

1. Shell configuration

a. ให้แสดงข้อความ Hello World หลังจาก Login

- nano ~/.bash_profile
- เมื่อเข้ามาในไฟล์แล้ว พิมพ์ echo "Hello World"

b. ตรวจสอบผลลัพธ์ด้วยการ Login ให้แสดงข้อความ Hello Moon หลังจากเปิด Shell ใหม่

- nano ~/.bashrc
- เมื่อเข้ามาในไฟล์แล้ว พิมพ์ echo "Hello Moon"

c. ตรวจสอบผลลัพธ์ด้วยการเรียก /bin/bash

```
Ubuntu 24.04.1 LTS 66070286 tty1
66070286 login: nuannim
Password:
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-51-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

System information as of Fri Jan 10 05:19:51 AM UTC 2025

System load:  1.91               Processes:    246
Usage of /:   43.2% of 9.75GB    Users logged in: 0
Memory usage: 7%                IPv4 address for ens33: 192.168.148.128
Swap usage:  0%

Expanded Security Maintenance for Applications is not enabled.

70 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
Hello World
nuannim@66070286:~$ /bin/bash
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
Hello Moon
nuannim@66070286:~$
```

2. Environment Variable

```

Hello World
nuannim@66070286:~$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
nuannim@66070286:~$ /bin/bash
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

Hello Moon
nuannim@66070286:~$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
nuannim@66070286:~$ export PATH="Hahaha"
nuannim@66070286:~$ echo $PATH
Hahaha
nuannim@66070286:~$ ls -la
Command 'ls' is available in the following places
 * /bin/ls
 * /usr/bin/ls
The command could not be located because '/usr/bin:/bin' is not included in the PATH environment variable.
ls: command not found
nuannim@66070286:~$ exit
exit
nuannim@66070286:~$ ls -la
total 44
drwxr-x--- 5 nuannim nuannim 4096 Jan 10 05:18 .
drwxr-xr-x 3 root     root    4096 Jan 10 04:42 ..
-rw-rw-r-- 1 nuannim nuannim   18 Jan 10 05:18 .bash
-rw----- 1 nuannim nuannim  215 Jan 10 05:34 .bash_history
-rw-r--r-- 1 nuannim nuannim  220 Mar 31 2024 .bash_logout
-rw-rw-r-- 1 nuannim nuannim   19 Jan 10 05:15 .bash_profile
-rw-r--r-- 1 nuannim nuannim 3790 Jan 10 05:16 .bashrc
drwx----- 2 nuannim nuannim 4096 Jan 10 04:44 .cache
drwxrwxr-x 3 nuannim nuannim 4096 Jan 10 04:55 .local
-rw-r--r-- 1 nuannim nuannim  807 Mar 31 2024 .profile
drwx----- 2 nuannim nuannim 4096 Jan 10 04:42 .ssh
nuannim@66070286:~$ _

```

คำสั่งที่ใช้

- nano ~/.bashrc เพื่อเข้าไปในไฟล์
- export PATH="Hahaha"

