

Basic Unix Commands - File System

The File

- UNIX treats everything as a file... Directories and devices like the hard disk, DVD-ROM, and printer are files to UNIX.
- Three types of files
 1. Ordinary file
 - Also known as a regular file, contains only data as a stream of characters.
 2. Directory file
 - A folder containing the names of other files and subdirectories.
 3. Device file
 - Represents a device or peripheral.

The File System Hierarchy

UNIX files are organized in a hierarchical (an inverted tree) structure, starting with root (/)

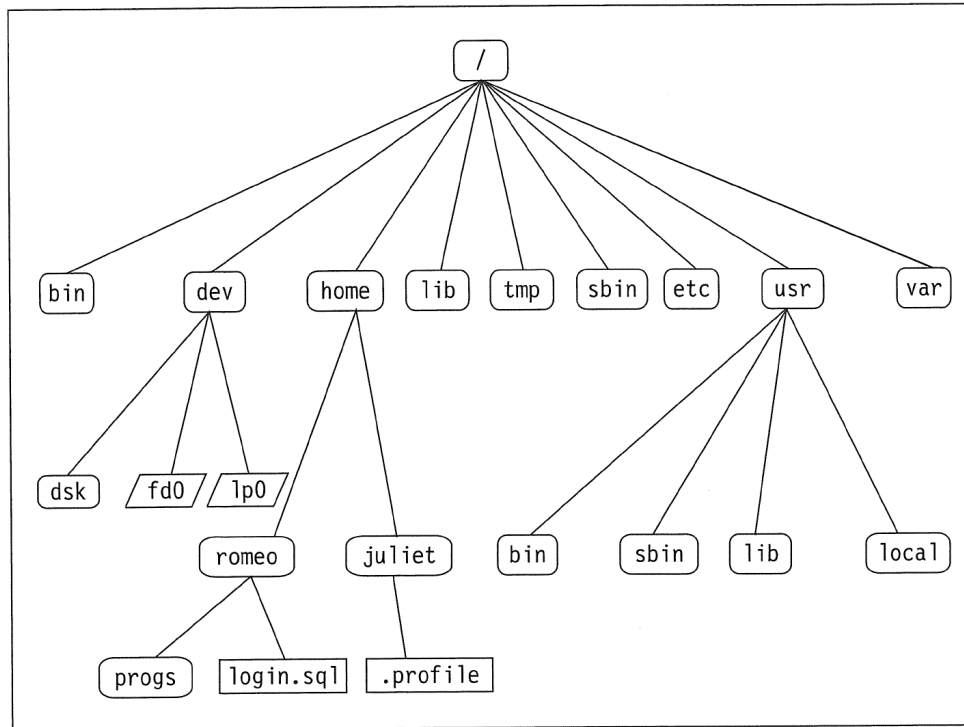


Image Source: S. Das. *Your UNIX/Linux: The Ultimate Guide*. Third. McGraw-Hill, Inc.,

Relative Pathnames

Relative path shortcuts

- `.` (a single dot) represents the current directory
- `..` (two dots) represents the parent directory

Example

```
> pwd /home
> ls .
  john george
> cd john $ pwd
/home/john
> cd ..
> pwd /home
```

Making and removing directories

Making directories

```
>mkdir myDir
```

(UNIX is case sensitive by-the-way) creates a directory myDir in the current directory

```
>mkdir myDir1 myDir2
```

Creates multiple directories in one command

```
>mkdir myDir1/myDir2
```

creates myDir2 inside of myDir1 (must exist)

Removing directories

```
rmdir myDir
```

Only works for empty directories. (No other files/directories inside)

```
rm -R myDir
```

Copy and Move

cp -- copy

```
>cp file1 file2
```

Copies file1 to file2

```
>cp -R myDir1 myDir2
```

-R option copies recursively, meaning all subdirectories will be copied as well

mv - move

```
>mv file1 file2
```

When used this way it's basically a rename utility

```
>mv file1 file2 myDir
```

Moves file1 and file2 into the directory myDir

Deleting files

```
>rm file1 file2
```

```
>rm file*
```

* is a wildcard, meaning anything, the command will remove all patterns that match file with anything following.

Can be dangerous. With the right permissions `rm -Rf /*` would remove most of the files on your hard drive without warning.

Protect yourself `rm -i`