UNIX

VI Editor

Lesson Objectives

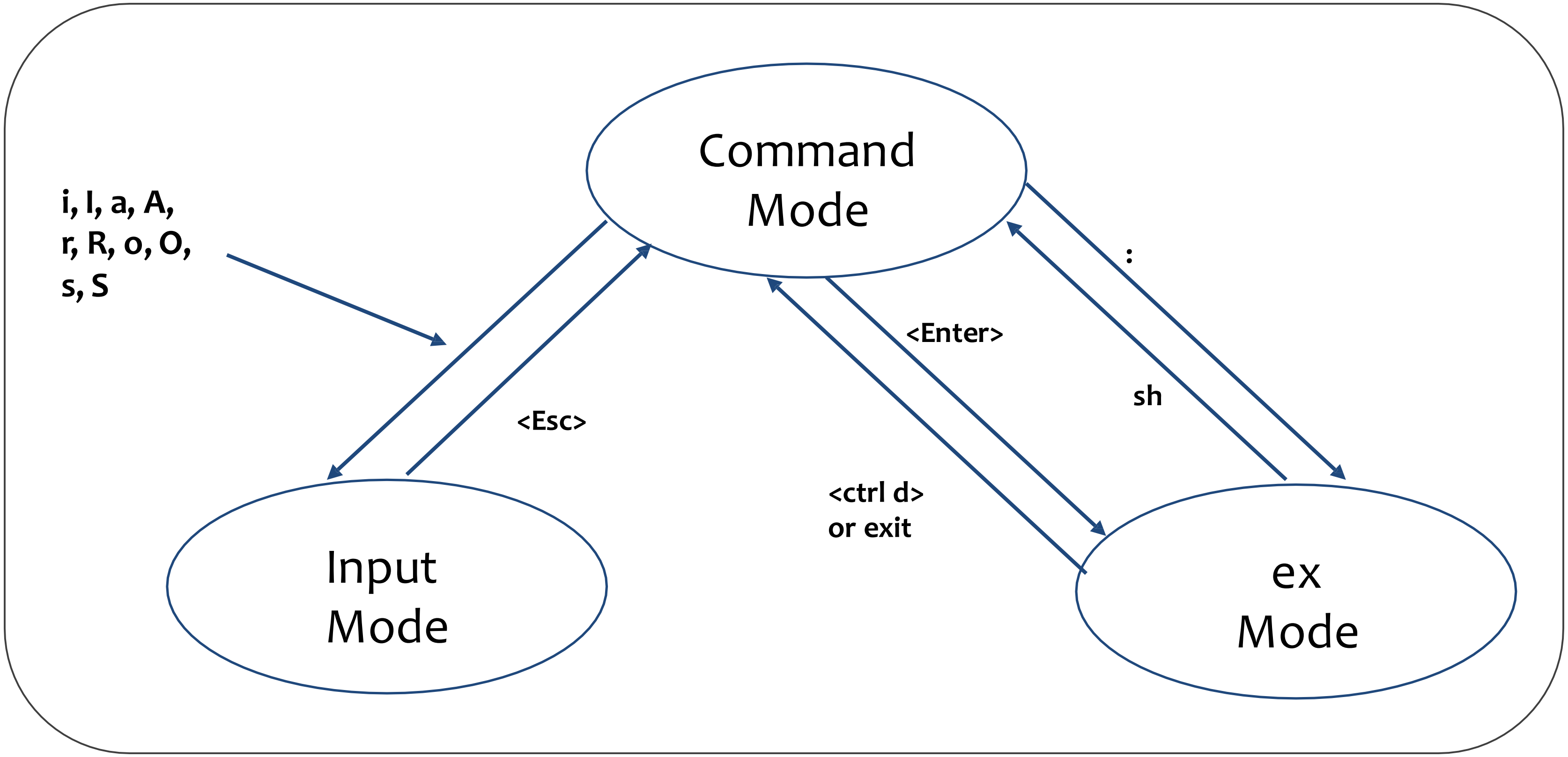
- **Different modes of vi editor**
  - Input
  - Command
  - Esc mode
- **Input mode commands**
- **Vi editor – Save & Quit**
- **Navigation commands**
- **Paging functions**
- **Search and repeat commands**

Lesson Objectives

- **Vi editor – Other Features**
- **SED – Introduction to SED**
- **SED Commands**

Introduction

- **Three Modes of Vi Editor are:**



Contents

Command	**Function**
i	Insert text to left of cursor
I	Inserts text at beginning of line
a	Appends text to right of cursor
A	Appends text at the end of line
o	Opens line below
O	Opens line above

Contents (contd..)

