

UNCA CSCI 373 System Administration

Exam 1

4 April, 2017

You can use on-line sources, but you can't communicate with any one else.

Start by executing the following three commands from your home directory:

```
mkdir sysadmindir  
chmod 711 sysadmindir  
cd sysadmindir
```

Now create a directory with the same name as your UNCA id and connect to that directory.

```
mkdir 93xxxxxxx  
cd 93xxxxxxx
```

You will do all your work in this directory. We'll call it the "quiz directory" in this exam description. Just to be clear the "quiz directory" is the one called 93xxxxxxx, not the one called sysadmindir.

Open the text editor of your choice in another window. Create either a text file called answers.txt or an Open Document Format file called answers.odt in the quiz directory to store answers to the questions. Or, better yet, download this file, in Open Document Format, from moodle, store it in your quiz directory, and insert your answers. **If any case, be sure to save your answer file!** You don't have to store the "answers" to the tasks, though you can write comments on them.

Question 1: (3 points)

Only those users with root access or those who know your UNCA user id should be able to list your quiz directory. Why is this the case?

Task 2: (3 points)

Copy the three files stored in /home/brock/exam1-start into your quiz directory. You can also download these files from moodle.

Task 3: (4 points)

Connect to the quiz directory and expand the file Plan9FromOuterSpace.X.tar.gz that you just copied into the quiz directory.

Task 4: (10 points)

Archive the directory Plan9FromOuterSpace created in Task 2 in three different formats: .zip, .tar, and .tar.bz2 (a tar file that has been compressed with bzip2).

Task 5: (4 points)

Create a file called share.txt in your quiz directory and protect it so that all members of the users group can read and write it.

Question 6: (3 points)

What is your numeric user id? I'm looking for the numeric user id, not the login name.
What command did you use to answer this question?

Question 7: (4 points)

What is the numeric user id of the person with the login name `benites`? Find that person's home directory and use an obscure option of the `ls` command to determine the numeric user id of the person who owns that directory. You will probably need to use the `man` command to determine the obscure option.

Again, list the commands you used to answer this question.

Question 8: (2 points)

What is the name of the workstation you are using right now? (Don't trust the name on the monitor, use the `hostname` command.)

Task 9: (20 points)

Notice that there are files called `greptest` and `testlines.txt` in your quiz directory. The `greptest` file that you copied is a shell script that can make four different searches of the file `testlines.txt` using `grep`. Replace the four instances of the "words" `GREPEXPiHERE` with `grep patterns` so that lines of `testlines.txt` satisfying the following four properties are printed.

- Lines containing the string "deed" two or more times.
- Lines ending in "deed".
- Lines contains contains **each** of the letters 'i', 'o', and 'u' at least once.
- Lines contains contains the letter 'e' **exactly** two times.

This is four different independent searches run one at a time. It is **not** one search looking for four different cases..

Task 10: (8 points)

The file `testlines.txt` is a poor set of test cases for Task 8. Add at least two test cases for each of the four cases mentioned in Task 8.

Task 11: (20 points)

There is also a file called `findtest` in your quiz directory. This file is set up to do three searches of the directory `/home/brock/MPLABXProjects`. Replace the three instances of the "words" `FINDEXPHERE` with a `find` expression so that the **names** of files satisfying the following three properties are printed.

- The file is an assembly language file, that is, the name of the file ends in '.s'.
- The file is an assembly language file that was last modified more than 1000 days ago.
- The name of the file ends in '.c' and the file contains the string "Stoplight".

Again, this is three separate searches. Remember to print **only** the name of the file.

Task 12: (3 points)

Store a listing of the `/var/log` directory in your quiz directory under the name `workstationlog.txt`. (Use file redirection.)

Task 13: (6 points)

Copy a listing of the `/var/log` directory of your Raspberry Pi into your quiz directory under then name `pilog.txt`. (This will require use of `ssh` and `scp`.)

Hard Task 14, one command – only two points: (2 points)

Copy 1000 bytes, starting with the 2000'th byte, from the file `/usr/bin/gcc` to a file named `middlec.bytes` in your quiz directory. Use the `dd` command for this task. It will be similar to the use of `dd` toward the end of the [March 7 lab on More Exploring FAT16](#).

Trivial Task 15: (3 points)

Connect back to your quiz directory and type the following command to save your recent commands:

```
history > tasks.txt
```

Task 16: (5 points)

ZIP up a copy of your `sysadmindir` directory and upload it to [moodle](#).