3. สร้างไดเรกทอรีและไฟล์ โดยกำหนดให้ใช้รหัส นศ เป็นเบส เช่น 65070001

- a. ที่ Home Directory สร้างไดเรกทอรีที่มีชื่อว่า 65070001-Dir
 - `mkdir ~/66070286-Dir`
- b. สร้างไฟล์ที่มีคำว่า HelloWorld ใช้ชื่อว่า 65070001-File ใน 65070001-Dir
 - `echo "HelloWorld" > ~/6607286-Dir/66070286-File`
- c. สำเนาไฟล์ 65070001-File เป็น 65070001-File-copy ใน 65070001-Dir
 - `cp ~/6607286-Dir/66070286-File ~/6607286-Dir/6607286-File-copy`
- d. ตรวจสอบผลลัพธ์โดยการสั่ง `ls -laR` จาก Home Directory

```

drwxr-x--- 6 nuannim nuannim 4096 Jan 10 05:44 .
drwxr-xr-x 3 root root 4096 Jan 10 04:42 ..
drwxrwxr-x 2 nuannim nuannim 4096 Jan 10 05:45 66070286-Dir
-rw-rw-r-- 1 nuannim nuannim 18 Jan 10 05:18 .bash
-rw----- 1 nuannim nuannim 248 Jan 10 05:41 .bash_history
-rw-rw-r-- 1 nuannim nuannim 220 Mar 31 2024 .bash_logout
-rw-rw-r-- 1 nuannim nuannim 19 Jan 10 05:15 .bash_profile
-rw-rw-r-- 1 nuannim nuannim 3790 Jan 10 05:16 .bashrc
drwx----- 2 nuannim nuannim 4096 Jan 10 04:44 .cache
-rw-rw-r-- 1 nuannim nuannim 0 Jan 10 05:44 HelloWorld
drwxrwxr-x 3 nuannim nuannim 4096 Jan 10 04:55 .local
-rw-rw-r-- 1 nuannim nuannim 807 Mar 31 2024 .profile
drwx----- 2 nuannim nuannim 4096 Jan 10 04:42 .ssh

/home/nuannim/66070286-Dir:
total 16
drwxrwxr-x 2 nuannim nuannim 4096 Jan 10 05:45 .
drwxr-x--- 6 nuannim nuannim 4096 Jan 10 05:44 ..
-rw-rw-r-- 1 nuannim nuannim 1 Jan 10 05:44 66070286-File
-rw-rw-r-- 1 nuannim nuannim 1 Jan 10 05:45 66070286-File-copy

/home/nuannim/.cache:
total 8
drwx----- 2 nuannim nuannim 4096 Jan 10 04:44 .
drwxr-x--- 6 nuannim nuannim 4096 Jan 10 05:44 ..
-rw-rw-r-- 1 nuannim nuannim 0 Jan 10 04:44 motd.legal-displayed

/home/nuannim/.local:
total 12
drwxrwxr-x 3 nuannim nuannim 4096 Jan 10 04:55 .
drwxr-x--- 6 nuannim nuannim 4096 Jan 10 05:44 ..
drwx----- 3 nuannim nuannim 4096 Jan 10 04:55 share

/home/nuannim/.local/share:
total 12
drwx----- 3 nuannim nuannim 4096 Jan 10 04:55 .
drwxrwxr-x 3 nuannim nuannim 4096 Jan 10 04:55 ..
drwx----- 2 nuannim nuannim 4096 Jan 10 04:55 nano

/home/nuannim/.local/share/nano:
total 8
drwx----- 2 nuannim nuannim 4096 Jan 10 04:55 .
drwx----- 3 nuannim nuannim 4096 Jan 10 04:55 ..

/home/nuannim/.ssh:
total 8
drwx----- 2 nuannim nuannim 4096 Jan 10 04:42 .
drwxr-x--- 6 nuannim nuannim 4096 Jan 10 05:44 ..
-rw----- 1 nuannim nuannim 0 Jan 10 04:42 authorized_keys
nuannim@66070286:~$ _

```

4. ค้นหาไฟล์หรือ directory ที่ชื่อ ls, passwd, log, และ sudo

```
nuannim@66070286:~$ find / -name "ls" 2>/dev/null
/usr/bin/ls
/usr/src/linux-headers-6.8.0-51/arch/arm/boot/dts/nxp/ls
/usr/lib/klibc/bin/ls
nuannim@66070286:~$ find / -name "passwd" 2>/dev/null
/usr/bin/passwd
/usr/share/bash-completion/completions/passwd
/usr/share/lintian/overrides/passwd
/usr/share/doc/passwd
/etc/pam.d/passwd
/etc/passwd
nuannim@66070286:~$ find / -name "log" 2>/dev/null
/run/log
/var/log
/dev/log
nuannim@66070286:~$ find / -name "sudo" 2>/dev/null
/run/sudo
/usr/bin/sudo
/usr/share/bash-completion/completions/sudo
/usr/share/lintian/overrides/sudo
/usr/share/doc/sudo
/usr/libexec/sudo
/etc/pam.d/sudo
/var/lib/sudo
```

คำสั่งที่ใช้

- find / -name "ls" 2>/dev/null
- find / -name "passwd" 2>/dev/null
- find / -name "log" 2>/dev/null
- find / -name "sudo" 2>/dev/null

