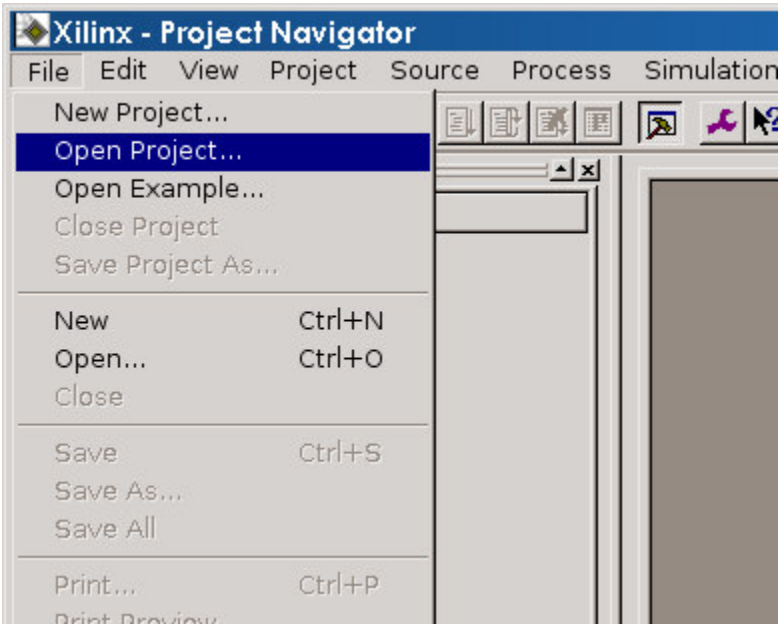
Using Xilinx Software and the Digilent Boards

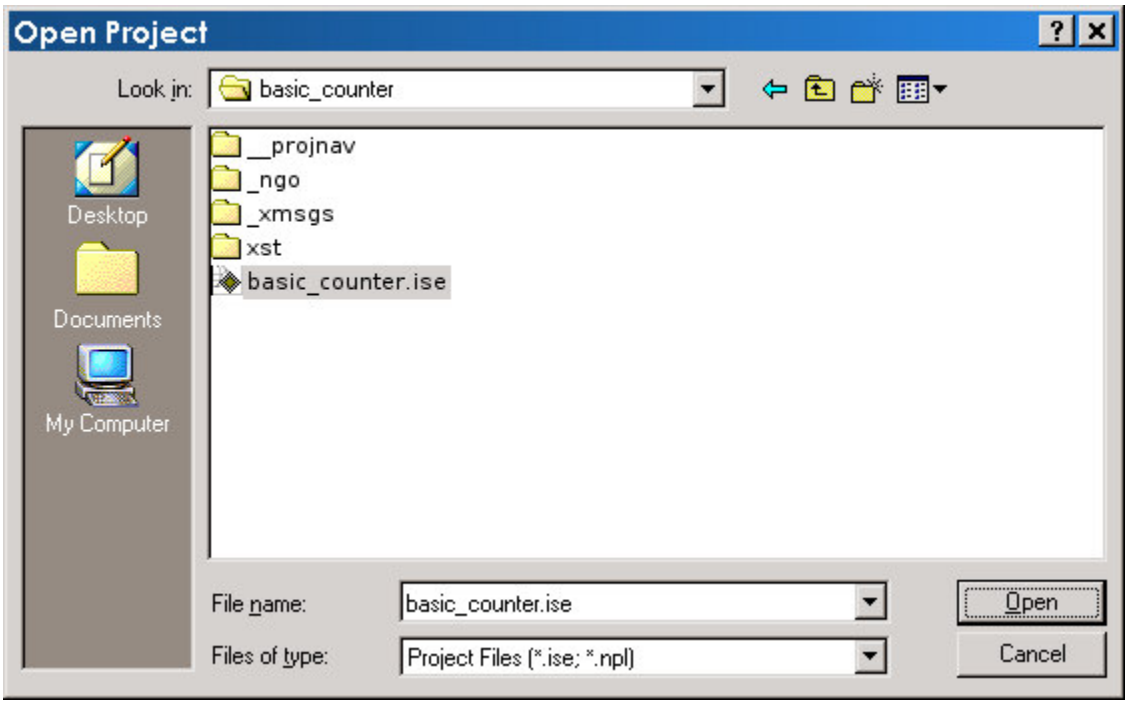
Using Xilinx ISE (Integrated Software Environment)

