UNIVERSITY OF ARKANSAS

Linux Tutorial #2

ls (list)

When you first login, your current working directory is your home directory. Your home directory has the same name as your user-name, and it is where your personal files and subdirectories are saved.

To find out what is in your home directory, type

```
% ls
```

The ls command lists the contents of your current working directory. There may be no files visible in your home directory, in which case, the Linux prompt will be returned. Alternatively, there may already be some files inserted by the System Administrator when your account was created.

ls does not, in fact, cause all the files in your home directory to be listed, but only those ones whose name does not begin with a dot (.) Files beginning with a dot (.) are known as hidden files and usually contain important program configuration information. They are hidden because you should not change them unless you are very familiar with Linux.

To list all files in your home directory including those whose names begin with a dot, type

```
% ls -a
```

As you can see, ls -a lists files that are normally hidden. ls is an example of a command which can take options: -a is an example of an option. The options change the behavior of the command. There are online manual pages that tell you which options a particular command can take, and how each option modifies the behavior of the command. (See later in this tutorial)

mkdir (make directory)

We will now make a subdirectory in your home directory to hold the files you will be creating and using in the course of this tutorial. To make a subdirectory called Linuxstuff in your current working directory type

```
% mkdir Linuxstuff
```

To see the directory you have just created, type

```
% ls
```

cd (change directory)

The cd command can be used to change the current working directory. The current working directory may be thought of as the directory you are in, i.e. your current position in the file-system tree.

To change to the directory you have just made, type

```
% cd Linuxstuff
```

Type ls to see the contents (which should be empty). Lets create a new directory called backups inside the Linuxstuff directory. To do this, type

```
% mkdir backups
```

Still in the Linuxstuff directory, type

```
% ls -a
```

You should now see the backups directory. In addition, you should see two special directories called (.) and (..)

The current directory (.)

In Linux, (.) means the current directory, so typing

```
% cd  .
```

means stay where you are (the Linuxstuff directory). This may not seem very useful at first, but using (.) as the name of the current directory will save a lot of typing, as we shall see later in the tutorial.

The parent directory (..)

In Linux, (..) means the parent of the current directory, so typing

```
% cd  ..
```

will take you one directory up the hierarchy (back to your home directory). Try it now. You should now be in your home directory again.

Typing cd with no argument always returns you to your home directory. This is very useful if you several levels down in your directory tree and you want to quickly return to your home directory.

pwd (print working directory)

Pathnames enable you to work out where you are in relation to the whole file-system. For example, to find out the absolute pathname of your home-directory, type cd to get back to your home-directory and then type

```
% pwd
```

The full pathname will look something like this

```
/home/user-name
```

which means that the user-name directory is in the home directory, which is in the top-level root directory called " / " .

Understanding pathnames

First type cd to get back to your home-directory, then type

```
% ls Linuxstuff
```

to list the contents of your Linuxstuff directory. Now type

```
% ls backups
```

You will get a message like this

```
backups: No such file or directory
```

The reason is, backups is not in your current working directory. To use a command on a file (or directory) not in the current working directory (the directory you are currently in), you must either cd to the correct directory, or specify its full pathname. To list the contents of your backups directory, you must type

```
% ls Linuxstuff/backups
```

Your home directory (~)

Home directories can also be referred to by the tilde ~ character. It can be used to specify paths starting at your home directory. So typing

```
% ls ~/Linuxstuff
```

will list the contents of your Linuxstuff directory, no matter where you currently are in the file system.

Lets do some experiments with the ~ character. What do you think

```
% ls ~
```

would list? Try it and find out if you are correct.

What do you think

```
% ls ~/..
```

would list? Try it and find out if you are correct.

Summary

Command	**Meaning**
ls	list files and directories
ls –a	list all files and directories
mkdir	make a directory
cd directory	change to named directory
cd .	change to current directory
cd ..	change to parent directory
cd ~	change to home-directory
cd	change to home-directory
pwd	display the path of the current directory

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