5. จัดการ Packages

```

nuannim@66070286:~$ apt list --installed | grep "net"

WARNING: apt does not have a stable CLI interface. Use with caution in scripts.

netbase/noble,now 6.4 all [installed,automatic]
netcat-openbsd/noble,now 1.226-1ubuntu2 amd64 [installed,automatic]
netplan-generator/now 1.0.1-1ubuntu2~24.04.1 amd64 [installed,upgradable to: 1.1.1-1~ubuntu24.04.1]
netplan.io/now 1.0.1-1ubuntu2~24.04.1 amd64 [installed,upgradable to: 1.1.1-1~ubuntu24.04.1]
networkd-dispatcher/noble,now 2.2.4-1 all [installed,automatic]
nuannim@66070286:~$ sudo apt-get install net-tools
[sudo] password for nuannim:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 73 not upgraded.
Need to get 204 kB of archives.
After this operation, 811 kB of additional disk space will be used.
Get:1 http://th.archive.ubuntu.com/ubuntu noble/main amd64 net-tools amd64 2.10-0.1ubuntu4 [204 kB]
Fetched 204 kB in 1s (152 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 80883 files and directories currently installed.)
Preparing to unpack .../net-tools_2.10-0.1ubuntu4_amd64.deb ...
Unpacking net-tools (2.10-0.1ubuntu4) ...
Setting up net-tools (2.10-0.1ubuntu4) ...
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.

```

```

nuannim@66070286:~$ sudo apt-get remove net-tools
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages will be REMOVED:
  net-tools
0 upgraded, 0 newly installed, 1 to remove and 73 not upgraded.
After this operation, 811 kB disk space will be freed.
Do you want to continue? [Y/n] y
(Reading database ... 80931 files and directories currently installed.)
Removing net-tools (2.10-0.1ubuntu4) ...
Processing triggers for man-db (2.12.0-4build2) ...
nuannim@66070286:~$ sudo apt update
Hit:1 http://th.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://th.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://th.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://th.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [770 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:6 http://th.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:7 http://th.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:8 http://th.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [972 kB]
Get:9 http://th.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [309 kB]
Get:10 http://th.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:11 http://th.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [208 B]
Get:12 http://th.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:13 http://th.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [11.7 kB]
Get:14 http://th.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:15 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [7,268 B]
Get:16 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:17 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.0 kB]
Get:18 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Fetched 2,654 kB in 4s (688 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
73 packages can be upgraded. Run 'apt list --upgradable' to see them.

```

คำสั่งที่ใช้

- ตรวจสอบว่ามี Packages อะไรที่ชื่อ net ขึ้นต้น Install อยู่บ้าง ด้วยคำสั่ง `apt list --installed | grep "^net"`
- ทดลองเพิ่ม Packages ชื่อ net-tools แล้วลองตรวจสอบและลองสั่ง ifconfig ด้วยคำสั่ง `sudo apt-get install net-tools`
- ทดลองลบ Packages ชื่อ net-tools แล้วลองตรวจสอบและลองสั่ง ifconfig ด้วยคำสั่ง `sudo apt-get remove net-tools`
- อัปเดต package index file ด้วยคำสั่ง `sudo apt update`
- อัปเดตระบบด้วยคำสั่ง `sudo apt upgrade`

