“Kyiv Professional College of Communications”

Cycle Commission of Computer and Software Engineering

**REPORT ON**

**WORK-CASE №2**

**on the subject: "Operating Systems"**

Performed by students

of the RPZ-23b group

Booblik Team:

Miroshnichenko A., Mykhalyov V.,

Checked by the teacher:

Sushanova V.S.

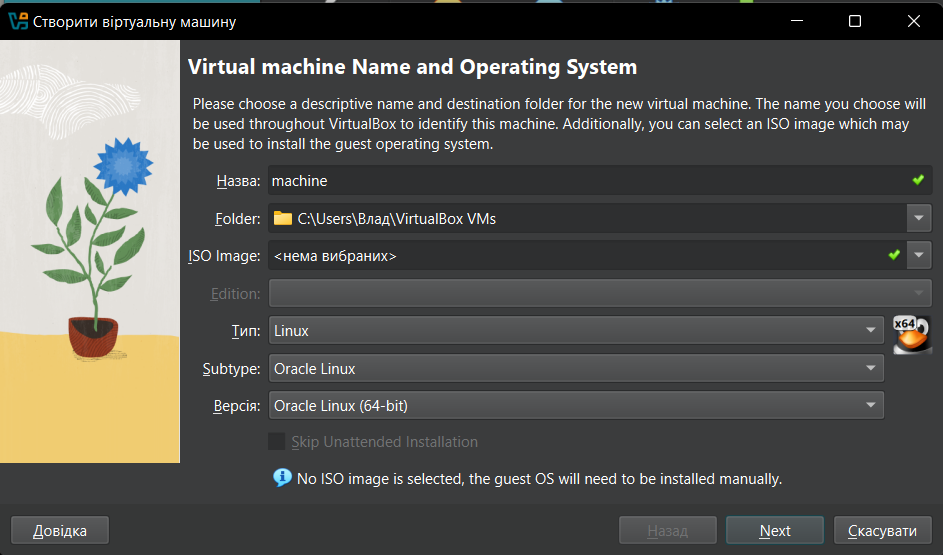
Kyiv 2024

1. Install a type II hypervisor on your home workstation – Virtual Box, VMWare Workstation, Hyper-V (or another one of your choice).

