CS 4/55111 **Project #1** **VLSI Design**

Due to Prof. Walker by 5pm on Friday 15 February 2002
this project counts as 5% of your course grade

1. Do **Lab Exercise 4 on page 25** of *Rapid Prototyping of Digital Systems, Second Edition*. Use the FLEX 10K chip, the FLEX pushbuttons, and the decimal point between the two digits of the FLEX 7-segment display.

   Turn in:

   a) a printout of the schematic

   b) a printout of the test vectors and simulation output that shows that that the circuit works as expected

   c) a printout of the timing analysis showing the input to output delay matrix

   d) a signature on the statement below (print out this page) by Prof. Walker, by the TA (Meiduo Wu), or by ***two*** other students in the class:

   I certify that _____ has successfully downloaded this design to a UP1 board and the design works correctly.

   _____ Name _____ Date

   _____ Name _____ Date

2. Do **Lab Exercise 13 on page 27** of *Rapid Prototyping of Digital Systems, Second Edition*, retargeting the design above onto the MAX chip.

   Turn in:

   a) a printout of the schematic

   b) a printout of the test vectors and simulation output that shows that that the circuit works as expected

   c) a printout of the timing analysis showing the input to output delay matrix

   d) a signature on the statement below (print out this page) by Prof. Walker, by the TA (Meiduo Wu), or by ***two*** other students in the class:

   I certify that _____ has successfully downloaded this design to a UP1 board and the design works correctly.

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