Or

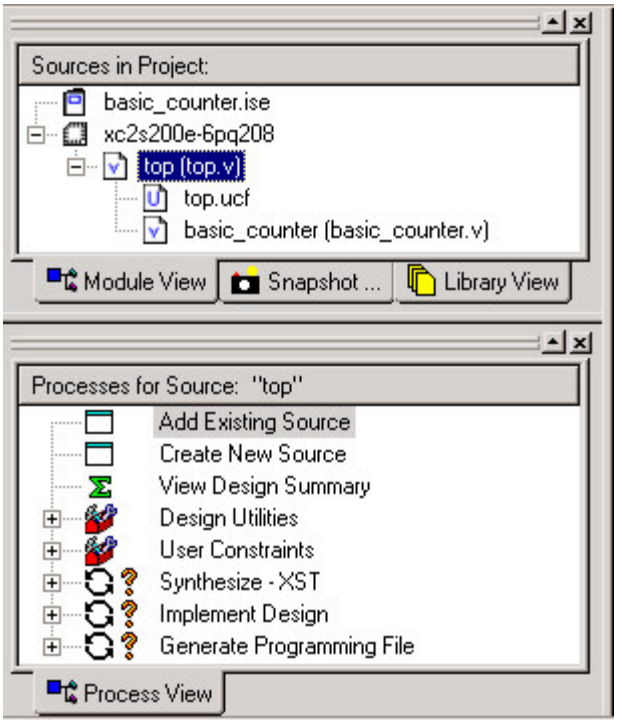

1. Double-click on the icon that either says "Xilinx ISE 7.1" or "Project Navigator" (they are the same program).



2. Click on "File", then "Open Project…"

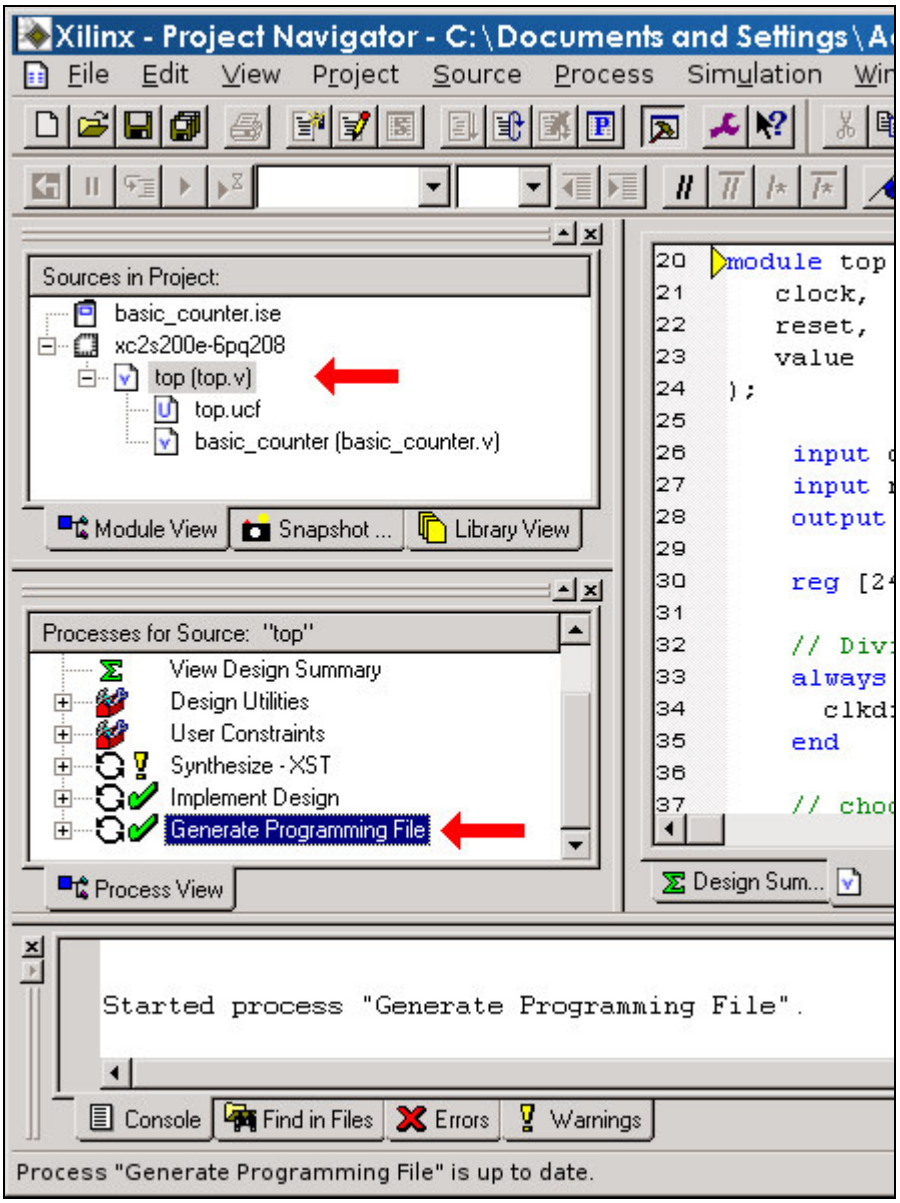


3. Select the **basic_counter.ise** file. Click on "Open". Please ask one of the presenters for the location of this file.

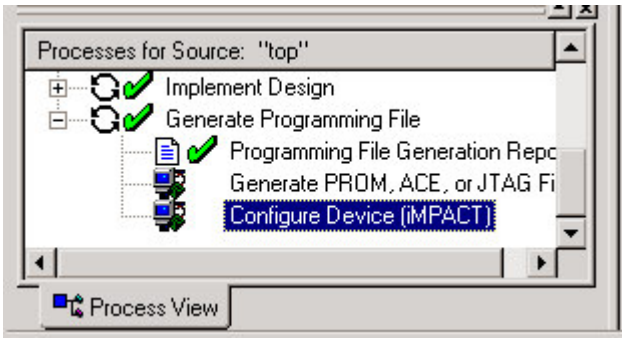


4. On the left side of the main window, you will now see something similar to the figure. You can view the source of any of these files by double-clicking on them.

