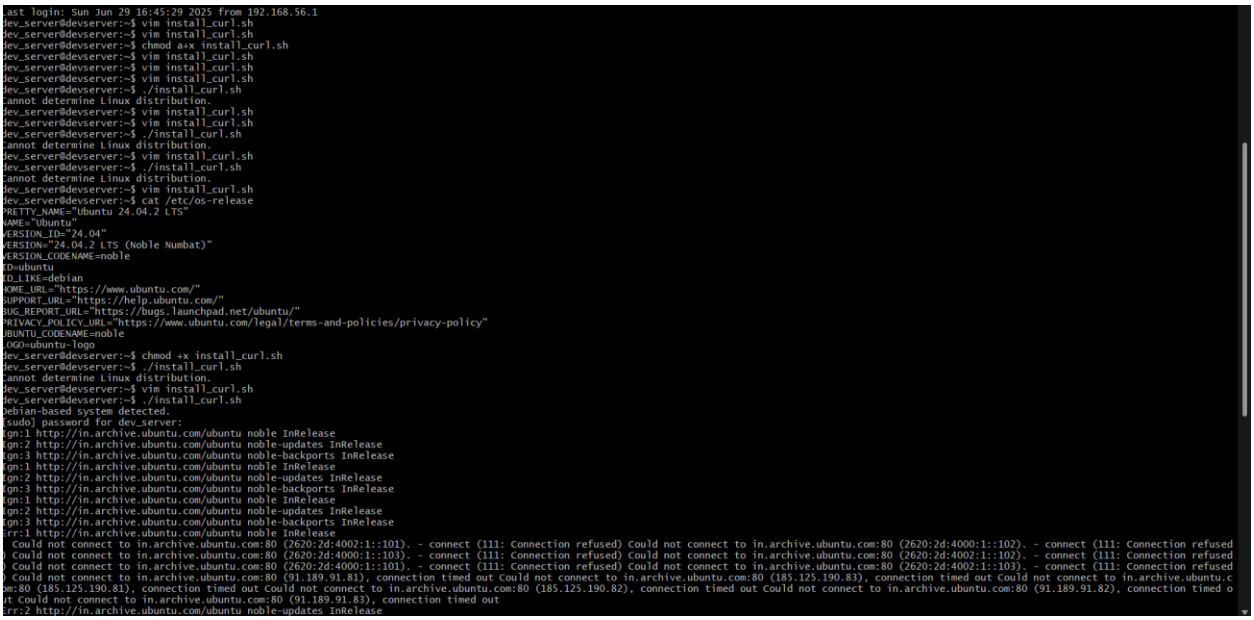
Assignment 1: Software installation

- **Script 1:** Write a program to install the **curl** package on different Linux distros(debain, redhat, alpine). Use the **case** condition in the program,to check/install package. The program should exit with the stderr "Distro not identified" if the OS is different than the list.

