Name:_____

Directories

1. Enter command "**cd foobar**", what happened? _____
2. Enter command "**cd ..**" (note: space before dots), Use "**pwd**" command. What happened?
   . _____
3. List the contents of the directory using "**ls**" command. What can you see? _____
4. Enter command "**cd**". What happened? Use "**pwd**" command. _____
5. Enter command "**cd ..**" twice. What are the contents and what is the purpose of this directory?
   . _____
6. Enter command "**cd root**", what happens? _____
7. Enter command "**ls -l**". What directories do you have access to? _____
   . _____

Files

1. Move to directory "**/**" and then to directory "**etc**". Enter command "**ls**". If the printout is longer than your terminal, you can make your window larger or use *shift-pageup* and *shift-pagedown* keys to scroll back and forth.
2. Enter command "**file services**". What is the type of this directory? _____
3. Enter command "**cat services**" and read the file. Try command "**less services**". What service is at port TCP/88? _____
4. Move back to your home directory using command "**cd**"
5. Enter command "**file .**", what is this file? Can you read the contents using command "**cat .**"?
   . _____
6. Read the manual page of command "**cp**" ("**man cp**" and/or "**cp --help**"). Copy the file "**/etc/services**" to your home directory.
7. Check command "**cat**" parameters. Print contents of the file "**services**" so that you add line numbers to it. Which parameter does this? _____
8. Run "**grep -v '#' services**". Look up from the grep manual page what this does. Add line numbers to this printout on all lines that are not empty. What commands did you use?
   . _____
   . _____

Where to find more information?

1. Read "**man intro**"
2. Read "**man ls**" - all commands have manual pages
3. Enter "**apropos pwd**" - does searches in manual pages
4. Read "**ls --help**"
5. Run "**help cd**" - help gives instructions on shell internal commands.

Let's look around

1. Move to directory "**/proc**". All the files in this directory represent the runtime state of the operating system.

   - How many processor cores does your computer have? _____
   - How much memory does your computer have? _____
   - How much swap space do you have? _____
   - How long has your computer been on? _____

2. Move to directory "**/etc**". This directory contains the configuration files.

   - How many user accounts are there in your computer? Don't count by hand, let the computer count them for you. What commands did you use? _____
   - How many user groups are there respectively? _____
   - Which file holds the name of the computer? _____

3. Move to directory "**/usr/share/doc**". This directory contains documentation of installed programs. (Debian-based systems do it like this.)

   - Name 3 programs that come with package "**coreutils**" (hint: README.gz)
     . _____
   - What version of "**bash**" your computer has? _____

Playing around with files and directories

1. Create a new directory to your home directory.

   - Can you move this directory to the higher level directory your home directory is in? _____
   - Copy all XPM-files from directory "**/usr/share/pixmaps**" to the new directory you created. What does "XPM" mean? _____

2. Move back to your home directory. Create a new directory and copy all the files from directory "**/etc**" to the directory you created. Copy all subdirectories also! (Hint: "recursive")

   - Move to the new directory. Count how many file names (not directory names) start with a capital letter there using commands "find" and "wc". (Hint: -type and -name options) Result:
   - Add all these files into one file. How many lines does this file have? (Hint: find -print0 |xargs -0 cat >>file) Result: _____
   - Move to your home directory. Delete the subdirectories that contain the files you've copied in this exercise using one command. The command you used: _____

3. Make a symbolic link to directory "**/tmp**" from your home directory. Make sure it works.

   - Make another link from your home directory that points to the previous link. Does it work? _
   - Remove the link you first made and check the contents of your home directory. What happened to the second link? _____