What is operating system?

An operating system is an interface between computer and hardware. It’s an software which performs basic task like file management, memory management, process management handling the inputs and outputs.

Or

An Operating System performs all the basic tasks like managing files, processes, and memory. Thus operating system acts as the manager of all the resources, i.e. resource manager. Thus, the operating system becomes an interface between user and machine.

What are the types of OS?

1. Batch Operating System

2. Time-Sharing Operating Systems

3. Distributed Operating System

4. Network Operating System

Explain the history of Linux?

In 1991, Linus Torvalds a student at the university of Helsinki, Finland, thought to have a freely available academic version of Unix started writing its own code. Later this project became the Linux kernel. He wrote this program specially for his own PC as he wanted to use Unix 386 Intel computer but couldn't afford it. He did it on MINIX using GNU C compiler. GNU C compiler is still the main choice to compile Linux code but other compilers are also used like Intel C compiler.

He started it just for fun but ended up with such a large project. Firstly he wanted to name it as 'Freax' but later it became 'Linux'.

He published the Linux kernel under his own license and was restricted to use as commercially. Linux uses most of its tools from GNU software and are under GNU copyright. In 1992, he released the kernel under GNU General Public License.

Linux Today

Today, supercomputers, smart phones, desktop, web servers, tablet, laptops and home appliances like washing machines, DVD players, routers, modems, cars, refrigerators, etc use Linux OS.

Difference between Linux and Windows?

| Linux | Windows |
| --- | --- |
| Linux is a open source operating system. | While windows are the not the open source operating system. |
| Linux is free of cost. | While it is costly. |
| It’s file name case-sensitive. | While it’s file name is case-insensitive. |
| In linux, monolithic kernel is used. | While in this, micro kernel is used. |
| Linux is more efficient in comparison of windows. | While windows are less efficient. |
| There is forward slash is used for Separating the directories. | While there is back slash is used for Separating the directories. |
| Linux is widely used in hacking purpose based systems. | While windows does not provide much efficiency in hacking. |
| There are 3 types of user account –  (1) Regular , (2) Root , (3) Service account | There are 4 types of user account –  (1) Administrator , (2) Standard , (3) Child , (4) Guest |
| Root user is the super user and has all administrative privileges. | Administrator user has all administrative privileges of computers. |
| Linux file naming convention in case sensitive. Thus, sample and SAMPLE are 2 different files in Linux/Unix operating system. | In Windows, you cannot have 2 files with the same name in the same folder. |

Make a list of commands on linux

touch <filename>

To create new file

ls

Check the file to display the list of files or directory presents inside the current working directory.

pwd

It will display the presently working directory

cd ..

Change the directory

mkdir <directory name>

Creates new directory

cd <directory name>

Check directory created or not.

Whoami

Who is the user like it will display the user.

vi <filename>

nano <filename>

To open the editor

cat <filename>

To display the content

cat > filename

If you dont want the old data or if you want to delete and need to add the new data

cat >> filename

You can add new data along with the old data.

cp from destination

You can copy the file or data of the file.

cp -r from/destination/

Copy the directory from place to another.

mv from destination

It’s used to move the data from one file to another file.

mv <old filename> <new filename>

Rename the filename.

rm <filename>

rmdir <Directory name>

Delete the file

Delete the directory

rm -rf

To remove the file recursively

For instance, when creating bunch of files, and wanted to remove group of files, then use this command.

Touch a b c d e f

rm \*

rm -f\*