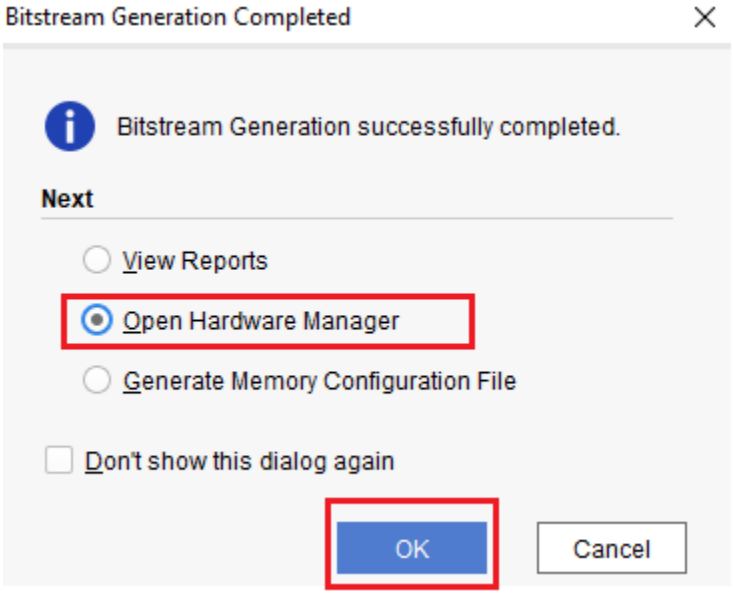
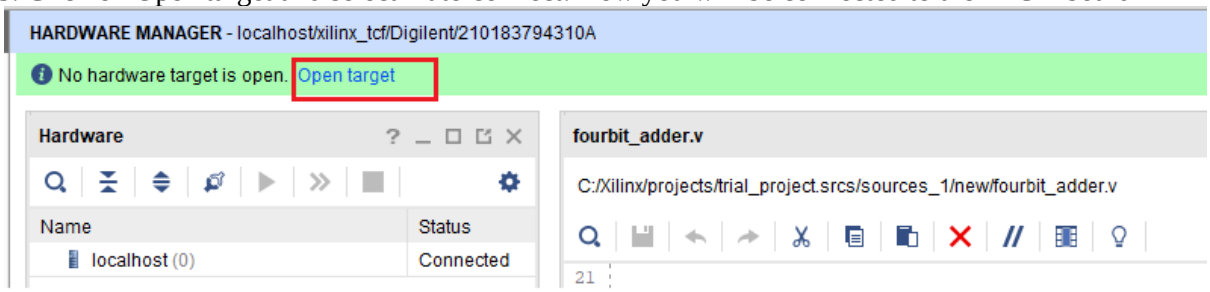
Appendix 3
Programming the Basys 3 FPGA board

If you are running the Vivado locally then follow the steps

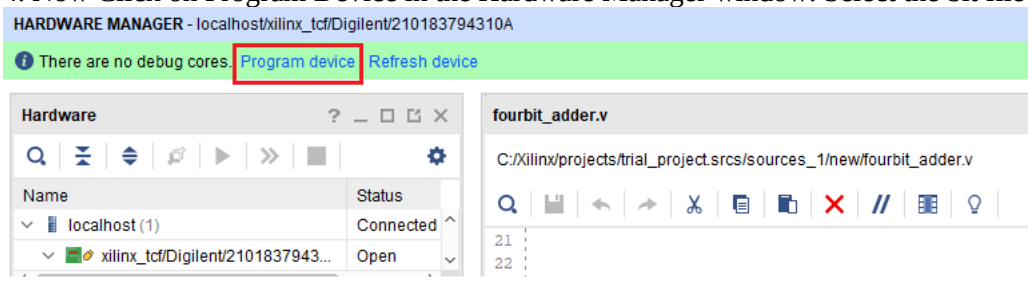
1. After successful completion of the Bitstream Generation, select Open Hardware manager from the dialog box or Flow -> Open Hardware Manager