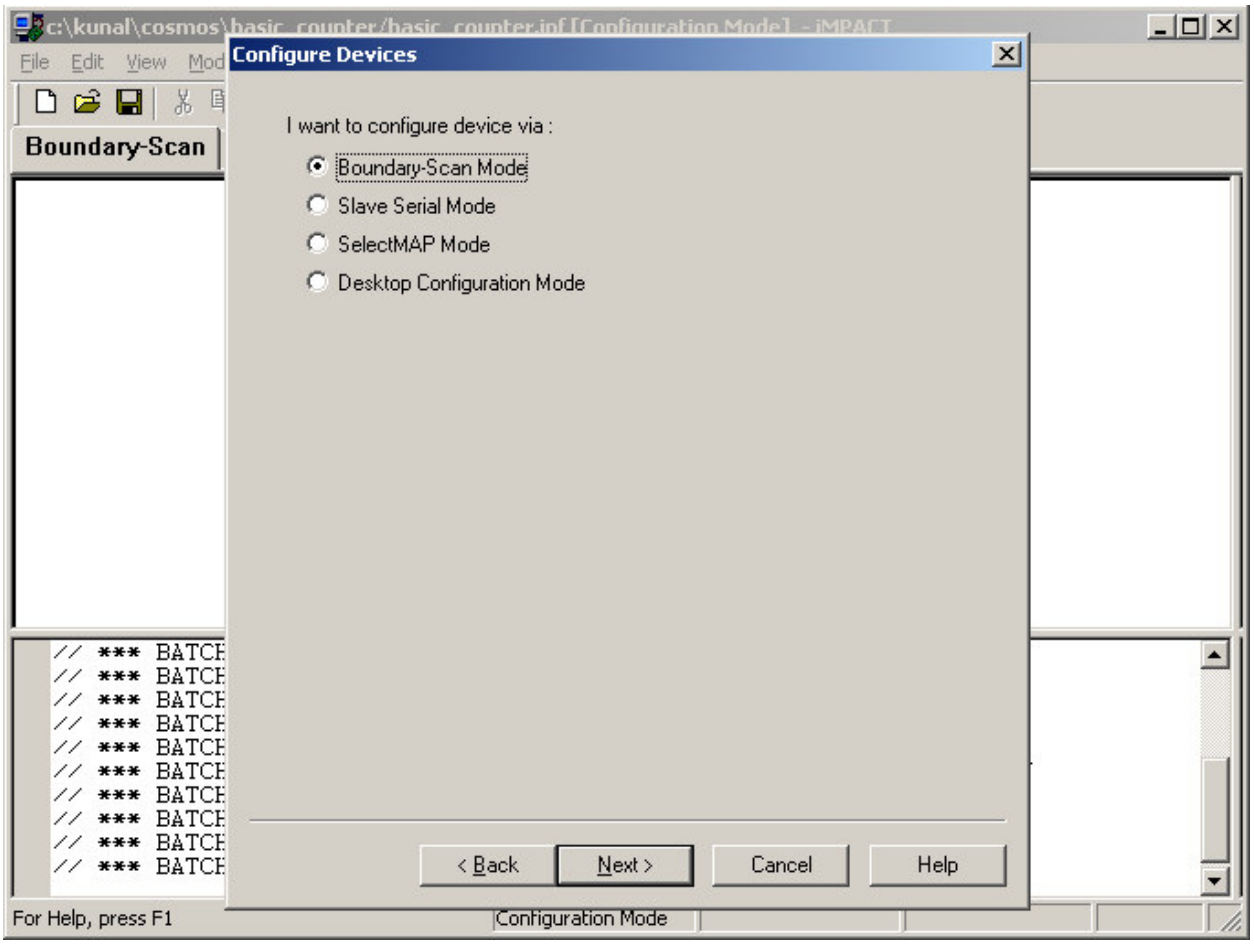
For now, however, we just want to program the Digilent boards. After you've programmed the board once, and can verify that it works, you can play around with the code to see what happens.



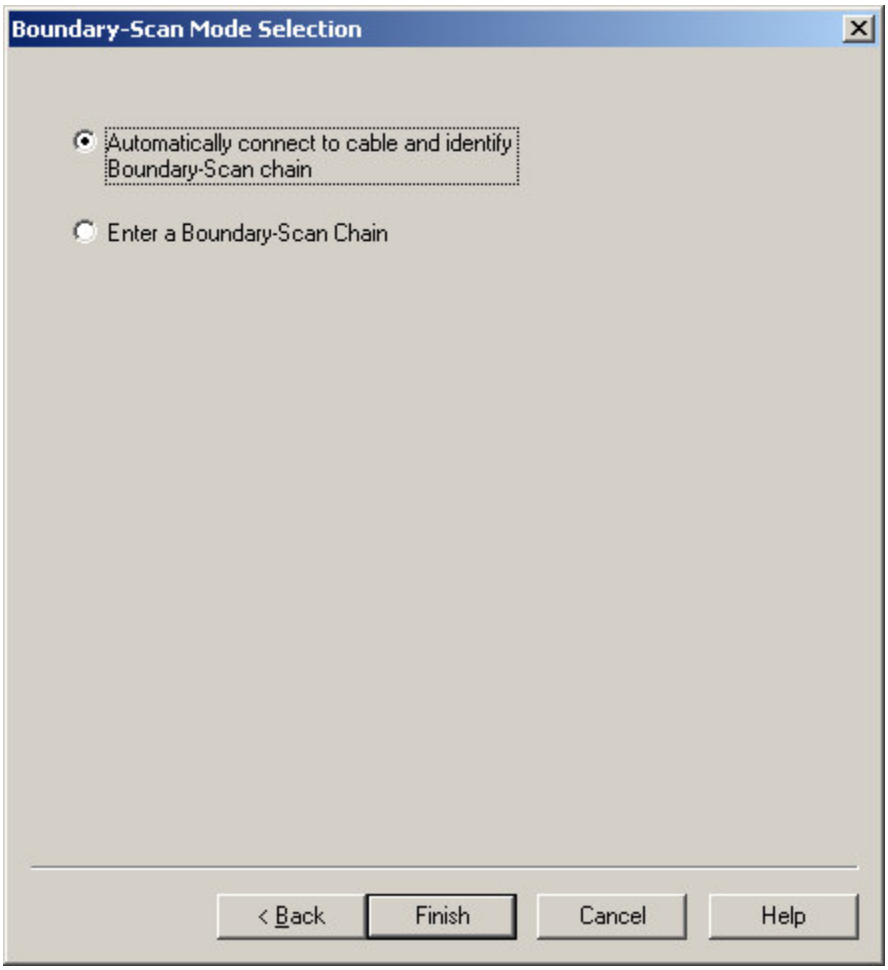
5. To program the board, click on the "top (top.v)" file in the small "Module View" window (if you cannot see this window, click on the View menu -> Sources). Then in the "Process View" window below it, double click on "Generate Programming File." This process will take a little while.



