UNIX

Lesson 06 : Bash Shell

Lesson Objectives

- In this lesson, you will learn:
  - Features of Bash shell
  - Different shells

6.1:Features of bash shell
Features

- While the GNU operating system provides other shells, including a version of csh, bash   is the default shell.

- Bash is quite portable.

- It currently runs on nearly every version of Unix and a few other operating systems -   independently.

Command Line Shortcuts and Expansion

- The '*' wildcard - allows you search everything that matches the pattern you are looking for.

- The '?' wildcard - useful for matching a single character.

- The '[ ]' wildcard - useful for specifying a set range of   values in the bracket.

- [Ctrl]+B - to move backward by one character.

- [Ctrl]+F - to move forward by one character.

Shortcuts continued…

[Esc]+B - to move one word backward

[Esc]+F - to move one word forward

[Ctrl]A - to move to the first character in the line

[Ctrl]+E - to move to the end of the line

[Ctrl]+U - to delete the current line

[Ctrl]+K - to delete from the cursor's current position to the end of the line

Shortcuts continued…

- Type <TAB> to complete command lines:

  ➤For the command name, it completes the command;
  ➤For an argument, it completes a file name.

6.3: History
History Tricks

- Use 'history' command to see list of "remembered" commands.
  - ➢ Syntax: $ history
- Use the up and down arrow keys to scroll through previous commands.
- Type <CTRL-R> to search for a command on command history.

Tricks continued…

- !c - To repeat the last command that started with c.

- !n - To repeat command by its number in history output.

- !! – To repeat the last command .

6.4: shells
Different Shells

- Whenever you login to a Unix system you are placed in a program called the shell. All of your work is done within the shell.

- The shell is your interface to the operating system. It acts as a command interpreter; it takes each command and passes it to the operating system. It then displays the results of this operation on your screen.

- There are several shells in widespread use. The most common ones are described below.

- Bourne shell (sh)

  - Original Unix shell written by Steve Bourne of Bell Labs. Available on all UNIX systems. Does not have the interactive facilites provided by modern shells such as the C shell and Korn shell. The Bourne shell does provide an easy to use language with which you can write shell scripts.

- C shell (csh)

  - Written at the University of California, Berkley. As it name indicates, it provides a C like language with which to write shell scripts.

- Korn shell (ksh)

  - Written by David Korn of bell labs. It is now provided as the standard shell on Unix systems. Provides all the features of the C and TC shells together with a shell programming language similar to that of the original Bourne shell.

Shells

- TC Shell (tcsh)

  - Available in the public domain. It provides all the features of the C shell together with EMACS style editing of the command line.

- Bourne Again Shell (bash)

  - Public domain shell written by the Free Software Foundation under their GNU initiative. Ultimately it is intended to be a full implementation of the IEEE Posix Shell and Tools specification. Widely used within the academic commnity. Provides all the interactive features of the C shell (csh) and the Korn shell (ksh). Its programming language is compatible with the Bourne shell (sh).

  - Your login shell is usually established by the local System Administrator when your userid is created. You can determine your login shell with the command:

    echo $SHELL

Shells

- Each shell has a default prompt. For the 5 most common shells:

    $ (dollar sign)   - *sh, ksh, bash*
    % (percent sign)   - *csh, tcsh*

Summary of Shells

	Bourne	C	TC	Korn	Bash
Command history	N	Y	Y	Y	Y
Command alias	N	Y	Y	Y	Y
Shell scripts	Y	Y	Y	Y	Y
Filename completion	N	Y	Y	Y	Y
Command line editing	N	N	Y	Y	Y
Job control	N	Y	Y	Y	Y

SUMMARY

- Use of history

- Recollecting history

- Tcsh,ksh,bash shell features

Review Questions

❖How to execute last executed command?

▪ .!!
▪ !n
▪ ?!
▪ ??

❖Which shells support command completion with tab key ?