

***A Practical Guide to Linux Commands
Editors and Shell Programming 4th edition
Sobell Solutions Manual***

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ANSWERS TO EXERCISES

1. The following message is displayed when you attempt to log in with an incorrect username *or* an incorrect password:

Login incorrect

This message does not indicate whether your username, your password, or both are invalid. Why does it not tell you this information?

If the system were to say that a password that someone entered was incorrect, it would be saying that the username was valid. This information could be used by a cracker to help break into the system. Saying that a password is valid for an invalid username does not make sense, but saying that a password is valid on the system could help a cracker in the same manner.

2. Give three examples of poor password choices. What is wrong with each? Include one that is too short. Give the error message the system displays.

Examples of poor password choices follow:

finger	word in the dictionary
tom	login name
aqbfgya	does not contain a number
5q	too short

3. Is **fido** an acceptable password? Give several reasons why or why not.

This password is not acceptable because it is too short, is a common pet name, and does not contain a number.

4. What would you do if you could not log in?

Make sure your username and password are valid. Usernames and passwords are case sensitive. Check with the system administrator. If possible, look in the **/etc/passwd** file to check the spelling of your username. Assign yourself a new password if you are the system administrator. Make sure you are logging in on the right system.

5. Try to change your password to **dog**. What happens? Now change it to a more secure password. What makes that password relatively secure?

```
$ passwd
passwd
Changing password for user sam.
Changing password for sam.
(current) UNIX password:
New password:
BAD PASSWORD: it is WAY too short
...
```

See page 44 for a list of criteria that make a password relatively secure.

6. How would you display a list of utilities that compress files?

```
$ apropos compress
```

7. How would you repeat the second preceding command line, edit it, and then execute it?

Press the UPARROW key two times to display the second preceding command line. Then use the LEFT ARROW and RIGHTARROW keys to move the cursor, the erase key to delete characters, and normal keyboard keys to add characters to the command line. Press RETURN to execute the command line.

8. Briefly, what information does the **--help** option display for the **tar** utility? How would you display this information one screen at a time?

When used with **tar**, the **--help** option displays usage information, examples, and descriptions of the many **tar** options. Send the output through **less** to view the output one screen at a time:

```
$ tar --help | less
```

9. How would you display the man page for **shadow** in section 5 of the system manual?

```
$ man 5 shadow
```

10. How would you change your login shell to **tcsh** without using **root** privileges?

Use **chsh**.

11. How many man pages are in the **Devices** subsection of the system manual? (*Hint: Devices* is a subsection of **Special Files**.)

Varies. You can come up with this number by counting the number of files in **/usr/share/man/man4**.

12. The example on page 35 shows that man pages for **passwd** appear in sections 1 and 5 of the system manual. Explain how you can use **man** to determine which sections of the system manual contain a manual page with a given name.

Use **man** with the **-f** option (equivalent to **whatis**) to list man entries for the argument that follows this option. Alternatively, use **man** with the **-a** option to display all of the entries for the argument that follows this option.

13. How would you find out which Linux utilities create and work with archive files?

```
$ apropos archive
```

ANSWERS TO EVEN-NUMBERED EXERCISES

2. Give three examples of poor password choices. What is wrong with each? Include one that is too short. Give the error message the system displays.

Examples of poor password choices follow:

finger	word in the dictionary
tom	login name
aqbfgya	does not contain a number
5q	too short

4. What would you do if you could not log in?

Make sure your username and password are valid. Usernames and passwords are case sensitive. Check with the system administrator. If possible, look in the `/etc/passwd` file to check the spelling of your username. Assign yourself a new password if you are the system administrator. Make sure you are logging in on the right system.

6. How would you display a list of utilities that compress files?

```
$ apropos compress
```

8. Briefly, what information does the `--help` option display for the `tar` utility? How would you display this information one screen at a time?

When used with `tar`, the `--help` option displays usage information, examples, and descriptions of the many `tar` options. Send the output through `less` to view the output one screen at a time:

```
$ tar --help | less
```

10. How would you change your login shell to `tcsh` without using `root` privileges?

Use `chsh`.

12. The example on page 35 shows that `man` pages for `passwd` appear in sections 1 and 5 of the system manual. Explain how you can use `man` to determine which sections of the system manual contain a manual page with a given name.

Use `man` with the `-f` option (equivalent to `whatis`) to list `man` entries for the argument that follows this option. Alternatively, use `man` with the `-a` option to display all of the entries for the argument that follows this option.