Simulation Guide for ELG5195 Project — RTL Design of 32-bit RISC Control Processor

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1. Download Coding Software and Simulation Software

I use Quartus II 13.1 (32-bit) Web Edition as coding software, ModelSim-Altera Starter Edition 13.1.0.162 as simulation software, and Arria II as target device.

All three tools are from Altera and could be downloaded at this link (http://dl.altera.com/?edition=web).

Choose those three tools to download as shown as Figure 1.

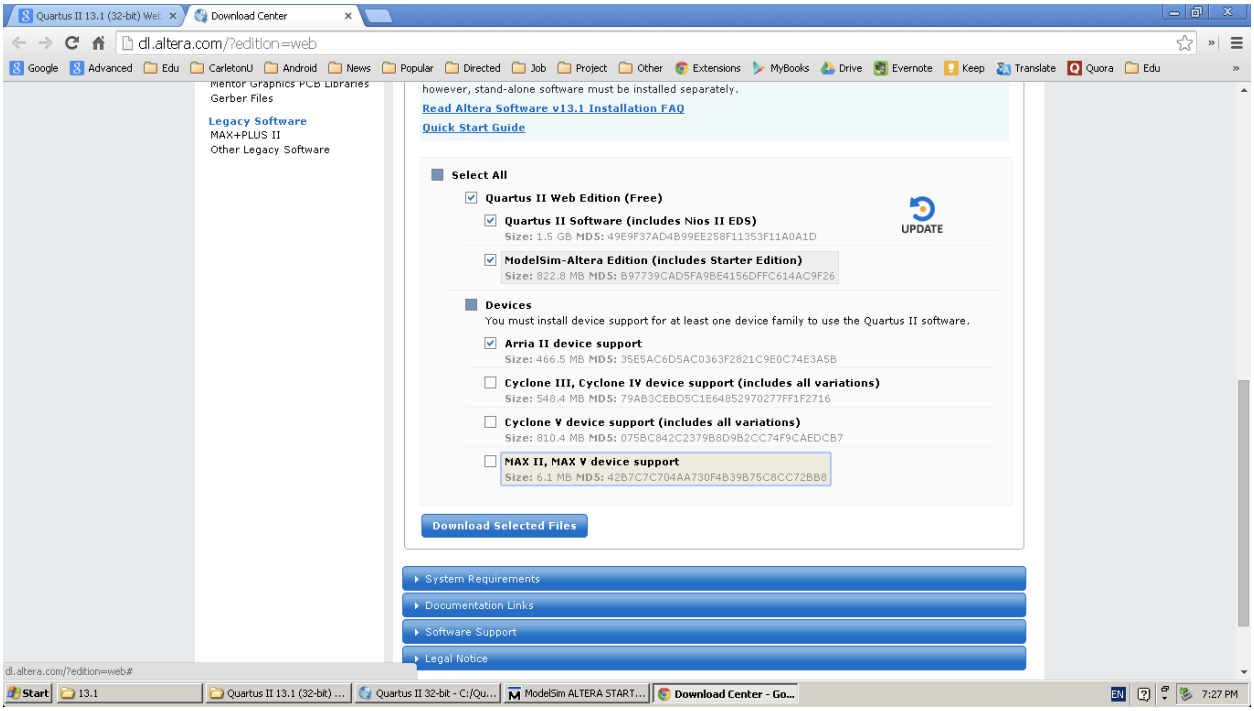

Figure 1.

2. Open Project file, cpu.qpf by Quartus II

Open the project file called (cpu.qpf) in zip file and then you could view the code.

3. Press Start Compilation

Press the button to Start Compilation as shown on Figure 2.

