ThangLong University

CS100: INTRO TO PROGRAMMING
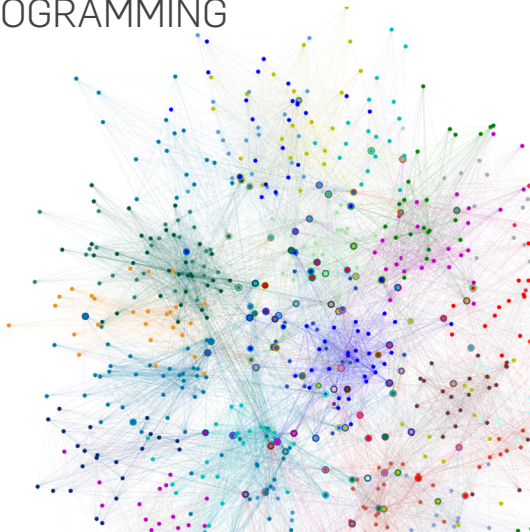## Linux operating system

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Overview

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In this lecture, I provide a general view of Ubuntu Linux and its the benefits. You'll learn the basics of the command line interface (CLI) of a Ubuntu Linux OS.

Overview

1. Operating system

2. Command line interface

3. Python programming

OPERATING SYSTEM

What is an operating system?

The operating system (OS) is the most important program that runs on a computer. Every general-purpose computer must have an operating system to run other programs and applications. Computer operating systems perform basic tasks.

Figure: Some operating system examples

Closed-source
operating system.

FREE

Development (Programming, Software/web development, ...)

Performance (RAM utilization, Core utilization, ...)

Security (Antivirus, firewall, ... awesome, no antivirus needed)

Install Ubuntu OS

1. Install Ubuntu OS inside Windows using Wubi (**recommend**)
   Watch video: https://youtu.be/vq22i0zglwQ
2. Install Ubuntu alongside Windows

Figure: Install Ubuntu inside Windows using wubi

COMMAND LINE INTERFACE

What can CLI do?

The CLI can help you:

→ Navigate folders
→ Create files, folders, and programs
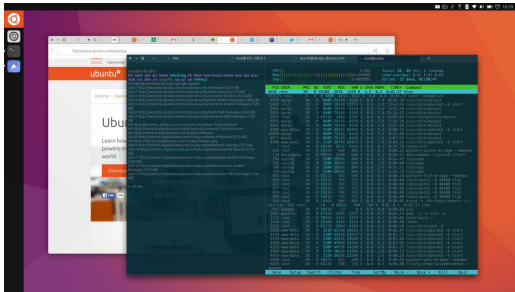→ Edit file, folders, and programs
→ Run computer programs

Figure: Command line interface on Ubuntu

CLI Basics

- → You can imagine tracing all of the directories from your root directory to the directory you're currently in.
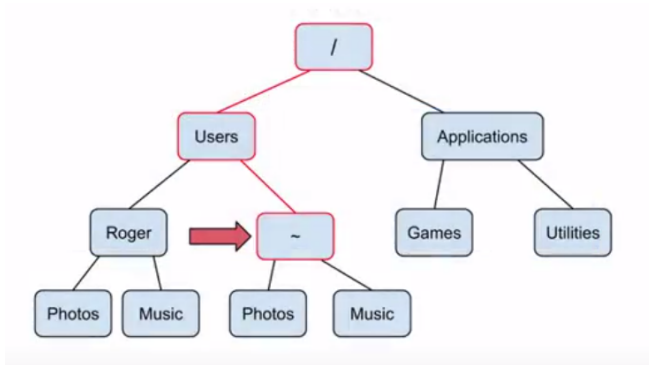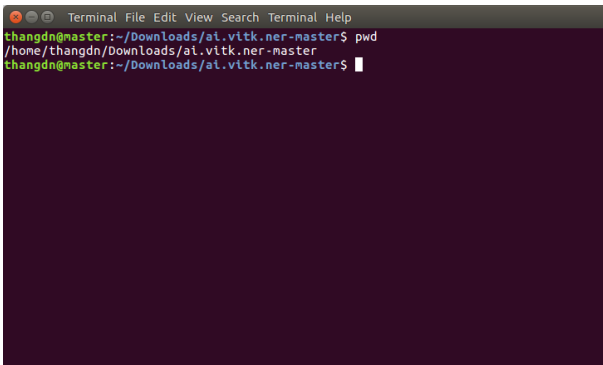- → This is called the "path" to your working directory.

Figure: Linux directory
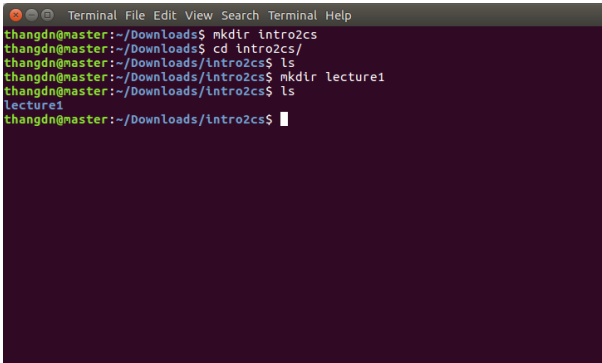
CLI Basics

→ In yoir CLI prompt, type **pwd** and press enter.

→ This will display the path to you're working directory.

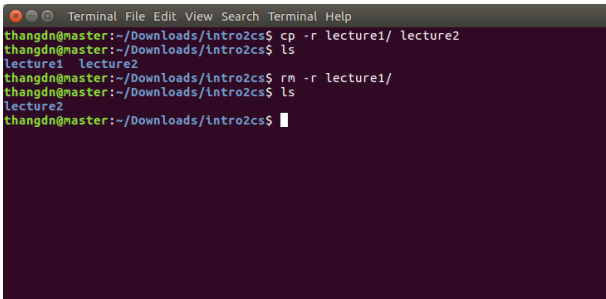→ As you can see we get the prompt back after entering a command.

CLI Commands

→ **cd** stands for "change directory"

→ **mkdir** stands for "make directory".
   Just like: right click -> create new folder

→ **ls** lists files and folders in the current directory

Overview

Operating system
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Command line interface
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Python programming

CLI Commands

→ **cp** can also be used for copying the contents of directories. The line: **cp -r Documents More_docs** copies the contents of Documents into More_docs

→ **rm** stands for "remove" to delete entire directories and their contents by using the **-r** flag
Be careful when you do this, there is no way to undo an rm command

```
Terminal  File  Edit  View  Search  Terminal  Help
thangdn@master:~/Downloads/intro2cs$ cp -r lecture1/ lecture2
thangdn@master:~/Downloads/intro2cs$ ls
lecture1  lecture2
thangdn@master:~/Downloads/intro2cs$ rm -r lecture1/
thangdn@master:~/Downloads/intro2cs$ ls
lecture2
thangdn@master:~/Downloads/intro2cs$
```

Your challenge

Learn basic terminal commands (CLI) quickly in an Hour!

PYTHON PROGRAMMING