**PRANAV SANDEEP RAIKAR**

**D10A 43**

**BATCH B**

**UNIX LAB**

**Experiment No: 1**

**Aim:** Introduction to Unix,Case Study: Brief History of UNIX, Unix Architecture; Installation of Unix Operating System

**History**

Unix and Unix-like operating systems are a family of computer operating systems that are derived from the original Unix system from Bell Labs.Initial proprietary derivatives included the HP-UX and the SunOS systems. However, growing incompatibility between these systems led to the creation of interoperability standards like POSIX. Modern POSIX systems include Linux, its variants, and Mac OS.Unix is the most powerful and popular multi-user and multitasking Operating System. The basic concepts of Unix originated in the Multics project of 1969. The Multics system was intended as a time-sharing system that would allow multiple users to simultaneously access a mainframe computer.

**Unix Architecture**

The following are the main components of Unix architecture:

1. Kernel: The kernel is the core of the Unix operating system, responsible for managing the hardware resources of the system, including memory, CPU, and I/O devices. It provides a layer of abstraction between hardware and software, and it is responsible for managing system calls, scheduling processes, and handling interrupts.

2. Shell: The shell is the command-line interface of Unix. It provides a user-friendly interface to interact with the system and run various commands. The shell is a user-level program that interacts with the kernel through system calls.

3. File System: Unix uses a hierarchical file system that organizes files and directories in a tree-like structure. Each file or directory has a unique path from the root directory to its location. The file system provides an interface for storing and retrieving files from the storage devices.

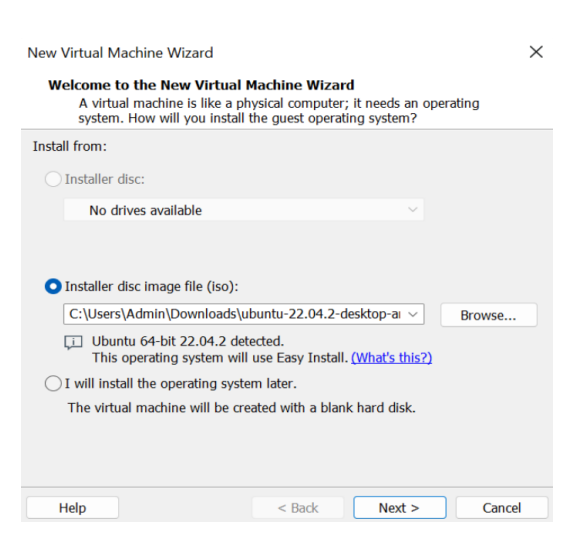
4. Utilities: Unix provides a set of utilities that perform various functions, such as file manipulation, text processing, networking, and system administration. The utilities are modular and can be combined to create complex commands.

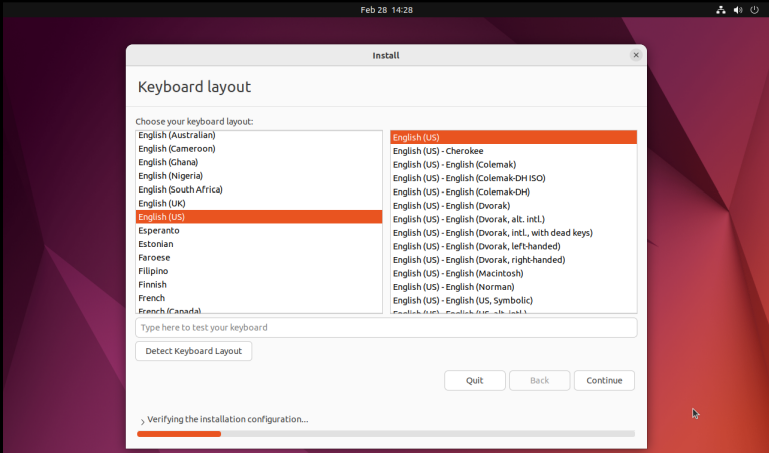
5. Libraries: Unix provides a set of libraries that contain common functions and procedures that can be used by other programs. The libraries provide an interface between the application programs and the kernel, making it easier for developers to create new software.

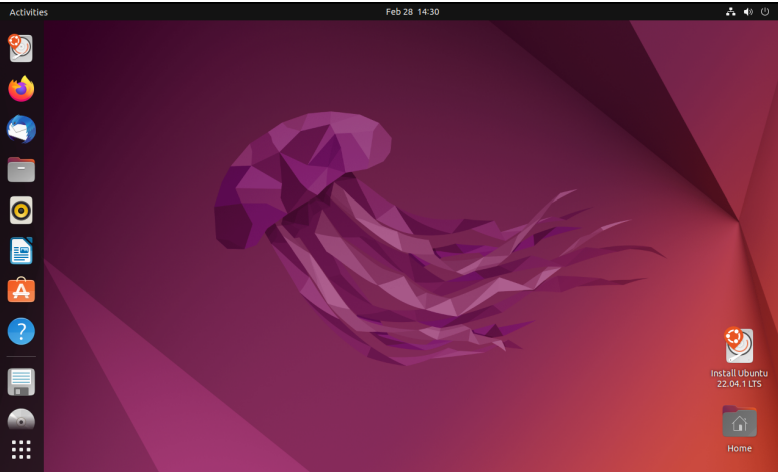
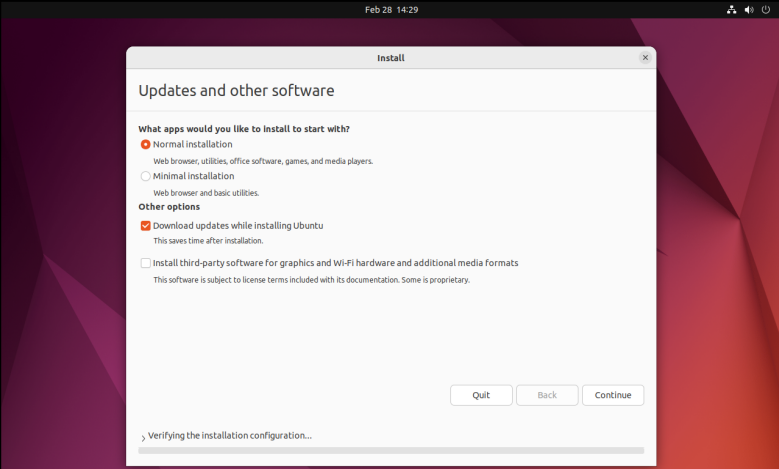
6. Network Services: Unix provides a set of network services that allow processes running on different systems to communicate with each other. The network services include protocols such as TCP/IP, FTP, SSH, and Telnet.

**Installation-**

****

****

****

****