Lab Exercise 1

08/10/2021

In order to gain more hands-on experience with the linux shell, following exercise is designed. It is required to perform this exercise and submit your work to Blackboard by the end of the lab session. You are required to perform all operations using the linux shell (using the linuxPool).

1. Download the exercise contents from the blackboard.
   - You need to copy the contents to the linuxPool machines by using "scp" command on your **local machine**.
   ```
   scp -r FOLDER_NAME  USERNAME@linuxpool.ku.edu.tr:
   ```
   - To download a folder from the linuxPool machines to your local machine, you can use scp again by changing the source and target address (you need to run this on your **local machine**).
   ```
   scp -r USERNAME@linuxpool.ku.edu.tr:/PATH/TO/FOLDER_NAME  .
   ```
2. Open hello.c file in your terminal and change the "printf" function to print "Welcome to the COMP201 Fall 2021".
3. Then compile the hello.c code with "$make install" command.
4. At this stage, if you run the "$make run" command, you will get a permission denied error because the "hello" executable file doesn't have execution permission and you get the following prompt.
   ```
   ./hello
   make: execvp: ./hello: Permission denied
   make: *** [makefile:6: run] Error 127
   ```
5. Please confirm that "hello" file doesn't have execution permission for your user by "$ls -l" command and then give the appropriate permission using the "chmod" command and run the code.
6. Make a directory named "doc" in the base working directory(beside scripts, src, and resources folders) and another directory under doc folder named "info".
7. Use terminal commands to get a list of files inside "resources" folder and use piping and connect output list to another program that searches for directories that has string "add" inside and redirects the results to the file named "info.txt" under info folder.

8. Again like previous step, extract the list of file names but this time look for folders with string "opencv" in their names in a case-insensitive manner and append the results and also the number of found results to the "info.txt" under info folder. Hint: use "–help" option and look for any useful information.

9. Append current date and time and your name to the end of "info.txt".

10. Use "–help" or "$man touch" command and check the use case of "touch" command. Then, make a directory under lab_practice_1 named "scripts" and under the "scripts" folder, make a file named "script.sh" and write the following lines one by one to the file. Next, change your directory to lab_practice_1 and then execute the "script.sh" (for running the script.sh you need to use a relative address to run the script while your working directory is lab_practice_1).

```
#!/bin/bash
echo -e "Hello there! How do you feel about bash scripting?"
read REPLY
echo "You said $REPLY. Lab exercise 1 is done! Thank you!"
echo $(uname -a) >> ./doc/info/info.txt
echo ./resources/koc.txt >> ./doc/info/info.txt
cat  ./resources/koc.txt

```

You can run a bash script using "bash" command so run the script and answer the question. In case you did everything correct without seeing any error message, you'll see the following ASCII art.

11. After you finish your task, you should compress your lab_practice_1 folder into zip or tar.gz files, and submit it to the Blackboard.