

4ITRC2 Operating System Lab

Lab Assignment - 1

1. Introduction

Linux is an open-source, Unix-like operating system kernel that powers many distributions (distros). Ubuntu is one of the most popular Linux distributions, developed by Canonical Ltd., known for its ease of use and stability.

Linux was created by Linus Torvalds in 1991. Ubuntu was first released in 2004 by Canonical, based on Debian.

Ubuntu releases new versions every six months. LTS (Long-Term Support) versions receive 5 years of updates (e.g., Ubuntu 22.04 LTS). Regular releases get updates for 9 months (e.g., Ubuntu 23.10).

2. Features of Ubuntu

Ubuntu comes with several key features that make it a preferred choice for many users. It is free and open-source, providing a secure environment with built-in firewalls and minimal vulnerability to viruses. Ubuntu offers a user-friendly experience with the GNOME desktop environment but is also highly customizable, allowing users to install different desktop environments like KDE and XFCE. It is lightweight and efficient, making it ideal for older hardware, and includes pre-installed software like LibreOffice, Firefox, and Terminal. Frequent updates ensure better system security and performance.

3. Difference between ubuntu and windows OS

When comparing Ubuntu with Windows, there are several key differences. Ubuntu is free and open-source, while Windows requires a paid license. Ubuntu is considered more secure, as it has fewer

vulnerabilities and does not require antivirus software. It allows extensive customization and relies more on the command line, whereas Windows is GUI-based and offers better compatibility with commercial software and gaming. Ubuntu is lightweight and runs well on older systems, whereas Windows demands higher system resources. While Windows supports a wide range of native applications, Ubuntu relies on tools like Wine and Proton to run Windows programs. Additionally, Windows enforces automatic updates, whereas Ubuntu gives users more control over updates.