“Київський фаховий коледж зв’язку”

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**ЗВІТ ПО ВИКОНАННЮ**

# **WORK-CASE №4**

з дисципліни: «Операційні системи»

**Тема: «Робота з Virtual Box»**

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Перевірив викладач

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**Завдання №1  
виконав Панчук О.С.**

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».

- Надайте короткий огляд існуючих менеджерів пакетів у Linux. Охарактеризуйте їх основні можливості.

1. **A package in Linux:**

is an archive file that contains program code, configuration files, and other resources necessary for the installation and operation of software on the Linux operating system. Packages are used to manage the installation, upgrade, uninstallation, and management of programs on Linux systems. Each package contains information about the version of the program, dependencies on other packages, and other metadata that helps the system resolve conflicts and ensure stable operation of programs.

**2.Repository in Linux:**

is a centralized repository or collection of packages that are developed, maintained, and distributed for the Linux operating system. Repositories are usually stored on remote servers and contain packages for different Linux distributions. They provide a convenient way for users to install, update, and uninstall software without having to manually download and compile programs.

**Existing package managers in Linux**

|  |  |
| --- | --- |
| **Name of the manager** | **functionality** |
| APT (Advanced Package Tool) | Features packet search and configuration management tools |
| YUM (Yellowdog Updater, Modified) | It has a user-friendly interface and the ability to automatically update packages.  Integrates with RPM package repositories. |
| DNF (Dandified YUM) | It is a modernized alternative to YUM with improved performance and other improvements |
| Pacman | Easy to use and fast enough.  Supports the development of custom packages. |
| ZYpp (ZENworks Package Management) | It is used in openSUSE and SUSE Linux Enterprise.  It has an integrated security system and supports distributed work. |
| Portage (Gentoo Linux) | It is used in Gentoo and allows users to compile program code from source files. |
| Nix Package Manager (NixOS) | Provides declarative management of packages and versions |
| Eopkg (Solus) | It is used in the Solus Linux distribution and has a simplified interface. |
| Conda (Anaconda) | Used to manage Python packages and other data science languages. |
| Slackware Package Tool (pkgtool) | It is used in Slackware Linux and has a simple text interface. |

**Завдання №2**

**Виконав Панчук О.С.**

Визначте який менеджер пакетів використовує ваш дистрибутив Linux.

Опишіть основні команди для роботи з ним:

● Пошук, скачування та установка необхідних пакетів, яких у Вашій

системі немає (зі сховища по замовчуванню, з нового репозиторію тощо).

● Перегляд інформації про встановлені та доступні пакети.

● Видалення непотрібних або застарілих пакетів.

● Оновлення менеджера пакетів.

1. My distribution is "CentOS Stream"

**Main commands:**

1. Search, download, and install packages

To find packages, use the command "dnf search:"

To install the package, use "dnf install:"

To install multiple packages at once "sudo dnf install package1 package2"

1. View information about packages

To view information about installed packages, use "dnf list"

To view information about available packages in the repositories "sudo dnf list available"

For detailed information about the package, use "dnf info"

1. Delete packets

To remove a package, use "dnf remove"

!!If packages have dependencies, they will be removed as well. If you want to remove a package along with its dependencies, use "dnf autoremove"1!

1. Update the package manager

Update information about packages from the "sudo dnf check-update" repositories

Update all installed packages to the latest versions with "sudo dnf update"

To update a specific package, “sudo dnf update package\_name”

Завдання №3

*Виконав: Петрик С.С.*

Install a new video or audio player:

To install a new video or audio player through a package manager, you should follow these steps.

For example, to install VLC Media Player:

Using YUM (CentOS/Fedora):

sudo yum install vlc

Installing an environment for a programming language (Python is an example):

Using YUM (CentOS/Fedora):

sudo yum install python3

# **Завдання №4**

*виконав Петрик С.С.*

Installing programs in a graphical environment:

Most modern Linux systems have app stores that allow you to easily install GUI programs. For example:

If you are using Ubuntu, you can open "Ubuntu Applications" and find and install the programs you need.

GNOME Software: Some graphical environments, such as GNOME, have their own app store.

Synaptic Package Manager: Synaptic is a graphical interface for the APT package manager. You can install it and use it to find and install programs.

If you are using KDE (KDE Software Center), you can use the Discover program to install applications.

To install programs in a graphical environment, you should open the tool of your choice and use it to search for and install the programs you want.

Висновки: