

Class Activity - Introduction to UNIX & C

Part 1: UNIX

1. Start Linux on your own PC or the Linux VM on one of the classroom PC's
2. Spend some time exploring UNIX and trying some of the commands we covered
3. What UNIX commands would you use to do the following:
 - a. Display all the files (including hidden files) in your home directory.
 - b. Get help on the find command
 - c. Display the \$PATH environment variable
 - d. Display information about all files starting with the letter "k" in the directory where commands are usually stored
 - e. Combine class1.lst and class2.lst into one file called alllist.txt
 - f. Display the first 10 lines of helloworld.c

Part 2: C

1. If you are new to C, spend some time looking over chapter 1 in the C book or browsing the web for sample programs and differences between C and a language you already know
2. Write a "Hello, World!" program and verify that it works correctly.
3. Make the following changes to temps.c:
 - a. Convert Celsius to Fahrenheit
 - b. Use a for loop
 - c. Make step a symbolic constant
4. Make the following changes to countlines.c:
 - a. Count the whitespace (newlines, tabs, & spaces)
 - b. Count the occurrences of each digit 0-9 using an array
 - c. Display a report with the number of each kind of whitespace and each digit
5. Write a program that prompts the user for a number X then print the numbers from 1 to 50 with the following conditions:
 - a. In place of multiples of 4 print "ffff"
 - b. In place of multiples of 7 print "seven"
 - c. If a number is divisible by both 4 and 8 print "ffffseven"
 - d. Do not print multiples of 5
6. Spend some time before the next class going over Chapter 1 and trying some of the exercises in the book.

Submission information:

1. Create a single, neatly formatted document (.txt, .doc, or .pdf) with the following:
 - a. Your responses to question 3 in part one. Include sample output.
 - b. A copy of your modified temps.c and countlines.c with sample output. If you submit a .doc or .pdf, please indicate the changes you made with **bold** type.
 - c. A copy of your codeflow.c program with sample output
2. You may submit a hard copy or via Canvas.