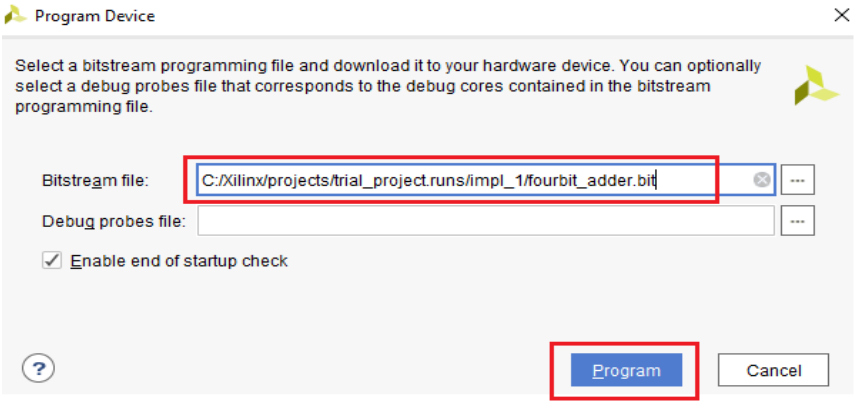


2. Connect the FPGA board to your laptop
3. Click on Open target and select Auto connect. Now you will be connected to the FPGA board



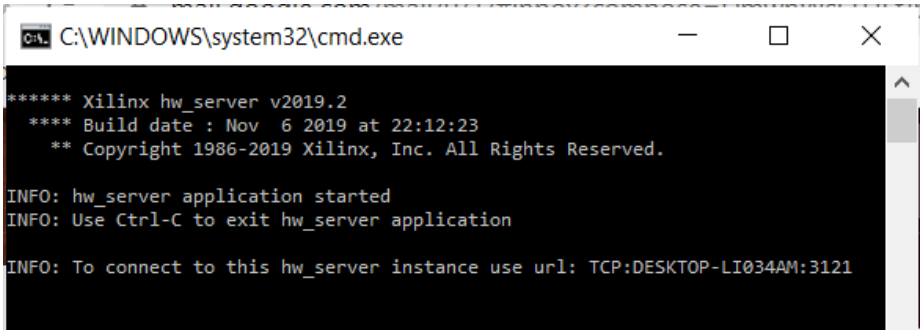
4. Now Click on Program Device in the Hardware Manager window. Select the bit file and hit Program



