Normi – OS

Introduction:

The NORMI-OS is GUI based Upgraded linux based Operating system which can Impress normal people to use linux based OS

Linux can serve as the basis for nearly any type of IT initiative, including containers, cloud-native applications, and security. It's at the core of some of the biggest industries and businesses in the world from knowledge-sharing websites like Wikipedia to the New York Stock Exchange to mobile devices running Android (which is a specific-use distribution of the Linux kernel with complimentary software). Linux has grown over the years to be the de facto standard for running highly available, reliable, and critical workloads in datacenters and cloud deployments. It has multiple use cases, distributions, target systems and devices, and capabilities all depending on your needs and workloads.

Very easy. Almost every Linux distribution comes with a graphic-user interface (GUI) that makes point-and-click actions very easy. These GUIs revolutionized computing during the OS wars in the late 1970s by humanizing software making it more visual. More real. But at some point, you might need to ask the computer to do something outside the prepackaged bucket of actions a GUI can perform. At that point, you need to open up the command line the strips of code you see tech-savvy geniuses in TV and movies feverishly typing away at. But that Hollywood treatment makes the command line (a staple of open source OSs) seem like something impossible to master.

The truth is, the command line is the most straightforward use of a computer. But there are some Linux distros like our latest release of Red Hat Enterprise Linux that make using open source OSs even easier.

Objectives:

To Develop a GUI based Upgraded linux based Operating system named as Normi-OS which can Impress normal people to use linux based OS.

Abstract:

Linux is a family of open-source Unix-like operating systems based on the Linux kernel, an operating system kernel first released on September 17, 1991, by Linus Torvalds. Linux is typically packaged as a Linux distribution, which includes the kernel and supporting system software and libraries, many of which are provided by the GNU Project. Many Linux distributions use the word "Linux" in their name, but the Free Software Foundation uses the name "GNU/Linux" to emphasize the importance of GNU software, causing some controversy. Popular Linux distributions include Debian, Fedora Linux, and Ubuntu, the latter of which itself consists of many different distributions and modifications, including Lubuntu and Xubuntu. Commercial distributions include Red Hat Enterprise Linux and SUSE Linux Enterprise. Desktop Linux distributions include a windowing system such as X11 or Wayland, and a desktop environment such as GNOME or KDE Plasma. Distributions intended for servers may omit graphics altogether, or include a solution stack such as LAMP. Because Linux is freely redistributable, anyone may create a distribution for any purpose. GUI based Upgraded linux based Operating system named as Normi-OS which can Impress normal people to use linux based OS. This OS includes the following modules : Baseline Profile Files Module, Buliding personal ISO Module, Multiple profile Building Module, Buliding Normi-OS ISO Module. Each linux distro has its own purpose to fullfill the needs. For Normal people aka. Normi, Normi – OS come into play to fullfill all needs of all kind people.

Problem Definition:

The normal people have thought like Microsoft windows operating system was one and only operating system exists out there in the whole world. But, its not true and its lie too which was created by the corperate world we live. In Windows you can't do whatever you want which means you didn't freedom to do whatever you want and its proprietary. To fix above mentioned swithing to linux was the only solution which is Linux is an open source operating system. A Linux distribution[a] (often abbreviated as distro) is an operating system made from a software collection that includes the Linux kernel, and often a package management system. Linux users usually obtain their operating system by downloading one of the Linux distributions, which are available for a wide variety of systems ranging from embedded devices (for example, OpenWrt) and personal computers (for example, Linux Mint) to powerful supercomputers (for example, Rocks Cluster Distribution). The linux distributions are quite complex by theory, In practical its not true. This project helps people swich to linux easily by making suitable OS for their need of use.

Literature Review:

Existing System:
Microsoft Windows [4] :

Windows is a group of several proprietary graphical operating system families developed and marketed by Microsoft. Each family caters to a certain sector of the computing industry. Windows is the most popular desktop operating system in the world, with 75% market share as of April 2022, according to StatCounter.[9] However, Windows is not the most used operating system when including both mobile and desktop OSes, due to Android's massive growth.

