

Work Case 4

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.

3. Встановіть у терміналі через менеджер пакетів на свою систему:

● Новий відео- чи аудіоплеєр.

Before starting work, you need to update the repository with the help of the team. **sudo apt-get update**. Then we need to choose which application we will download, in our case there are several popular options for video players: VLC, MPV Player, SMPlayer, Kylin Video, Parole, GNOME Videos. In our case, we will download SMPlayer using the command **sudo apt-get install smplayer**.

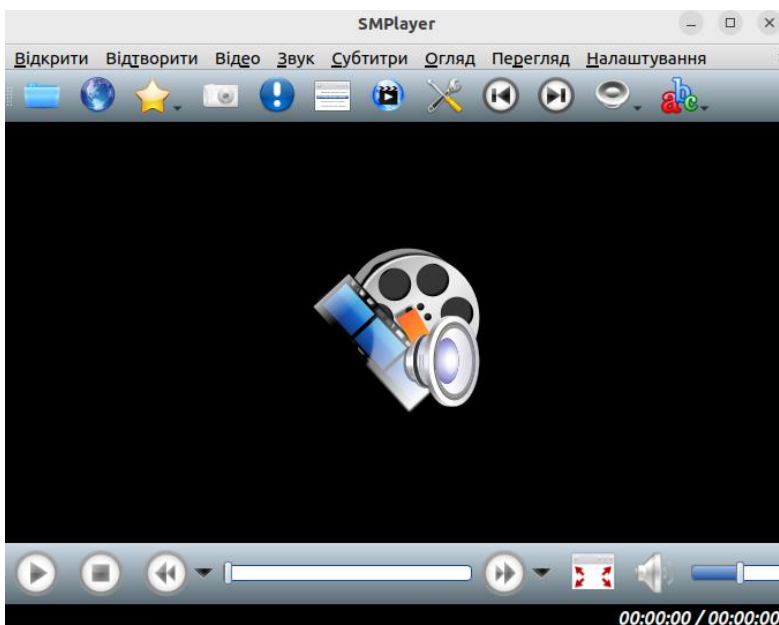
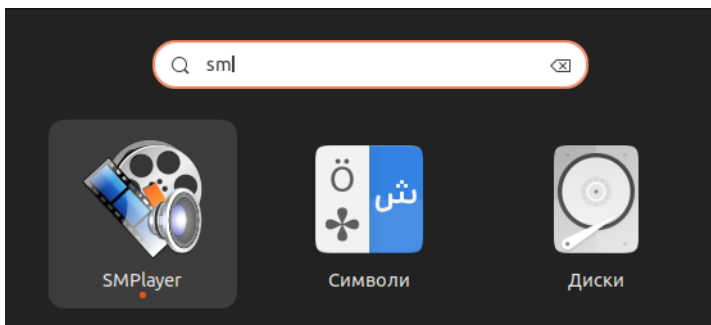
```
foxas@foxas-VirtualBox:~$ sudo apt-get update
[sudo] пароль до foxas:
В кеші:1 http://ua.archive.ubuntu.com/ubuntu jammy InRelease
Отр:2 http://ua.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Отр:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Отр:4 http://ua.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Отр:5 http://ua.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [594 kB]
Отр:6 http://ua.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1 502 kB]
Отр:7 http://ua.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [289 kB]
Отр:8 http://ua.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1 619 kB]
Отр:9 http://ua.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [271 kB]
Отр:10 http://ua.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [697 kB]
Отр:11 http://ua.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1 059 kB]
Отр:12 http://ua.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [240 kB]
Отр:13 http://ua.archive.ubuntu.com/ubuntu jammy-backports/universe i386 Packages [17,2 kB]
