Name:

For this quiz, copy the examples I have been using in class (Makefile, example.h, and example.cc). Place your solution in example.cc. Make sure it compiles with make and executes the example below correctly.

1. (75 pts) In the directory p01, write a C program that converts the command line arguments to a binary coded decimal. Assume we always specify 4 bits on the command line, and assume we are dealing with an unsigned integer. The following examples should work:

nedc\_999\_[1]: example.exe 1 1 1 1

BCD value = 15

nedc\_999\_[1]: example.exe 0 0 0 0

BCD value = 0

nedc\_999\_[1]: example.exe 0 1 1 1

BCD value = 7

nedc\_999\_[1]: example.exe 0 1 0 1

BCD value = 5

Your output must be exactly as shown above. You must assign the value of the command line arguments to a variable named “value” declared as an unsigned int (“unsigned int value =”).

1. (25 pts) In the directory p02, create a text file, p02.txt, that contains the answers to this problem. Use the od command to list the contents of this file showing the character value(s) (hint: look at the “-c” option):

/data/courses/ece\_1111/current/quizzes/qu\_03/picone\_joseph/example.txt

Then list the decimal value(s) of each character in this file. Explain what bits are set in the 8-bit character representing the value of each character (e.g., if the decimal value is 1, only the least significant bit is set to 1, while all other bits are set to 0). Use your solution above to show that your answer makes sense. Capture all of these commands and results in your text file.

**Summary:** The od command is a very powerful tool to display the contents of a file in Linux.