6. Passwd ที่หาเจอในข้อ 4

```

nuannim@66070286:~$ file /usr/bin/passwd
/usr/bin/passwd: setuid ELF 64-bit LSB pie executable, x86-64, version 1 (SYSV), dynamically linked, interpreter /lib64/ld-linux-x86-64.so.2, BuildID[sha1]=2344
480b478a675609210ed886207d6cbdc8cdd7, for GNU/Linux 3.2.0, stripped
nuannim@66070286:~$ file /usr/s
sbin/ share/ src/
nuannim@66070286:~$ file /usr/s
sbin/ share/ src/
nuannim@66070286:~$ file /usr/share/bash-completion/
bash_completion completions/ helpers/
nuannim@66070286:~$ file /usr/share/bash-completion/
bash_completion completions/ helpers/
nuannim@66070286:~$ file /usr/share/bash-completion/
bash_completion completions/ helpers/
nuannim@66070286:~$ file /usr/share/bash-completion/
bash_completion completions/ helpers/
nuannim@66070286:~$ file /usr/share/bash-completion/passwd
/usr/share/bash-completion/passwd: cannot open `/usr/share/bash-completion/passwd' (No such file or directory)
nuannim@66070286:~$ file /usr/share/bash-completion/completions/passwd
/usr/share/bash-completion/completions/passwd: ASCII text
nuannim@66070286:~$ file /usr/share/lintian/overrides/passwd
/usr/share/lintian/overrides/passwd: ASCII text
nuannim@66070286:~$ file /usr/share/doc/
doc/ doc-base/ dot.bashrc dot.profile dot.profile.md5sums
nuannim@66070286:~$ file /usr/share/doc/passwd/
/usr/share/doc/passwd/: directory
nuannim@66070286:~$ file /etc/pam.d/passwd
/etc/pam.d/passwd: ASCII text
nuannim@66070286:~$ file /etc/passwd
/etc/passwd: ASCII text

```

คำสั่ง file แสดงชนิดของไฟล์

```

nuannim@66070286:~$ wc /usr/bin/passwd
144  976 64152 /usr/bin/passwd
nuannim@66070286:~$ wc /usr/share/bash-completion/completions/passwd
24  63 551 /usr/share/bash-completion/completions/passwd
nuannim@66070286:~$ wc /usr/share/lintian/overrides/passwd
6  30 360 /usr/share/lintian/overrides/passwd
nuannim@66070286:~$ wc /usr/share/doc/passwd/
wc: /usr/share/doc/passwd/: Is a directory
0  0 0 /usr/share/doc/passwd/
nuannim@66070286:~$ wc /etc/pam.d/passwd
6 14 92 /etc/pam.d/passwd
nuannim@66070286:~$ wc /etc/passwd
33  49 1741 /etc/passwd