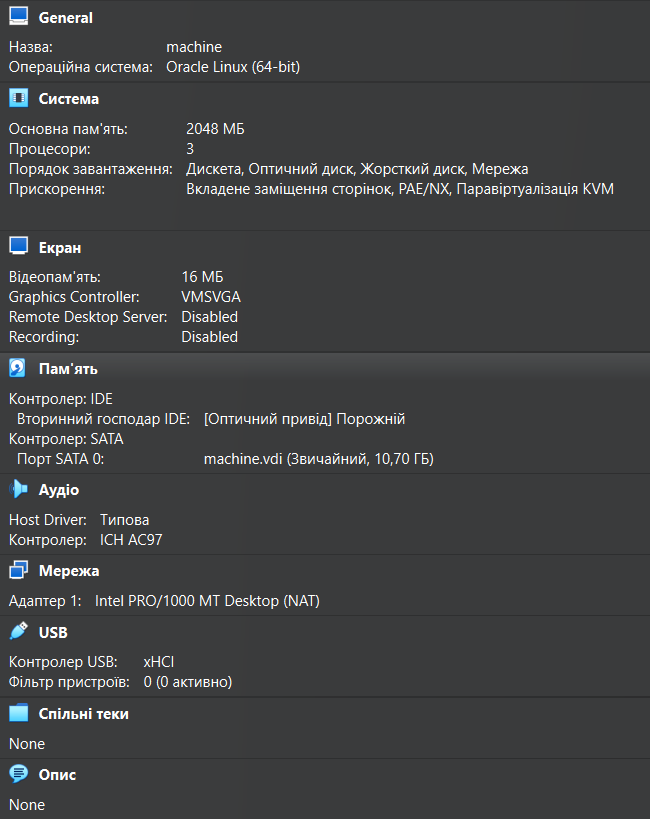


2. Describe a set of basic actions in the hypervisor you have installed:

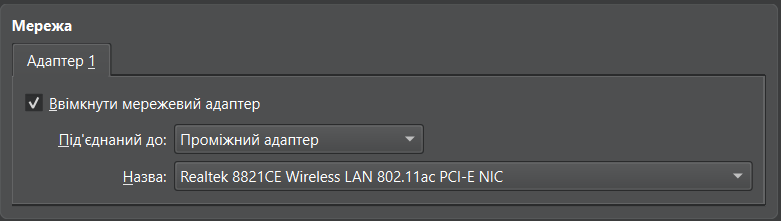
- Creating a new virtual machine;



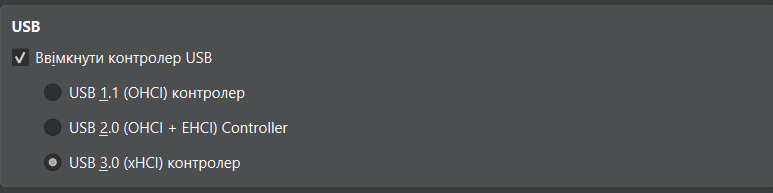
- Selecting/adding hardware available to the virtual machine;



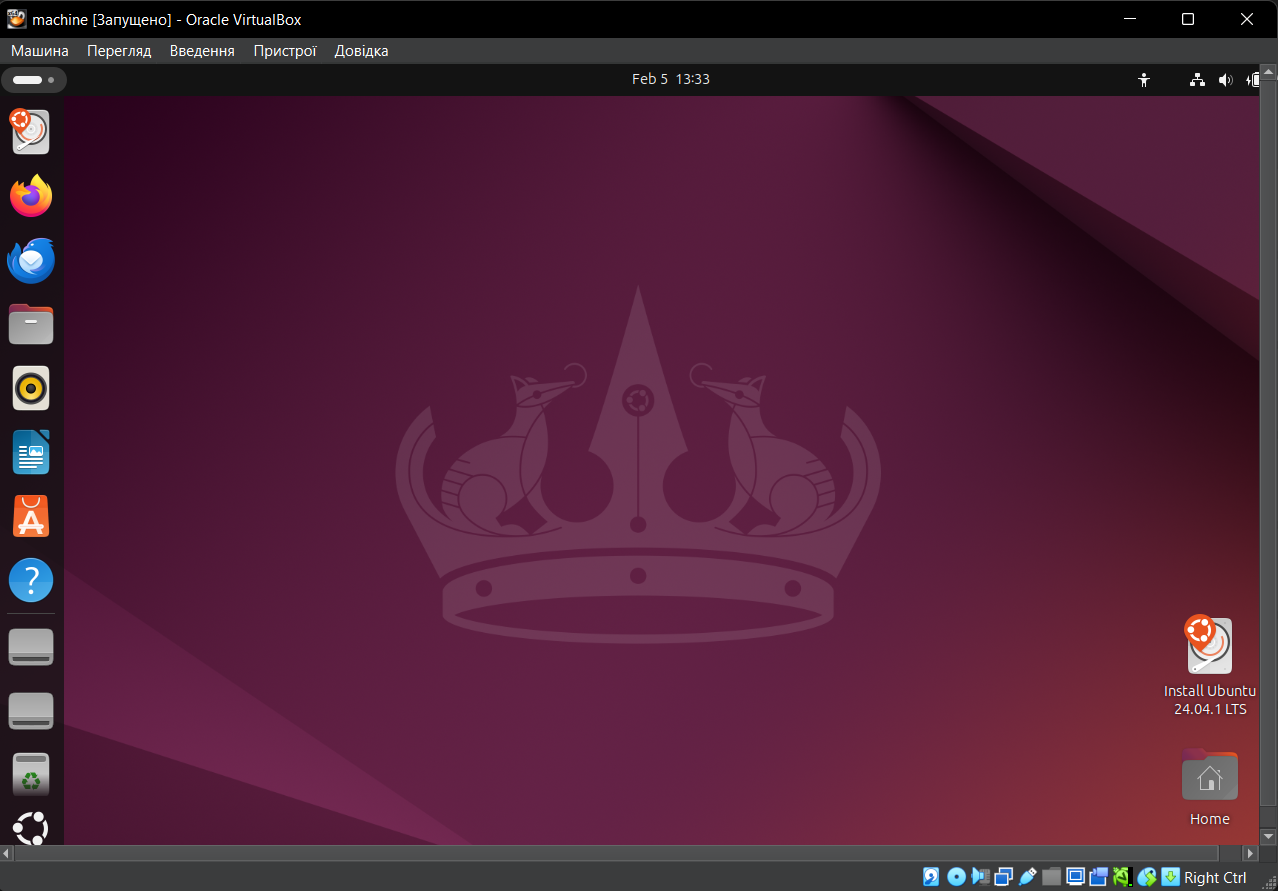
- Configuring the network and connecting to Wi-Fi points;



