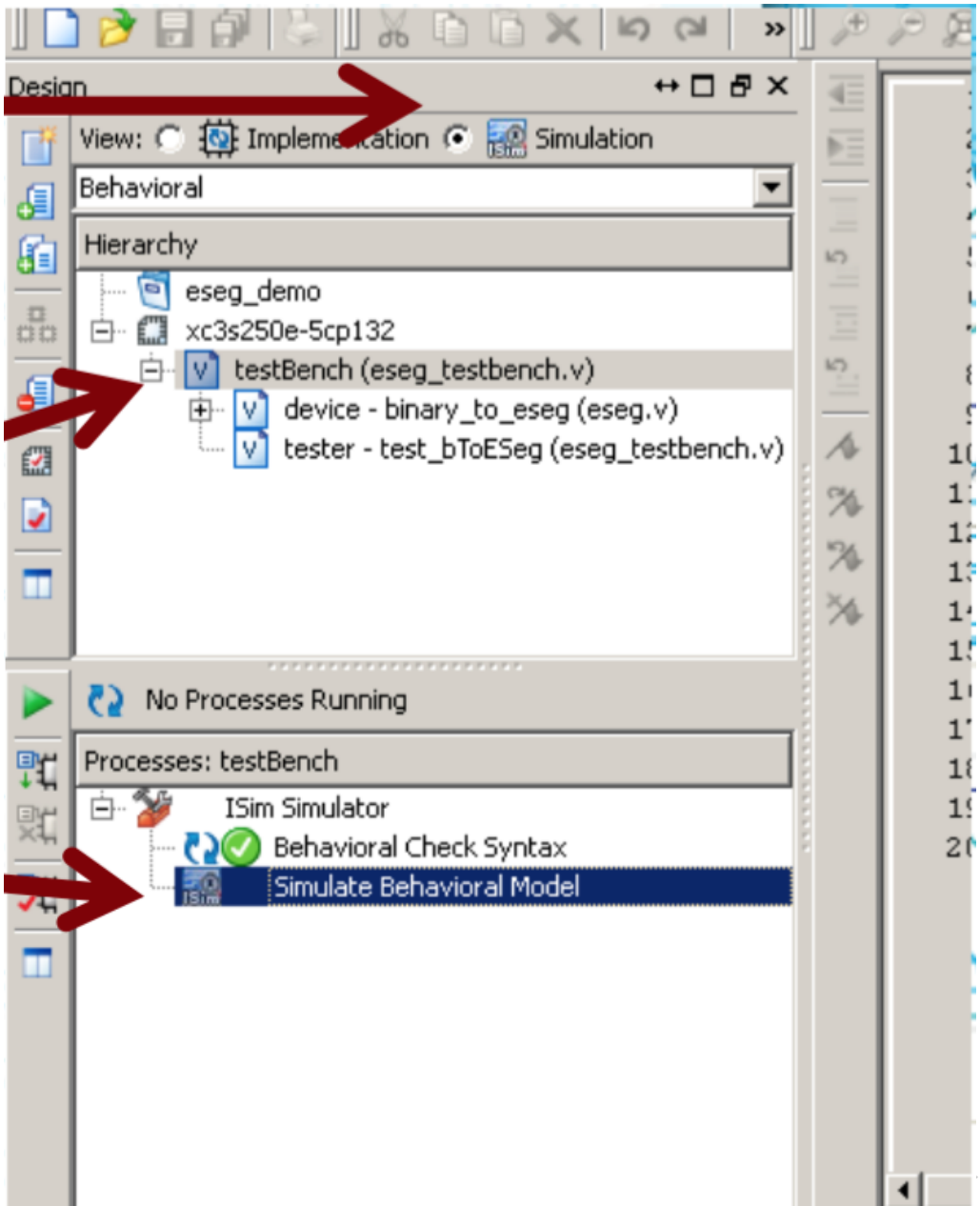
CENG 232 - How to use the FPGA board

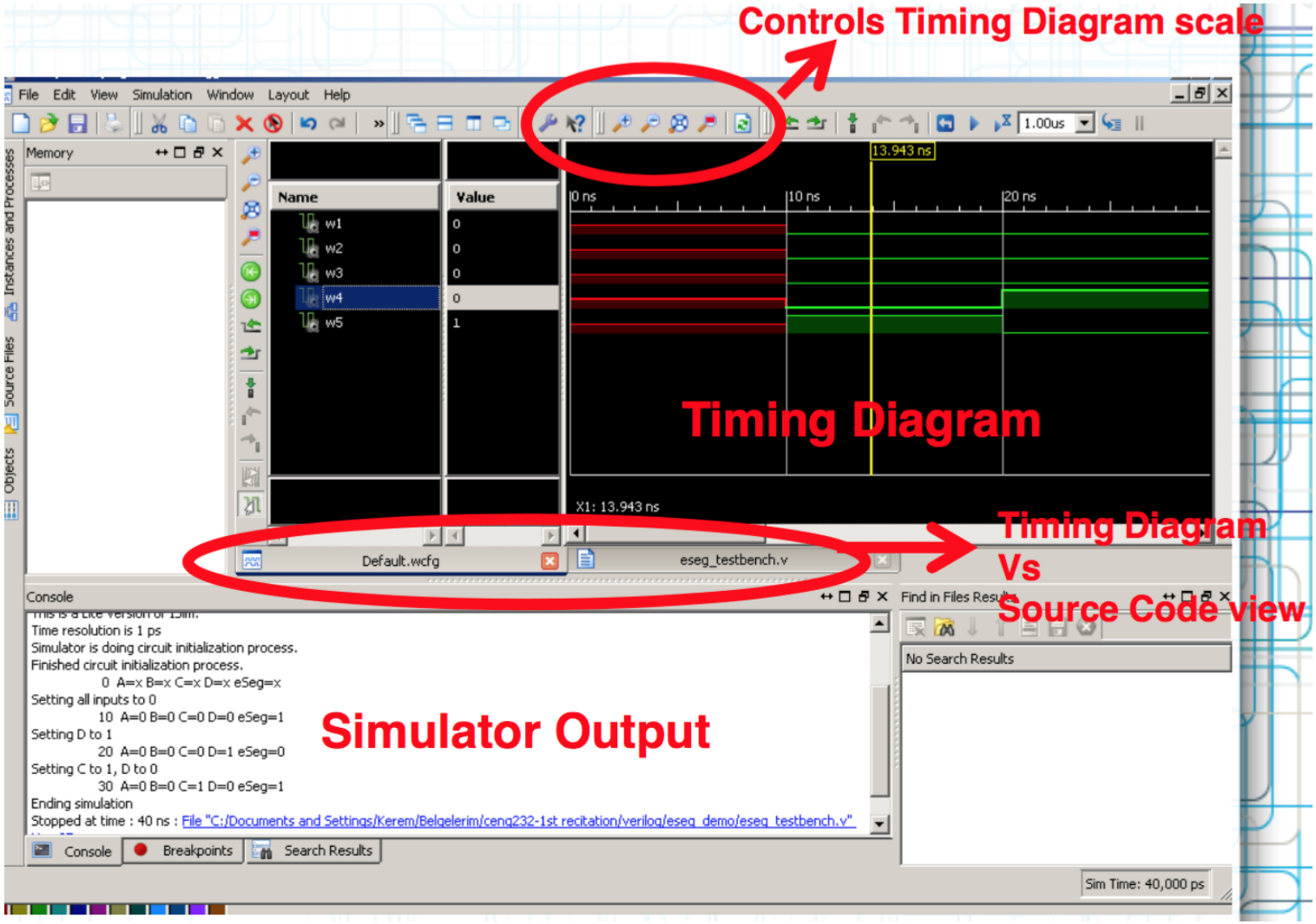
Middle East Technical University

