Lab 7

Vi Text Editor

Shell Script

Common shell environment variables

- **$HOME:** your home directory
- **$PATH:** list of directories used to find commands.
- **$BASH:** Contains the full path name of the *bash* command.
- **$PWD:** This is the directory that is assigned as your current directory.
- **$OLDPWD:** The directory that was the working directory before you changed to the current working directory.

Rerunning commands:

command line recall

- Type a command line →shell's history list→ history file
- To view history list:

```
$ history
$ history 8
```

The last 8 commands, including history 8

- Run command number (!command number)

```
$ !22
```

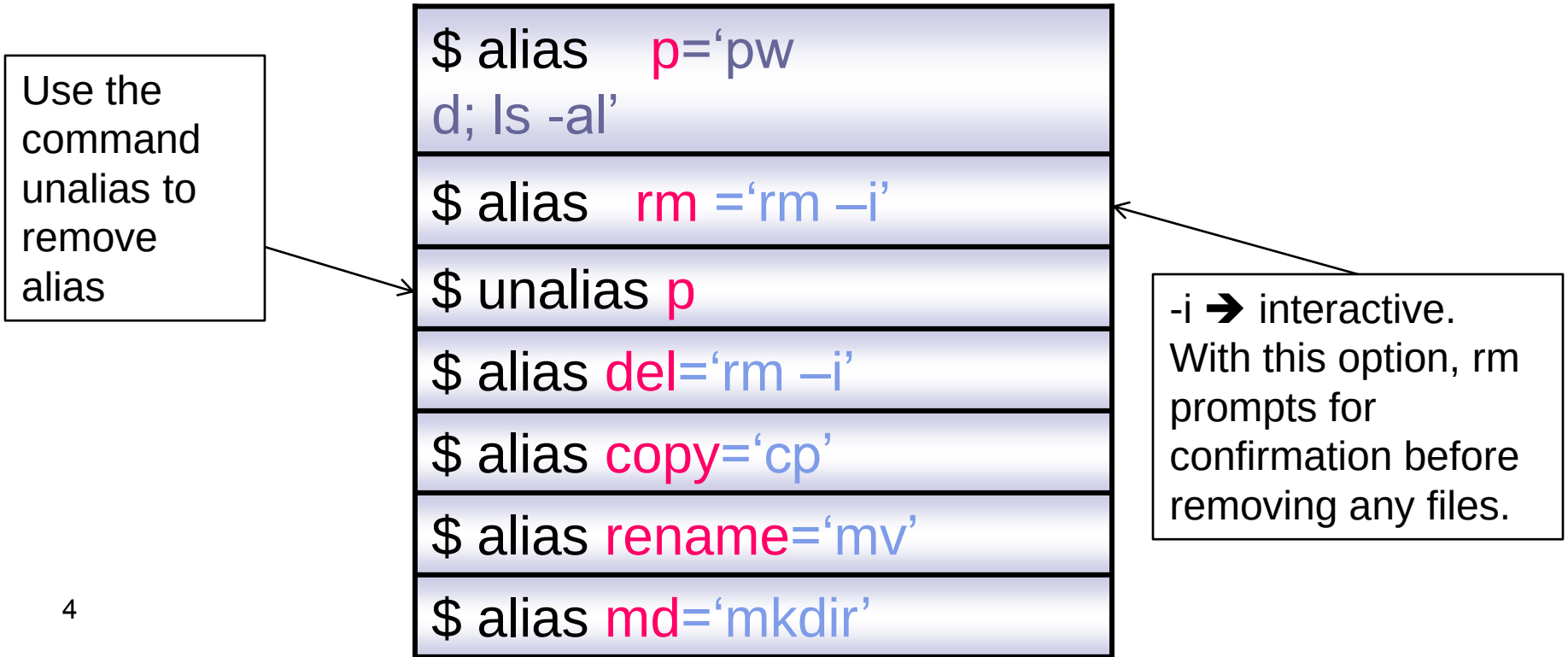
If the command # 22 is pwd ➔ pwd will be run

- Run previous command

```
$ !!
```

Adding Alias

- makes it possible to launch any command or group of commands by entering a pre-set *string* of characters.
- it allows a user to create simple names or abbreviations (even consisting of just a single character) for commands regardless of how complex the original commands are and then use them in the same way that ordinary commands are used.