```

คำสั่ง wc แสดงจำนวนบรรทัดของแต่ละไฟล์

7. ใช้คำสั่งต่อไปนี้กับไฟล์ syslog

a. head, tail, sort

- head /var/log/syslog
- tail /var/log/syslog
- sort /var/log/syslog

b. Record 10 อันดับเก่าที่สุด

- head -n 10 /var/log/syslog

c. Record 10 อันดับใหม่ที่สุด

- tail -n 10 /var/log/syslog

```
nuannim@66070286:~$ head /var/log/syslog
2025-01-10T04:42:22.302376+00:00 66070286 systemd-modules-load[469]: Inserted module 'msr'
2025-01-10T04:42:22.303058+00:00 66070286 systemd-modules-load[469]: Inserted module 'dm_multipath'
2025-01-10T04:42:22.303072+00:00 66070286 lvm[452]: 1 logical volume(s) in volume group "ubuntu-vg" monitored
2025-01-10T04:42:22.303078+00:00 66070286 systemd[1]: modprobe@efi_pstore.service: Deactivated successfully.
2025-01-10T04:42:22.303083+00:00 66070286 systemd[1]: Finished modprobe@efi_pstore.service - Load Kernel Module efi_pstore.
2025-01-10T04:42:22.303089+00:00 66070286 systemd[1]: modprobe@fuse.service: Deactivated successfully.
2025-01-10T04:42:22.303093+00:00 66070286 systemd[1]: Finished modprobe@fuse.service - Load Kernel Module fuse.
2025-01-10T04:42:22.303097+00:00 66070286 systemd[1]: modprobe@loop.service: Deactivated successfully.
2025-01-10T04:42:22.303106+00:00 66070286 systemd[1]: Finished modprobe@loop.service - Load Kernel Module loop.
2025-01-10T04:42:22.303110+00:00 66070286 systemd[1]: Finished systemd-modules-load.service - Load Kernel Modules.
nuannim@66070286:~$ tail /var/log/syslog
2025-01-10T15:50:03.843844+00:00 66070286 systemd[1]: Starting sysstat-collect.service - system activity accounting tool...
2025-01-10T15:50:03.848569+00:00 66070286 systemd[1]: sysstat-collect.service: Deactivated successfully.
2025-01-10T15:50:03.848625+00:00 66070286 systemd[1]: Finished sysstat-collect.service - system activity accounting tool.
2025-01-10T15:51:30.860244+00:00 66070286 PackageKit: daemon quit
2025-01-10T15:51:30.864102+00:00 66070286 systemd[1]: packagekit.service: Deactivated successfully.
2025-01-10T15:55:01.606968+00:00 66070286 CRON[12107]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
2025-01-10T16:00:09.978341+00:00 66070286 systemd[1]: Starting sysstat-collect.service - system activity accounting tool...
2025-01-10T16:00:09.985259+00:00 66070286 systemd[1]: sysstat-collect.service: Deactivated successfully.
2025-01-10T16:00:09.986295+00:00 66070286 systemd[1]: Finished sysstat-collect.service - system activity accounting tool.
2025-01-10T16:05:01.620332+00:00 66070286 CRON[12122]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
```

```
2025-01-10T15:46:55.695774+00:00 66070286 multipath: sda: failed to get sgio uid: No such file or directory
2025-01-10T15:46:55.705257+00:00 66070286 multipathd[11940]: sda: failed to get sysfs uid: No such file or directory
2025-01-10T15:46:55.705339+00:00 66070286 multipathd[11940]: sda: failed to get sgio uid: No such file or directory
2025-01-10T15:46:55.705363+00:00 66070286 multipathd[11940]: sda: failed to get path uid
2025-01-10T15:46:55.705383+00:00 66070286 multipathd[11940]: uevent trigger error
2025-01-10T15:46:58.409697+00:00 66070286 systemd-timesyncd[11946]: Contacted time server 185.125.190.57:123 (ntp.ubuntu.com)...
2025-01-10T15:46:58.409840+00:00 66070286 systemd-timesyncd[11946]: Initial clock synchronization to Fri 2025-01-10 15:46:58.388
2025-01-10T15:47:05.686363+00:00 66070286 multipathd[11940]: sda: not initialized after 3 udev retriggers
2025-01-10T15:47:06.688138+00:00 66070286 multipathd[11940]: sda: add missing path
2025-01-10T15:47:06.688323+00:00 66070286 multipathd[11940]: sda: failed to get sysfs uid: No such file or directory
2025-01-10T15:47:06.688338+00:00 66070286 multipathd[11940]: sda: failed to get sgio uid: No such file or directory
2025-01-10T15:47:06.688346+00:00 66070286 multipathd[11940]: sda: no WWID in state "undef
2025-01-10T15:47:06.688357+00:00 66070286 multipathd[11940]: ", giving up
2025-01-10T15:47:06.688369+00:00 66070286 multipathd[11940]: sda: check_path() failed, removing
2025-01-10T15:50:03.843844+00:00 66070286 systemd[1]: Starting sysstat-collect.service - system activity accounting tool...
2025-01-10T15:50:03.848569+00:00 66070286 systemd[1]: sysstat-collect.service: Deactivated successfully.
2025-01-10T15:50:03.848625+00:00 66070286 systemd[1]: Finished sysstat-collect.service - system activity accounting tool.
2025-01-10T15:51:30.860244+00:00 66070286 PackageKit: daemon quit
2025-01-10T15:51:30.864102+00:00 66070286 systemd[1]: packagekit.service: Deactivated successfully.
2025-01-10T15:55:01.606968+00:00 66070286 CRON[12107]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
2025-01-10T16:00:09.978341+00:00 66070286 systemd[1]: Starting sysstat-collect.service - system activity accounting tool...
2025-01-10T16:00:09.985259+00:00 66070286 systemd[1]: sysstat-collect.service: Deactivated successfully.
2025-01-10T16:00:09.986295+00:00 66070286 systemd[1]: Finished sysstat-collect.service - system activity accounting tool.
2025-01-10T16:05:01.620332+00:00 66070286 CRON[12122]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
nuannim@66070286:~$
```

```
nuannim@66070286:~$ head -n 10 /var/log/syslog
2025-01-10T04:42:22.302376+00:00 66070286 systemd-modules-load[469]: Inserted module 'msr'
2025-01-10T04:42:22.303058+00:00 66070286 systemd-modules-load[469]: Inserted module 'dm_multipath'
2025-01-10T04:42:22.303072+00:00 66070286 lvm[452]: 1 logical volume(s) in volume group "ubuntu-vg" monitored
2025-01-10T04:42:22.303078+00:00 66070286 systemd[1]: modprobe@efi_pstore.service: Deactivated successfully.
2025-01-10T04:42:22.303083+00:00 66070286 systemd[1]: Finished modprobe@efi_pstore.service - Load Kernel Module efi_pstore.
2025-01-10T04:42:22.303089+00:00 66070286 systemd[1]: modprobe@fuse.service: Deactivated successfully.
2025-01-10T04:42:22.303093+00:00 66070286 systemd[1]: Finished modprobe@fuse.service - Load Kernel Module fuse.
2025-01-10T04:42:22.303097+00:00 66070286 systemd[1]: modprobe@loop.service: Deactivated successfully.
2025-01-10T04:42:22.303106+00:00 66070286 systemd[1]: Finished modprobe@loop.service - Load Kernel Module loop.
2025-01-10T04:42:22.303110+00:00 66070286 systemd[1]: Finished systemd-modules-load.service - Load Kernel Modules.
nuannim@66070286:~$ tail -n 10 /var/log/syslog
2025-01-10T15:50:03.843844+00:00 66070286 systemd[1]: Starting sysstat-collect.service - system activity accounting tool...
2025-01-10T15:50:03.848569+00:00 66070286 systemd[1]: sysstat-collect.service: Deactivated successfully.
2025-01-10T15:50:03.848625+00:00 66070286 systemd[1]: Finished sysstat-collect.service - system activity accounting tool.
2025-01-10T15:51:30.860244+00:00 66070286 PackageKit: daemon quit
2025-01-10T15:51:30.864102+00:00 66070286 systemd[1]: packagekit.service: Deactivated successfully.
2025-01-10T15:55:01.606968+00:00 66070286 CRON[12107]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
2025-01-10T16:00:09.978341+00:00 66070286 systemd[1]: Starting sysstat-collect.service - system activity accounting tool...
2025-01-10T16:00:09.985259+00:00 66070286 systemd[1]: sysstat-collect.service: Deactivated successfully.
2025-01-10T16:00:09.986295+00:00 66070286 systemd[1]: Finished sysstat-collect.service - system activity accounting tool.
2025-01-10T16:05:01.620332+00:00 66070286 CRON[12122]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
```

