

**UNC Charlotte, Department of Electrical and Computer Engineering  
ECGR 2181, Fall 2008, Homework #6  
Due: 11/5/2008, at the beginning of class (100 points)**

**Show all of your work!!!!**

1. How long did this assignment take you? (Answer truthfully!) (5 points)
2. Write the VHDL statements that represent the prime number detector with a behavioral model for all prime numbers between 0 and 63. Assume a bus with input “i”, six bits wide and a circuit enable bit “en\_L” (enable, active low); also assume output “F”, one bit wide.

You will need to write ALL of the statements that would allow this file to be synthesized in our Xilinx tools. (95 points)