Homework #5
EECS 388
Due: December 5, 2007

Problem #1.
List the internal operations that the Microblaze performs when it initially responds to an external interrupt. (You can use pseudo code to outline the operations)

Problem #2
List the internal registers of the interrupt controller and describe their operations and usage.

Problem #3
Suppose you have two interrupting devices, dev1 and dev2 hooked up into interrupt level 0 and 1 respectively of our interrupt controller. When a device has generated an interrupt request, you should call either function dev1(), or function dev2() to perform the specific operations for the devices. Write the assembly interrupt handler routine that checks in priority order for pending service requests. Your handler should service any and all devices with a pending request before the handler exits. You don't have to worry about "handshaking" either requesting device, which will be taken care of inside the function call, but you will need to clear each interrupt request from the interrupt controller after servicing the device.

Problem #4.
Write an assembly routine that sets the timer chip to output a clock signal at 150 Mhz with a duty cycle of 40%. Your routine should set up the counters and initiate execution of the output clock. Make sure you show the values that you will store in the Load Registers to generate this signal assuming the OPB_Clock is 100 Mhz.