Advantages:
- Beginner-friendly.
- Pre-installed on many devices

Disadvantages:
- Less secure than Linux.
- Proprietary software.
- Can slow down over time.
- Can have bugs and reliability issues.
- Must be purchased.
- Subject to vulnerabilities.
- Does have data collection, though it can be turned off.
- Ads in Windows Search.

Cononical's : Ubuntu [5] :

Ubuntu is a Linux distribution based on Debian and composed mostly of free and open-source software. Ubuntu is officially released in three editions: Desktop, Server, and Core for Internet of things devices and robots. All of the editions can run on a computer alone, or in a virtual machine. Ubuntu is a popular operating system for cloud computing, with support for OpenStack. Ubuntu's default desktop changed back from the in-house Unity to GNOME after nearly 6.5 years in 2017 upon the release of version 17.10. Ubuntu is released every six months, with long-term support (LTS) releases every two years. As of October 2022, the most-recent release is 22.10 ("Kinetic Kudu"), and the current long-term support release is 22.04 ("Jammy Jellyfish").

Ubuntu is developed by British company Canonical, and a community of other developers, under a meritocratic governance model. Canonical provides security updates and support for each Ubuntu release, starting from the release date and until the release reaches its designated end-of-life (EOL) date. Canonical generates revenue through the sale of premium services related to Ubuntu and donations from those who download the Ubuntu software.

Advantages:
- Free Operating System for Personal and Enterprise Computing.
- A Well-Rounded Operating System for Desktop Computing.

Disadvantages:
- Limited Functionality Due to Limited Applications.
- Designed for specific use case.
- Issues About Commercialization Versus Open Source.
- Few customizations.
- Not responsive community.

Garuda Linux [6] :

Garuda Linux is a Linux distribution based on the Arch Linux[1] operating system. Garuda Linux is available in wide range of popular Linux desktop environments, including modified versions of the KDE Plasma 5 desktop environment. It features a rolling release update model using Pacman as its package manager. The term Garuda, which originates from Hinduism, is defined as a divine eagle-like sun bird and the king of birds. Garuda Linux installation process is done with Calamares, a graphical installer. The rolling release model means that the user does not need to upgrade/reinstall the whole operating system to keep it up-to-date inline with the latest release. Garuda Linux uses systemd as its init software. Package management is handled by Pacman via command line, and front-end UI package manager tools such as the pre-installed Pamac. It can be configured as either a stable system (default) or bleeding edge in line with Arch. Garuda Linux includes colorized UI which comes in various options, with the option to further customize the user preferences. Provides Garuda KDE Dragonized Gaming edition.

Advantages:
- Easy installation with Calamares installer.
- Automatic snapshots accessible from GRUB.

Disadvantages:
- Designed for specific use case.
- Need more resources to run.
- Need more Hard Disk space.

BlackArch [6]:

BlackArch is a penetration testing distribution based on Arch Linux that provides a large amount of cyber security tools. It is an open-source distro created specially for penetration testers and security researchers. The repository contains more than 2800 tools that can be installed individually or in groups. BlackArch Linux is compatible with existing Arch Linux installs. BlackArch is similar in usage to both Parrot OS and Kali Linux when fully installed, with a major difference being BlackArch is based on Arch Linux instead of Debian. BlackArch only provides the Xfce desktop environment in the "Slim ISO" but provides multiple preconfigured Window Managers in the "Full ISO". Similar to Kali Linux and Parrot OS, BlackArch can be burned to an ISO image and run as a live system. BlackArch can also be installed as an unofficial user repository on any current Arch Linux installation.

Advantages:
- Most seure linux distribution.
- Designed to audit security.
- Best for penetration testing.

Disadvantages:
- Designed for specific use case.
- Only for advanced user.

Requirement Specifications:

Hardware Requirements:

Processor   : Minimum 2Ghz Processor.
RAM   : Minimum 2.00GB & Recommended 4. GB
Hard Disk   : Minimum 15 GB .
Graphics   : HD Graphics Card.
Monitor.
Mouse.
Keyboard.

Reference:

1. https://en.wikipedia.org/wiki/Linux_distribution
2. https://www.redhat.com/en/topics/linux/what-is-linux
3. https://www.redhat.com/en/topics/linux
4. https://www.microsoft.com/en-us/windows
5. https://ubuntu.com/
6. https://www.blackarch.org/