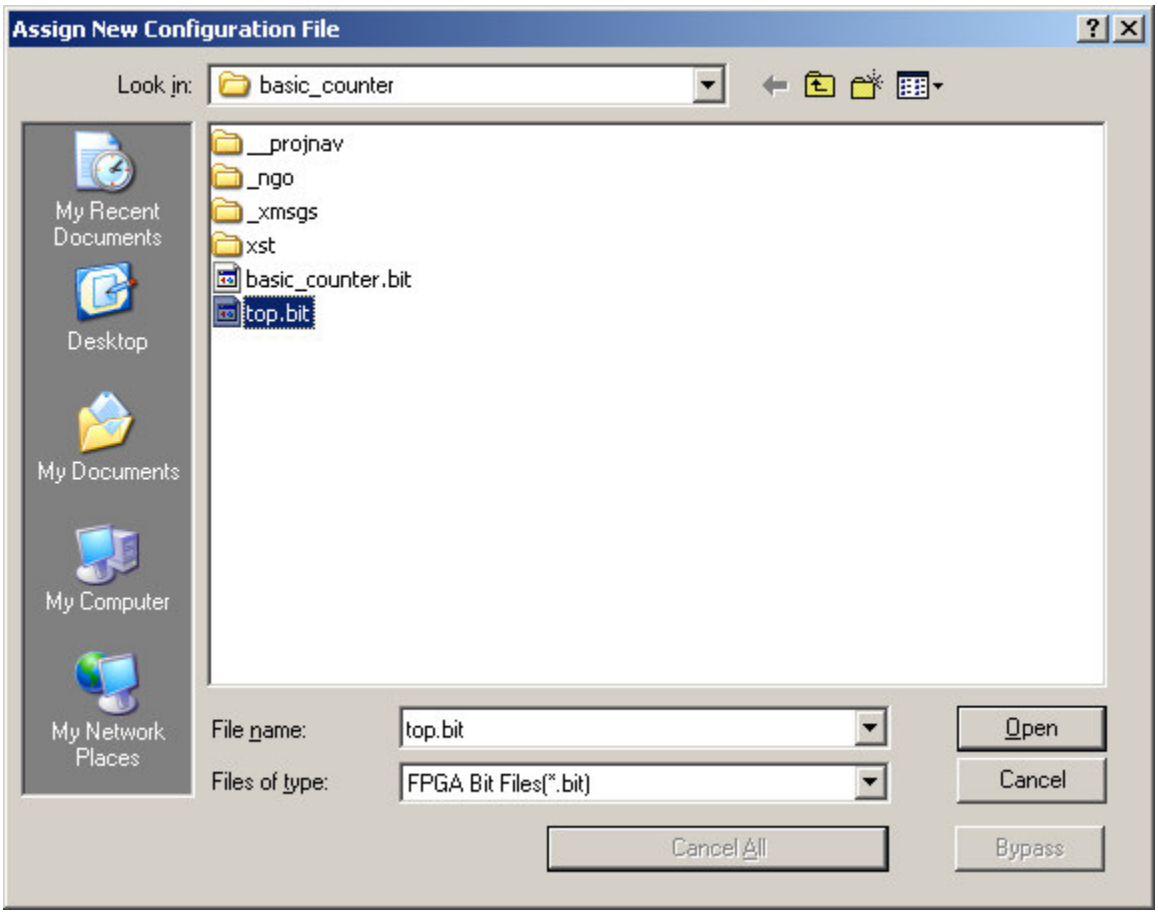
6. Now click on the little plus arrow next to "Generate Programming File." You should see a small list. One of the items is "Configure device (iMPACT)"