Отр:14 http://ua.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28,4 kB]
Отр:15 http://ua.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16,2 kB]
Отр:16 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1 286 kB]
Отр:17 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [428 kB]
Отр:18 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [229 kB]
Отр:19 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1 591 kB]
Отр:20 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [267 kB]
Отр:21 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [851 kB]
Отр:22 http://security.ubuntu.com/ubuntu jammy-security/universe i386 Packages [599 kB]
Отр:23 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [162 kB]
Отримано 12,1 MB за 5сВ (2 468 kB/s)
Зчитування переліків пакунків... Виконано
```

```

foxas@foxas-VirtualBox:~$ sudo apt-get install smplayer
[sudo] пароль до foxas:
Зчитування переліків пакунків... Виконано
Побудова дерева залежностей... Виконано
Зчитування інформації про стан... Виконано
Буде встановлено такі додаткові пакунки:
  libdouble-conversion3 libmd4c0 libpcre2-16-0 libqt5core5a l
libqt5dbus5
  libqt5gui5 libqt5network5 libqt5svg5 libqt5widgets5 libqt5x
ml5
  libxcb-xinerama0 libxcb-xinput0 qt5-gtk-platformtheme qtrra
nslations5-l10n
  smplayer-l10n smplayer-themes
Пропоновані пакунки:
  qt5-image-formats-plugins qtwayland5
НОВІ пакунки, які будуть встановлені:
  libdouble-conversion3 libmd4c0 libpcre2-16-0 libqt5core5a l
libqt5dbus5
  libqt5gui5 libqt5network5 libqt5svg5 libqt5widgets5 libqt5x
ml5
  libxcb-xinerama0 libxcb-xinput0 qt5-gtk-platformtheme qtrra
nslations5-l10n

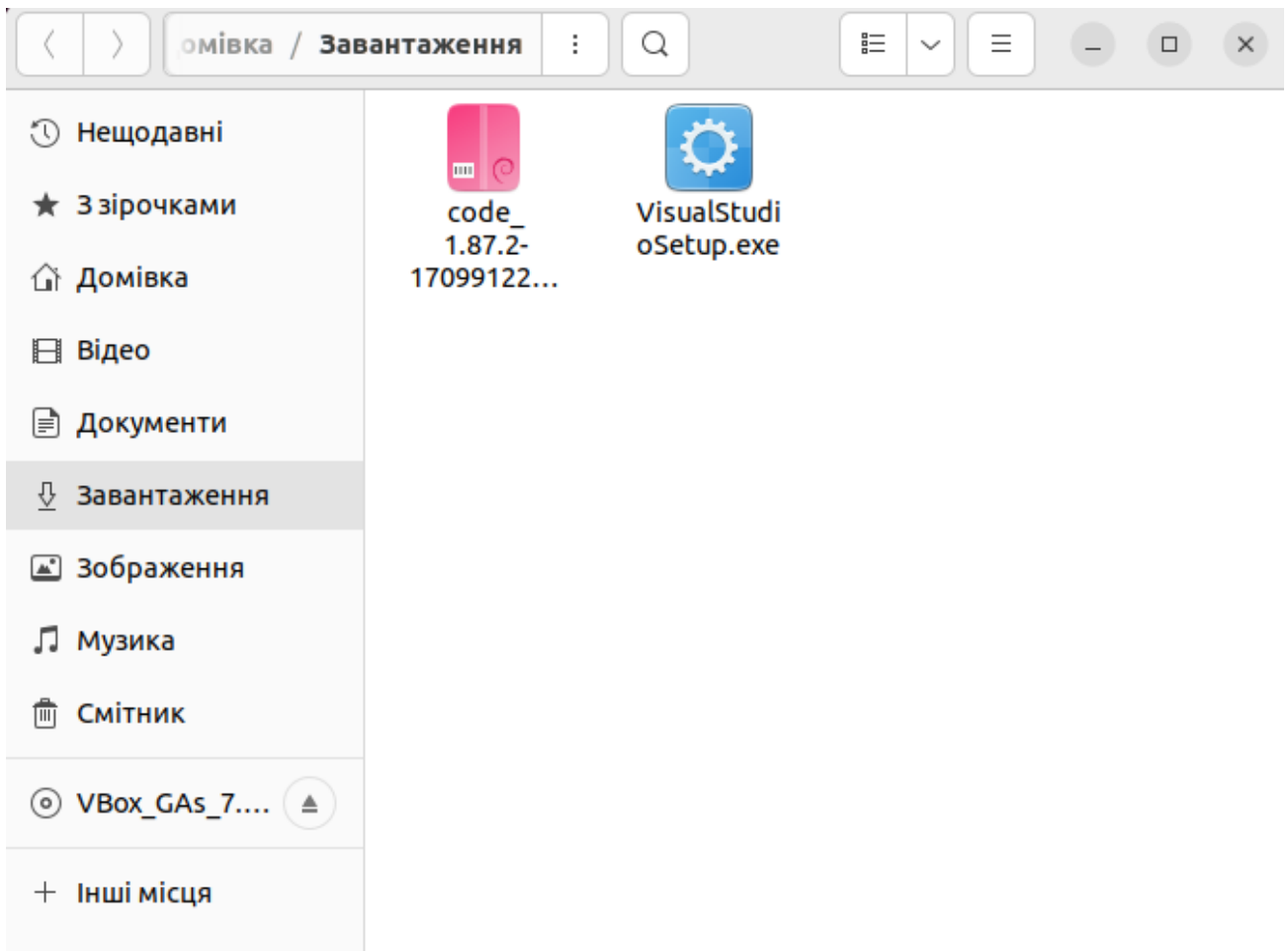
```

