CISC105 Spring 2006 Lab07

- Write a program for each of the following problems. Be sure to save every separate program. All programs must be properly commented and indented (see Assignment Standards on the class website).

- Work on the webpage during lab. It should go very quickly and you will want your TA there in case you have a question. You may work with other students if you have trouble getting your webpage to appear, but as usual, all your other programming must be done by yourself.

- Name each program lab07.n.c, where n is the number in the list below. For example, the name of the file for the first will be lab07.1.c. Put the files in your lab07 directory.

Programs

1. See makeWebpage.html for the first part of this lab.

2. Look up the chmod command from part 1 in your Anderson. Can't find it? See the "more details" section of the webpage instructions for another way to look it up in the index. Explain what `a+rx` means, in a text file or on your script.

3. Declare an array of type char. A character is represented by putting a symbol inside single quotes, so `'a'` is of type char. Use characters in quotes the same way you would use an integer value, i.e. you can say

   ```
   char c = 's';
   ```

   Initialize the array to contain 8 characters as follows: `'a'`, `'n'`, `'t'`, `'\n'`, `'\0'`, `'r'`, `'a'`, `'t'`. After initializing the array to contain these characters, use a loop to print the whole array out, one element at a time, using the format specifier `%c`.

4. Once you have done 7.3 and it is working correctly, write a new program and print the entire array at once without a loop, using **only** the name of the array and the format specifier `%s`. Explain what is printed.

5. Copy the previous program. Try using assignment to change the second element of the array , `'n'`, to match the fifth element (how?). Describe (writing on your script by hand) what happens when you print now.

   Now change the fifth element, `'\0'` to an `'x'` and try to print using `%s`. What happens? Describe (writing on your script by hand).

6. Create an array of 1000 integers. Initialize it with random integers from 0-99 inclusive, using the rand() function as used in class. The use fopen in "w" mode, fprintf and a loop to write the whole array to a new file `~/public_html/cisc105/random.txt`

   After you run the program and verify that the file has been created, use chmod to make it readable so your TA (and the world) can see it. **Cat** this program, but **do not script this program running**.

You should have two html web pages and a text file online, which do not get submitted to webCT or scripted. You also have a total of 4 programs named lab07.3.c to lab07.6.c. Make a single script file (see lab00 for the instructions) where you cat, compile, and run each one in its final form. Follow the instructions above for adding written information to your script.

Submit all 4 program files *and* your script on WebCT, and give the paper version of the complete script file **only** on paper to your TA at the **beginning** of your next lab (Wednesday labs submit Friday at the **beginning** of class). Note: Cat, compile, and run each program in order! Do *not* cat all programs, then compile, etc.