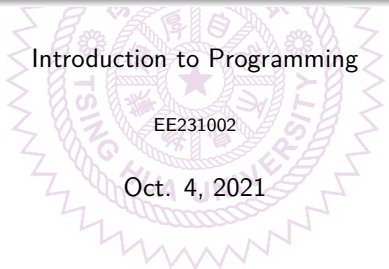


Introduction to Linux, I

Introduction to Programming

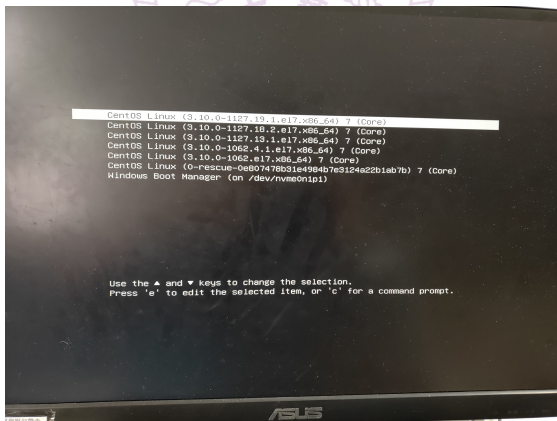
EE231002

Oct. 4, 2021



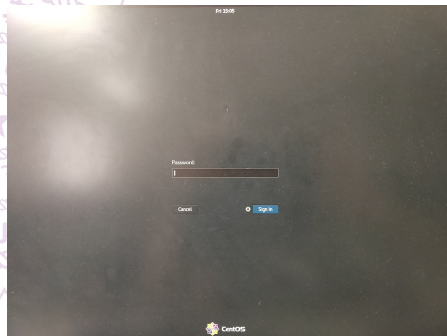
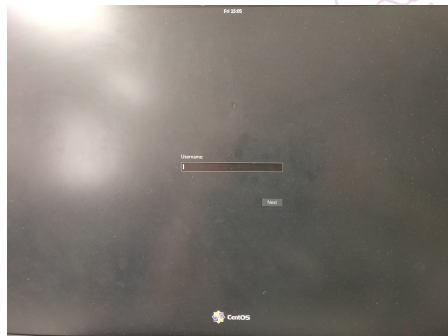
Power On a PC

- Power on a PC
- Select the **first options**
 - Or wait for 10 seconds
 - The latest version of **CentOs Linux** will start