After the download is complete, we can see if our program has downloaded.



- Середовище для мови програмування, що ви вивчаєте.

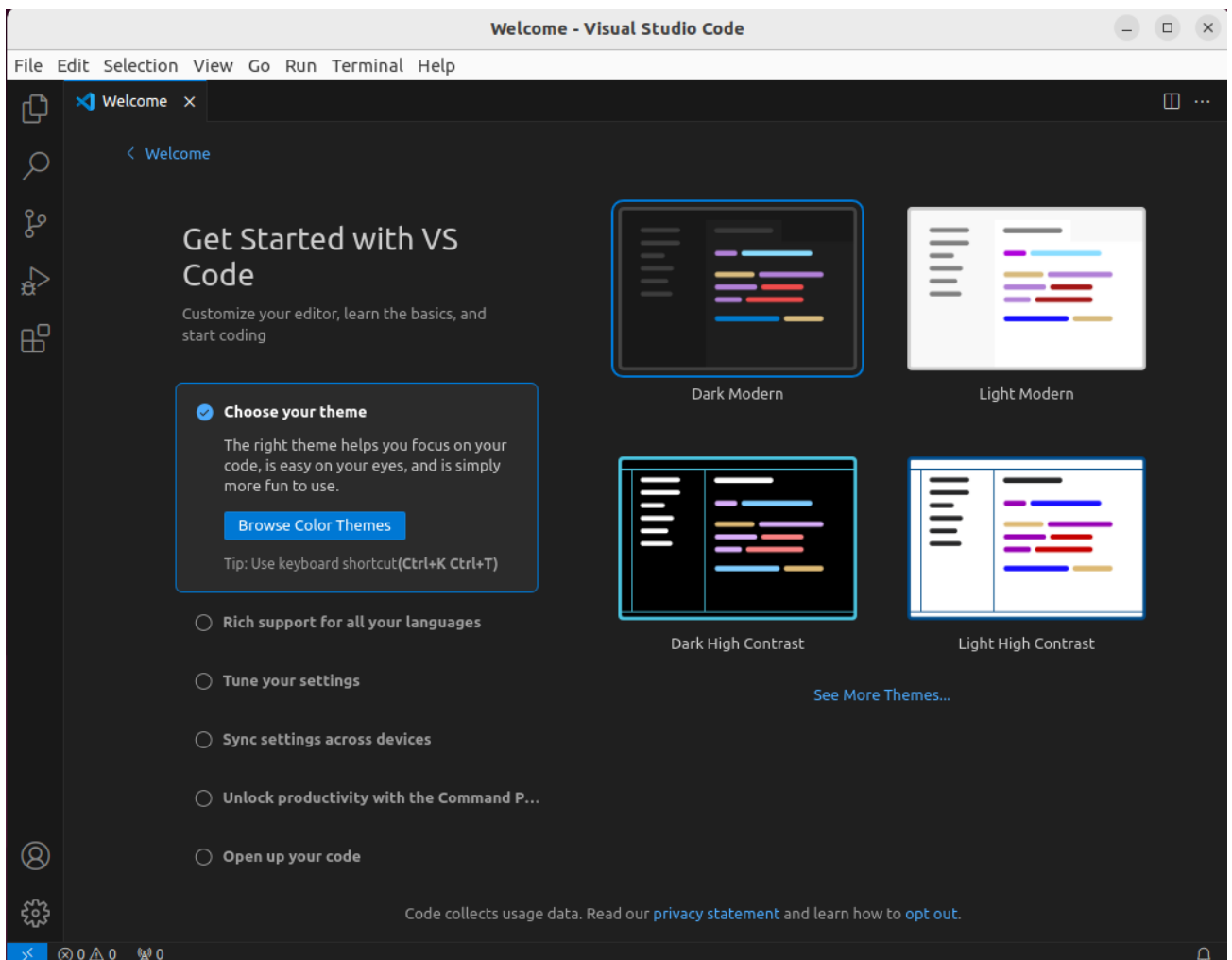