Department of Computer Engineering

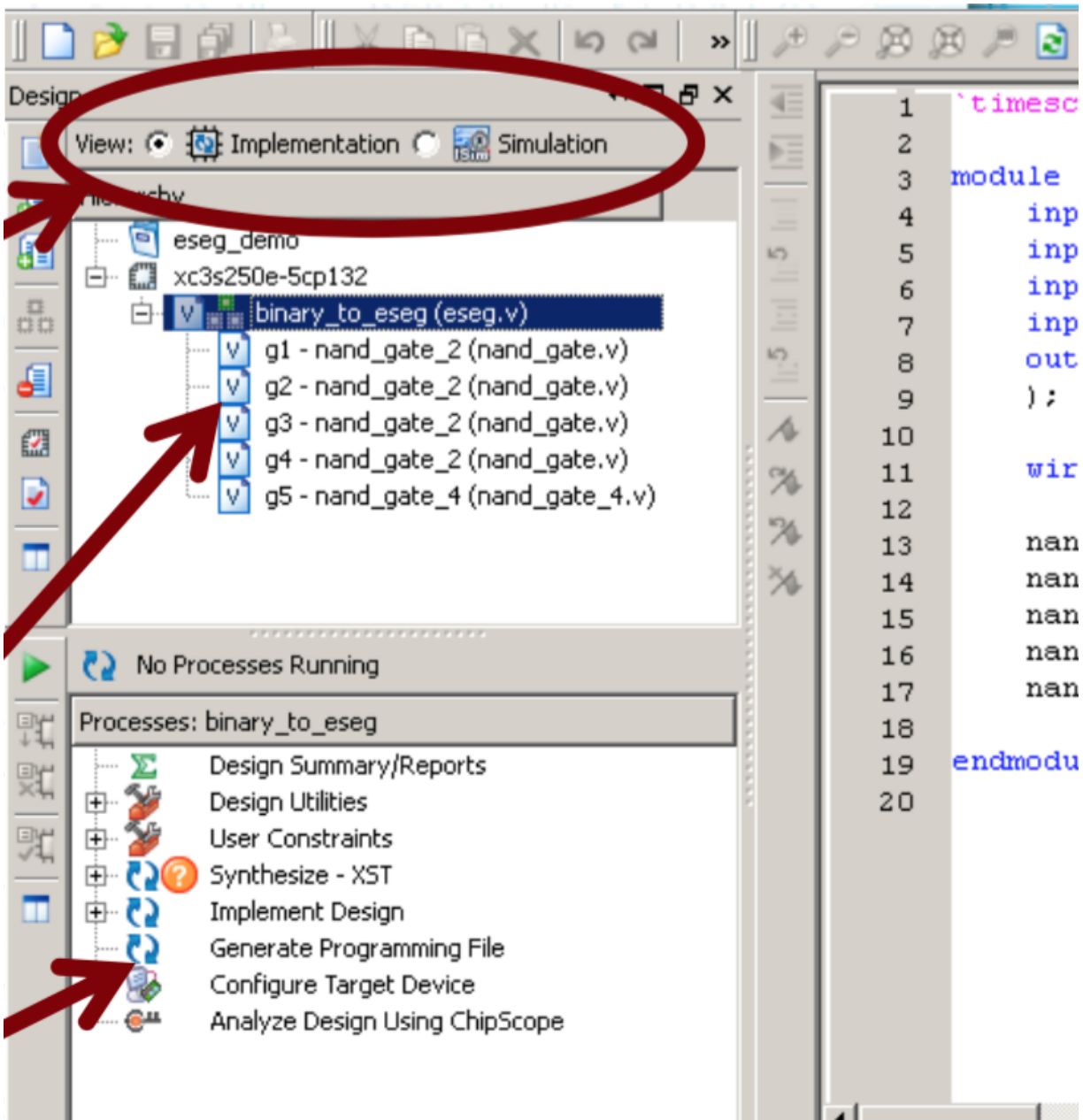
XILINX - SIMULATING WITH A TEST BENCH



