**Que1: Find out the History, philosophy, Community, Distributor?**

**Ans: Linux History:**

**Evolution of Computer:** In earlier days, computers were as big as houses or parks. So you can imagine how difficult it was to operate them. Every computer has a different operating system which made it completely worse to operate on them. Every software was designed for a specific purpose and was unable to operate on other computer. It was extremely costly and normal people neither can afford it nor can understand it.

**Evolution of UNIX:** In 1969, a team of developers of Bell Labs started a project to make common software for all the computers and named it as 'Unix'. It was simple and elegant, used 'C' language instead of assembly language and its code was recyclable. As it was recyclable, a part of its code now commonly called 'kernel' was used to develop the operating system and other functions and could be used on different systems. Also its source code was open source. UNIX was only found in large organizations like government, university, or larger financial corporations with mainframes and minicomputers (PC is a microcomputer).

**UNIX Expansion:** In eighties, many organizations like IBM, HP and dozen other companies started creating their own UNIX. It results in a mess of UNIX dialects. Then in 1983, Richard Stallman developed GNU project with the goal to make it freely available UNIX like operating system and to be used by everyone. But his project failed in gaining popularity. Many other UNIX like operating system came into existence but none of them was able to gain popularity.

**Evolution 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 'Freaks' 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 Philosophy:** Linux has a philosophy that underlies the entire operating system and which strongly affects the way in which administrators and advanced users interact with it. This philosophy is very similar to that of its UNIX parenthood. It is called “The Linux Way.”

Whether we know it or not, most of us have some sort of philosophy of life. That may be as simple as, “Be kind to others,” or it might be a very complex life philosophy. Linux treats everyone equally and allows everyone the maximum amount of power. That is egalitarian. Other operating systems are elitist and exclusive because they withhold or hide their power behind an inflexible Graphical User Interface that allows one to do only what the developers think we should be allowed to do. The Linux philosophy is epitomized by the ease with which one can open a terminal emulator to access the CLI and its concomitant power. Linux has several fine GUI desktop environments from which to choose so that every user can choose the one she likes best. And yet the power of the CLI is only a click away with many choices for both the terminal emulator and the shell. For even more flexibility there is the screen program which provides for multiple shell sessions within a single terminal session. This is particularly useful when logging in remotely because if your connection fails the screen session continues along with all of the programs running in the various shells launched within the screen session. I still use the GUI desktop but as much to provide me with the flexibility of multiple console sessions with screen running in them as to run programs like LibreOffice, Firefox and Thunderbird.

**Linux Community:** A distribution is largely driven by its developer and user communities. Some vendors develop and fund their distributions on a volunteer basis, [Debian](https://en.wikipedia.org/wiki/Debian) being a well-known example. Others maintain a community version of their commercial distributions, as [Red Hat](https://en.wikipedia.org/wiki/Red_Hat) does with [Fedora](https://en.wikipedia.org/wiki/Fedora_(Linux_distribution)), and [SUSE](https://en.wikipedia.org/wiki/SUSE) does with [openSUSE](https://en.wikipedia.org/wiki/OpenSUSE).

In many cities and regions, local associations known as [Linux User Groups](https://en.wikipedia.org/wiki/Linux_User_Group) (LUGs) seek to promote their preferred distribution and by extension free software. They hold meetings and provide free demonstrations, training, technical support, and operating system installation to new users. Many Internet communities also provide support to Linux users and developers. Most distributions and free software / open-source projects have [IRC](https://en.wikipedia.org/wiki/Internet_Relay_Chat) chat rooms[. Org](https://en.wikipedia.org/wiki/LinuxQuestions.org) and the various distribution specific support and community forums, such as ones for [Ubuntu](https://en.wikipedia.org/wiki/Ubuntu_(operating_system)), [Fedora](https://en.wikipedia.org/wiki/Fedora_(operating_system)), and [Gentoo](https://en.wikipedia.org/wiki/Gentoo_Linux). Linux distributions host [mailing lists](https://en.wikipedia.org/wiki/Mailing_list).

Although Linux distributions are generally available without charge, several large corporations sell, support, and contribute to the development of the components of the system and of [free software](https://en.wikipedia.org/wiki/Free_software). An analysis of the Linux kernel showed 75 percent of the code from December 2008 to January 2010 was developed by programmers working for corporations, leaving about 18 percent to volunteers and 7% unclassified. Major corporations that provide contributions include [Dell](https://en.wikipedia.org/wiki/Dell), [IBM](https://en.wikipedia.org/wiki/IBM), [HP](https://en.wikipedia.org/wiki/Hewlett-Packard), [Oracle](https://en.wikipedia.org/wiki/Oracle_Corporation), [Sun Microsystems](https://en.wikipedia.org/wiki/Sun_Microsystems) (now part of Oracle) and [Nokia](https://en.wikipedia.org/wiki/Nokia). A number of corporations, notably Red Hat, [Canonical](https://en.wikipedia.org/wiki/Canonical_Ltd.) and [SUSE](https://en.wikipedia.org/wiki/SUSE), have built a significant business around Linux distributions.

The [free software licenses](https://en.wikipedia.org/wiki/Free_software_licenses), on which the various software packages of a distribution built on the Linux kernel are based, explicitly accommodate and encourage commercialization; the relationship between a Linux distribution as a whole and individual vendors may be seen as [symbiotic](https://en.wikipedia.org/wiki/Symbiosis). One common [business model](https://en.wikipedia.org/wiki/Business_model) of commercial suppliers is charging for support, especially for business users. A number of companies also offer a specialized business version of their distribution, which adds proprietary support packages and tools to administer higher numbers of installations or to simplify administrative tasks.

**Linux Distributor:** Developers maintain many popular Linux distributions today. Among the longest-standing is Debian, a free and open-source distribution that has 50,000 software packages. Debian inspired another popular distribution, Ubuntu, funded by Canonical Ltd. Ubuntu uses Debian’s deb package format and package management tools, and Ubuntu’s developers push changes back upstream to Debian.

A similar relationship exists between Red Hat, [Fedora](https://www.digitalocean.com/community/tags/fedora), and CentOS. Red Hat created a Linux distribution in 1993, and ten years later split its efforts into Red Hat Enterprise Linux and Fedora, a community-based operating system that utilizes the Linux kernel and elements from the GNU Project. Red Hat also has a relationship with the CentOS Project, another popular Linux distribution for web servers. This relationship does not include paid maintenance, however. Like Debian, CentOS is maintained by a community of developers.