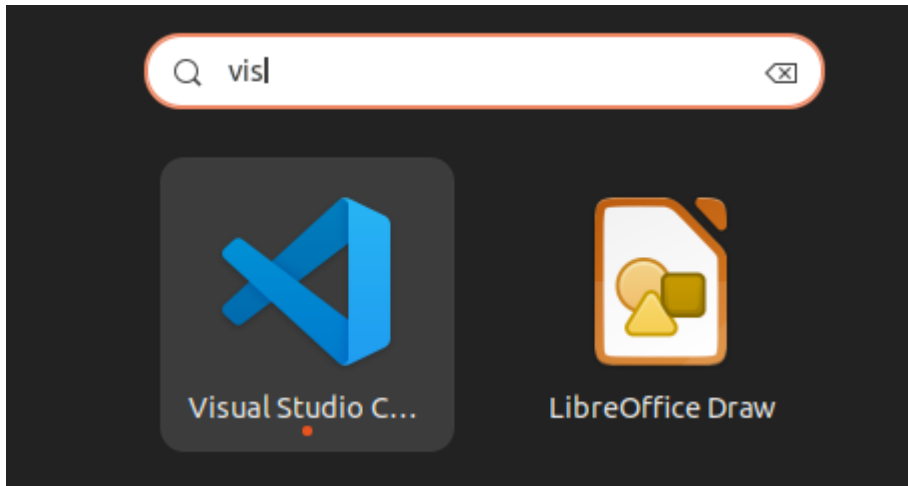
For the programming environment, let's download VisualStudio by going to the official website: <https://code.visualstudio.com/download>



