# APPLIED OPERATING SYSTEM LABORATORY

FEU ALABANG   FEU DILIMAN   FEU TECH

*Technology Driven by Innovation*

MODULE 2

# LINUX OVERVIEW, INSTALLATION AND ENVIRONMENT FAMILIARIZATION

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# OBJECTIVES

**Upon completion of this module, the student will be able to:**

- Understand the history and concepts of Linux
- Install LINUX operating systems in the virtual machine and familiarize with the platform in terms of hardware requirements, bundled application software, user interface and security features

# TOPIC OUTLINE

- **Linux Overview**
  - What is Linux?
  - Who developed Linux?
  - How to get Linux?
  - Where can I use Linux?
  - Major Components of Linux

- **Linux Installation using Virtual Machine (Oracle VirtualBox)**

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# LINUX OVERVIEW

## What is Linux?

- Unix-like
- Free
- Open Source
- Network operating system
- Developed under the GNU General Public License (GPL), the source code for Linux is freely available to everyone.

# LINUX OVERVIEW

**Who developed Linux?**

- Linus Torvalds
- University of Helsinki in Finland
- 1991
- He used special educational experimental purpose operating system called **Minix** (small version of Unix and used in Academic environment). But due to Minix limitations. Linus felt he could do better than the Minix. So he developed his own version of Minix, which is now known as **Linux.**

# LINUX OVERVIEW

## How to get Linux?

- Download over the net
- Order CD from Linux distributions
- Versions/types of Linux operating system are called **Distributions.**
- **CentOS** is one of the most used Linux Distribution for enterprise and web servers. It is a free enterprise class Operating system and is based heavily on Red Hat enterprise Distro.
- Other Linux Distros are as follows:

# LINUX OVERVIEW

**Where can I use Linux?**
- Server OS
- Stand-alone OS

**As a server OS, it provides different services/network resources to client. Server OS must be:**
- Stable
- Robust
- Secure
- High Performance

# LINUX OVERVIEW

## Linux as Server OS
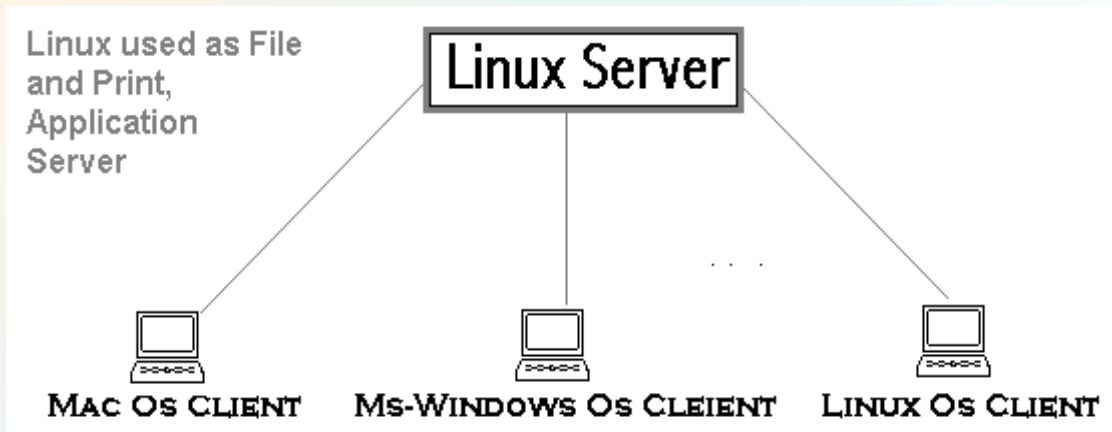


(A) Linux Server with different Client OS
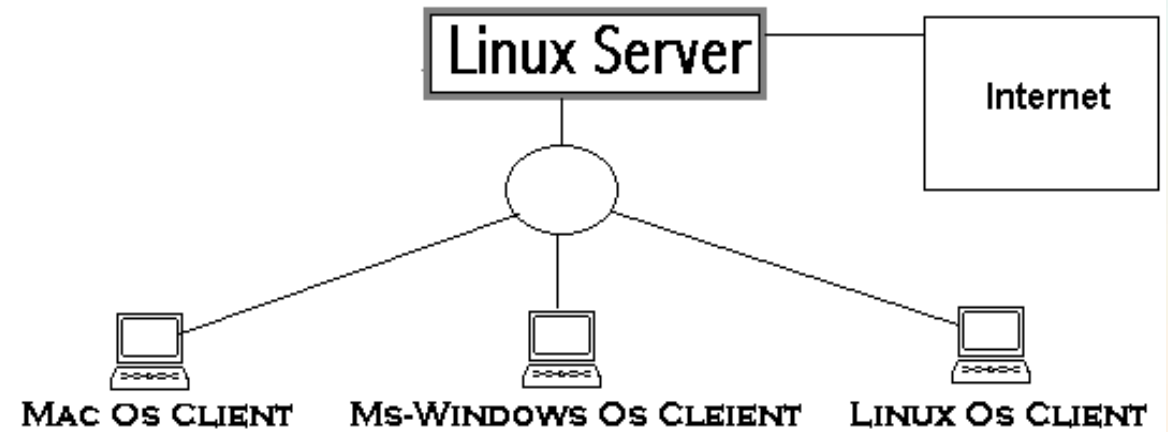
(B) Linux Server can act as Proxy/Mail/WWW/Router Server etc.

# LINUX OVERVIEW

**Linux as Stand-alone OS**

**Linux offers bundled applications such as follows:**

- Open Office (Writer, Impress, Calc)
- Graphics/image-editing software (Gimp)
- Software development (Phyton)
- Internet, e-mail, chatting
- Small personal database management system, etc.

