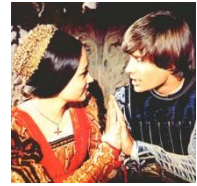


CIS 90 - Fall 2013 - TEST 3 (Finnish) - 30 points

Timed Test (2 hours 50 minutes)



Honor Code:

This test is open book, open notes, and open computer. **HOWEVER, you must work alone. You may not share answers. You may not receive or give assistance to others.**

Procedure:

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

English	Finnish
signal	signaali
quote	lainaus
accounts	tilit
place	paikka
custom	nimikoitu
lines	vuorosanat
tally	pistelasku
reports	raportit

Navigate and manage the UNIX/Linux file system

- [2 points] In your home directory you will see a directory named *RJ-Tree*. Create a new directory named *test03* and move *RJ-Tree* into it. Set the permissions on *test03* to 700 and *RJ-Tree* to 755. Explore *RJ-Tree* so you have an idea of what's in it.
- [2 points] Use your original Opus credentials with **scp** to copy the remote file *test03.tar* from the **Catalina** Linux system. This tarball file is located in your home directory on **Catalina**. Place this file, keeping the same name, into your *test03* directory on **Sun-Hwa-II**.
- [2 points] Extract all the files in *test03.tar* into your *test03* directory. Get rid of all the files whose names start with "*basura*". Change the permissions of the extracted *RJ-All-T3* and *index* files to 440. Explore both so you have an idea of what they contain.
- [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 *signaali*, in your *test03* directory. Change the permissions on this file to 600.
- [4 points] On **Sun-Hwa-II** examine your *signaali* 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 *test03* directory naming it *lainaus* and set the permissions on it to 411.
- [2 points] What is the absolute pathname of the */etc/passwd* file? Edit a new file named *tilit* in your *test03* directory and add your answer as the first line of the file.

- [2 points] Log into **P19-Arwen** from **Sun-Hwa-II** using the nurse account and the "funny Cabrillo" password. From there follow the hidden bread crumbs till you find out the place where Benji likes to visit. Create a file named *paikka* in your *test03* directory that contains this place. When finished **exit** back, system by system, till you are back on **Sun-Hwa-II**.

Customize the shell environment

- [4 points] Modify *.bash_profile* so that your *test03* directory is on your path, *umask* is initialized to 077 and your prompt is blue (hint: use Google for the prompt). Add an alias named **lcl** to your *.bashrc* that outputs a banner saying "Linux Command Line Rules!" (Thanks Ismael) 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 *nimikoitu* in your *test03* directory.

Automate and schedule tasks

- [4 points] Read the quote in your *lainaus* file and locate the text of your quote in the actual play found in *RJ-All-T3*. 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 *vuorosanat*. When you run this script it should output just the portion of *RJ-All-T3* that includes your character's name and the group of lines that include your quote.
- [4 points] Write a script named *pistelasku* that outputs a short report. The first section of the report should show all the users currently logged in and a count of them. The second section should show a long listing of (just) the *test03* directories found under the */home/CISLAB* branch of the file tree. In addition a line should be added to the end of the report that shows the distro name of the system the report is being run on. This *pistelasku* script should be placed in your *test03* directory and have the appropriate permissions so it can be executed.
- [2 points] Schedule your *pistelasku* script to run at 2PM, 3PM and 4PM and have the output emailed to you. Use *\$MLOGNAME* instead of *\$LOGNAME* as the recipient because Sun-Hwa-II uses Active Directory usernames. Create a file named *raportit* in your *test03* 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 this *raportit* file you can just copy and paste the appropriate parts of your login session into it.

Extra credit

- [3 points] Write a script named *showt3* 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 **checkt3** script to review your work. Then leave the files and directories you created on **Sun-Hwa-II** for the instructor to grade. You are finished with the course! Good luck on any remaining final exams and have a great holiday break!