Command	**Function**
r	Replaces single character under cursor with character (no<Esc>)
R	Replace text from cursor to right

5.3: Vi Editor – Save & Quit

Description

- **From input mode to command mode press <Esc>**
- **From command mode:**

To Save	: w
To Quit	: q
To Quit without saving	: q!
To save & quit	: wq
or	: x

Overview

Command	**Function**
h	Moves cursor left
j	Moves cursor down
k	Moves cursor up
l	Moves cursor right
^	Moves cursor to beginning of first
$	Moves cursor to end of line
b	Moves cursor backwards to beginning of word
e	Moves cursor forward to end of word
w	Moves cursor forward to beginning of word

Details

Command	Function
<Control-f>	Full page forward
<Control-b>	Full page backward
<Control-d>	Half page forward
<Control-u>	Half page backward

Details

Commands	**Functions**
/pat	Searches forward for pat
?pat	Searches backward for pattern pat
n	Repeats search in the same direction along which the previous search was made (no repeat factor)
N	Repeats search in a direction opposite to that which the previous search was made (no repeat factor)

5.8: SED – Introduction to SED

- **SED("Stream EDitor") is a non-interactive stream oriented editor for filtering and transforming text.**
- **It reads input line by line, applying the operation which has been specified via the command line (or a sed script), and then outputs the line in a terminal or file.**
- **When to use SED?**
  - To automate editing actions to be performed on one or more files.
  - To simplify the task of performing the same edits on multiple files.
  - To write conversion programs.

Invoking SED using Command Line

- **Syntax of SED Command**

  sed *options sed-script* filename

  - sed-script -> sed can use regular expressions for manipulating text on the input file.
  - Options:
    - -n Suppress the default output.
    - -e Script is an edit command for sed . Used to specify multiple instructions by preceding with –e.

Invoking SED using script file

- **Create a script file with long editing instructions to perform task on an input file.**
- **The sed command will then be used as:**
- **sed –f scriptfile file**
- **For Example,**

  sed –f sedsrc text

  - *sedsrc* – script file contains editing instructions.
  - *text* – input file consists of data.

Substitute Command

- **/s Command**
  - The substitute command changes all occurrences of the regular expression into a new value
- **Syntax:**

```
sed ’s/old/new’ file
```

- **For Example:**

```
sed 's/Hi/Hello' data
```

would substitute the occurrence of the word hi to hello in "data" file.

Multiple Instructions in SED Command

- **There are three ways to specify multiple instructions on the command line:**
  - Separate instructions with semicolon
    - sed ‘s/ WB/, West Bengal/; s/ BH/, Bihar/’ text
  - Precede each instruction by –e
    - sed –e ‘s/ WB/, West Bengal/’ -e ‘s/ BH/, Bihar/’ text
  - Use the multiline entry capability
    - sed ‘

      s/ WB/, West Bengal/

      s/ BH/, Bihar/’ text

Other options

- **-n option**
  - Suppresses the display of all input lines with print command ‘p’
  - For example
    - *$ sed –n ‘s/WB/WestBengal/p’ text* - prints only the affected lines
- **d command**
  - Used to delete all lines and also to delete specific lines by either using regular expression or line number.
    - **For Example:** $ sed d temp # deletes all lines
- **-i option**
  - Used to substitute for the current given file. i.e the original file is changed.
- **$ sed = temp # number each line of a file.**

Other options

- **-i option**
  - Used to edit content and save for the given file. In this case original file is changed.
    - Ex: $sed –i ‘s/^/\t’ file
  - If back up of original file is to be maintained then extension to –i option can be used. Extension used can be anything. Its just acts like another file which contains the original content.
    - Ex: $sed –i.temp ‘s/^/\t/’ emp

More Commands

Sl.No	Command	Description
1	**sed 10q temp**	**print first 10 lines of file(emulates behavior of "head")**
2	**sed q temp**	**print first line of file(emulates "head -1")**
3	**sed '$!d' temp # method 1** **sed -n '$p' temp # method 2**	**Prints last line of a file(emulates "tail -1")**
4	**sed '$!N;s/\n/ /’ temp**	**join pairs of lines side-by-side (like "paste")**
5	**sed '$!N; s/^\(.*\)\n\1$/\1/; t; D' temp**	**Delete all lines except duplicate lines (emulates "uniq -d").**
6	**sed '1,10d' temp**	**delete the first 10 lines of a file**

Summary

- **In vi editor:**
  - esc key is used to change the mode.
  - esc - $ is used to move cursor at the end of the file.
  - wq is used to write (save) and quit from the file.
  - q! is used to quit without saving.
- **SED**
  - Commands used to process the data.
    - Command line instruction
    - Script file based instruction

Review Questions

- **What command is used to copy the lines in vi editor?**

- **___________command search for the pattern in vi editor in forward direction?**

- **What is the <control b> command used for?**

- **VI editor is stream Oriented?**
  - True
  - False