

# **Practical Work 01**

Access to Linux (Ubuntu) Server with Basic Command Line

# Instruction

1. Install Linux (Ubuntu)
2. Basic Command (review)
3. Example Command
4. Assignment W01-1

# Install Linux (Ubuntu)

There are **4 ways** of using Ubuntu:

1. Make it as your main OS on your computer
  - a. Go to <https://www.ubuntu.com/download>
2. Using VirtualBox or VMware on your Windows or Mac OS
  - a. Go to <https://www.virtualbox.org/wiki/Download>
3. Using Windows Subsystem Linux (instruction in next slide)
4. Access to Ubuntu Server
  - a. By using command line “SSH” which is a full form of Secure Shell

# Windows Subsystem Linux

1. Install Ubuntu in your Windows 11 from Microsoft Store
  - a. <https://documentation.ubuntu.com/wsl/stable/howto/install-ubuntu-wsl2/#method-3-install-from-the-microsoft-store>
2. Install Ubuntu in your Windows 10 from Microsoft Store
  - a. Requirement
    - i. Windows 10 version 1607+
    - ii. Enable “Windows Subsystem for Linux” by going to menu and search “Windows PowerShell” and right click “Run as administrator”. Then enter below command

```
Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux
```
    - iii. `Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux`
  - b. Go to “Microsoft Store”
  - c. Search “Ubuntu” and click on “Ubuntu 24.04”
  - d. Click on “Get”

# Basic Command (review)

- `pwd` : show your working directory
- `cd ..` : change directory to parent directory
- `cd directory_name` : change directory to child directory
- `cd` or `cd ~` : change directory to HOME directory
- `cd /home/coca/tmp` : change directory to a specific path location
- `mv oldname newname` : move/rename file/directory
- `cp src.txt dest.txt`: copy file “src.txt” to another file “dest.txt”

# Basic Command (review)

- `ls` : list all files and directories of current directory
- `ls directory_name` : list all files and directories of a specified directory
- `cat filename` : display contents of a file
- `rm filename` : remove a file
- `mkdir dir_name` : create new empty directory
- `touch filename` : create new empty file

# Basic Command (VIM)

- **vim filename.txt** : edit content of a file
  - a. ESC > :q > ENTER : to quit (exit) from vim
  - b. ESC > :q! > ENTER : to force quit without saving from vim
  - c. ESC > :w > ENTER : to write (save) edited content in vim
  - d. ESC > :wq > ENTER : to write and quite (save and exit) from vim
  - e. ESC > i : to edit and writing text in vim
  - f. ESC : to go to default mode in vim
  - g. ARROW KEYS : to navigate cursor around in vim

# Using man and --help

- `man <command>` : detailed manual page
  - a. Example: `man ls`
- `<command> --help` : quick summary of options
  - a. Example: `ls --help`

Good Habit :

- Check `man` or `--help` first before searching online

# Example W01-1

1. (Work on your local machine from option 1 to 3 of your choice and open terminal)
2. Show all files and directories in home directory by using command “**ls**”
3. Create a new directory in **home directory**, named “**hello**” by using “**mkdir**”
4. Go to directory “**hello**” by using command “**cd**”
5. Create a new file name “**your.full.name.txt**” inside directory “**hello**”
  - a. NOTE: “**your.full.name**” is your email before @ symbol
  - b. For example: kannika.kong@cadt.edu.kh ⇒ “kannika.kong”
6. Show all files and directories in this “**hello**” directory
7. Show your currencies directory by using command “**pwd**”

# Answer W01-1

1. Show all files and directories in home directory by using “**ls**”

```
➤ ls ~
```

2. Create a new directory in home directory, named “**hello**” by using “**mkdir**”

```
➤ cd ~
```

```
➤ mkdir hello
```

3. Go go to directory “**hello**” by using “**cd**”

```
➤ cd hello
```

4. Create a new file name “**your.full.name.txt**” inside directory “**hello**”

```
➤ touch kannika.kong.txt
```

5. Show all files and directories in this “**hello**” directory

```
➤ ls
```

6. Show your currencies directory by using command “**pwd**”

```
➤ pwd
```

# Example W01-2

1. Edit content inside file “**your.full.name.txt**” and write text:
  - a. I Love Command Line!
2. Save and exit
3. Display content inside “**your.full.name.txt**”

# Answer W01-2

1. Open terminal of your local Linux setup from the previous Example W01, and change the current directory to hello directory:
  - Enter “**cd ~/hello**”
2. Edit content inside file “**your.full.name.txt**” and write text “**I Love Command Line!**”
  - Enter “**vim kannika.kong.txt**”
  - Type “**ESC**”, then type “**i**”
  - Write text “**I Love Command Line!**”
3. Save and exit
  - Type “**ESC**”, then type “**:wq**”, then hit “**ENTER**”
4. Display content inside “**your.full.name.txt**”
  - Type “**cat kannika.kong.txt**”

# Try Yourself on Remote Server

1. Enter command: (change **group01** to your real group number 1, 2, 3 or 4)
  - o `ssh group01@os.cammob.ovh`
  - o The password is : `group01@student2026`
2. Check your current working directory by using command "**pwd**"
3. Show all files and directories in servers by using command "**ls**"
4. Go inside directory "**public\_html**"
5. Create a directory "**your.full.name**" inside that directory "**public\_html**"
  - o "`your.full.name`" is your email before @ symbol (for example `kannika.kong@cadt.edu.kh`)
6. Create a file "**hello.txt**" inside your directory "**your.full.name**"
7. Write content inside "**hello.txt**" by using "**vim**" with below text and save it
  - o "`I Love Command Line`"
8. Go to browser enter
  - o `http://group01.os.cammob.ovh/your.full.name/hello.txt`
  - o For example:
    - i. `http://group01.os.cammob.ovh/kannika.kong/hello.txt`

# Assignment W01-1

1. Access to remote server “`ssh group01@os.cammob.ovh`”
2. Go to directory “`public_html/your.full.name/`” by using command “`cd`”
3. Create file name “`YOUR_STUDENT_ID.html`” by using command “`touch`”
4. Write text below inside this file “`YOUR_STUDENT_ID.html`” by using “`vim`” or “`nano`”
  - o “`<h1>My name is your.full.name. My Student ID is YOUR_STUDENT_ID</h1>`”
  - o Write down your answer below your info above inside the same file “`YOUR_STUDENT_ID.html`” with tag `<p>`
    - i. What is one thing you learned today in this lab that you didn't know before?
  - o **Save it**
  - o Go to browser enter this in address bar:
    - i. “`http://group01.os.cammob.ovh/your.full.name/YOUR_STUDENT_ID.html`”
    - 1. For example: “`http://group01.os.cammob.ovh/kannika.kong/IDTB090119.html`”
5. Create these directories inside your directory “`your.full.name`”:
  - o `lab01, lab02, lab03, lab04, lab05, lab06, lab07, lab08, lab09, lab10`
  - o Go to browser enter this in address bar:
    - i. “`http://group01.os.cammob.ovh/your.full.name/`”

# Submit Your Assignment W01-1

1. Screenshot of your command lines
2. Screenshot of your browser result including address bar for both
  - a. "`http://group01.os.cammob.ovh/your.full.name/YOUR_STUDENT_ID.html`"
  - b. "`http://group01.os.cammob.ovh/your.full.name/`"
3. Submit your work to eLearning