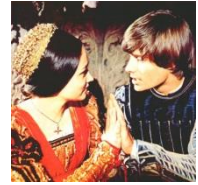


CIS 90 - Fall 2013 - PRACTICE TEST 3 - 30 points

Timed Test (2 hours 50 minutes)



Honor Code:

This is a practice test and you may work with others and use the forum. However on the real test you must work alone. This test is not turned in or graded.

Procedure

For this test you will use the **Sun-Hwa** Linux system.

Read and carry out in order each of the instructions below. You will be creating a directory and adding files and directories to it. If you can't complete a step you can ask the instructor for help and forfeit the points for that step.

Note to instructor:

remove /etc/nologin
setup-romeo-juliet for P3 on sun-hwa

Navigate and manage the UNIX/Linux file system

1. [2 points] In your home directory you will see a directory named *RJ-Tree*. Create a new directory named *ptest03* and move *RJ-Tree* into it. Set the permissions on *ptest03* to 700 and *RJ-Tree* to 550. Explore *RJ-Tree* so you have an idea of what's in it.
2. [2 points] Use your original Opus credentials with **scp** to copy the remote file *ptest03.tar* from the **Razia** Linux system. This tarball file is located in the */var/tests/P3* directory on **Razia**. Place this file, keeping the same name, into your *ptest03* directory on **Sun-Hwa**.
3. [2 points] Extract all the files in *ptest03.tar* into your *ptest03* directory. Get rid of all the files whose names start with "junk". Change the permissions of the extracted *RJ-All-P3* and *index* files to 444. Explore both so you have an idea of what they contain.
4. [2 points] A file containing the word "signal" has been hidden somewhere in your *RJ-Tree* directory. Locate this file and make a copy of it, named *segnale*, in your *ptest03* directory. Change the permissions on this file to 400.
5. [4 points] On **Sun-Hwa** examine your *segnale* file and identify your unique signal number. Start the delphi process by using running the **delphi** command. You must "ask" the delphi process for a clue on how to locate your Shakespeare quote file. There is only one way to do this and that is by sending the delphi process your unique signal number. Do so now. If you sent your signal correctly the Delphi process will stop and output a clue for you. Use the clue to locate your Shakespeare quote file. Once you locate the file, make a copy of it in your *ptest03* directory naming it *quote* and set the permissions on it to 640.
6. [2 points] What is the absolute pathname of the */etc/passwd* file? Edit a new file named *accounts* in your *ptest03* directory and add your answer as the first line of the file.

7. [2 points] Log into **Doc** from **Sun-Hwa** using the mercutio account and the "funny Cabrillo" password. From there follow the hidden clues till you find out the name of Benji's girlfriend. Create a file named *benji* in your *ptest03* directory that contains her name. When finished **exit** back, system by system, till you are back on **Sun-Hwa**.

Customize the shell environment

8. [4 points] Customize your permanent shell environment. Modify *.bash_profile* so that your *ptest03* directory is on your path, *umask* is initialized to 027 and your prompt is purple (hint: use Google for the prompt). Add an alias named **booster** to your *.bashrc* that outputs a banner saying "you are a Linux guru!" Log out and back in again to check your modifications. When satisfied, append the contents of your *.bash_profile* and *.bashrc* files to a file named *custom* in your *ptest03* directory.

Automate and schedule tasks

9. [4 points] Read your *quote* file and locate the text of your quote in the actual play found in *RJ-All-P3*. You should identify any immediate lines before or after the quote as well as the character that recites them. Figure out the specific Act and Scene in the play where these lines are located. Change to the directory in *RJ-Tree* that matches the Act, Scene and character for your quote and create a script there named *lines*. When you run this script it should output just the portion of *RJ-All-P3* that includes your character's name and the group of lines that include your quote.
10. [4 points] Write a script named *tally* that makes a mini report on (just) the *ptest03* directories found under the */home/CISLAB* branch of the file tree. The report should include a title, the date when the report is run and a long listing for each directory. In addition a line should be added to the end of the report that shows the count of how many directories were reported on. This *tally* script should be placed in your *ptest03* directory and have the appropriate permissions so it can be executed.
11. [2 points] Schedule your *tally* script to run at 2PM, 3PM and 4PM and have the reports emailed to you. Use *\$MLOGNAME* instead of *\$LOGNAME* as the recipient because Sun-Hwa uses Active Directory usernames. Create a file named *reports* in your *ptest03* directory that includes excerpts from your login session showing the commands you used to schedule the reports, output from the **atq** command showing the scheduled jobs and an email showing an actual report. To simplify making your *reports* file you can just copy and paste the appropriate parts of your login session into it.

Extra credit

12. [3 points] Write a script named *showp3* that lets the user select any of the test steps above and then show the files or directories (colored brown above) for that step. Show directories with the **tree** command, tarballs with the **tar** command and files with the **cat** command. The user should be able to exit gracefully when finished.

Finish up

Run the **checkp3** script to review your work. Then leave the files and directories you created on **Sun-Hwa** for the instructor to grade. Since this is the practice test it doesn't actually get graded.

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