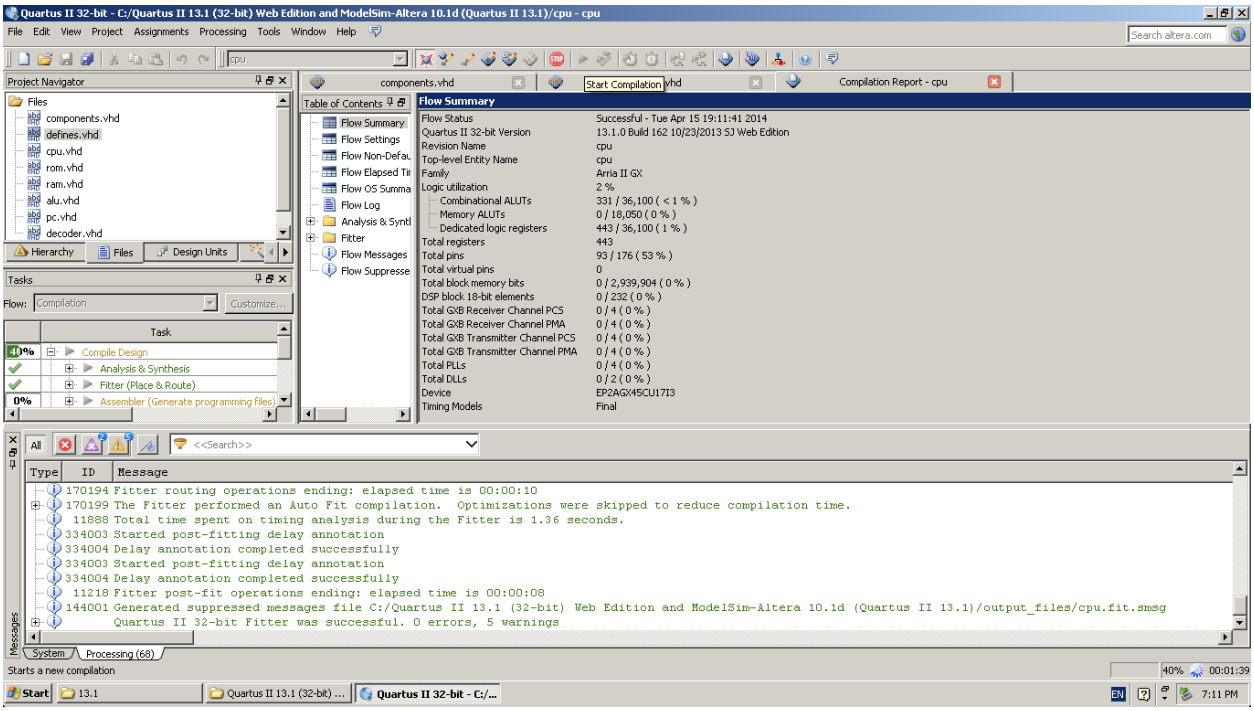

Figure 2

4. Press Start Analysis and Synthesis

Press the button to Start Analysis and Synthesis as shown on Figure 3.