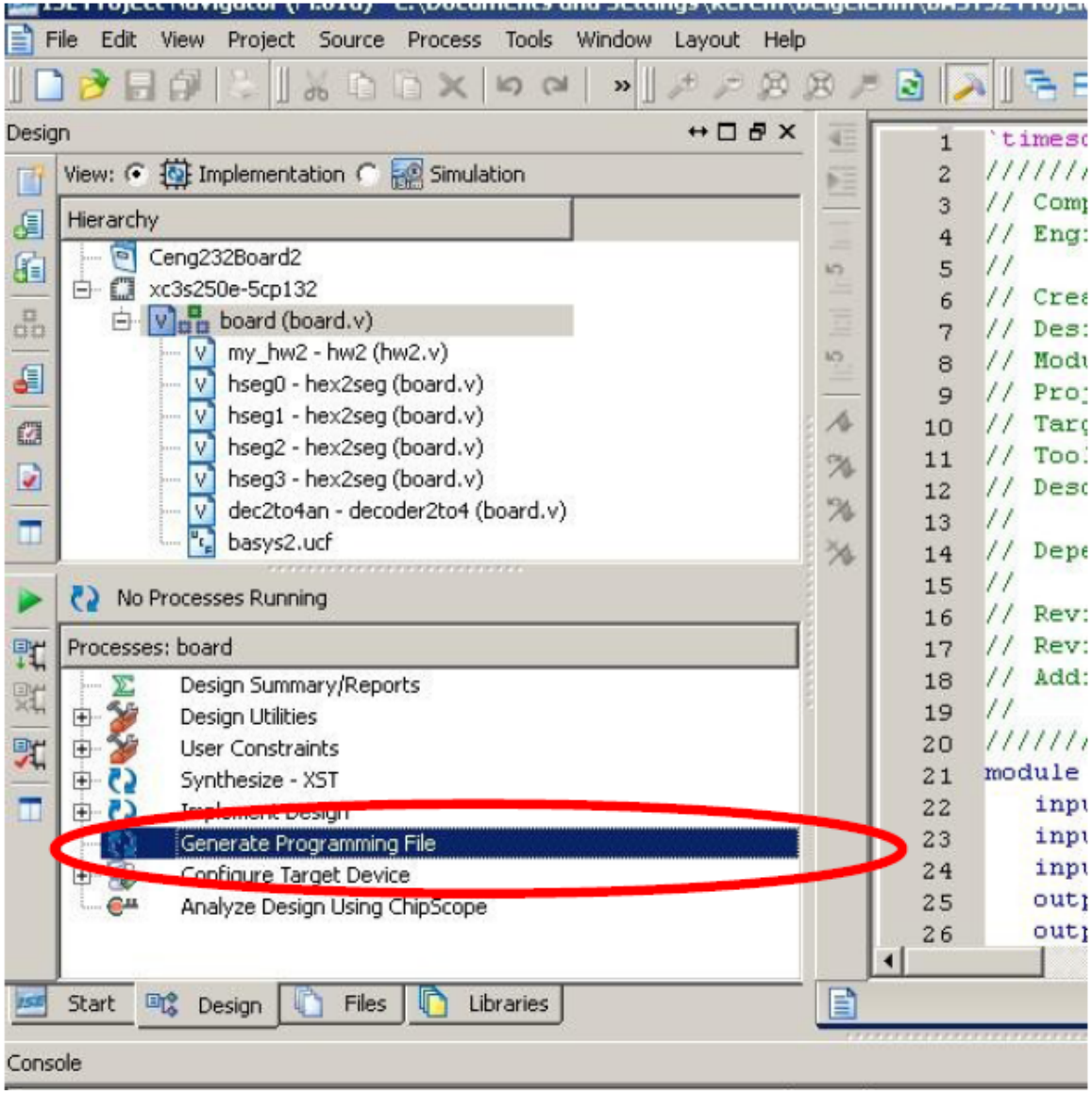
XILINX - ISIM SIMULATOR



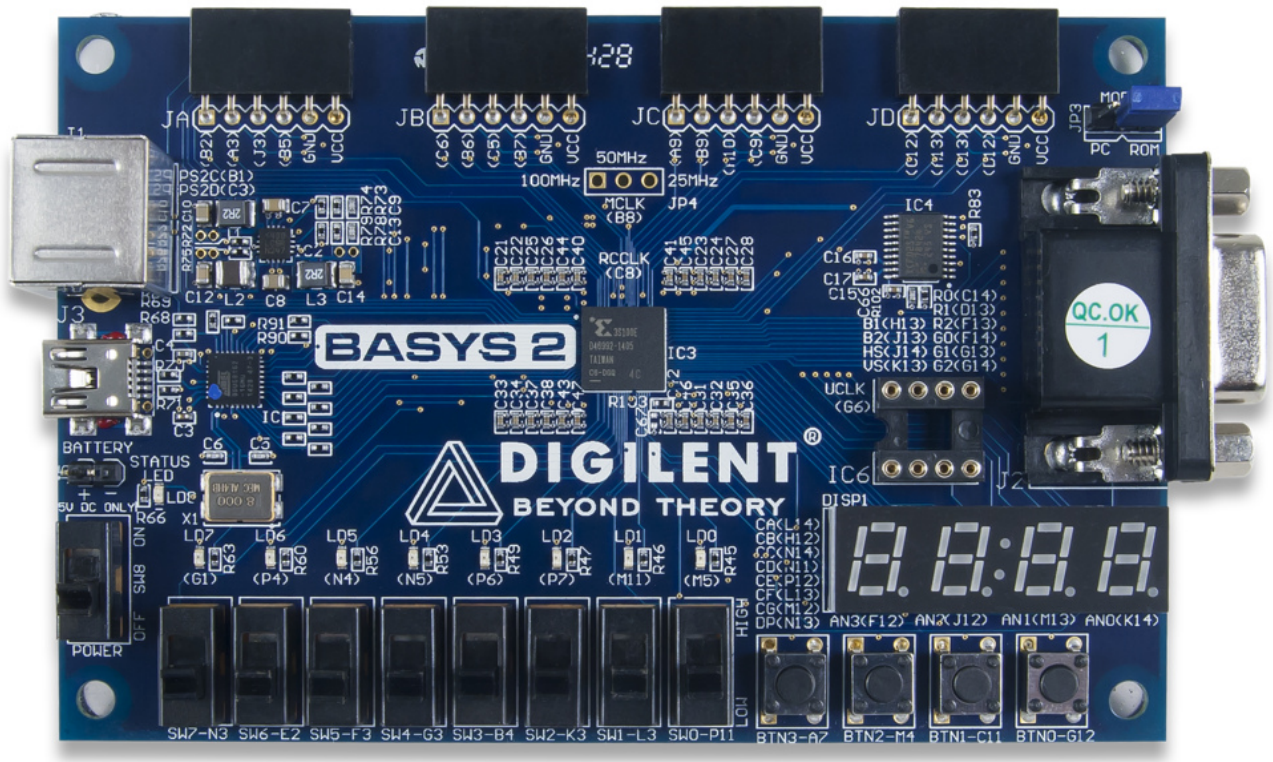
XILINX - CREATING A BIT FILE



