For this exercise, you are to build the register file we have been discussing in class. It should consist of 32 registers, each 32 bits wide. It should have a dual ported read function - that is, there should be two 5-bit inputs, which specify two registers to be retrieved, and it should have two 32-bit outputs that produce the values in the registers. It should also have a single write port - this consists of a 5 bit register number and a 32 bit data value (both are inputs). The actual write operation should be coincident with the rising edge of the clock, which is also an input to the module.