In-Class Exercise 2

This exercise is for you to review the lesson. Therefore, it is your responsibility to search the slides, research on the Web, or ask around when coming across terms or requests that you are not familiar with.

For action request below, find corresponding shell command(s) that accomplish the action in the provided space. **Follow the requests one by one from top to bottom and do not skip any step** so that you can compare the answers with classmates. All commands needed to complete this worksheet will be covered in the lecture.

When you finish each part in this worksheet, compare you answers with a classmate's and help each other identify correct solutions. Of course, there can be more than one correct solutions, and often there will be solutions that are better than others.

Part I: Basic Shell Commands

No.	Action	Shell Command(s)
1	Log into `syskill`.	ssh syskill
2	Change to the root directory. Use at most **four** characters only, including a blank space.	cd /
3	Display the name of the current working directory to check if it is actually the root.	pwd
4	Change into your home directory. Use **four** characters only, including a blank space.	cd ~
5	Display the name of the current working directory to check if it is actually your home directory. Otherwise, the following commands may not work.	ls -l ~
6	Create a file called `first.txt`.	touch first.txt
7	Check if the file is created by listing files in the working directory.	ls -a
8	Rename the file to `second.txt`.	mv first.txt second.txt
9	Make a copy of `second.txt` and call it `copy.txt`.	cp second.txt cpp copy.txt
10	Create a folder called `questions`.	mkdir questions
11	Move `copy.txt` to folder `questions` using a relative path.	mv copy.txt questions
12	Change the directory to the `questions` folder.	cd questions

No.	Action	Shell Command(s)
13	Create a file called `file1.txt`.	touch file1.txt
14	Create a file called `file2.txt`.	touch file2.txt
15	Go back a directory.	cd ..
16	Make a copy of the questions folder, and call it `questions_copy`.	cp -R questions questions_copy
17	Change into the `questions` folder again.	cd questions
19	List only files starting with the text "file" using the short format.	ls -d file*
18	While still in the `questions` folder, remove the file `file2.txt` from the `questions_copy` directory using the absolute path.	rm ~/questions_copy/file2.txt
20	Change into the `questions_copy` directory using only one command (one line in the other words).	cd ~/questions_copy
21	List the file to see if the file `file2.txt` is actually gone. **Then, change back a directory.**	ls -a
22	Remove the `questions_copy` directory using the relative path.	rm -R questions_copy

Verified by: _____ Date: _____

Part II: Another Bunch of Shell Commands

No.	Action	Shell Command(s)
1	Make sure you are in your home folder.	pwd
2	Redirect the output of the long file listing of the current directory into `listing.txt` in the `questions` folder using the relative path.	ls >listing.txt
3	Display the content of this new file `listing.txt`.	cat listing.txt
4	Display lines(s) in `listing.txt` that contains the string "drw".	grep 'drw' listing.txt
5	Find out which group(s) you belong.	groups

No.	Action	Shell Command(s)
6	Display the current permission of the file `listing.txt`. (You may see the permission of other files in the same folder, too.)	ls l listing.txt
7	Remove the permission of the group to read and write the file `listing.txt`.	chmod g-x listing.txt

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Part III: Copying Files Between Hosts

No.	Action	Shell Command(s)
1	Close you connection to `syskill`.	
2	Copy the `questions` folder on `syskill` to your local home folder.	scp -P 2222 -r u6280004@syskill.csmgo.io:/home/u6280004/questions/* ~
3	Copy any file in your local folder (other than those in the `questions` folder) to your home folder on `syskill`.	scp ~/hi.txt u6280004@syskill.cs.ng.io:/home/u6280004/

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Part IV: Passwordless Login

No.	Action	Shell Command(s)
0	Stay in your local terminal.	
1	Generate a SSH key pair using the command on the right. Press <Enter> at any prompt coming up during the generation.	ssh-keygen -t rsa -b 4096
2	Make sure that the directory `.ssh` exists in your Syskill home folder. Otherwise, create one.	ls -a
3	Append `id_rsa.pub` to the server's authorized_keys located at: `~/.ssh/authorized_keys`	
4	Now try to connect to `syskill`. You should not be promoted for password this time.	ssh syskill

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