# LINUX OVERVIEW

**Major Components of Linux**

- Kernel
- Shell
- File System
- Communication/Networking
- Text Processing
- Programming
- System Management
- Online Documentation
- Graphical Environment

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# LINUX INSTALLATION

**Step 1:**
Double-click the
**Public OVAs**
folder on your
Desktop

# LINUX INSTALLATION

**Step 2:**
Double-click
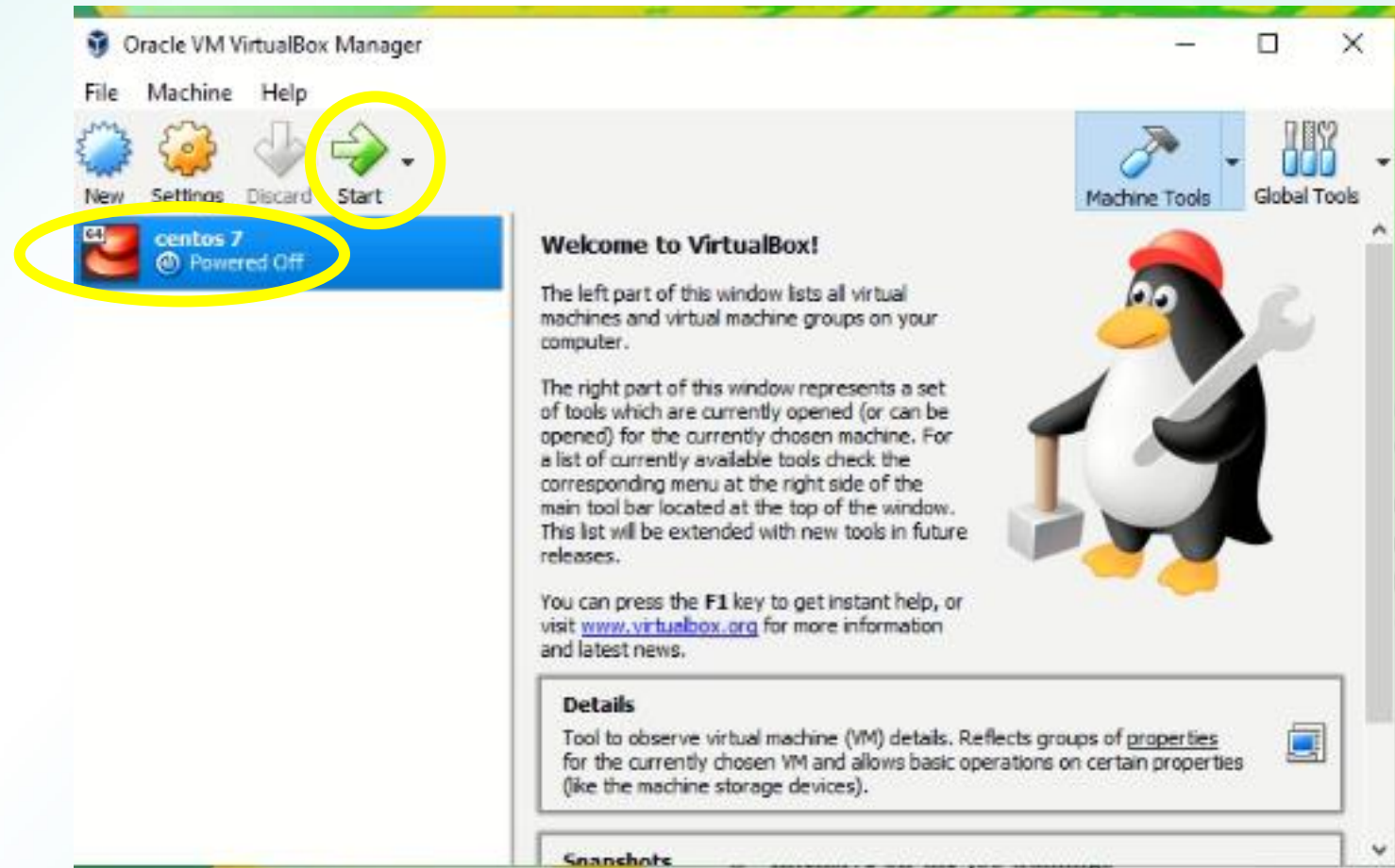Centos7
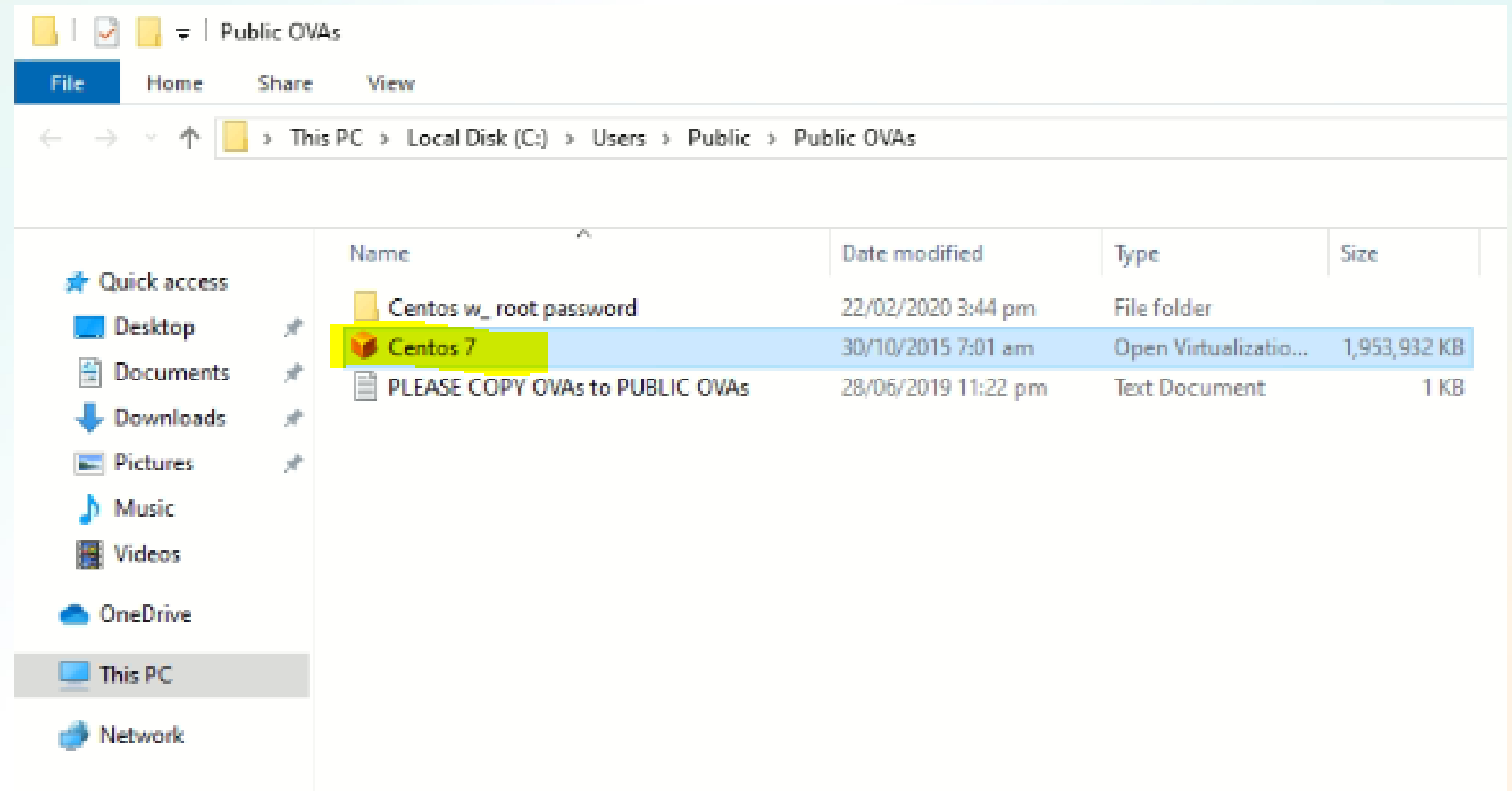
# LINUX INSTALLATION