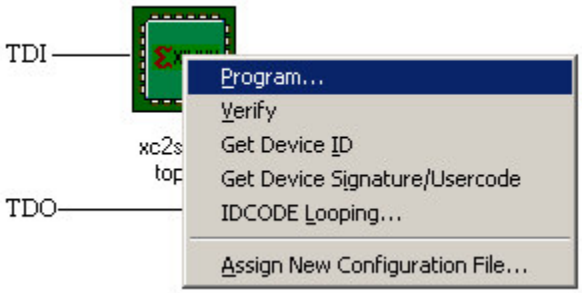
7. iMPACT will pop up with the window shown in the figure. If it does not, skip to step #10. Select "Boundary-Scan Mode" and click on "Next".



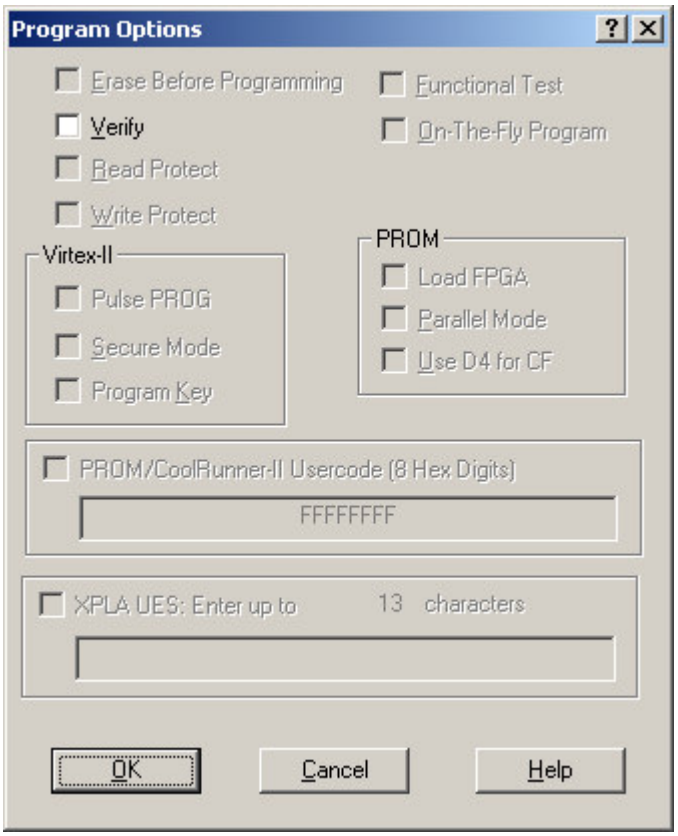
8. In the next window, select "Automatically connect to cable and identify Boundary-Scan chain." This process simply tries to connect to the cable to download the design.



9. Next, you will be asked to select the file to load onto the chip. The file we want is called **top.bit**. It was created by the Xilinx ISE software when you clicked on "Generate Programming File" earlier.



10. You should see a small diagram with a picture of a chip. Right-click on the chip, and select "Program…" from the menu.



11. This "Program Options" window will pop up. Click on "OK" and the board will get programmed.