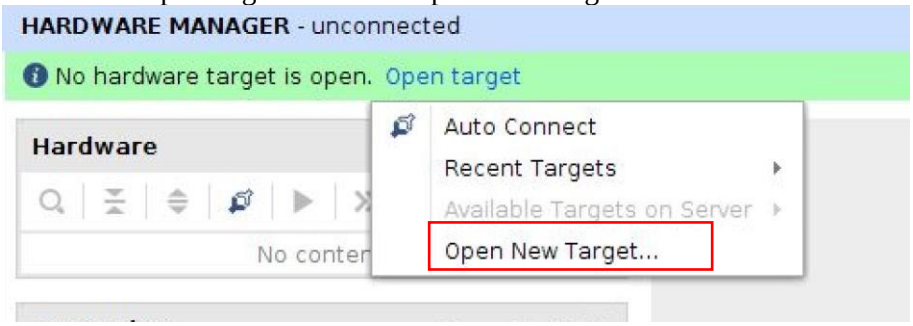


If you are running the Vivado on the CSE server then do the following

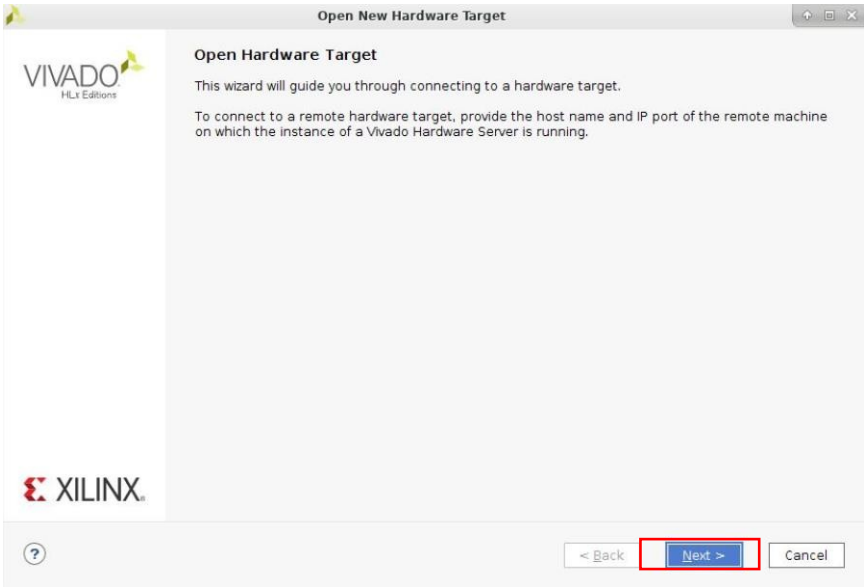
1. Download the hardware server on your local machine from https://www.xilinx.com/support/download/index.html/content/xilinx/en/downloadNav/vivado-design-tools/archive.html (This is not the complete software and just requires approx.. ~400MB and download time of few minutes)
2. Run the xsetup file
3. Run the hardware server from C:\Xilinx\HWSRVR\2019.2\bin\hw_server.bat. You will see the following window



4. Open Hardware manager from the dialog box or Flow -> Open Hardware Manager
5. Connect the FPGA board to your laptop
6. Click on Open target and select Open New Target.

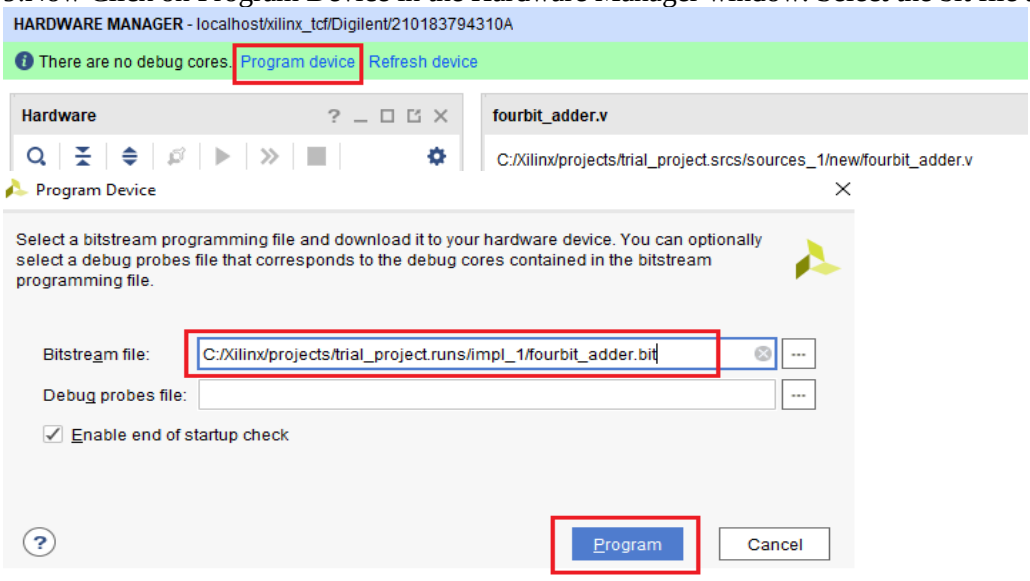


7. Click on Next in the Open New Hardware Target Wizard



8. In the Connect to field select Remote Server and in the Host name field enter your local machine's IP address.

9.Now Click on Program Device in the Hardware Manager window. Select the bit file and hit Program



You can try a simple calculator example from https://github.com/Digilent/Basys-3-Abacus