Next, unpack the downloaded file using the **sudo dpkg -i file_name.deb** command

```
foxas@foxas-VirtualBox:~$ sudo dpkg -i /home/foxas/Завантаження/code_1.87.2-1709912201_amd64.deb
Вибір раніше не обраного пакунку code.
(Читання бази даних ... на дану мить встановлено 208956 файлів та каталогів.)
Приготування до розпакування .../code_1.87.2-1709912201_amd64.deb ...
Розпакування code (1.87.2-1709912201)...
Налаштовування code (1.87.2-1709912201) ...
Обробка тригерів mailcap (3.70+nmu1ubuntu1)...
Обробка тригерів gnome-menus (3.36.0-1ubuntu3)...
Обробка тригерів desktop-file-utils (0.26-1ubuntu3)...
Обробка тригерів shared-mime-info (2.1-2)...
foxas@foxas-VirtualBox:~$
```

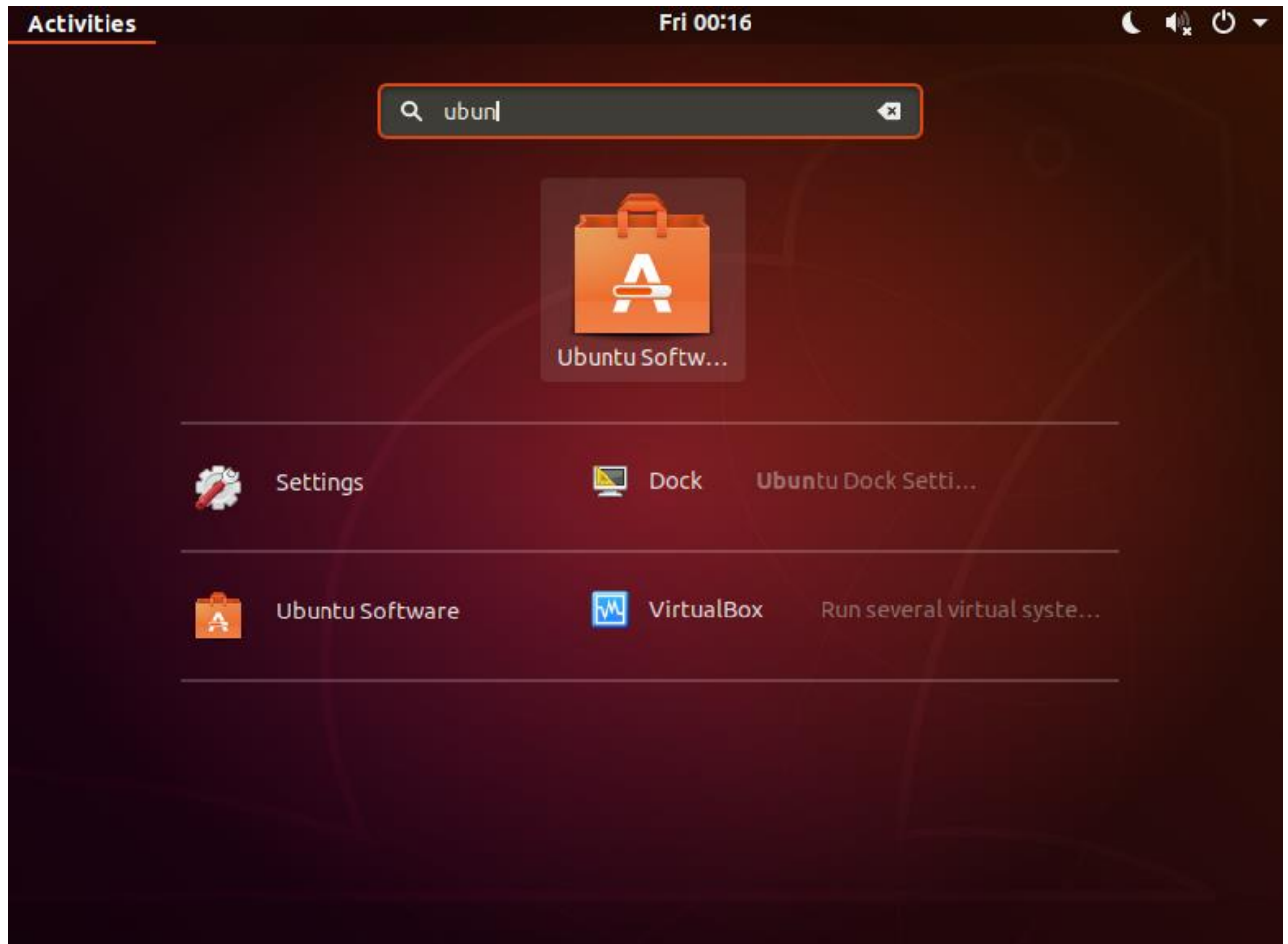
The program has been successfully downloaded

