1. В ході роботи досить часто виникає необхідність встановлювати нові програми та додатки. Для цього необхідно в терміналі вміти працювати з менеджерами пакетів:  
- Дайте розгорнуте визначення таким поняттям як «пакет» та «репозиторій».

A package is an archive or collection of files that contain programs, libraries, configuration files, documentation and other resources necessary for the installation and operation of a particular software product or component.

A repository is a centralized repository that contains packages or software for a specific operating system or platform. The repository stores packages, their versions, metadata such as descriptions and dependencies, as well as other information necessary to manage and install packages.- Надайте короткий огляд існуючих менеджерів пакетів у Linux. Охарактеризуйте їх основні можливості.

APT:- The main package manager for Debian distributions and its derivatives, such as Ubuntu.- Provides a user-friendly command line interface for package management.- Allows you to quickly install, delete and update packages and their dependencies.- Supports automatic dependency resolution and repository management. DNF:- Used in Fedora and CentOS distributions.- Has a user-friendly command line interface and graphical interface for package management.- Supports quick installation, removal and update of packages, including automatic resolution of dependencies.Pacman:

- Used in the Arch Linux distribution and its derivatives such as Manjaro Linux.

- Has a simple command line interface for package management.

- Provides quick installation, removal and update of packages with convenient configuration management.

Zypper:

- Used in the OpenSUSE distribution.

- Supports installation, removal, update, and repository management.

- Has an interactive command line interface and a graphical interface for package management.

Portage:

- Used in Gentoo Linux distribution.- Provides a user-friendly command line interface for package management.- Has a powerful dependency system and allows users to specify compilation options when installing packages.2. Визначте який менеджер пакетів використовує ваш дистрибутив Linux. Опишіть основні команди для роботи з ним:

My computer has Ubuntu OS and APT package manager installed.  
- Пошук, скачування та установка необхідних пакетів, яких у Вашій системі немає (зі сховища по замовчуванню, з нового репозиторію тощо).

1. package search:- Command: apt-cache search < keywords >- Description: This command allows you to search packages by keywords. It returns a list of packages that match the search criteria.2. update package list:- Command: sudo apt-get update- Description: This command updates the list of available packages from all installed repositories. It is important to run this command before attempting to install new packages or update existing packages.3. installation of packages:

- Command: sudo apt-get install < package\_name >

- Description: This command installs the specified package and all its dependencies. You can specify one or more packages to install by separating them with spaces.

4. deleting packages:

- Command: sudo apt-get remove < package\_name >

- Description: This command removes the specified package from the system, while leaving its configuration files. If you also want to delete configuration files, use purge instead of remove.

5. Update of installed packages:- Command: sudo apt-get upgrade- Description: This command updates all installed packages to the latest version. It does not install new packages, but only updates existing ones.6. complete system update:- Command: sudo apt-get dist-upgrade- Description: This command performs a complete system upgrade, including installing new packages, removing obsolete packages, and resolving dependencies.