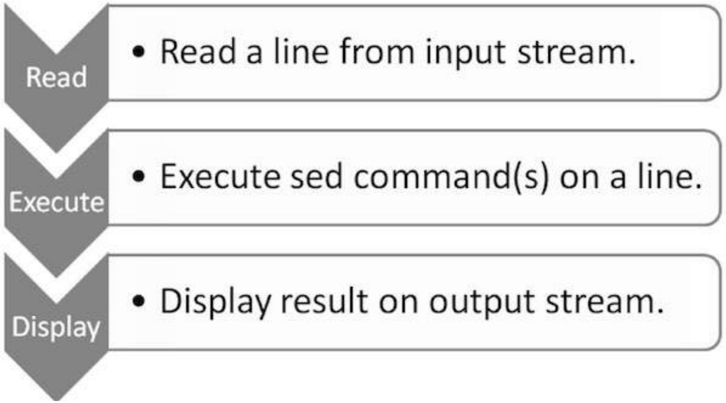
Introduction to sed

What is sed ?

- sed command stands for stream editor.
- sed command perform lot’s of function on file like
    - Viewing file content
    - Searching
    - find and replace
    - insertion or deletion
- sed also supports regular expression which allows it perform complex pattern matching.
- Advantage of sed over vi/vim editors:
    - Edit files without opening it.

Syntax for sed command

- **Syntax for sed command:**
    - **sed [options] ‘commands’ file-to-work-with-sed**
- **How sed works ?**



- Read a line from input stream.
- Execute sed command(s) on a line.
- Display result on output stream.

Viewing file content with sed command

Sed command

- Functions of sed command on a file:
  - Viewing file content
  - Searching
  - find and replace
  - insertion or deletion

- sed also supports regular expression which allows it perform complex pattern matching.

Viewing file content with Sed command

- Basic syntax is:
  - sed [options] ‘commands’ file-to-work-with-sed
- sed without any options and commands
  - sed ‘ ‘ file-to-work-with-sed
- sed ‘p’ file-to-work-with-sed
- sed -n ‘p’ file-to-work-with-sed
- sed -n '1p‘ file-to-work-with-sed
- sed -n '1,5p‘ file-to-work-with-sed
- sed -n '1,+4p' file-to-work-with-sed
- sed -n '1~2p' file-to-work-with-sed
- sed '1~2d' file-to-work-with-sed
- sed -i '1~2d' file-to-work-with-sed
- sed -i.bak '1~2d‘ file-to-work-with-sed

Searching content with sed command

Sed command

- Functions of sed command on a file:
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Find and replace with sed command

Sed command

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Sed command

- sed [options] ‘commands’ file-to-work-with-sed
- Substitute Word Once
- Substitute All Words
- Substitute Only 2nd Occurrence of Word
- Substitute Only If The Line Matches with Given Pattern

Insertion and Deletion with sed command

(Complete course is present in Udemy.
Udemy link is provided in the description part of this video)

Sed command

- Functions of sed command on a file:
  - Viewing file content
  - Searching
  - find and replace
  - insertion or deletion

- sed also supports regular expression which allows it perform complex pattern matching.

Insertion and Deletion with sed command

- sed [options] ‘commands’ file_to_work_with_sed
- Insert a new line   (sed ‘line_noi’ file_name)
    - Use –i option for permanent change
    - (Inserting a new line before particular line)
- Insert a new line after particular line
- Insert a new line after last line
- Insert a new line before any specific line
- Insert a new line after any specific line
- Delete a line or Delete a any specific line

sed command with regex or regular expressions

Introduction to sed command with regex

What is regex ?

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Regex is the shortcut for regular expression.
If any expression uses a pattern then that expression is called regex.

What is pattern ?
Pattern is a string which represents more than one word.

Sed command with regex

- Functions of sed command on a file:
  - Viewing file content
  - Searching
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Special characters in regex

How to match Special characters/symbols ?

- The special characters in regex are:
  - . * \+ \? \ | ^ $ [ ] { } ( )
- If we use these characters/symbols directly then we wont get the expected results.
- We need to escape these special characters using the backslash character (\).

Special characters \s \t . * \+ \? and \

Usage of \s \t . * \+ \? and \

- The special characters in regex are:
  - \s \t . * \+ \? and \
- \s --> Matches for space
- \ --> Escape character
- \t --> Matches for tab
- . --> Matches any character, excluding newline.
- * --> Matches a sequence of zero or more instances of matches for the preceding regular expression
- \+ --> As *, but matches one or more.
- \? --> As *, but only matches zero or one.

Special characters ^ $

sed --> Regex with ^,$ and ^$

and

Deleting Empty lines

Special characters [] {} and ()

Usage of [] {} and ()

- [ ] --> Matches any single character in list
- { } --> Matches for required number of repetations.
  - \{i\}
  - \{i,j\}
  - \{i,\}
- ( ) --> This will search for zero or more whole sequence.
  - put\+ --> look for only put string
  - \(put\)\+ --> Look for put or putput or putputput …

One video to understand the usage of sed cut awk and arrays with an example of:

Simple shell script to get all available git versions from official GIT website

Automate the installation of required Git version using bash shell script

Thank you

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