**Step 3:**

Click **Import** button then wait until it is completed
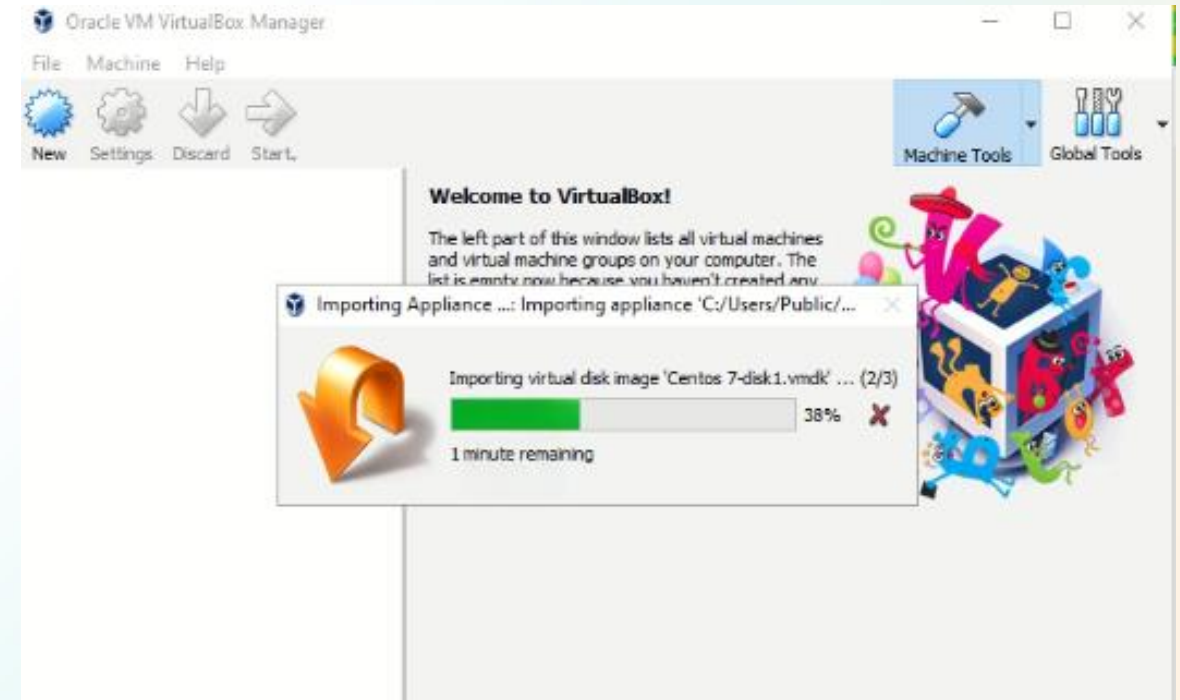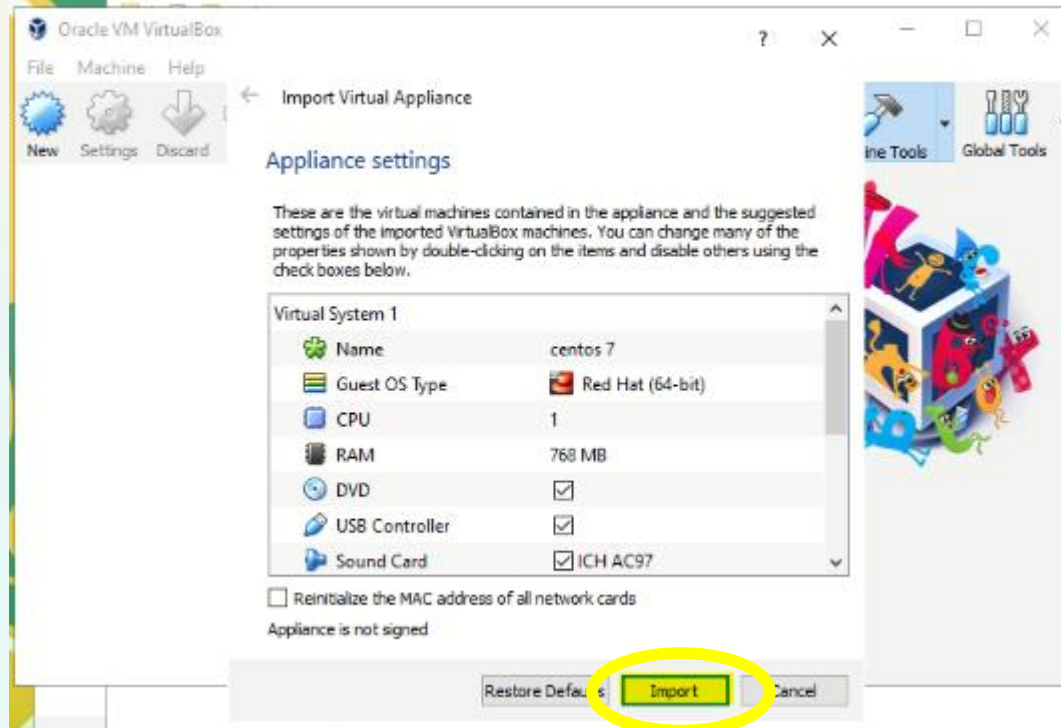
# LINUX INSTALLATION

