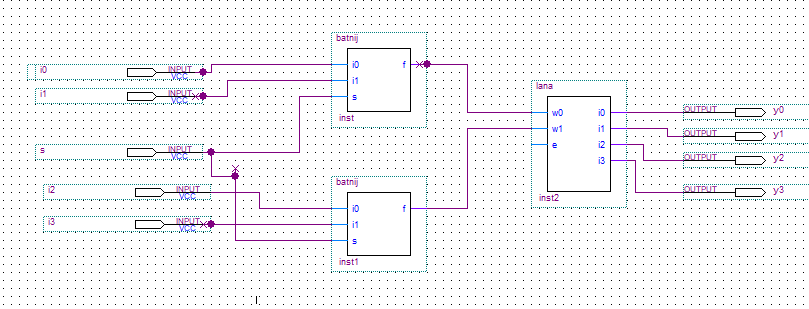
And as a final step I wrote the whole code in structural way.

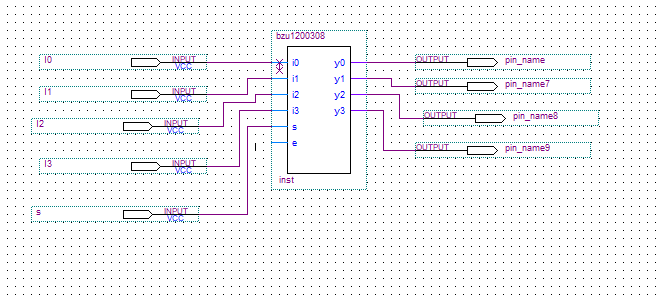


And check the wave form:

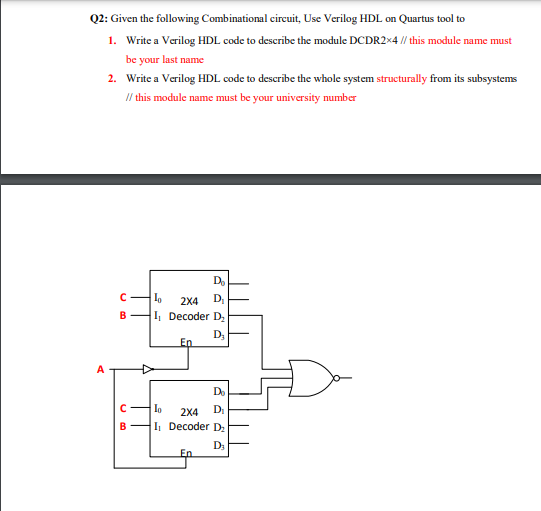


And finally I made the diagram in two ways:

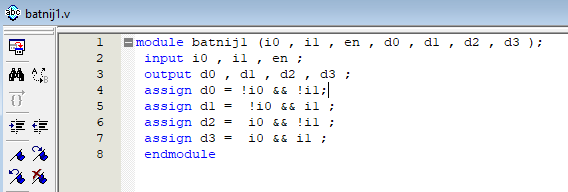




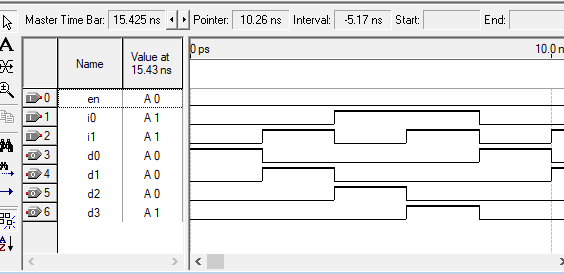
The second system:



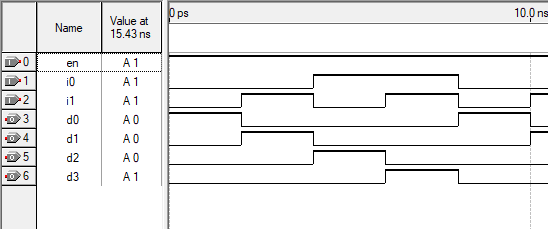
First, I wrote the code of decoder



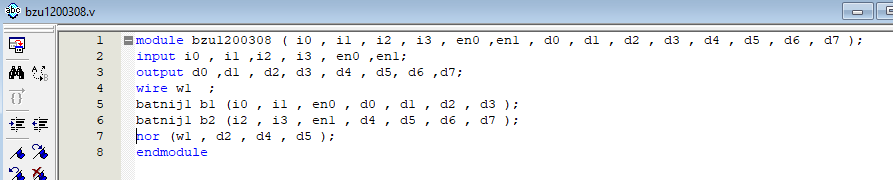
I notice that the first one with low enable active and the second one high enable active , but I didn’t missed up with the code , I just try it out on the wave ; first wave



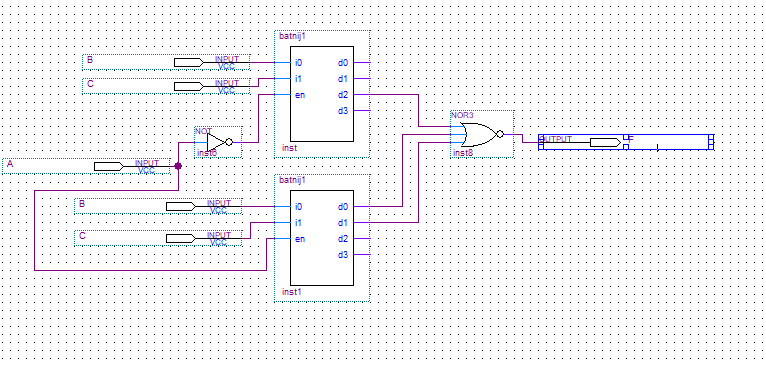
Notice the enable here is 0; the second one the enable will be 1.



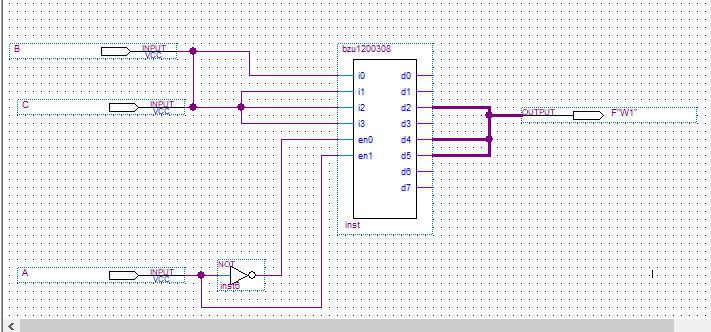
Then I wrote the whole system code structurally



And finally I did the diagram the first one



While the whole system in one chip:



My note about the project:

It was good but I found it kind of tricky, especially in system two; how to deal with the enables.

The end