8. แสดงผลการค้นหาไฟล์หรือไดเรกทอรีที่มีคำว่า log อยู่ในชื่อ

คำสั่งที่ใช้

- `find / -name "*log*" | sort | head -n 10` เพื่อแสดง 10 อันดับแรก โดยเรียงตามตัวอักษร

```
find: '/proc/12135/task/12135/fd': Permission denied
find: '/proc/12135/task/12135/fdinfo': Permission denied
find: '/proc/12135/task/12135/ns': Permission denied
find: '/proc/12135/fd': Permission denied
find: '/proc/12135/map_files': Permission denied
find: '/proc/12135/fdinfo': Permission denied
find: '/proc/12135/ns': Permission denied
find: '/proc/12136/task/12136/fd': Permission denied
find: '/proc/12136/task/12136/fdinfo': Permission denied
find: '/proc/12136/task/12136/ns': Permission denied
find: '/proc/12136/fd': Permission denied
find: '/proc/12136/map_files': Permission denied
find: '/proc/12136/fdinfo': Permission denied
find: '/proc/12136/ns': Permission denied
find: '/proc/12137/task/12137/fd': Permission denied
find: '/proc/12137/task/12137/fdinfo': Permission denied
find: '/proc/12137/task/12137/ns': Permission denied
find: '/proc/12137/fd': Permission denied
find: '/proc/12137/map_files': Permission denied
find: '/proc/12137/fdinfo': Permission denied
find: '/proc/12137/ns': Permission denied
find: '/var/log/private': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-ModemManager.service-z34CaI': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-systemd-timesyncd.service-PudHTI': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-systemd-resolved.service-NcCL3W': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-polkit.service-0R0xB8': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-upower.service-98nQ20': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-systemd-logind.service-pk9aeS': Permission denied
find: '/var/spool/rsyslog': Permission denied
find: '/var/spool/cron/crontabs': Permission denied
find: '/var/cache/ldconfig': Permission denied
find: '/var/cache/private': Permission denied
find: '/var/cache/apparmor/baad73a1.0': Permission denied
find: '/var/cache/apt/archives/partial': Permission denied
find: '/var/cache/pollinate': Permission denied
find: '/var/lib/swap/vold': Permission denied
find: '/var/lib/swap/cookie': Permission denied
find: '/var/lib/update-notifier/package-data-downloads/partial': Permission denied
find: '/var/lib/private': Permission denied
find: '/var/lib/udisks2': Permission denied
find: '/var/lib/ubuntu-advantage/apt-esm/var/lib/apt/lists/partial': Permission denied
find: '/var/lib/polkit-1': Permission denied
find: '/var/lib/apt/lists/partial': Permission denied
find: '/var/lib/fuupd/gnupg': Permission denied
find: '/root': Permission denied
find: '/sys/kernel/tracing': Permission denied
find: '/sys/kernel/debug': Permission denied
find: '/sys/fs/pstore': Permission denied
```

