Things to do on the USB

1. Convert the supplied Varilog code to VHDL
2. Test the SLD code that was provided
3. Find free software that can measure the speed and data flow of the USB port.
   1. Something similar to what hhdsoftware.com has
   2. Needs to be able to easily go onto multiple computers
      1. So that we can measure the data rates on them and start to understand an average speed
      2. Also to compare statistics with how different USB ports react
4. Need to build the ALU lab
   1. Will use the vJTAG
   2. Will use hard buttons on the board
      1. One of the buttons will need to be read to the host computer so that it knows when to start
   3. Will use virtual buttons through a python script
      1. The values for the other input
   4. This will require the Tcl script be changed and modified
      1. Will need to send larger packets of data
      2. Will need to read back larger packets of data and convert them from binary to hex
5. Further Testing
   1. What is the largest size packet we can send
   2. How many vJTAG instances can we have
      1. This is more than likely dependent on the chip itself and how much space it has
   3. How much detail can we get back from the JTAG
      1. Will it give us something similar to an address space
         1. If so sweet
         2. If not then what does it give us back
6. From the data that we start to get from test we ned to start building a GUI
   1. Would like for the GUI to hide all command windows
   2. Would like it to read the vJTAG SLD nodes
      1. Give nodes labels
      2. Give nodes values
   3. Would like the GUI to have an establish connection node
      1. Close connection
      2. Open connection
   4. Have the GUI have the built in abilities to change the physical switches
      1. Will this cause issues?
   5. Have the GUI be able to manipulate the LEDs
      1. This may require that every lab have a built in set of entities that is already provided to the students
         1. vJTAG
         2. LED decoder
         3. Etc.
   6. Would like the this program to be an .exe file
   7. Another thing to keep in mind is to try and make the program work with both python 2.x and 3.x
7. Later steps
   1. Get the SDCARD to work
      1. Integrate it into the GUI
   2. Get any onboard Memory to work
      1. Such as changing the startup program