Entering VI

- To call the VI editor and begin an editing session

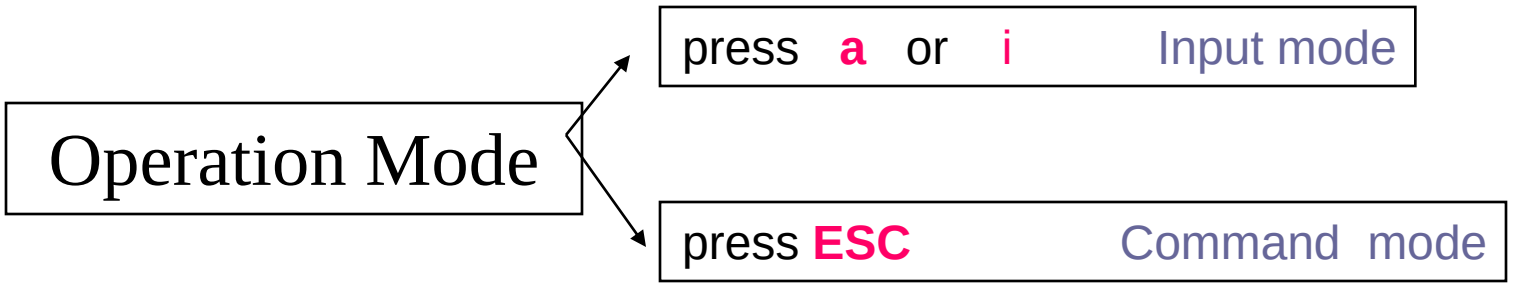
```
$ vi  file-name
```

- *File-name* does not exist → anew file will be created
- *File-name* exists → edit the existing file