- Ability to work with external media (flash memory).



3. Install the GNU/Linux operating system (any distribution you prefer) in your hypervisor in a basic configuration with a graphical shell.



4. Create a second virtual machine and perform the following actions for it:

- Install the GNU/Linux operating system in a minimal configuration with terminal input-output without a graphical interface;

- Install the GNOME graphical shell on top of the OS installed in the previous step;

- Install a second graphical shell (a possible list of them can be found in laboratory work No. 1) and compare its capabilities with GNOME.

Installation of the minimum GNU/Linux configuration:

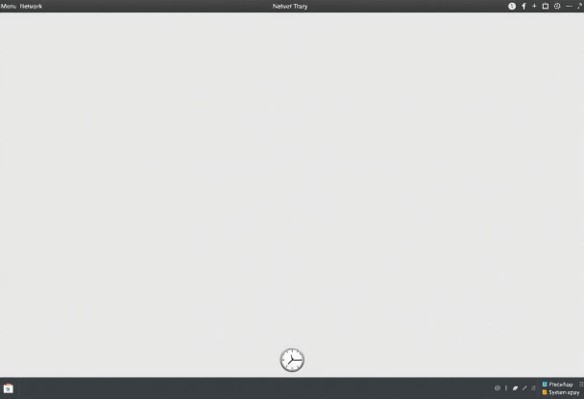
After creating a virtual machine, you need to install the GNU/Linux operating system on it. For minimal configuration, you will need to install basic packages such as system kernel, command line utilities, and package manager. You also need to download the ISO image of the distribution. In the virtual machine settings, go to the Storage tab and mount the downloaded ISO file as an optical drive.

Installing the GNOME graphical shell:

After installing the minimal configuration with terminal I/O, you can install the GNOME graphical application. To do this, you need to download and install the GNOME package. Depending on the Linux distribution you choose, the installation process may vary.

After installing GNOME, you need to reboot the virtual machine. After rebooting, you should see the GNOME graphical interface. You can now use the virtual machine with the GNOME graphical interface. You can run various applications, browse the web, and interact with the virtual machine using the mouse and keyboard.

Installing the second XFCE graphical shell:

Installing XFCE can be done using a package manager such as apt. To install XFCE on a virtual machine with a Debian-like GNU/Linux distribution, you will need to run the command sudo apt install xfce4.

Comparison of GNOME and XFCE:

GNOME has a modern and minimalist interface focused on productivity, with large elements that are friendly to touch screens, but it requires more resources, such as RAM and processing power. GNOME functionality is more focused on simplified access through search and active workspaces, offers many modern integrations and extensions, but not always as flexible.

XFCE - a classic desktop with a simple interface, similar to old versions of Windows or Linux, and is suitable for old or weak systems due to its lightness and lower resource consumption. More configuration options, simplicity of the classic menu and high customization.