**Step 4:**
After the import, double click the **Centos 7** or click **Start** to initialize your Centos 7 (Linux OS)
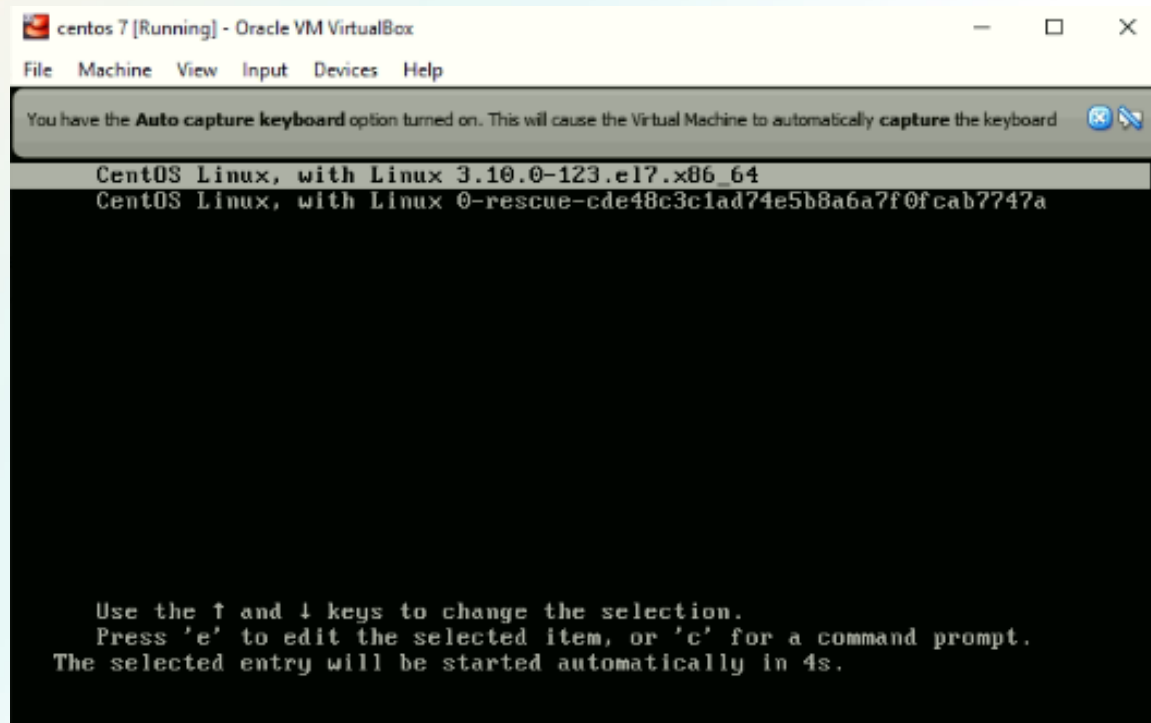
# LINUX INSTALLATION