Input

Output



```
ast login: Sun Jun 29 16:45:29 2025 from 192.168.56.1
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ chmod a+x install_curl.sh
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ ./install_curl.sh
annot determine Linux distribution.
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ ./install_curl.sh
annot determine Linux distribution.
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ ./install_curl.sh
annot determine Linux distribution.
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ cat /etc/os-release
RETTY_NAME="Ubuntu 24.04.2 LTS"
AME="Ubuntu"
ERSION_ID="24.04"
ERSION="24.04.2 LTS (Noble Numbat)"
ERSION_CODENAME=noble
ID=ubuntu
ID_LIKE=debian
OME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
UG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
RIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
BUNTU_CODENAME=noble
OGO=ubuntu-logo
dev_server@devserver:~$ chmod +x install_curl.sh
dev_server@devserver:~$ ./install_curl.sh
annot determine Linux distribution.
dev_server@devserver:~$ vim install_curl.sh
dev_server@devserver:~$ ./install_curl.sh
ebian-based system detected.
[sudo] password for dev_server:
Ign:1 http://in.archive.ubuntu.com/ubuntu noble InRelease
Ign:2 http://in.archive.ubuntu.com/ubuntu noble-updates InRelease
Ign:3 http://in.archive.ubuntu.com/ubuntu noble-backports InRelease
Ign:1 http://in.archive.ubuntu.com/ubuntu noble InRelease
Ign:2 http://in.archive.ubuntu.com/ubuntu noble-updates InRelease
Ign:3 http://in.archive.ubuntu.com/ubuntu noble-backports InRelease
Ign:1 http://in.archive.ubuntu.com/ubuntu noble InRelease
Ign:2 http://in.archive.ubuntu.com/ubuntu noble-updates InRelease
Ign:3 http://in.archive.ubuntu.com/ubuntu noble-backports InRelease
rr:1 http://in.archive.ubuntu.com/ubuntu noble InRelease
  Could not connect to in.archive.ubuntu.com:80 (2620:2d:4002:1::101). - connect (111: Connection refused) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4000:1::102). - connect (111: Connection refused
) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4000:1::103). - connect (111: Connection refused) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4002:1::102). - connect (111: Connection refused
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) Could not connect to in.archive.ubuntu.com:80 (91.189.91.81), connection timed out Could not connect to in.archive.ubuntu.com:80 (185.125.190.83), connection timed out Could not connect to in.archive.ubuntu.c
om:80 (185.125.190.81), connection timed out Could not connect to in.archive.ubuntu.com:80 (185.125.190.82), connection timed out Could not connect to in.archive.ubuntu.com:80 (91.189.91.82), connection timed o
ut Could not connect to in.archive.ubuntu.com:80 (91.189.91.83), connection timed out
rr:2 http://in.archive.ubuntu.com/ubuntu noble-updates InRelease
```

