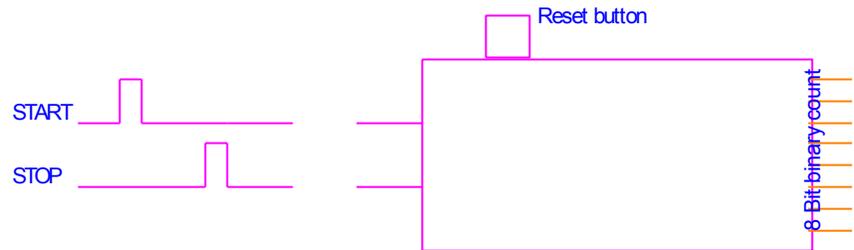


Homework #10

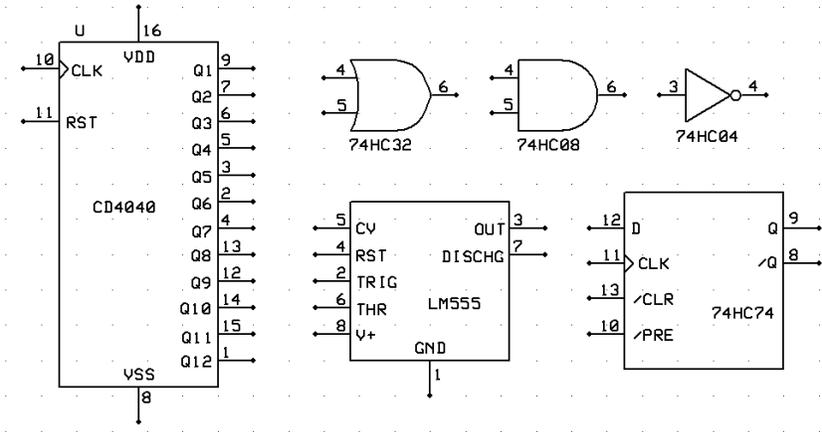
Interval Timer

Design an interval timer to count the number of milliseconds between two TTL pulses. You're told that the input pulses will be no more than 250ms apart so an 8 bit counter will work (0-255). You can use the eight least significant bits of the 12 bit counter. Have the 555 timer oscillate at 1KHz. Use the button to reset the counter when pressed. This is what you built in class except the start and stop pulses come from an external source and not switches (see block diagram below).



Use these parts:

- CD4040
- 74HC74
- 74HC08
- 74HC32
- 74HC04
- LM555



Draw a complete schematic of you circuit. You may use as many AND, OR, INVERTER gates, resistors, capacitors, and switches as needed. Tie unused inputs to 5V or ground.