**Step 5:**
During the initialization, select the first option.

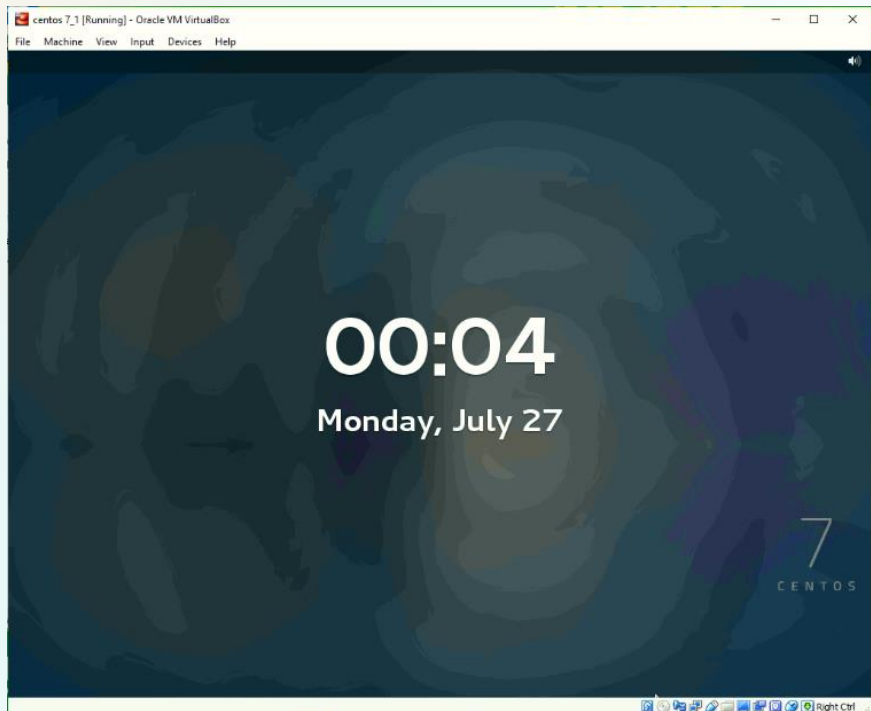**Step 6:**
Wait for the loading of OS to finish.
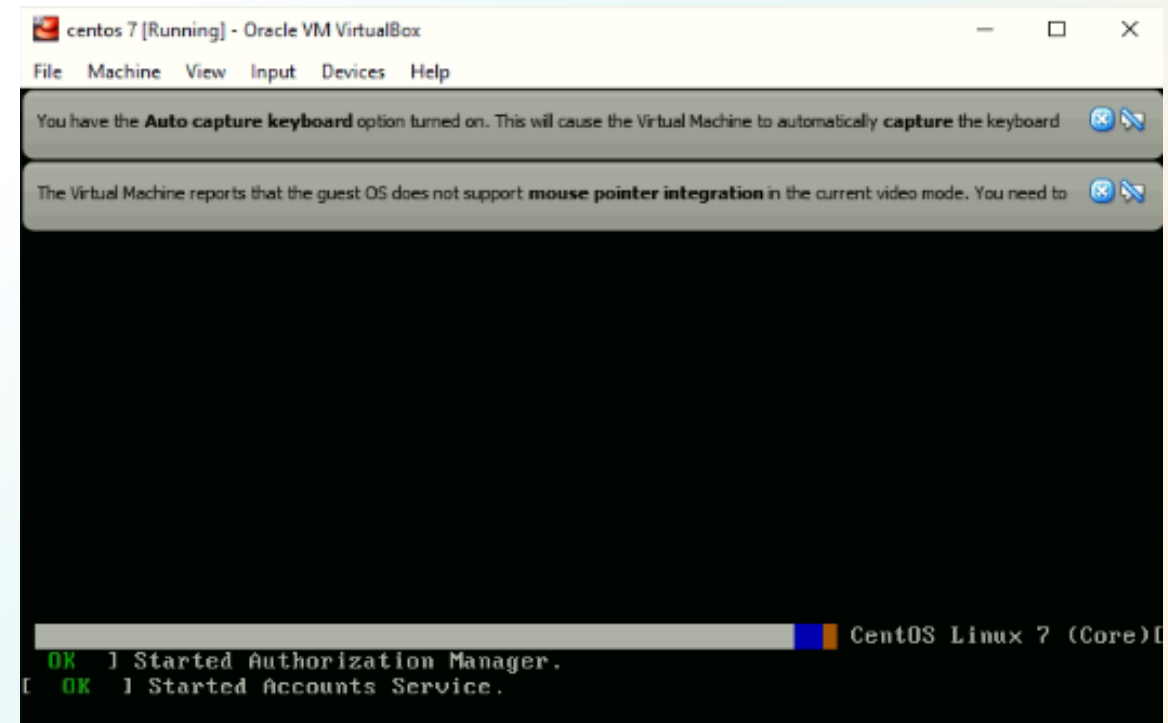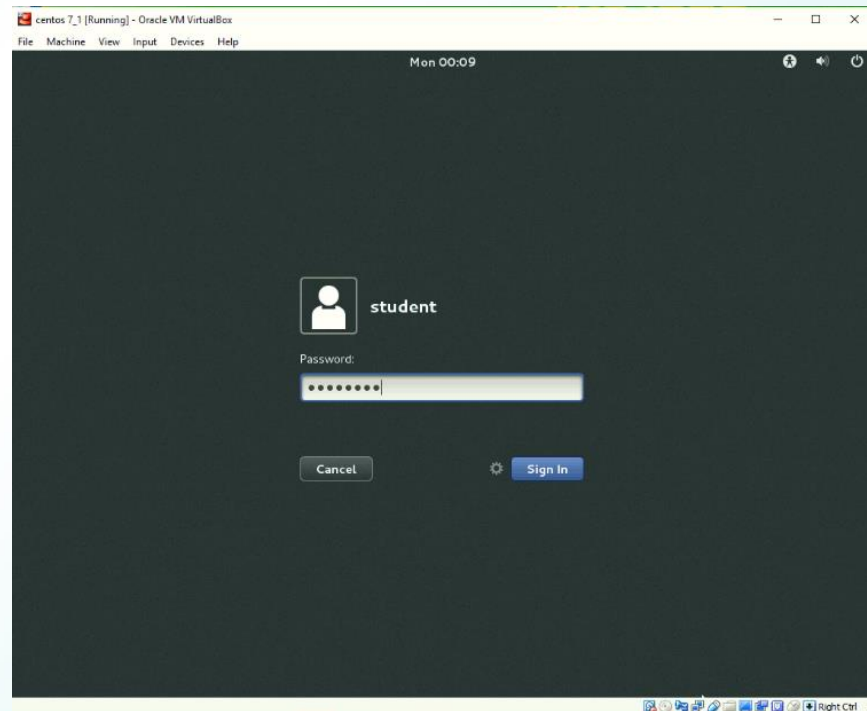
# LINUX INSTALLATION

**Step 7:**

Once the OS is loaded, press **ENTER** key, to log-in.

**Step 8:**

Select **Student** account and type **"password"** in the Password textbox.