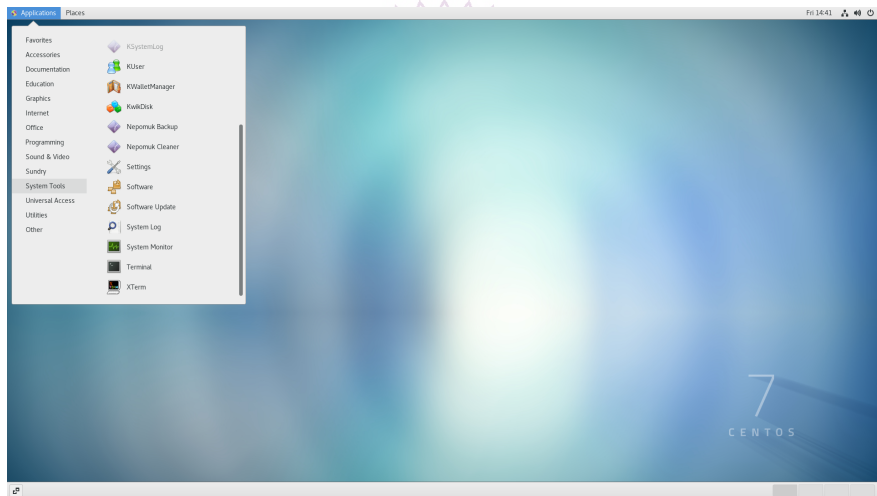
Login

- Login using your **account** and **password**



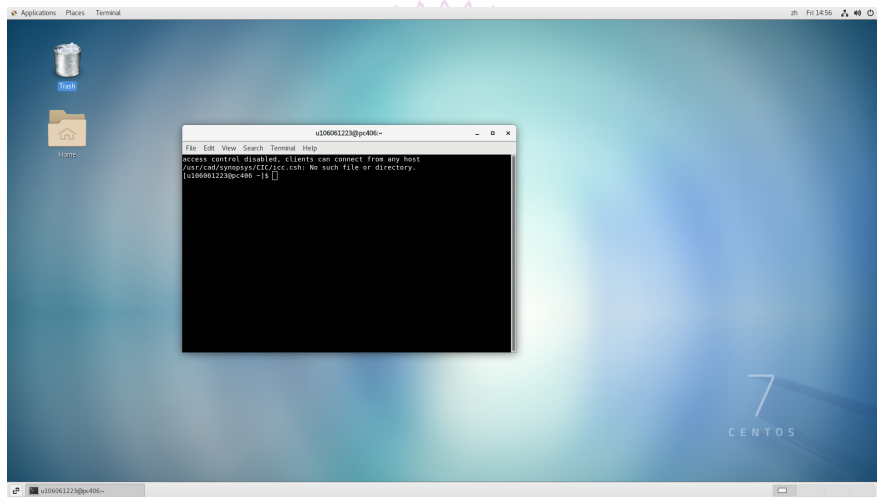
Open a Terminal

- To open a terminal, use the **Applications** menu on the top-left corner
 - **Applications -> System Tools -> Terminal**



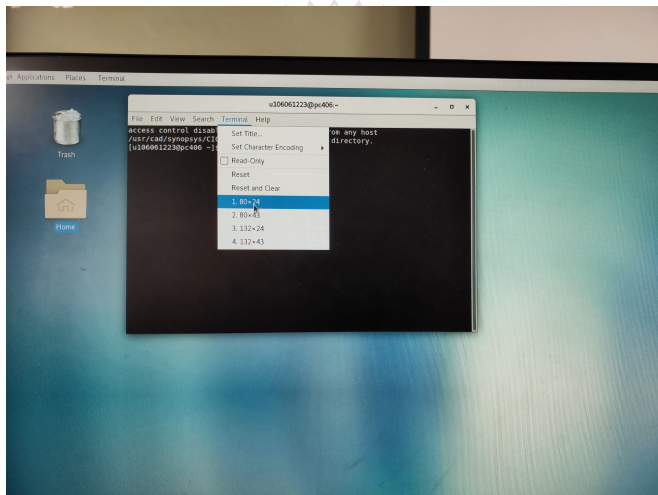
Open a Terminal, II

- A **terminal** accepts and processes commands
 - Multiple terminals can be opened



Open a Terminal, III

- Set terminal width to 80 characters
 - Terminal -> 1. 80 x 24



Change Password

- To change password: `yppasswd`
- Type in the original password

```
~ /u2019/PL/labs/linux1/test — vi t1 — bash — 70x10
[u102061251@ws38 ~]$ yppasswd
Changing NIS account information for u102061251 on brontosaur.
Please enter old password: [ ]
```

- Type in a new password twice

```
~ /u2019/PL/labs/linux1/test — vi t1 — bash — 70x10
[u102061251@ws38 ~]$ yppasswd
Changing NIS account information for u102061251 on brontosaur.
Please enter old password:
Changing NIS password for u102061251 on brontosaur.
Please enter new password:
Please retype new password: [ ]
```

- Choose a password that is easy to remember and difficult to break

```
~ /u2019/PL/labs/linux1/test — vi t1 — bash — 70x12
[u102061251@ws38 ~]$ yppasswd
Changing NIS account information for u102061251 on brontosaur.
Please enter old password:
Changing NIS password for u102061251 on brontosaur.
Please enter new password:
Please retype new password:

The NIS password has been changed on brontosaur.

[u102061251@ws38 ~]$ [ ]
```

Directory

- Right after you logged-in, you are at your home directory.
- `pwd`: print working directory

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x12
[u102061251@ws38 ~]$ pwd
/home/u102/u102061251
[u102061251@ws38 ~]$
```

- `mkdir`: make directory

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x12
[u102061251@ws38 ~]$ pwd
/home/u102/u102061251
[u102061251@ws38 ~]$ mkdir C_program
[u102061251@ws38 ~]$ ls
C_program
```

- `cd`: change directory

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x12
[u102061251@ws38 ~]$ pwd
/home/u102/u102061251
[u102061251@ws38 ~]$ mkdir C_program
[u102061251@ws38 ~]$ ls
C_program
[u102061251@ws38 C_program]$ cd C_program
[u102061251@ws38 C_program]$ pwd
/home/u102/u102061251/C_program
[u102061251@ws38 C_program]$
```


- Continue to create directory for **lab01**

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x14
[u102061251@ws38 ~]$ pwd
/home/u102/u102061251
[u102061251@ws38 ~]$ mkdir C_program
[u102061251@ws38 ~]$ ls
C_program
[u102061251@ws38 C_program]$ cd C_program
[u102061251@ws38 C_program]$ pwd
/home/u102/u102061251/C_program
[u102061251@ws38 C_program]$ mkdir lab01
[u102061251@ws38 C_program]$ cd lab01
[u102061251@ws38 lab01]$ cd lab01
[u102061251@ws38 lab01]$
```

