Unix?

Unix is a multiuser, multitasking operating system (OS) designed for flexibility. Which is made up of a few essential programs including KERNEL, SHELL, and FILE SYSTEM.

In which KERNEL is the heart of the operating system.

a master control program that provides services to start and end programs. It also handles low-level operations, such as allocating memory, managing files, responding to system calls, and scheduling tasks. (Task scheduling is necessary to avoid conflicts when multiple programs attempt to access the same resource at the same time)

From <https://www.techtarget.com/searchdatacenter/definition/Unix>

Users interact with the Unix environment through the shell

1. What are the commonly used commands on Unix or Linux operating system

* To create a directory, delete a directory: % mkdir , % rmdir
* To create a new file: % vi > filename
* To open created file: $ cat < filename
* To display the content of the file: $ cat file1 file2 ……File\_N

E.g.- $ cat emp1 emp2 emp3…empn

* To change or append data in the file:> $ cat >> filename
* % touch command: Mainly used to create zero-byte files.

$ touch saisri.txt

* Deleting file: $ rm filename.txt

Ex: rm saisri.txt

* To delete a file with permissions: $rm -I saisri.txt
* To delete a file forcefully: $rm -f saisri.txt
* To read a file, edit a file: $cat myfile.txt (which displays the content of a file)
* Read only the top few and bottom few lines of a file
  + $ head myfile.txt
  + $ tail myfile.txt
  + $ head -10 myfile.txt
  + $ tail -10 myfile.txt
* How do you search for a particular word in a file in Unix
  + grep word filename.txt
* How do you rename a file in Unix
  + mv filename.txt newname.txt
* How do you find the size of a directory or file
  + du -sh path
  + du -h --maxdepth=1 path -> to find the size of sub-directories
* How to copy a file from one directory to another directory
  + $cp myfile.txt sageit
* How do you move from one to one
  + $mv myfile.txt sageit
* How do you change permissions for a file and directory

chmod permission number filename.txt

* What is a group, how do you create a group and assign it to a directory
  + A group is a collection of users who can share files and other system resources. For example, users who work on the same project could be formed into a group. A group is traditionally known as a UNIX group.
  + To create a new group: $groupadd -g group-ID group-name
* What are the three kinds of levels of permissions you have in a Unix
  + Read, write, and execute.
  + Owner permissions
  + Group permissions
  + User permissions
* What is the use of the grep command?
* **grep** - print lines matching a pattern
* grep searches the named input FILEs (or standard input if no files are named, or if a single hyphen-minus (-) is given as file name) for lines containing a match to the given PATTERN. By default, grep prints the matching lines.
* grep [OPTIONS] PATTERN [FILE...]
* grep [OPTIONS] [-e PATTERN | -f FILE] [FILE...]
* What is the use of the find command?
  + **find**- search for files in a directory hierarchy
  + find searches the directory tree rooted at each given file name by evaluating the given expression from left to right, according to the rules of precedence, until the outcome is known (the left-hand side is false for and operations, true for or), at which point find moves on to the next file name.
  + find [-H] [-L] [-P] [-D debugopts] [-Olevel] [path...] [expression]
* What is the use of the awk command?

The awk command is a powerful text processing tool used in Unix and Linux systems. It allows users to search, extract, manipulate, and transform text data from files or standard input, and produce customized reports.Some common uses of awk include:

* Selecting specific fields or columns from a file, based on a delimiter or separator.
* Filtering records based on specific criteria, such as a pattern or a range of values.
* Modifying or transforming data by replacing, deleting, or adding text.
* Performing mathematical calculations and aggregations on numerical data.
* Generating reports, statistics, and summaries of data.
* The awk command can be used in combination with other Unix utilities, such as grep, sed, and sort, to create powerful and flexible text processing pipelines.
* How do we connect different commands in Unix(how do we pass the output of one command as input to another command)

By using pipe”|” symbol we pass output of one command as input to another command

Example: cat filename1 | vi filename2 | grep word filename

* What is the use of ssh command in Unix
* The ssh command (which stands for "Secure Shell") is a widely-used tool in Unix and Unix-like operating systems (such as Linux and macOS) that allows a user to securely connect to a remote computer over a network.
* Here are some common uses of the ssh command:
* Remote login: ssh can be used to log in to a remote computer securely, providing encrypted communication between the two systems.
* File transfer: ssh also supports secure file transfer between systems using the SCP (Secure Copy) or SFTP (Secure File Transfer Protocol) protocols.
* Tunneling: ssh can be used to create a secure tunnel between two systems, allowing encrypted traffic to be forwarded between them.
* Remote command execution: ssh can be used to execute commands on a remote system without requiring a login session.
* Overall, the ssh command provides a secure way to communicate with and manage remote systems, which is especially important for sensitive data or systems that need to be accessed remotely.
* What is the use of group command in unix

Command to calculate the size of a file: ls -alt