Command Line Operations - Grep, Find, and Regex

Grep Commands

Command Line Operations - Parse, Find, and Regex ### Parse Commands 1) Find all lines c

1) Find all lines containing the word error in a specific file.

```
grep "error" filename
```

2) Search for a pattern recursively in all files under a directory.

```
grep -r "pattern" /path/to/directory
```

3) Search for a word ignoring case sensitivity.

```
grep -i "word" filename
```

4) Count the number of occurrences of a word in a file.

```
grep -c "word" filename
```

5) Display line numbers where the word fail appears in a file.

```
grep -n "fail" filename
```

6) Find lines matching a regular expression pattern (e.g., ^[a-z]).

```
grep "^[a-z]" filename
```

7) Exclude lines containing the word skip while searching.

```
grep -v "skip" filename
```

8) Search for a list of words (e.g., error, fail) in a file.

```
grep -E "error|fail" filename
```

9) Search for lines ending with a specific word (e.g., done).

```
grep "done$" filename
```

Find Commands

1) Find and list all .txt files in a directory and its subdirectories.

```
find /path/to/directory -type f -name "*.txt"
```

2) Find all files larger than 50 MB in a directory.

```
find /path/to/directory -type f -size +50M
```

3) Find all empty files and directories.

```
find /path/to/directory -empty
```

4) Find all files modified in the last 7 days and display their paths.

```
find /path/to/directory -type f -mtime -7
```

5) Find files with .log extension and delete them.

```
find /path/to/directory -type f -name "*.log" -exec rm {} \;
```

6) Find and move all .jpg files to another directory.

```
find /path/to/source -type f -name "*.jpg" -exec mv {} /path/to/destination/ \;
```

7) Find all symbolic links and display their targets.

```
find /path/to/directory -type l -exec ls -l {} \;
```

8) Find all files not accessed in the last 30 days and compress them.

```
find /path/to/directory -type f -atime +30 -exec gzip {} \;
```

9) Find files with permission 644 and change their permission to 600.

```
find /path/to/directory -type f -perm 644 -exec chmod 600 {} \;
```

10) Find files owned by a specific user (e.g., john).

```
find /path/to/directory -type f -user john
```

Regex Commands

1) Find all files with names starting with a number.

```
find /path/to/directory -type f -regex '\./[0-9].*'
```

2) Search for files with names ending in .jpg or .png.

```
find /path/to/directory -type f -regex '.*\.(jpg\|png)'
```

3) Find files larger than 1 GB whose names contain digits.

```
find /path/to/directory -type f -size +1G -regex '.*[0-9]+.*'
```

4) Search for directories with names starting with backup.

```
find /path/to/directory -type d -regex '.*backup.*'
```

5) Extract all unique email addresses from a file.

```
grep -oE "[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}" filename | sort -u
```

6) Find all lines in a log file that contain a valid timestamp (e.g., 2024-11-26 14:32:45).

```
grep -P "\d{4}-\d{2}-\d{2} \d{2}:\d{2}:\d{2}" logfile
```

7) Extract all valid IPv4 addresses from a file.

```
grep -oE '\b(?:[0-9]{1,3}\.){3}[0-9]{1,3}\b' filename
```