# LINUX INSTALLATION
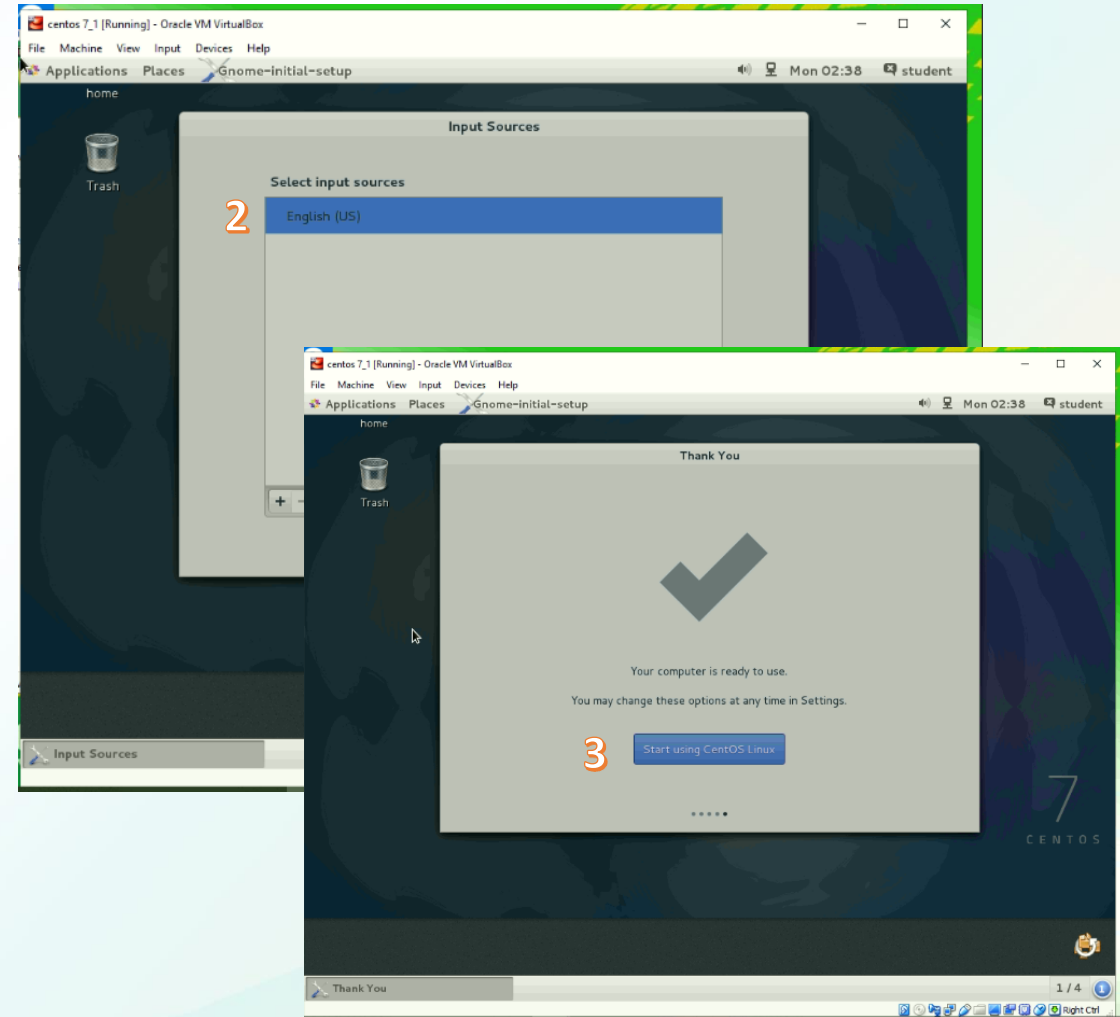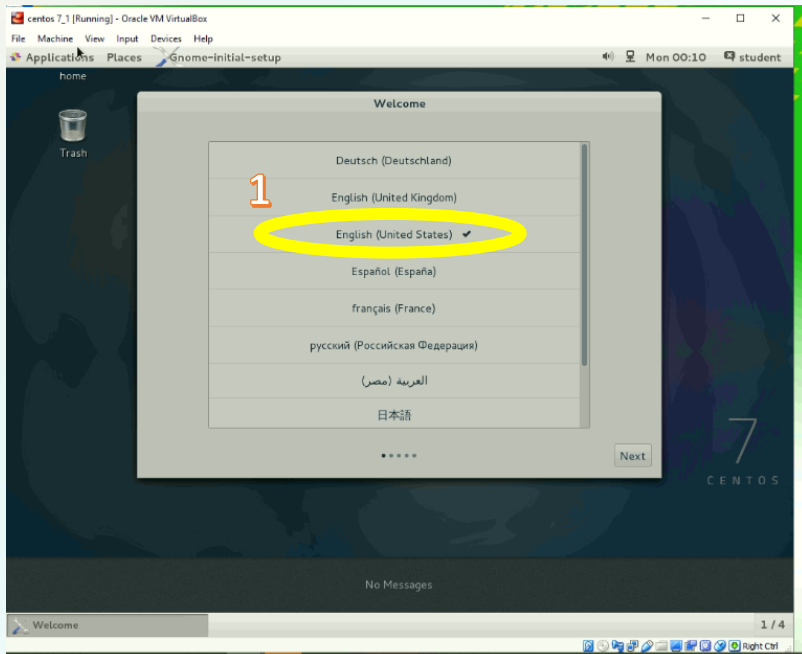
**Step 9:**
Select **English** as the language and input source then click **Start using CentOS Linux** button.

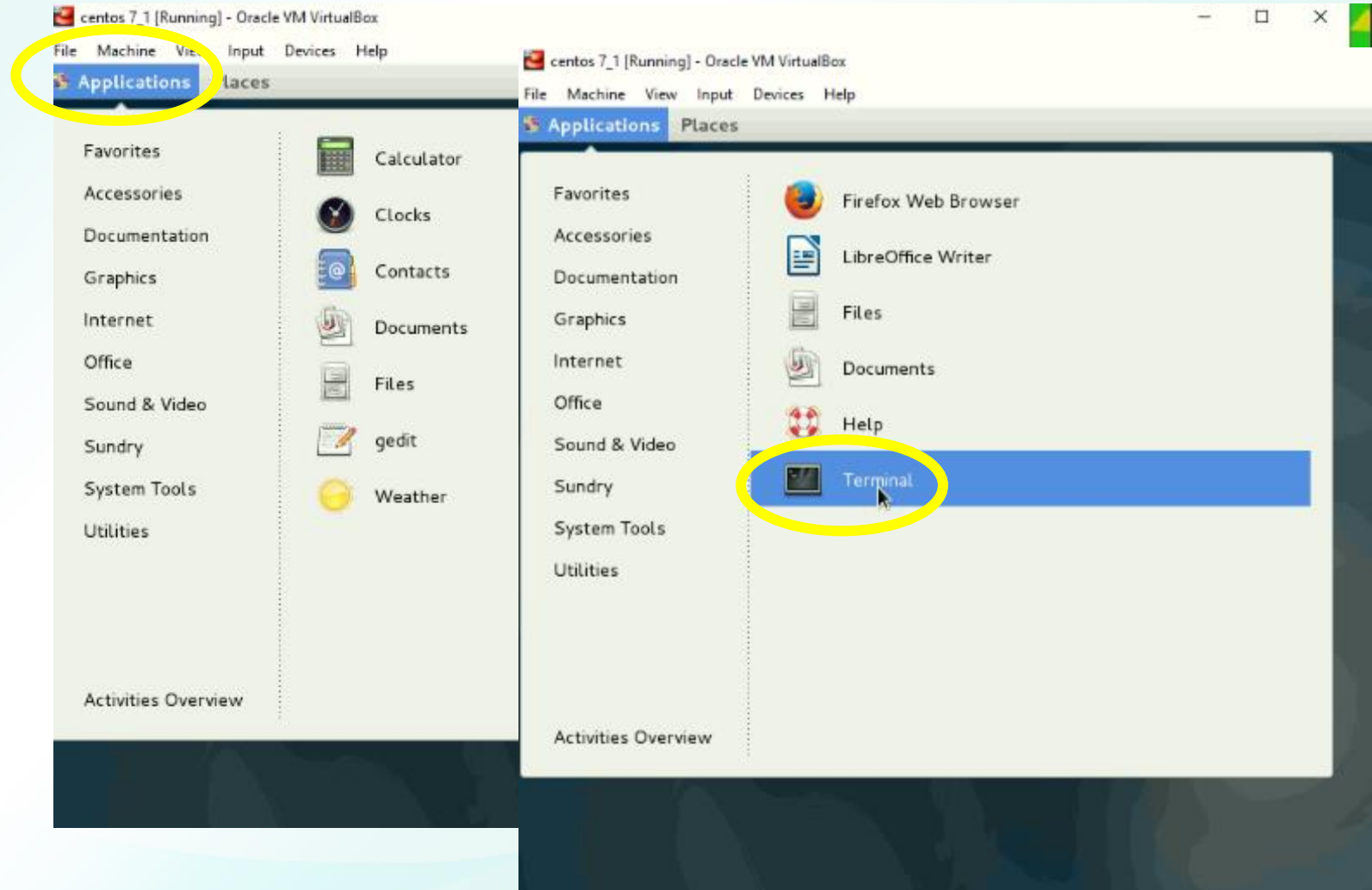# LINUX INSTALLATION

By default, the **Host key** is the
**Right Ctrl** key on the keyboard.