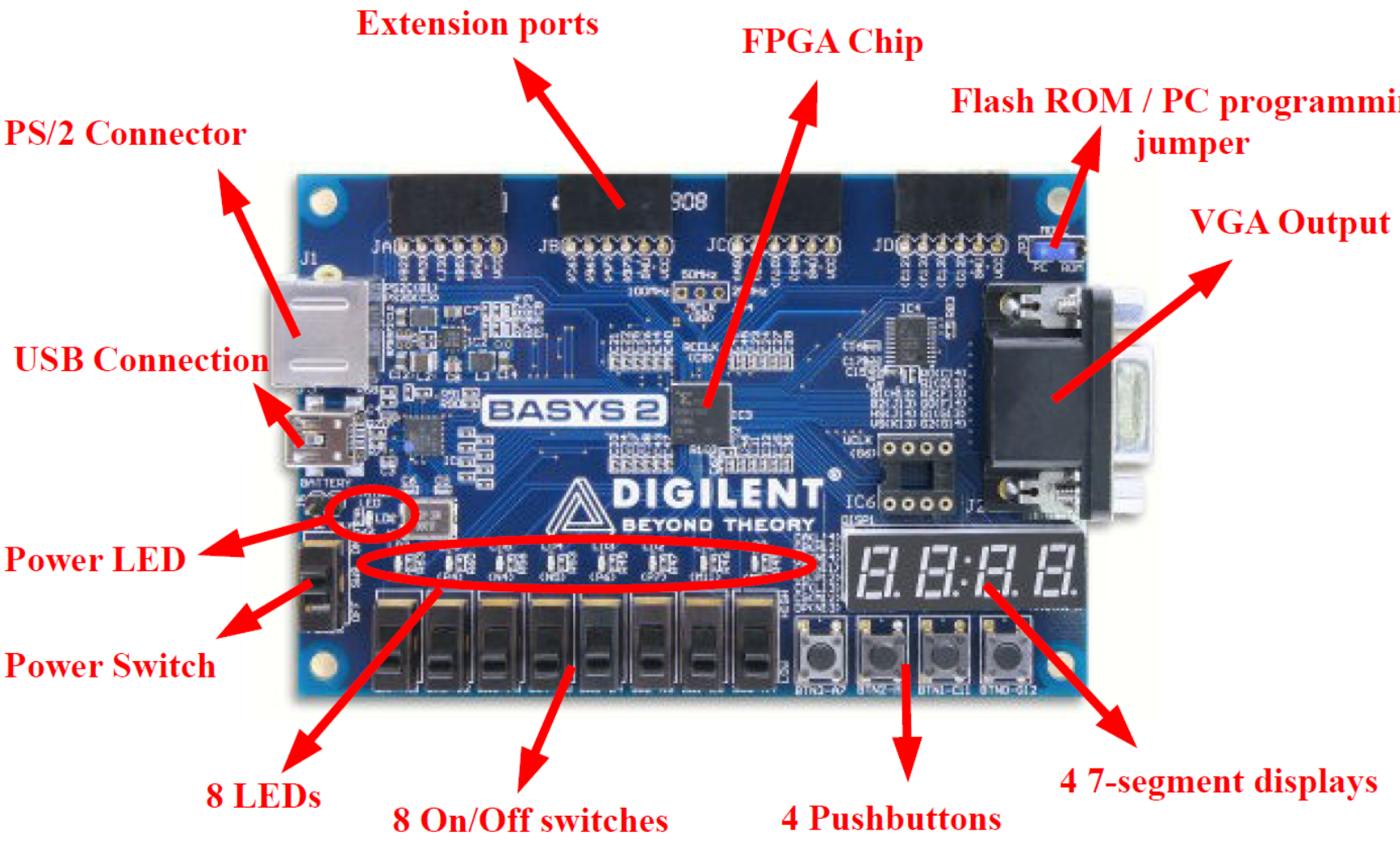
XILINX - CREATING A BIT FILE



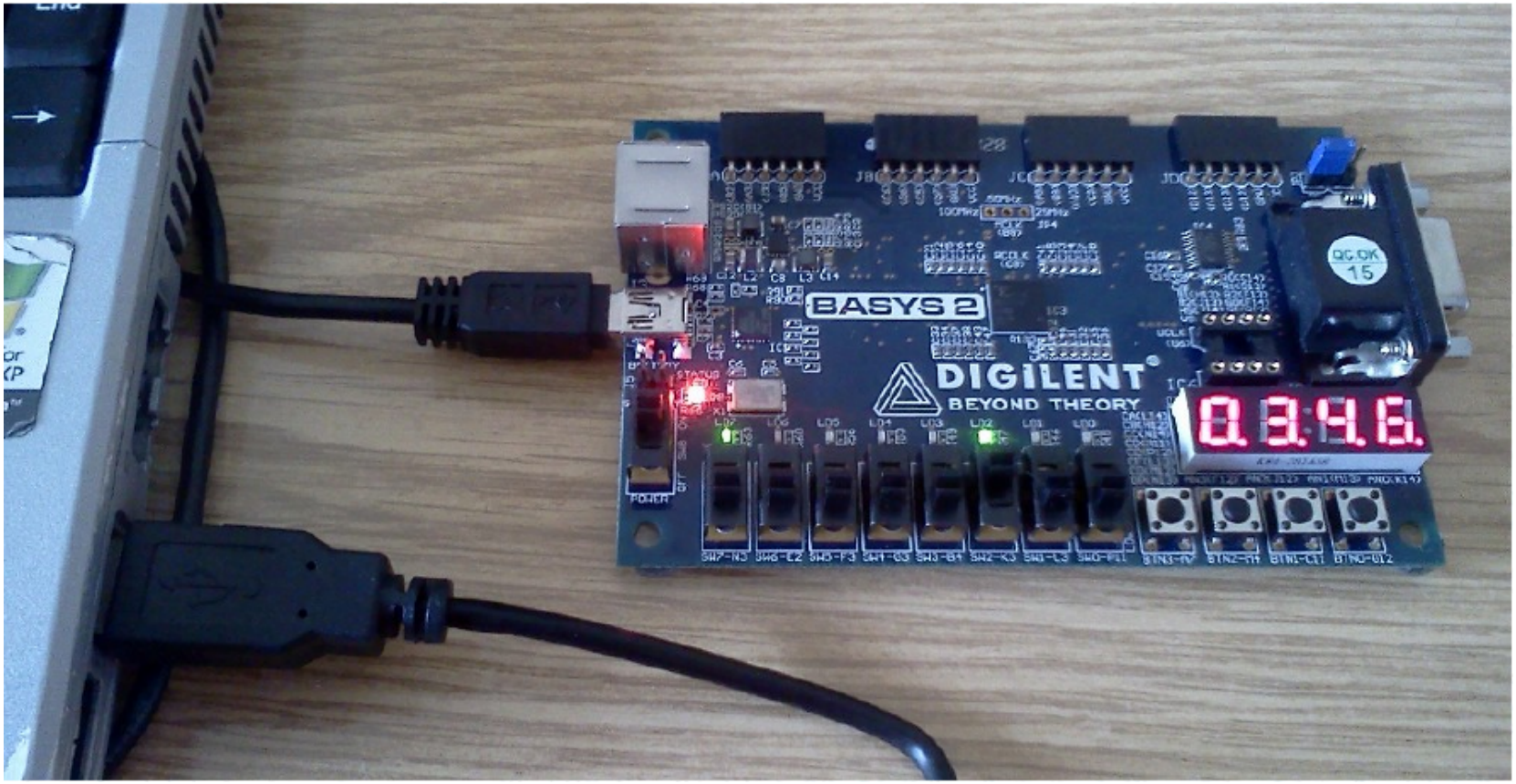
THE FPGA BOARD TO BE USED



PARTS OF THE FPGA BOARD