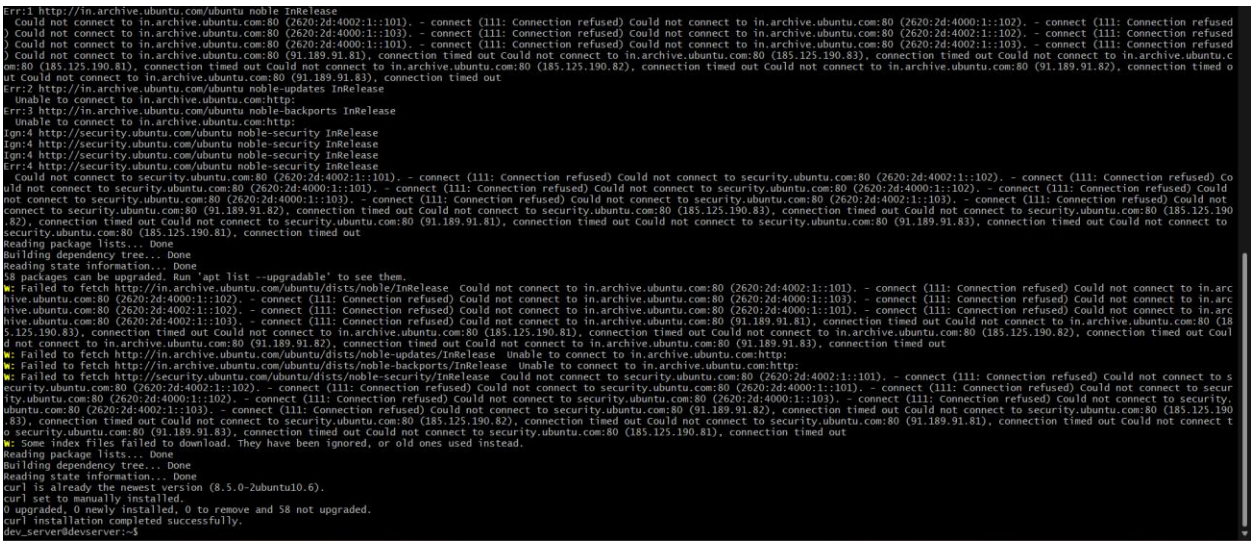

```
Err:1 http://in.archive.ubuntu.com/ubuntu noble InRelease
  Could not connect to in.archive.ubuntu.com:80 (2620:2d:4002:1::101). - connect (111: Connection refused) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4000:1::102). - connect (111: Connection refused
) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4000:1::103). - connect (111: Connection refused) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4002:1::102). - connect (111: Connection refused
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ut Could not connect to in.archive.ubuntu.com:80 (91.189.91.83), connection timed out
Err:2 http://in.archive.ubuntu.com/ubuntu noble-updates InRelease
  Unable to connect to in.archive.ubuntu.com:http:
Err:3 http://in.archive.ubuntu.com/ubuntu noble-backports InRelease
  Unable to connect to in.archive.ubuntu.com:http:
Ign:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Ign:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Ign:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Err:4 http://security.ubuntu.com/ubuntu noble-security InRelease
  Could not connect to security.ubuntu.com:80 (2620:2d:4002:1::101). - connect (111: Connection refused) Could not connect to security.ubuntu.com:80 (2620:2d:4002:1::102). - connect (111: Connection refused) Co
uld not connect to security.ubuntu.com:80 (2620:2d:4000:1::101). - connect (111: Connection refused) Could not connect to security.ubuntu.com:80 (2620:2d:4000:1::102). - connect (111: Connection refused) Could
not connect to security.ubuntu.com:80 (2620:2d:4000:1::103). - connect (111: Connection refused) Could not connect to security.ubuntu.com:80 (2620:2d:4002:1::103). - connect (111: Connection refused) Could not
connect to security.ubuntu.com:80 (91.189.91.82), connection timed out Could not connect to security.ubuntu.com:80 (185.125.190.83), connection timed out Could not connect to security.ubuntu.com:80 (185.125.190
.82), connection timed out Could not connect to security.ubuntu.com:80 (91.189.91.81), connection timed out Could not connect to security.ubuntu.com:80 (91.189.91.83), connection timed out Could not connect to
security.ubuntu.com:80 (185.125.190.81), connection timed out
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
58 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: Failed to fetch http://in.archive.ubuntu.com/ubuntu/dists/noble/InRelease  Could not connect to in.archive.ubuntu.com:80 (2620:2d:4002:1::101). - connect (111: Connection refused) Could not connect to in.arc
hive.ubuntu.com:80 (2620:2d:4000:1::102). - connect (111: Connection refused) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4000:1::103). - connect (111: Connection refused) Could not connect to in.arc
hive.ubuntu.com:80 (2620:2d:4002:1::102). - connect (111: Connection refused) Could not connect to in.archive.ubuntu.com:80 (2620:2d:4000:1::101). - connect (111: Connection refused) Could not connect to in.arc
hive.ubuntu.com:80 (2620:2d:4002:1::103). - connect (111: Connection refused) Could not connect to in.archive.ubuntu.com:80 (91.189.91.81), connection timed out Could not connect to in.archive.ubuntu.com:80 (18
5.125.190.83), connection timed out Could not connect to in.archive.ubuntu.com:80 (185.125.190.81), connection timed out Could not connect to in.archive.ubuntu.com:80 (185.125.190.82), connection timed out Coul
d not connect to in.archive.ubuntu.com:80 (91.189.91.82), connection timed out Could not connect to in.archive.ubuntu.com:80 (91.189.91.83), connection timed out
W: Failed to fetch http://in.archive.ubuntu.com/ubuntu/dists/noble-updates/InRelease  Unable to connect to in.archive.ubuntu.com:http:
W: Failed to fetch http://in.archive.ubuntu.com/ubuntu/dists/noble-backports/InRelease  Unable to connect to in.archive.ubuntu.com:http:
W: Failed to fetch http://security.ubuntu.com/ubuntu/dists/noble-security/InRelease  Could not connect to security.ubuntu.com:80 (2620:2d:4002:1::101). - connect (111: Connection refused) Could not connect to s
ecurity.ubuntu.com:80 (2620:2d:4002:1::102). - connect (111: Connection refused) Could not connect to security.ubuntu.com:80 (2620:2d:4000:1::101). - connect (111: Connection refused) Could not connect to secur
ity.ubuntu.com:80 (2620:2d:4000:1::102). - connect (111: Connection refused) Could not connect to security.ubuntu.com:80 (2620:2d:4000:1::103). - connect (111: Connection refused) Could not connect to security.
ubuntu.com:80 (2620:2d:4002:1::103). - connect (111: Connection refused) Could not connect to security.ubuntu.com:80 (91.189.91.82), connection timed out Could not connect to security.ubuntu.com:80 (185.125.190
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o security.ubuntu.com:80 (91.189.91.83), connection timed out Could not connect to security.ubuntu.com:80 (185.125.190.81), connection timed out
W: Some index files failed to download. They have been ignored, or old ones used instead.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
curl is already the newest version (8.5.0-2ubuntu10.6).
curl set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 58 not upgraded.
curl installation completed successfully.
dev_server@devserver:~$
```

