CS270 Recitation 12
"Recursion Program Help Session"

Goal: Help you get started on Programming Assignment 8.

The Assignment

This recitation will help you get started with PA8. If you have already done some of the assignment, proceed to the first step that you haven't completed. You may not finish all the steps during the recitation, but you can use this document to help you when you're working on your own.

Step One

If you have not started on PA8, go to the following link and read it:

http://www.cs.colostate.edu/~cs270/.Spring14/assignments/PA8/PA8.pdf

For this recitation you should try and write the C program requested. Start by making a pa8.c source file with a main entry point that reads an input value from the user and prints it using a C printf call with the %x specifier. Add code to check the input value, which must be in the range 0x0000 to 0x7fff.

Step Two

Implement the printHexDigit() function and test it from the main program for all values in the range from 0x0 to 0xf, making sure it handles both numeric digits and letters. The key is to add the correct offset to translate from values to ASCII characters.

Step Three

Implement the printHexValue() function and test it from the main program for the test values listed in the assignment. You can use the print function for digits to simplify the code for this function, which should call itself recursively.

Step Four (Optional)

If you finish the C program, pick up the pa8.asm file from the assignment link. Assemble and step the code in the simulator to help you understand what it does, paying special attention to the stack protocol.

Show your C program to the TA to get checked off and submit pa8.c to the drop box.