right-Ctrl key
(default Host key)

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# LINUX INSTALLATION

**Step 10:**
To access installed applications, click **Applications.**
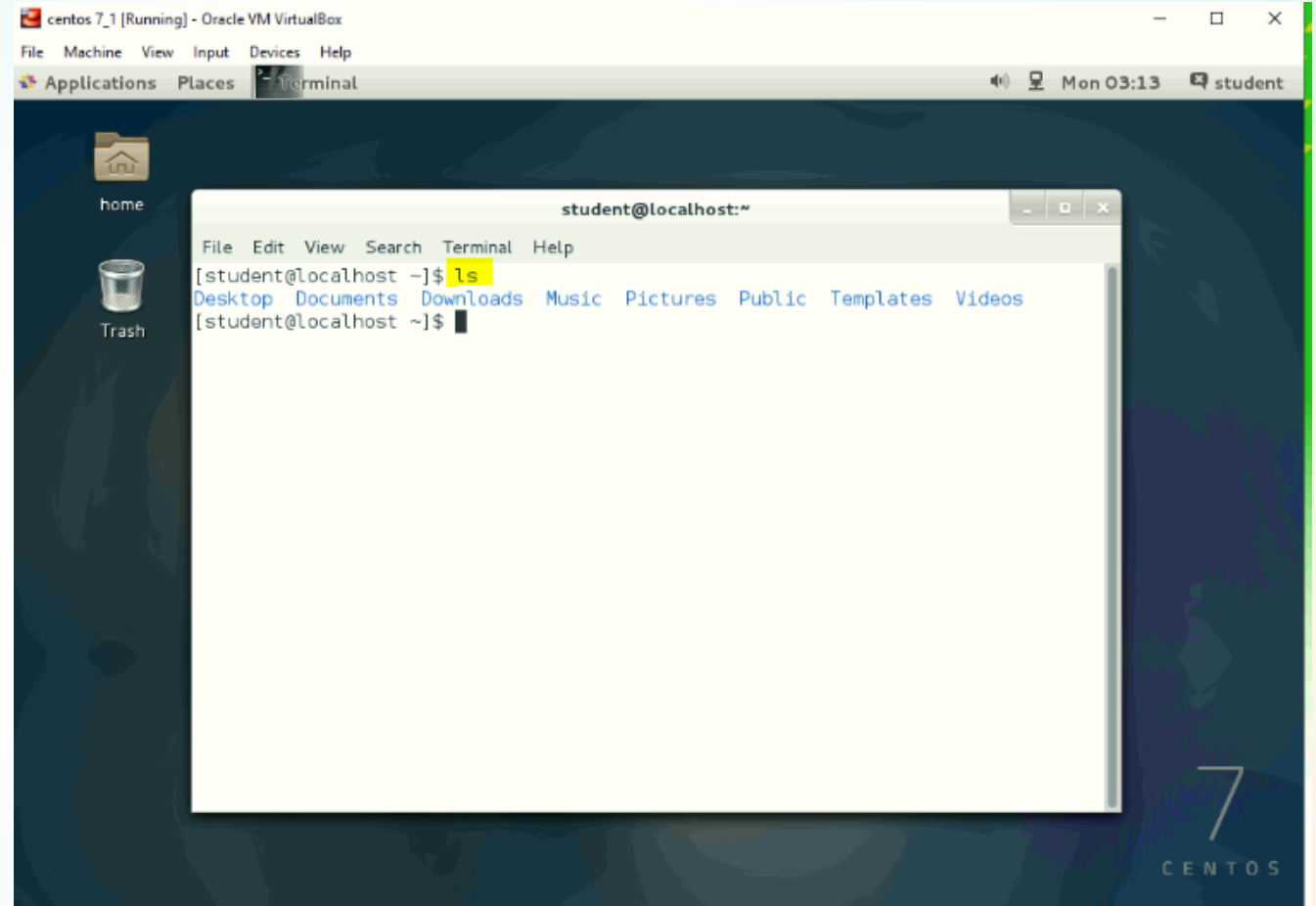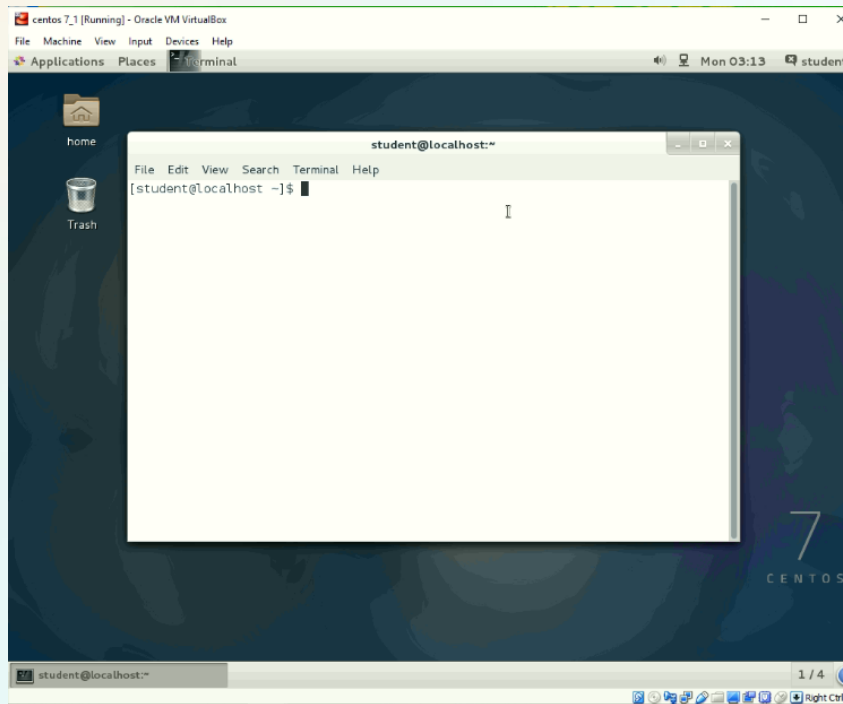**Terminal** is also known as *shell* or *console* which is the command line interface in Linux.



