

Introduction :

Linux is an open-source, Unix-like operating system kernel that serves as the foundation for various distributions, including Ubuntu. Developed by Linus Torvalds in 1991, Linux has evolved into a powerful OS used in servers, desktops, and embedded systems.

Ubuntu, a popular Linux distribution, was first released in 2004 by Canonical Ltd. It is based on Debian and is designed for ease of use. Ubuntu follows a release cycle, with Long-Term Support (LTS) versions released every two years and standard versions every six months. Some of the latest versions include Ubuntu 22.04 LTS (Jammy Jellyfish) and Ubuntu 23.10 (Mantic Minotaur).

- In my virtual machine I am using kali linux 2024.2 release on 5 june 2024 and it includes GNOME 46, offering a refined user experience that builds on the enhancements

Features of Ubuntu :

- **Open-Source and Free:** Ubuntu is completely free and open-source, allowing users to modify and redistribute it.
- **User-Friendly Interface:** Comes with GNOME as the default desktop environment , but supports others like KDE and XFCE.
- **Regular Updates:** Receives security patches and updates regularly, ensuring system stability.
- **Software Support:** Includes essential applications like LibreOffice, Firefox, and Thunderbird, with additional software available via APT package management.
- **Security:** Offers built-in firewall and security features, reducing vulnerability to malware.
- **Customization:** Users can customize themes, icons, and layouts extensively.
- **Community Support:** A large community and extensive documentation make troubleshooting easy.
- **Low System Requirements:** Can run efficiently on older hardware compared to Windows.

Difference Between Ubuntu and Windows OS :

Feature	Ubuntu	Windows
Customization	Highly customizable	Limited customization
Security	More secure, fewer viruses	More vulnerable to malware
Performance	Runs efficiently on older PCs	Requires higher system specs
Software	Uses open-source applications	Supports a wide range of commercial software
File System	Uses ext4, supports NTFS	Uses NTFS, supports FAT32
Updates	Regular and fast updates	Updates take longer to roll out
Cost	Free and open- source	Paid , proprietary software
User Interface	GNOME/KDE options available	Single default UI with theming