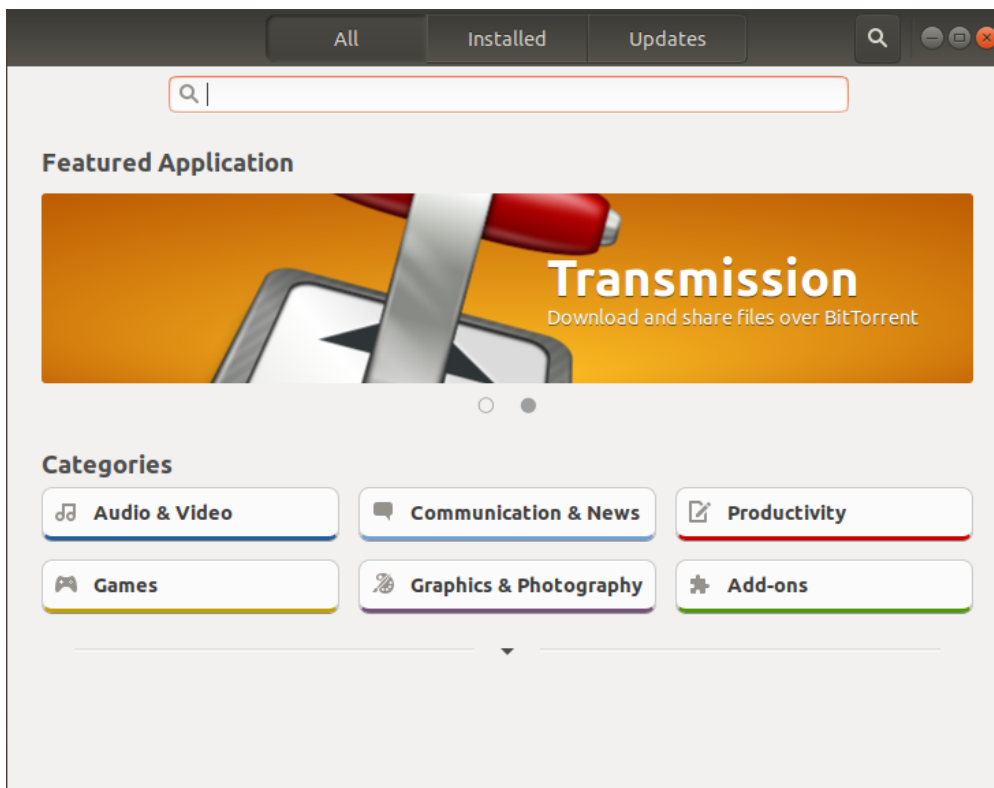



4. Яким чином можна встановити нові програми через магазини додатків та менеджери пакетів у графічному середовищі. Наведіть свої приклади.

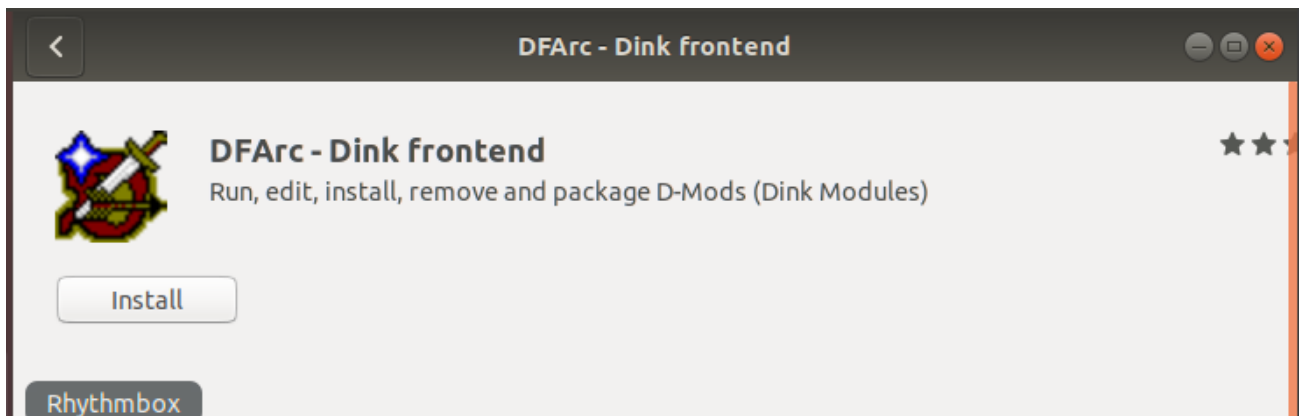
Since I have Ubuntu, I will talk about the option for this OS.

For Ubuntu, the most common and convenient way to install new software is to use the Ubuntu Software Centre.