HOW TO CONNECT FPGA BOARD TO COMPUTER

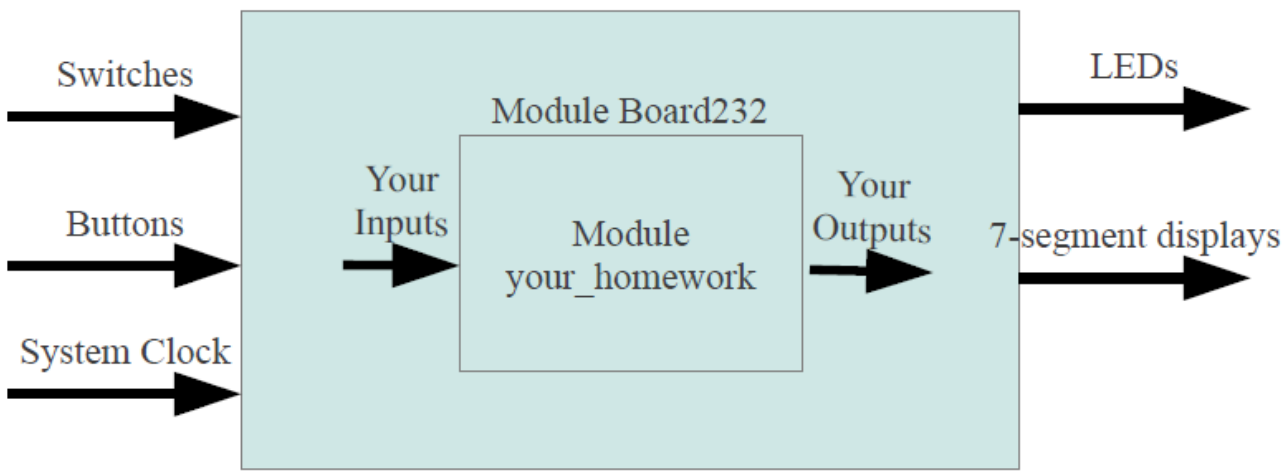


HOW TO CONNECT FPGA BOARD TO COMPUTER

- When connecting the board to the computer, board should be off.
- Open the board from the switch before you will upload your data. (After connecting)
- Before uploading data, make sure that the jumper is to the left.
- If you need the change the place of the jumper, make it when the board is off.

