**DIGITAL LOGIC DESIGN LABORATORY**

**CE3705**

**PROJECT**

**DIGITAL CLOCK**

**Section 61**

**Group 9**

**5248021 Rafaelle Faustine Jimenez Palmos**

**Date of Submission: 03.12.2012**

**Project** : Digital Clock

**Apparatus** : Integrated circuits, clock, power supply, 7-segment display, resistors

**Objective** : To be able to design a clock that tells military time (24 hour time).

**Procedure** : Basing on previous experiments, I set the 4-bit counters (74LS93P) to reset at 23:59 using AND gates (74LS08) and OR (74LS32) gates. The first resets at 1010 = 10102. The second resets at 610 = 01102. The third resets at again, 1010 = 10102. The fourth resets when the fourth counter is at 210 = 00102 and when the third counter is at 410 = 01002. I then used OR gates to reset the counter when the next counter also resets. Then I used the BCD to 7-segment decoder (74LS47) to translate the numerical values to be displayed on the 7-segments. Resistors are used because the voltage is too high and would destroy the 7-segment display. The clock is set to 60Hz and all four counters are connected by the same clock. Each counter is powered by 5V and is connected to the ground.