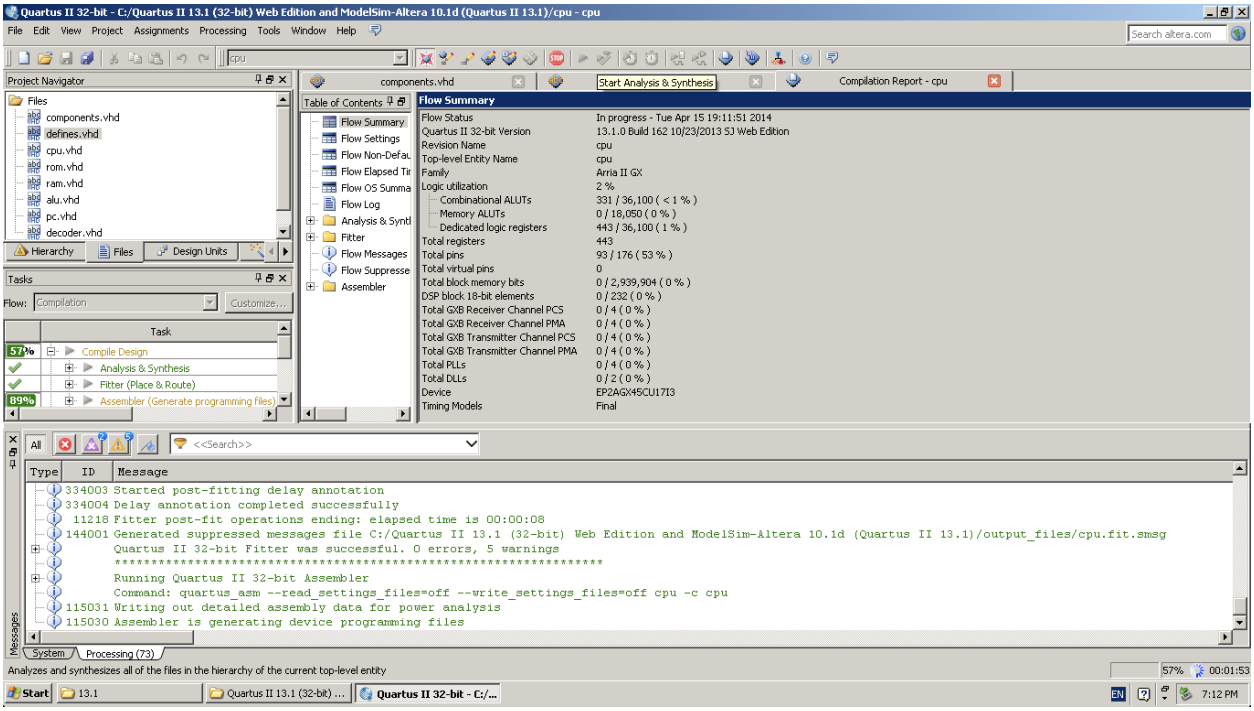

Figure 3

5. Press RTL Simulation to Open ModelSim-Altera

Press the button for RTL Simulation as shown on Figure 4.

