Introduction to Digital Computers - Fall 1997
Assignment No. 8
Course homepage:
http://www.eng.tau.ac.il/~guy/Digital_Computers/dc_home.html

Deadline: May 17th

Consider the following 13 instructions: lh, lbu, sh,subi,andi,sgri,beqz,jr,jalr, srai, sub, sgr, jal. For each instruction, outline how the instruction is executed by the DLX: (a) specify the path of the control states; and (b) for each control state in the path describe the flow of data in the datapath and the computation/action that takes place during that state.

For each environment in the datapath, deduce which signals are required to be sent from control, and which signals are sent to the control. Use the following naming convention: A signal controlling the clock of register *reg* is called *regce* (shorthand for "*reg* clock enable"). An enable signal of a driver is called *ABdoe* where *A* is the source of the input of the driver and *B* is the destination of the output of the driver (*doe* stands for "driver output enable").