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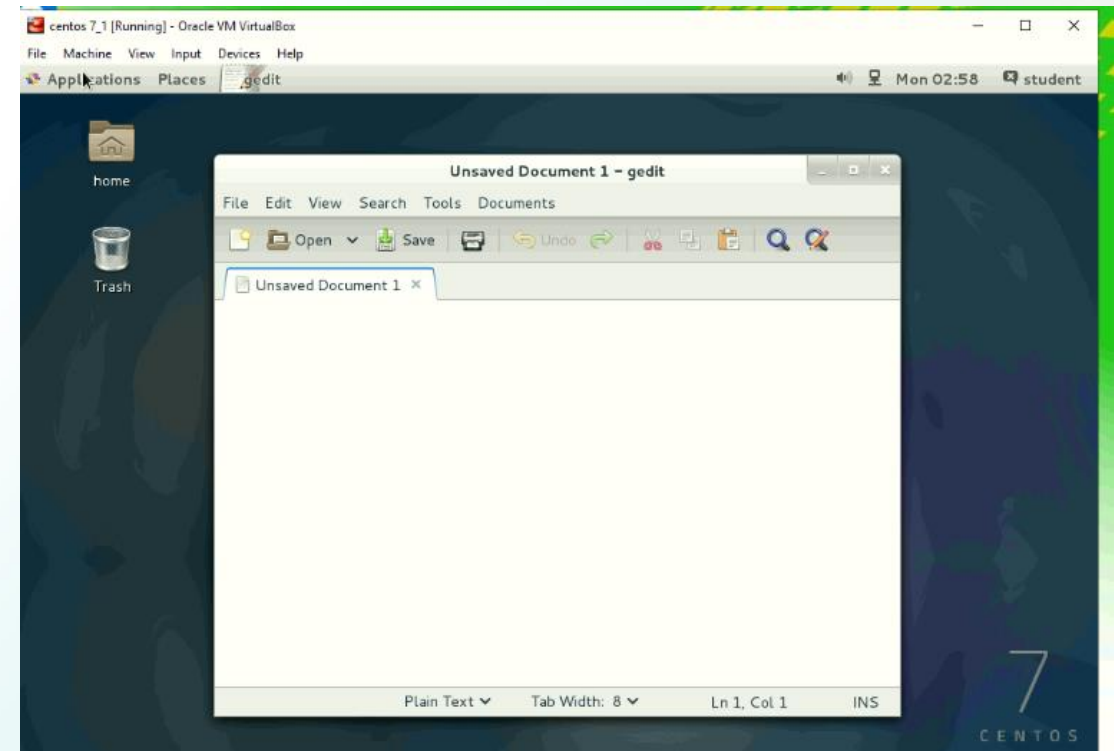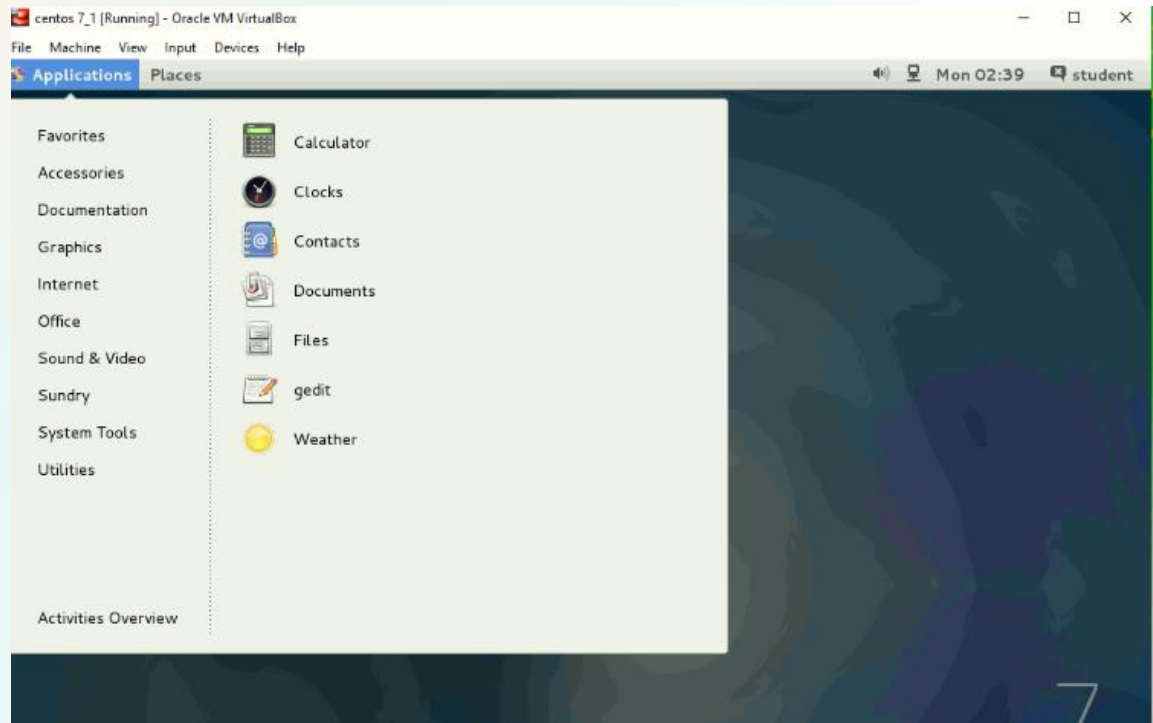
# LINUX INSTALLATION

## Terminal environment

# LINUX INSTALLATION

**gedit** is a powerful general purpose text editor in Linux. It is the default text editor of the GNOME desktop environment.

# REFERENCES

- Sobell, M., et al. (2017). A Practical Guide to Linux Commands, Editors, and Shell Programming, 4th Ed. Addison-Wesley Professional
- Cobbaut, P. (2016). Mastering Linux- Networking
- Blum, R., (2015). Linux Command Line and Shell Scripting Bible