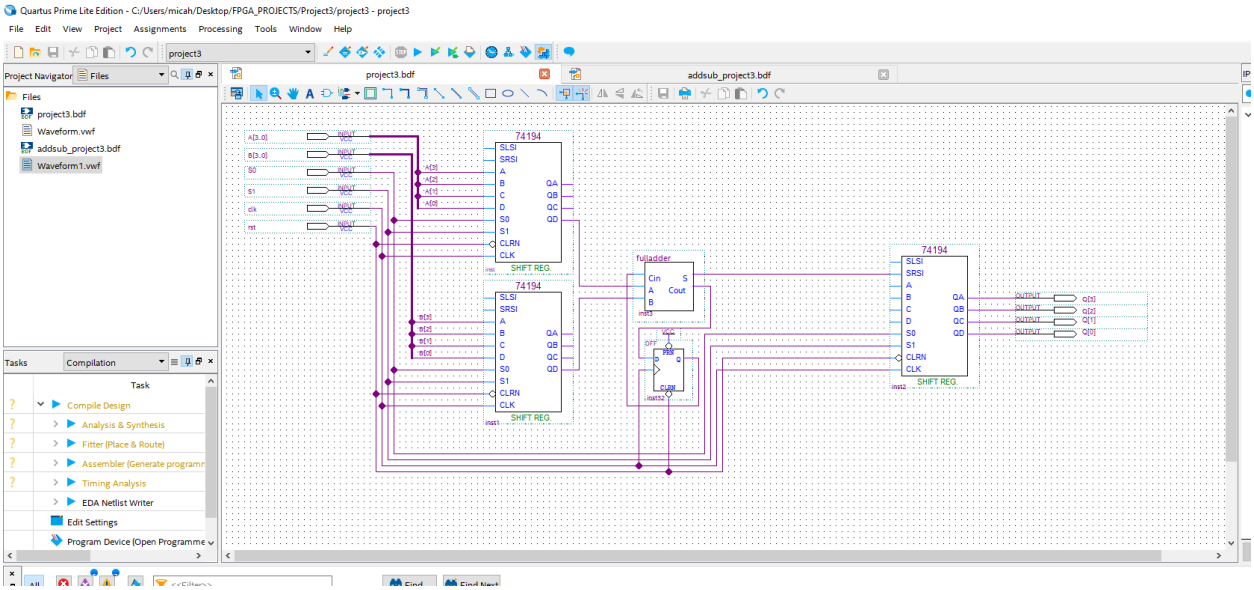
Micah Perkins

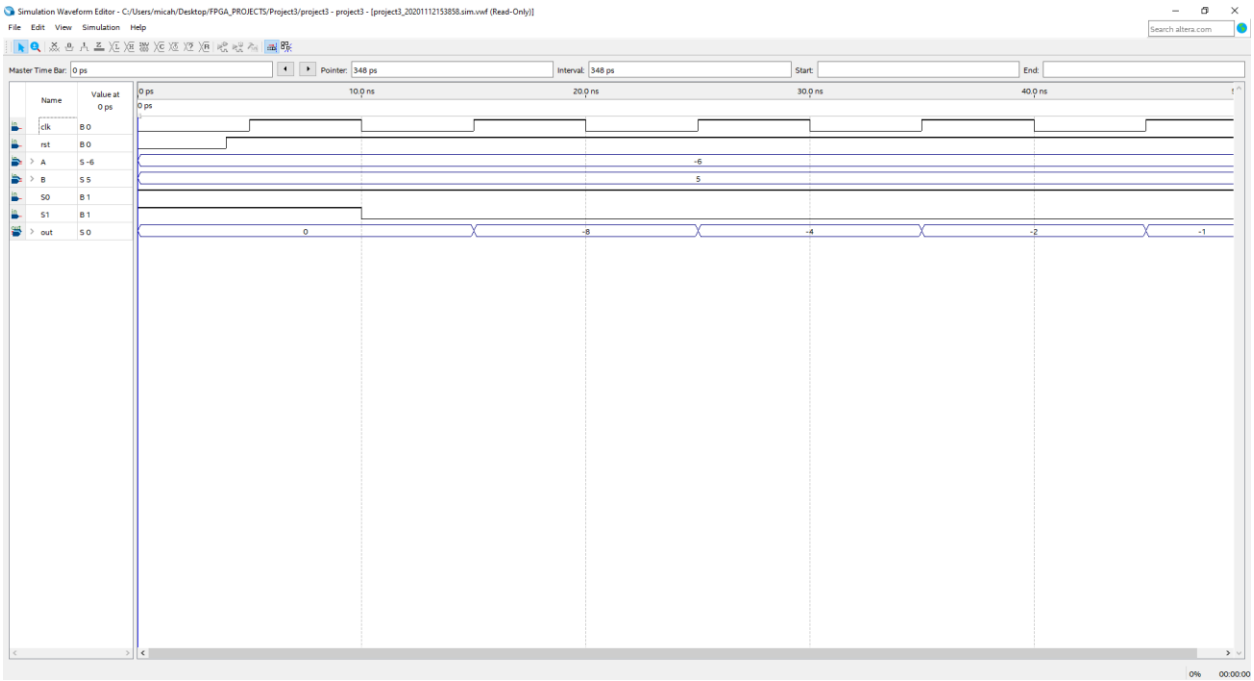
Logic Design

Serial Adder:

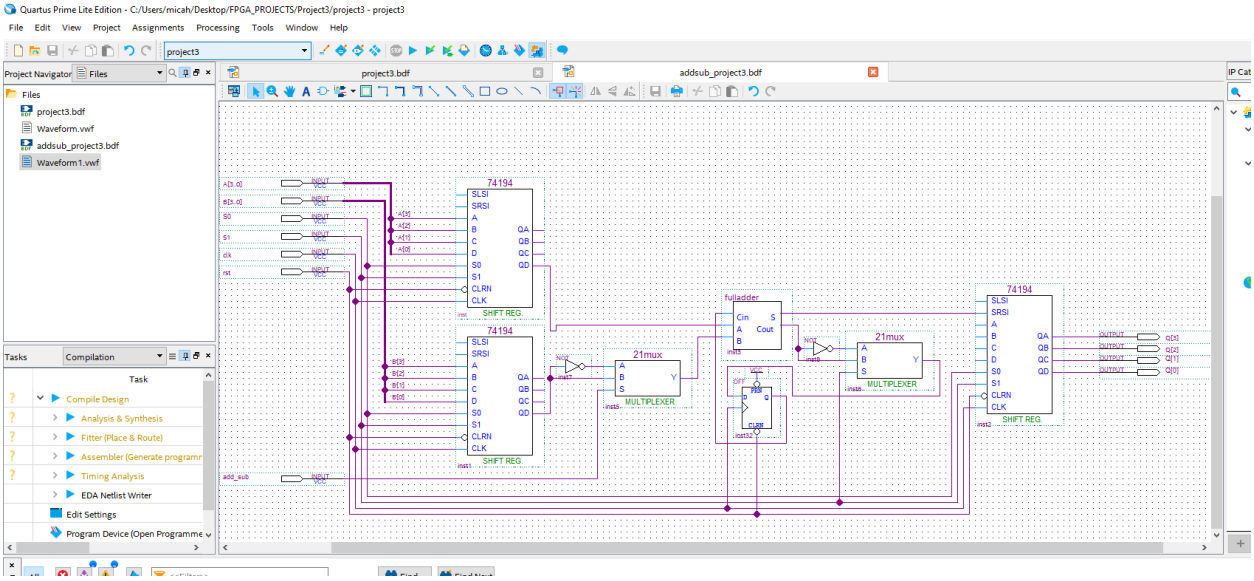
Part 1:



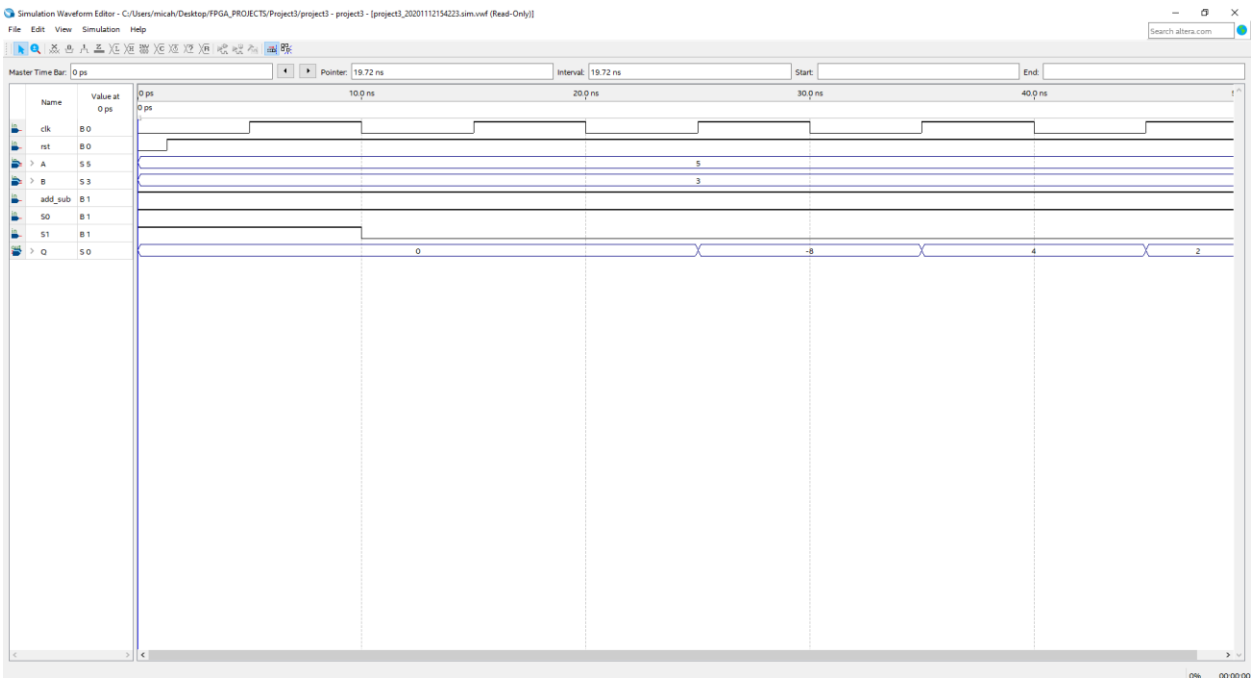
Part 2:



Part 3:



Part 4:



Brief Discussion:

I tried to keep my BDF circuit as streamlined as possible. Since most of the assignment told me which parts to use, I made very few choices on my own regarding placement. Only a single output is connected on the shift registers because as we shift the value, singular bits are forced into the adder which allows us to add larger numbers. In the add_sub portion, I simply placed the MUX's as per the diagram in the instructions. I made sure add_sub = 0 would force the mux to give up the real number, and add_sub = 1 would NOT the value for subtraction. I connected the second MUX to S1 simply because S0 did not give me the desired output and S1 did.