- cp**: copy files and directories

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x14
[u102061251@ws38 lab01]$ cp ~/ee2310/lab01.pdf .
[u102061251@ws38 lab01]$ ls
lab01.pdf
[u102061251@ws38 lab01]$
```

- ls**: list directory content

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x14
[u102061251@ws38 lab01]$ cp lab01.pdf new.pdf
[u102061251@ws38 lab01]$ ls
lab01.pdf new.pdf
[u102061251@ws38 lab01]$
```

mv and rm

- General linux command syntax
`COMMAND [OPTION1] [OPTION2] [ARGUMENT1] [ARGUMENT2] ...`
- **cp**: copy files and directories
 - Syntax: `cp SOURCE ... DIRECTORY`
 - Purpose: copy SOURCE or multiple SOURCE(s) to DIRECTORY
- **mv**: move a file to a different name
 - Can move files and directories also
 - Syntax: `mv SOURCE DIRECTORY`




```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x14
[u102061251@ws38 lab01]$ ls
lab01.pdf new.pdf
[u102061251@ws38 lab01]$ mv new.pdf old.pdf
[u102061251@ws38 lab01]$ ls
lab01.pdf old.pdf
[u102061251@ws38 lab01]$
```

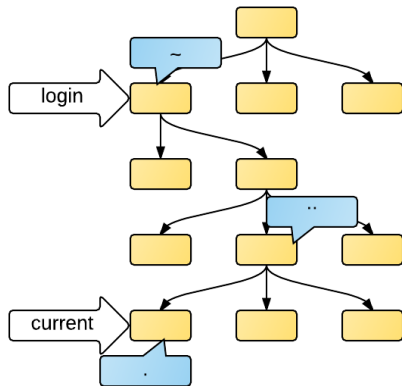
- **rm**: remove a file from a directory

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x14
[u102061251@ws38 lab01]$ ls
lab01.pdf old.pdf
[u102061251@ws38 lab01]$ rm old.pdf
[u102061251@ws38 lab01]$ ls
lab01.pdf
[u102061251@ws38 lab01]$
```

Special Directories

- Linux file structure

- : current directory
- : directory one-level up
- : home directory



Special Directories – Usages

- Example of using special directories

```
~/.2019/PL/labs/linux1/test — vi t1 — bash — 70x16
[u102061251@ws38 lab01]$ pwd
/home/u102/u102061251/C_program/lab01
[u102061251@ws38 lab01]$ cd .
[u102061251@ws38 lab01]$ pwd
/home/u102/u102061251/C_program/lab01
[u102061251@ws38 lab01]$ cd ..
[u102061251@ws38 C_program]$ pwd
/home/u102/u102061251/C_program
[u102061251@ws38 C_program]$ cd ~
[u102061251@ws38 ~]$ pwd
/home/u102/u102061251
[u102061251@ws38 ~]$ cd C_program/lab01
[u102061251@ws38 lab01]$ pwd
/home/u102/u102061251/C_program/lab01
[u102061251@ws38 lab01]$
```

- Note that a file path can consist of multi-levels.

Command Summary

Command	Usage	Comments
<code>yppasswd</code>	<code>yppasswd</code>	Change password.
<code>mkdir</code>	<code>mkdir dir</code>	Create a directory <code>dir</code> .
<code>cd</code>	<code>cd dir</code>	Change to directory <code>dir</code> .
<code>pwd</code>	<code>pwd</code>	Show current working directory.
<code>ls</code>	<code>ls</code>	List current directory.
<code>rmdir</code>	<code>rmdir dir</code>	Remove directory <code>dir</code> .
<code>rm</code>	<code>rm file</code>	Remove file <code>file</code> .
<code>cp</code>	<code>cp file1 file2</code> <code>cp file dir</code>	Copy <code>file1</code> to <code>file2</code> . Copy <code>file</code> to directory <code>dir</code> .
<code>mv</code>	<code>mv file1 file2</code> <code>mv file dir</code>	Rename <code>file1</code> to <code>file2</code> . Move <code>file</code> to directory <code>dir</code> .

Logout

- Please make sure to logout of the PC after class
 - Use the menu on the top right of the screen.



- 使用規則

1. 請勿攜帶飲料、食物進入。
2. 離開時請確實 logout，關機關電源。



Quick Start for Lab01

- login
- open a terminal then in that terminal

```
$ yppasswd
$ mkdir C_program
$ cd C_program
$ mkdir lab01
$ cd lab01
$ cp ~/ee2310/lab01/* .
$ evince linux1.pdf &
$ evince vim1.pdf &
$ evince lab01.pdf &
```
- After reviewing those materials, you can start working on your lab01.c.

