# **Лабораторна робота №1**

**Тема:** “Знайомство з робочим середовищем віртуальних машин та особливостями операційної системи Linux”

**Мета роботи:**

1. Знайомство з гіпервізорами різного типу, віртуалізацією при роботі з операційними системами.

2. Знайомство з основними видами сучасних ОС, короткий огляд їх можливостей.

**Матеріальне забезпечення занять:**

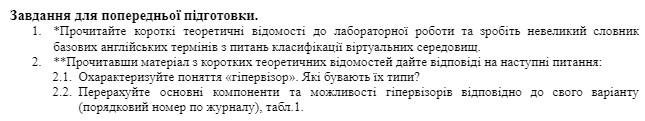
1. ЕОМ типу IBM PC.

2. ОС сімейства Windows та віртуальна машина Virtual Box (Oracle).

3. ОС GNU/Linux (будь-який дистрибутив).

4. Сайт мережевої академії Cisco netacad.com та його онлайн курси по Linux

## Створив Трощинський Ярослав

1. Read the short theoretical information for the laboratory work and make a small dictionary of basic English terms on the classification of virtual environments.

2. After reading the material from short theoretical information, answer the following questions:

1. Describe the concept of "hypervisor". What are their types?
2. List the main components and capabilities of hypervisors according to your option (serial number by journal), Table 1.

1.Some of the new English terms I`ve found:

* Kernel - the central controller of everything that happens on the computer. Синонім слова ядро(core)
* GNU is the free software that provides open source equivalents of many common UNIX commands
* UNIX, an operating system developed at AT&T Bell Labs in the 1970s
* The open source is when you have a right to obtain the software source code and to modify it for your own use
* Distribution is often referred to the kernel, tools and suite of applications that come bundled together
* Graphical user interface is when applications present themselves in windows that can be resized and moved around
* Command line interface is a text-based interface to the computer, it relies primarily on keyboard input

2.1. Hypervisor is a software that can be used to run multiple virtual machines on a single physical machine. There are 2 types of hypervisors, the main difference between them is effectiveness. While 1 type makes all decisions directly, 2 type make use of the host operating system and its file system to create processes, store files, and so on.

2.5. Answers to p. 2.1 and p. 2.2 from tasks for preliminary training

2.5.1 List the steps for deploying an operating system based on a VirtualBox virtual machine.

For personal usage of VirtualBox you need to follow this guide:

1. Download application from internet
2. Install and open it
3. Click “Create” in the tool window and enter a name
4. Select the type, version and amount of RAM that will be allocated to virtual machine
5. Specify the hard disk parameters
6. Click “Create” and “Continue”
7. The next and final step, install selected version of OS you chose of subparagraph 4

2.5.2 Are there any hardware limitations when installing 32-bit and 64-bit OS?

Yes, if you try to run a 64-bit OS on a 32-bit PC, it won't even boot up. And when you boot a 32-bit OS on a 64-bit PC, usable RAM will be limited to an amount of 4 GB.

## Створив Когут Богдан

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