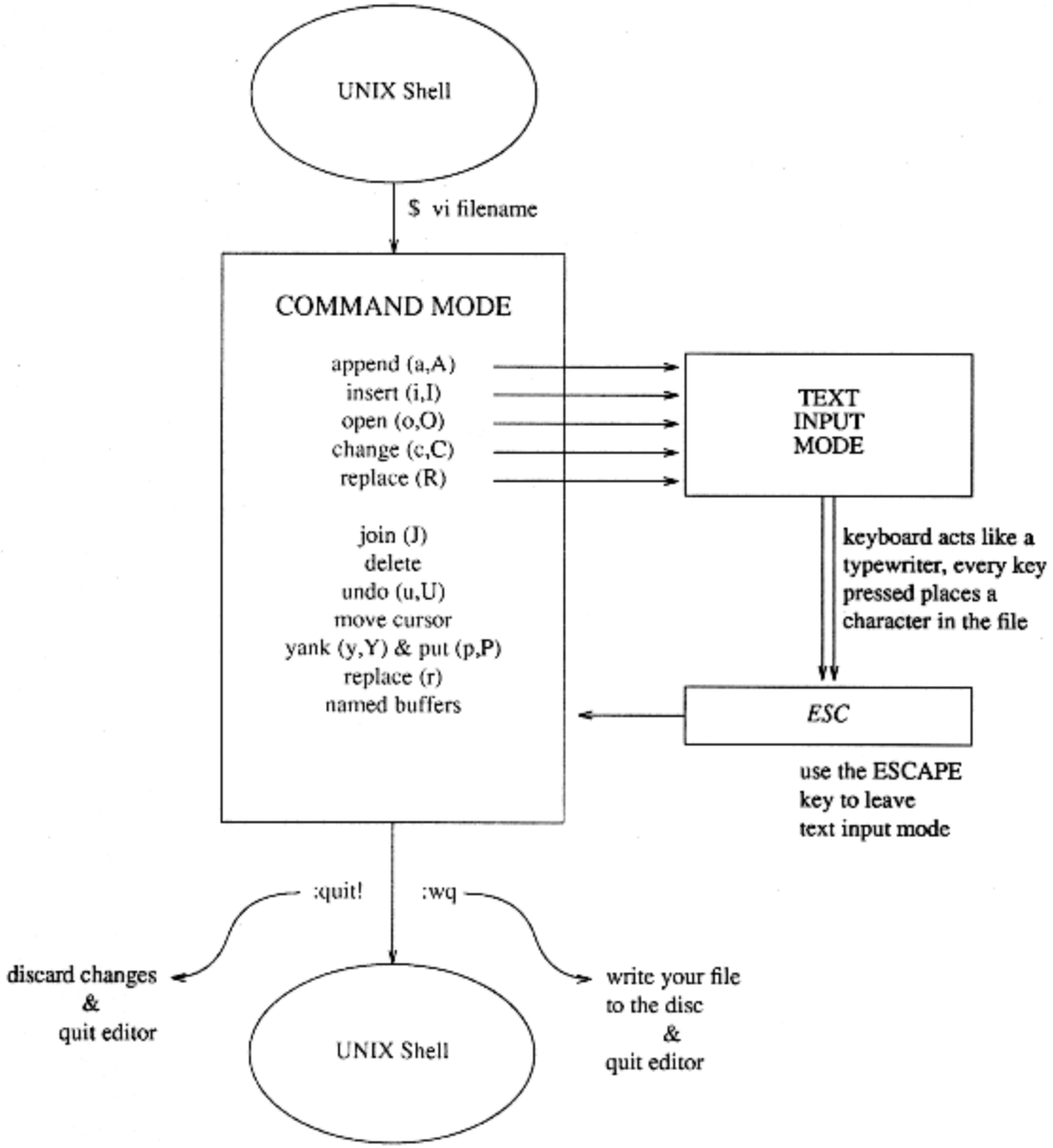
Organization of VI

There are two modes of operation in VI:

- ***Command mode***: where you tell the editor what you want it to do.
- ***Text input mode***: the part of the editor where you inter material (text, data, or program code) .



a : insert <u>after</u> the current position(cursor position).
i : insert <u>before</u> the current position(cursor position).


UNIX Shell
$ vi filename
COMMAND MODE
append (a,A)
insert (i,I)
open (o,O)
change (c,C)
replace (R)
join (J)
delete
undo (u,U)
move cursor
yank (y,Y) & put (p,P)
replace (r)
named buffers
TEXT
INPUT
MODE
keyboard acts like a typewriter, every key pressed places a character in the file
ESC
use the ESCAPE key to leave text input mode
:quit!
:wq
discard changes & quit editor
UNIX Shell
write your file to the disc & quit editor

Command mode	Input mode
You can **do** the following: -Change current position(move the cursor). -Delete. -Show file name. -Save and quit. -Undo & Redo. -Run shell command.	Enter(type or write): - text, data, code.

To change the current position(move the cursor):

in the command mode use the arrow in the keyboard

↑↓ → ←

Vi Text Editor keys:

Delete

- x delete current character
- X delete previous character(backspace)
- dw delete word forward
- dd delete complete line
- d0 delete from cursor to beginning of line
- D$ delete to the end of the line

Vi Text Editor keys:

Ctrl+g Show file name

Save and quit

ZZ or :wq	**Save and quit**	Then press ENTER
:w	**Save only**	
:q	**Quit (nothing added to save)** used when there are NO unsaved changes. If you need to save, vi warns you: E37: no write since last change(add ! To override)	
:q!	**Quit and don't save**	

Vi Text Editor keys:

Undo and Redo

- **u** Undo
- **Ctrl+r** Redo

Run shell command

:!command

For example:
:!id
:!ls
:!ps

Shell script

- **What is Shell Script**

  "*Shell Script is* ***series of command*** *written* ***in plain text file****.* "

- **Why to Write Shell Script?**
  - Shell script can take input from user, file and output them on screen.
  - Useful to create our own commands.
  - Save lots of time.
  - To automate some task of day today life.
  - System Administration part can be also automated.

Getting started with Shell Programming

- ***How to write shell script***

1) Use any editor like vi or mcedit to write shell script.
2) After writing shell script set execute permission for your script

syntax:

chmod *permission your-script-name*

chmod 755 test

Getting started with Shell Programming (cont.)

3) Execute your script as

syntax:

bash your-script-name
sh your-script-name
./your-script-name

$ bash test
$ sh test
$ ./ test

Getting started with Shell Programming (cont.)

```
$ vi first
#
# My first shell script
#
clear
echo "Knowledge is Power"
```

After saving the above script, you can run the script as follows:

```
$ chmod 755 first
$ ./first
```

Getting started with Shell Programming (cont.)

$ vi first	Start vi editor
# # **My first shell script** #	# followed by any text is considered as comment. Comment gives more information about script, logical explanation about shell script. ***Syntax:*** # comment-text
clear	clear the screen
echo "Knowledge is Power"	To print message or value of variables on screen, we use echo command, general form of echo command is as follows ***syntax:*** echo "Message"