

1. 30% + 10% + 5%

- a) Assume you are now at your home directory. Please show the commands, step by step, to create directory ~/myhouse and the stuff below it. The structure of ~/myhouse should be like the left tree of the following. The "myhouse", "cute", and "green" are directories. Others are files. The "favorite" is a symbolic link to pine and "piggy" is a hard link to mouse. The file you created, if it can be found on the right tree, should be copied from the right tree or it is an empty file

<pre>~/myhouse -- cute -- kitty -- mouse -- favorite -> green/pine -- green -- tomato -- pine -- piggy</pre>	<pre>/var/tmp/somewhere -- animals -- cat -- dog -- mouse -- botany -- banana -- tomato</pre>
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- b) Assume that the inode numbers of myhouse, cute, kitty, and mouse are 111, 121, 131, and 141. Since "cute" is a directory, its content is actually a table. Please show the content of "cute".
- c) Assume you are now at ~/myhouse/cute. Write ONE command to move the file "mouse" such that its new position is under "green" and its name is changed to "mickey".

2. 10%

Show two methods to logout.

3. 10%

There is a directory named "something-ugly". You do not want others to know what is inside this directory but there is a file named "something-ugly/itisok" should be readable by anyone if they do know the name. Of course, no one except you can modify this directory or file.

Show possible permissions of "something-ugly" and "itisok".

4. 10%

Explain what is the SUID bit and why is it necessary.

5. 5% * 5

Explain the following commands. Each description should not exceed ONE line.

- a) nl b) shuf c) tac d) expand e) yes

number of lines