- `find / -name "*log*" | sort | tail -n 10` เพื่อแสดง 10 อันดับสุดท้าย โดยเรียงตามตัวอักษร

```
find: '/proc/12135/task/12135/fd': Permission denied
find: '/proc/12135/task/12135/fdinfo': Permission denied
find: '/proc/12135/task/12135/ns': Permission denied
find: '/proc/12135/fd': Permission denied
find: '/proc/12135/map_files': Permission denied
find: '/proc/12135/fdinfo': Permission denied
find: '/proc/12135/ns': Permission denied
find: '/proc/12136/task/12136/fd': Permission denied
find: '/proc/12136/task/12136/fdinfo': Permission denied
find: '/proc/12136/task/12136/ns': Permission denied
find: '/proc/12136/fd': Permission denied
find: '/proc/12136/map_files': Permission denied
find: '/proc/12136/fdinfo': Permission denied
find: '/proc/12136/ns': Permission denied
find: '/proc/12137/task/12137/fd': Permission denied
find: '/proc/12137/task/12137/fdinfo': Permission denied
find: '/proc/12137/task/12137/ns': Permission denied
find: '/proc/12137/fd': Permission denied
find: '/proc/12137/map_files': Permission denied
find: '/proc/12137/fdinfo': Permission denied
find: '/proc/12137/ns': Permission denied
find: '/var/log/private': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-ModemManager.service-z34CaI': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-systemd-timesyncd.service-PudHTI': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-systemd-resolved.service-NcCL3W': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-polkit.service-0R0xB8': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-upower.service-98nQ20': Permission denied
find: '/var/tmp/systemd-private-ecb40adf2c7e45a8a19abcf195998ba7-systemd-logind.service-pk9aeS': Permission denied
find: '/var/spool/rsyslog': Permission denied
find: '/var/spool/cron/crontabs': Permission denied
find: '/var/cache/ldconfig': Permission denied
find: '/var/cache/private': Permission denied
find: '/var/cache/apparmor/baad73a1.0': Permission denied
find: '/var/cache/apt/archives/partial': Permission denied
find: '/var/cache/pollinate': Permission denied
find: '/var/lib/swap/vold': Permission denied
find: '/var/lib/swap/cookie': Permission denied
find: '/var/lib/update-notifier/package-data-downloads/partial': Permission denied
find: '/var/lib/private': Permission denied
find: '/var/lib/udisks2': Permission denied
find: '/var/lib/ubuntu-advantage/apt-esm/var/lib/apt/lists/partial': Permission denied
find: '/var/lib/polkit-1': Permission denied
find: '/var/lib/apt/lists/partial': Permission denied
find: '/var/lib/fuupd/gnupg': Permission denied
find: '/root': Permission denied
find: '/sys/kernel/tracing': Permission denied
find: '/sys/kernel/debug': Permission denied
find: '/sys/fs/pstore': Permission denied
find: '/sys/fs/bpf': Permission denied
nuannm66070286:~$
```