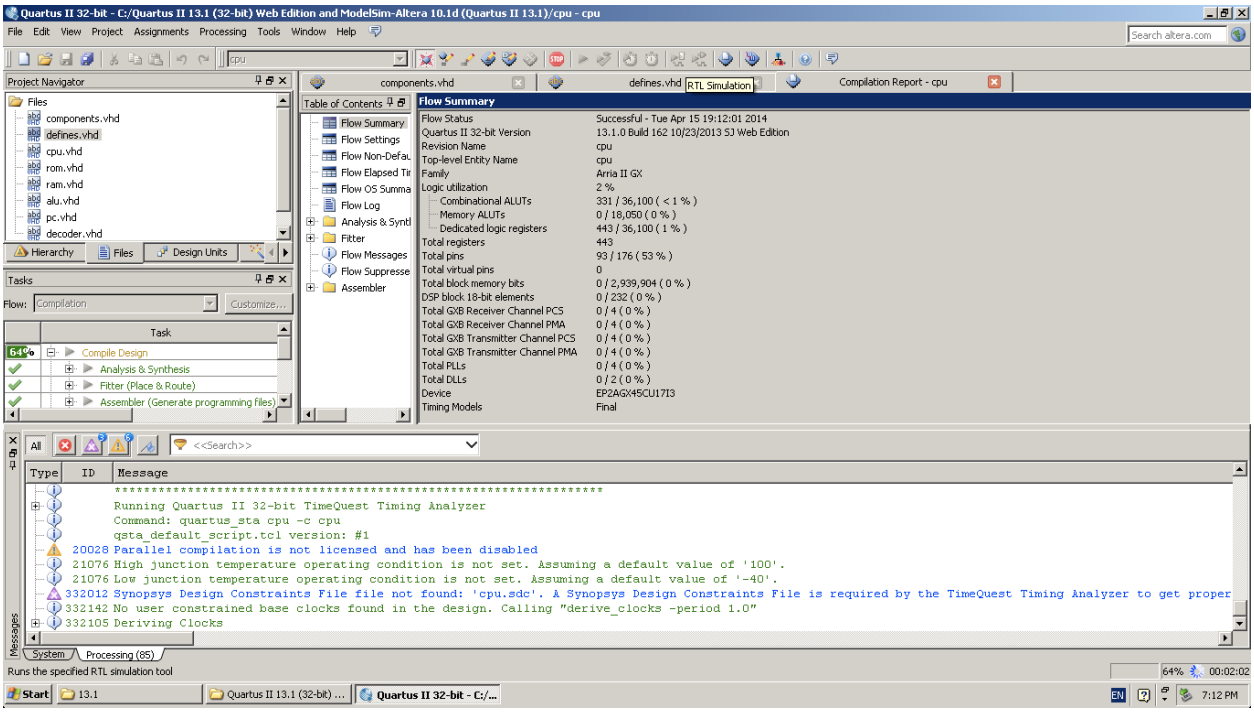

Figure 4

6. Start the Simulation

The ModelSim-Altera would be opened. You could start the simulation as shown as Figure 5.

For how to do the simulation, there is a great tutorial called Getting Started with Quartus II Simulation Using the ModelSim-Altera Software. You can get it from this link (http://www.altera.com/literature/ug/ug_gs_msa_qii.pdf). From Page 4, the guide talks about Creating Stimulus Waveforms.

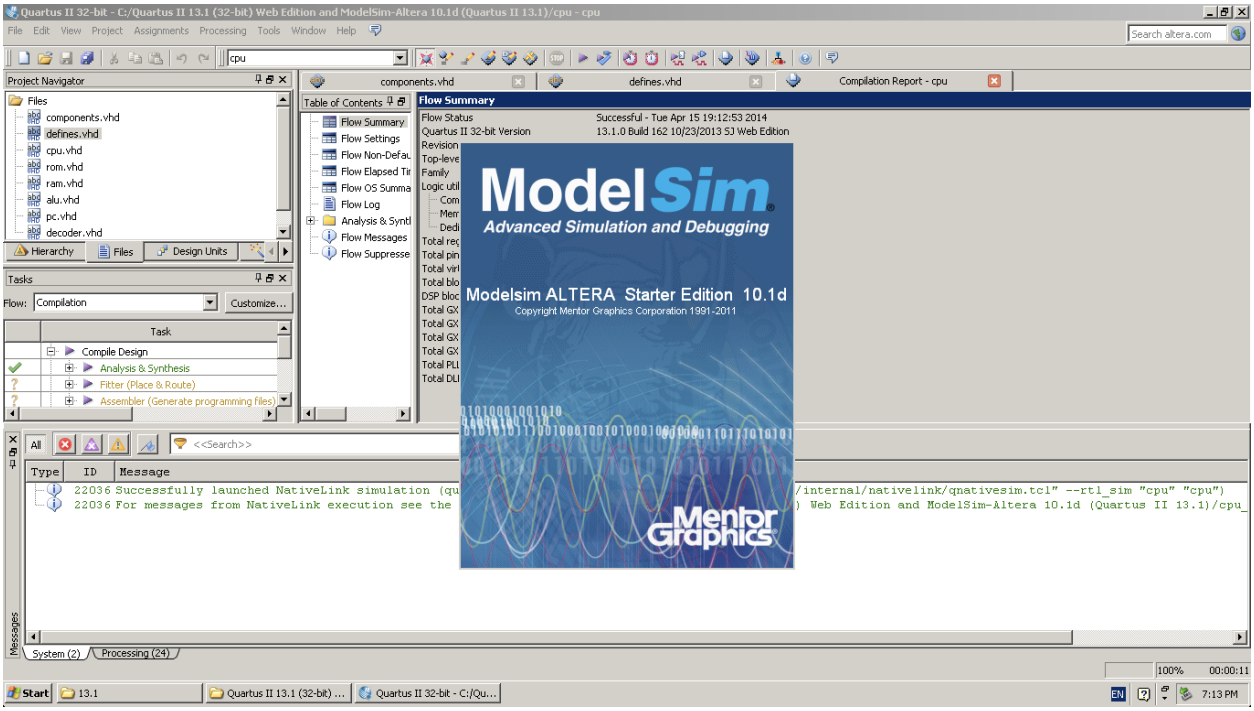

Figure 5