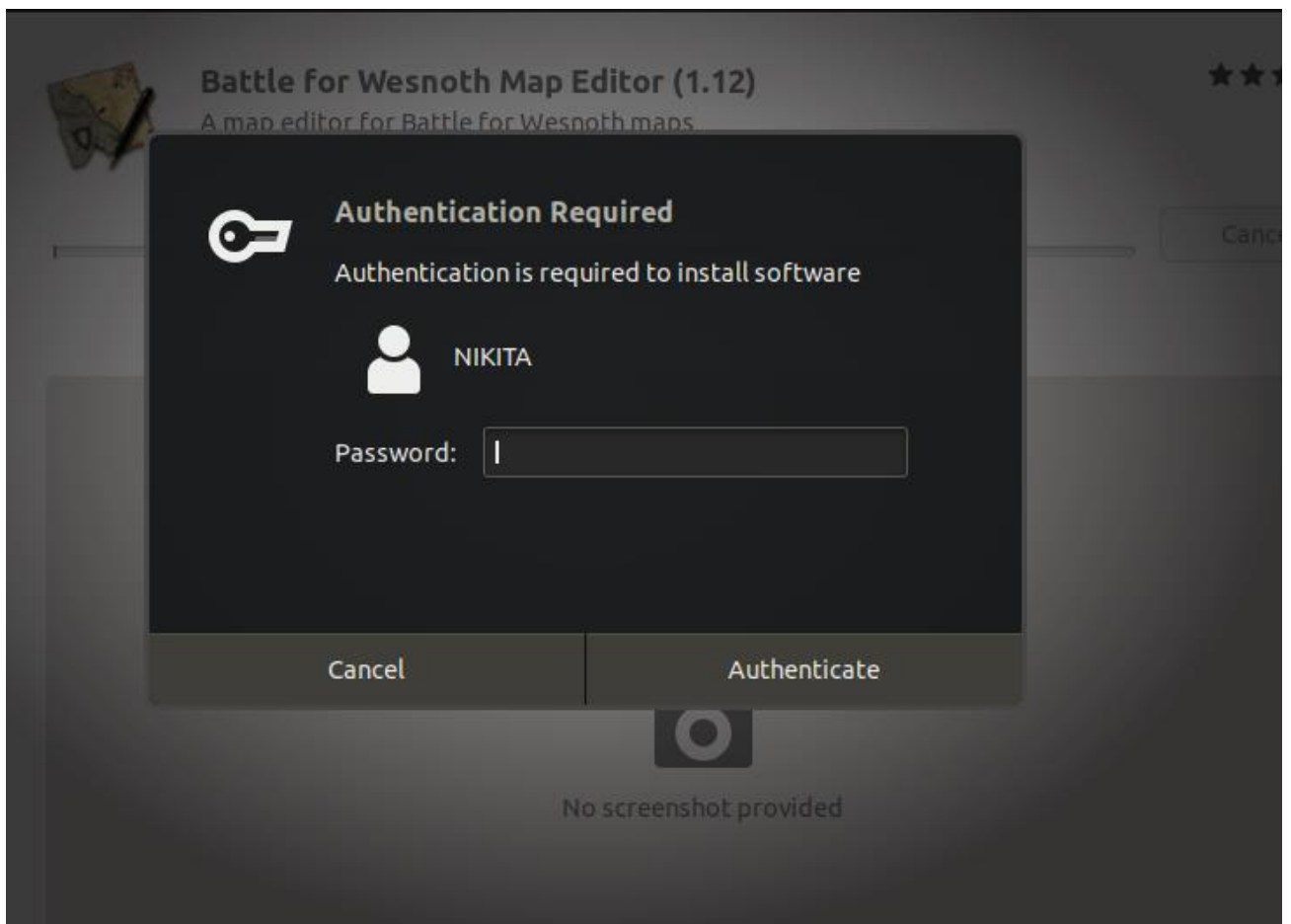




You can choose category and then search what do you want or press on “Search icon”  then you should press to the program and press “Install”



Then you must write password.



Snap Store:

The Snap Store is an app store that offers an expanded selection of apps and supports installing packages in the Snap format.

It can be accessed in Ubuntu as a standalone application or through the Ubuntu Software Centre.

The Snap Store allows you to quickly install applications and their dependencies from a remote location.

Unfortunately, I'm having some technical problems and can't show you how to work with Snap on my own screenshots

Link to Snap : <https://snapcraft.io/store>

Conclusion

In the course of work, they expanded their knowledge of package managers and app stores on Linux operating systems.