



Unix Primer

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Motivation

- *Unix philosophy*: to provide a rich set of *generic tools* and to support tool-based application development.
- *Open System* - Users have *access to the same tools* which are also *used by UNIX* as an OS.
- *X-Windows* offers *GUI* in UNIX.
- Unix supports *client-server architecture*.



Unix Environment

- Its a *Command driven* environment.
- Unix hides the system *kernel* beneath the *shell*.
- The user *command* is interpreted by the *shell*.

Subsequently the *shell seeks* the desired *service from kernel*.

- Two basic concepts in Unix
 - ✓ Files
 - ✓ Processes



Unix File System

- *Directory* – group related files.
- Unix allows creation of *subdirectories* to help organize files hierarchically.
- All paths emanate from a directory called *root*.
- *Current directory* is denoted by *period(.)*
- The *parent of* current directory is denoted by *two periods (..)*.



Unix File Commands - 1

- `ls` : Lists all the files within a directory
- `cd` : By itself it brings you back to home directory.
- `cd pathname` : Takes you to the directory described by the *pathname*.
- `rm filename` : Removes file *filename* from the current directory.
- `pwd` : Prints the name of the current working directory.



Unix File Commands - 2

- `mkdir subdirname` : Creates a subdirectory under the current directory with the name *subdirname*.
- `rmdir subdirname` : Removes a subdirectory under the current directory with the name *subdirname*.
- `touch filename` : Creates a file (containing 0 characters and 0 lines) in the current directory with the name *filename*.



Useful UNIX Commands - 1

- **bc** : a basic calculator
- **cal** : the calendar for the current month
- **clear** : clears the screen
- **cp** *filename1 filename2* : creates a copy of file *filename1* in *filename2*.
- **date** : shows the current date and time
- **echo** *sometext* : echos back *sometext* on the terminal.



Useful Unix Commands - 2

- **history** : shows the command history
- **more *filename*** : shows the file **filename** one page at a time.
- **cat *filename*** : displays the **filename** on the screen.
- **cat *filename(s)* > *newfile*** : combines all the files in **filename(s)** and outputs to create a file **newfile**.
- **man *AUnixCmd***: shows the description of the command **AUnixCmd** from online help manual.
- **exit** : Exits the current shell.



UNIX Portability

- **X/open** and **POSIX** – popular standards for Unix.
- Unix allows the use of **regular expressions** in arguments.