

EE 107 Lab 2 (Week 3)

Description: Complete the following C-programming exercises and demonstrate the results to the instructor during lab. A formal report is not necessary for this lab, however each group should submit a paper copy of the source code and execution results for each exercise along with a title page containing the experiment number, experiment title, date of lab, due date of report and printed names of the group members. Ensure all programs include header and statement comments as described in class.

(1) Write a program to read in a positive floating point number using the following two lines as part of your code

```
float my_number;  
scanf("%f",&my_number);
```

Then output the entered number with the following format (where the entered number is written with four digits of precision in every 'x' position):

```
xB      |x      x|  
xC      |      x|  
        x|ABC    Ax|
```

1234567891234567891234

Numbers in the range -9.0 to 9.0 can be entered.

(2) Write a program that reads in a keyboard character (one that prints to the screen) and prints the hexadecimal ASCII equivalent in hex format to the screen.

(3) There are a number of pre-defined constants as part of every C-compiler software package. Some of these constants indicate numerical limits on data types. They include:

```
CHAR_MIN  
CHAR_MAX  
INT_MIN  
INT_MAX  
LONG_MIN  
LONG_MAX
```

Write a program to print these values to the screen. Use the following header files in your program: `stdio.h` and `limits.h`. Include comments in your code indicating what the constants represent. (Note: Use the correct conversion specifier in your `printf()` function calls.)