INPUTS AND OUTPUTS OF THE BOARD

- Switches, push buttons and the clock can be used as inputs.
- Leds and seven segment display can be used as a output.
- You should connect these parts carefully in your verilog module with your inputs and outputs.

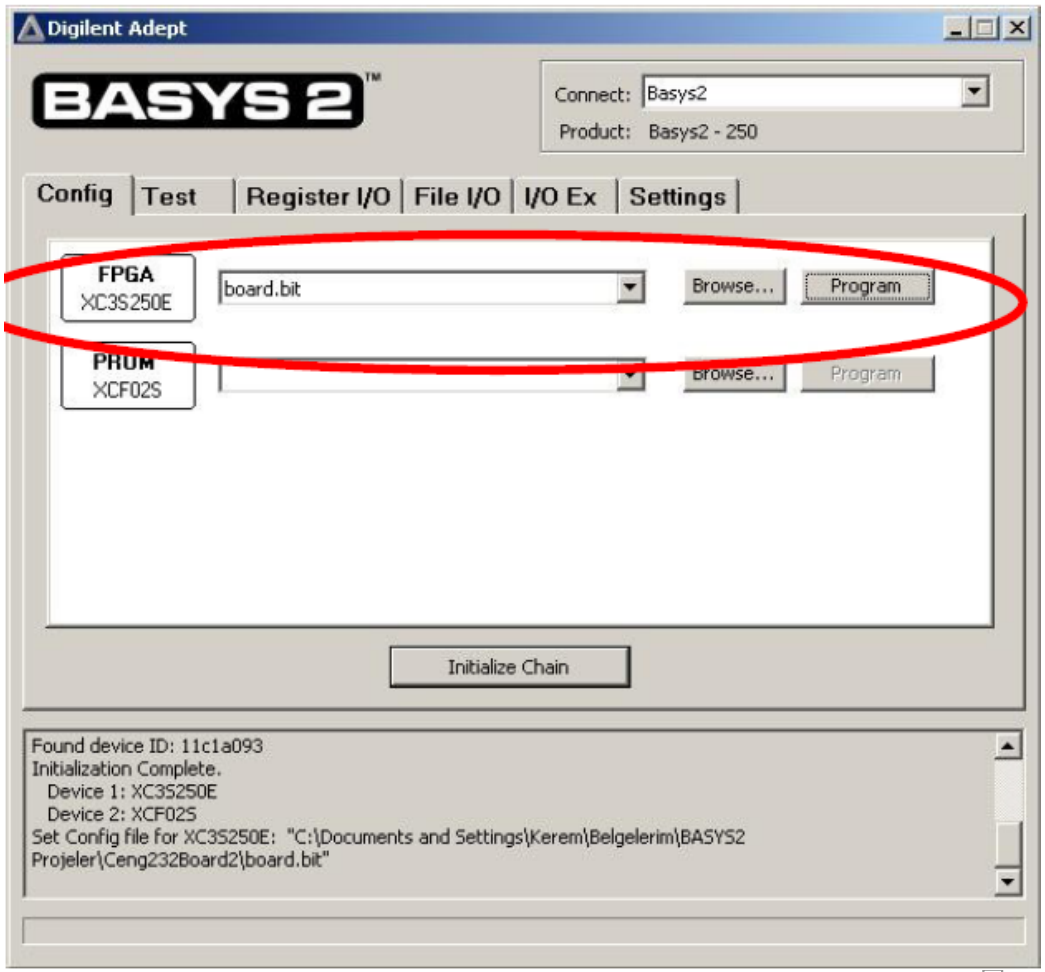


UPLOADING THE BIT FILE

- Is done via digilent adept.
- Digilent adept link
- Dowload both utilities and runtime executables.
- After installing, open the board (from the switches).
- Then upload the bitfile.

UPLOADING THE BIT FILE - WINDOWS

- Just upload the bitfile to the user interface of the adept.



UPLOADING THE BIT FILE - LINUX

- Run the following command from the terminal.
- djtgcfg prog -d Basys2 -i 0 -f Board232.bit

AFTER THE UPLOAD

- The board will behave as you coded it in the verilog.
- To run it second time, you have to upload it again, it is uploaded to board for only one usage.
- After you make the switch off, all the information will be vanished from the board and you have to upload the bitfile again.