1. Linux System

Linux.org (<https://www.linux.org/>)

The Linux Documentation Project (<https://tldp.org/>)

Linux Journal (<https://www.linuxjournal.com/>)

Components of Linux Operating System,

The Linux operating system consists of the following components:

* The Linux kernel: It is the core component of the operating system and communicates between the hardware and software.
* System Libraries: They provide basic functionality for the user-space programs.
* System Utilities: They provide functionality for managing the system, such as managing files, system processes, and the network.
* User-space programs: They are the applications that run on the Linux operating system.

Kernel Mode vs User Mode:

The Linux operating system uses two modes of operation: kernel mode and user mode.

* In kernel mode, the operating system has complete control over the hardware and can access all memory and I/O resources.
* In user mode, the operating system restricts the program's access to hardware and system resources to prevent it from crashing the system.

Linux Basic Features:

* Multi-user support: Multiple users can log into the system and run their own processes.
* Multi-tasking: The operating system can run multiple processes at the same time.
* Virtual memory support: Linux supports virtual memory, which allows the operating system to run applications larger than the available physical memory.
* Portable: Linux can run on a wide range of hardware architectures, including x86, ARM, and PowerPC.

Linux System Architecture,

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GNU Linux Distribution:

GNU/Linux is a distribution of the Linux operating system that is built using software from the GNU Project. The term "GNU/Linux" is used to emphasize the relationship between the operating system and the GNU Project.

Filesystem Hierarchy Standard:

The Filesystem Hierarchy Standard (FHS) defines the structure of file systems in Linux systems. The FHS specifies where files and directories should be located on a Linux system, such as /bin for essential user command binaries, /etc for system-wide configuration files, and /home for user home directories.

1. Linux Environment Setup

