UNC Charlotte - ECGR2181 - Homework #7 - Due 3/16/06

As mentioned in the slides there are three types of VHDL programming styles:
1. Structural (decode2to4_struct.vhd)
    – Define explicit components and the connections between them.
    – Textual equivalent of drawing a schematic
2. Dataflow (decode2to4_data.vhd)
    – Assign expressions to signals
    – Includes "when" and "select" (case) statements
3. Behavioral (decode2to4_behav.vhd)
    – Write an algorithm that describes the circuit's output
    – May not be synthesizable or may lead to a very large circuit
    – Primarily used for simulation

Write three files of VHDL code which represent these styles. All three should be of the 2 to 4 decoder
in notes page 5-13. The files should be complete and ready to use in the Xillinx ISE
application. The filenames will be as listed above. The first two lines will be comments that
should look like the following (with your names in it and the correct file name).

```
// ECGR2181 Homework 6 – filename:  decode2to4_struct.vhd
// Student's name – 3/16/06
```