Assignment 2: File Operations

- **Script 1:** Write a script that takes a directory path as an argument and lists all the files in that directory.
- **Script 2:** Create a script that renames all files in a directory with a **.txt** extension to have a prefix **"backup_"** (e.g., **file.txt** becomes **backup_file.txt**).
- **Script 3:** Write a script that takes two file paths as arguments and compares them. If they are identical, print a message saying so; otherwise, display the differences

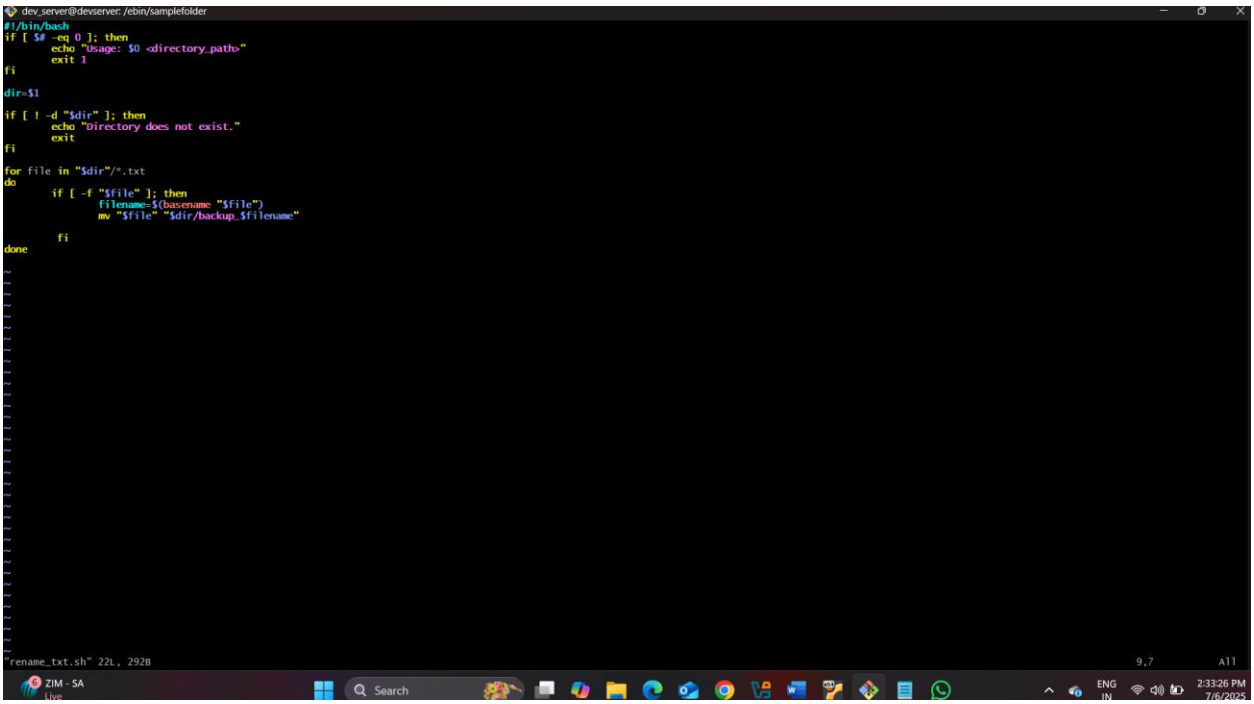
Script1

Input code

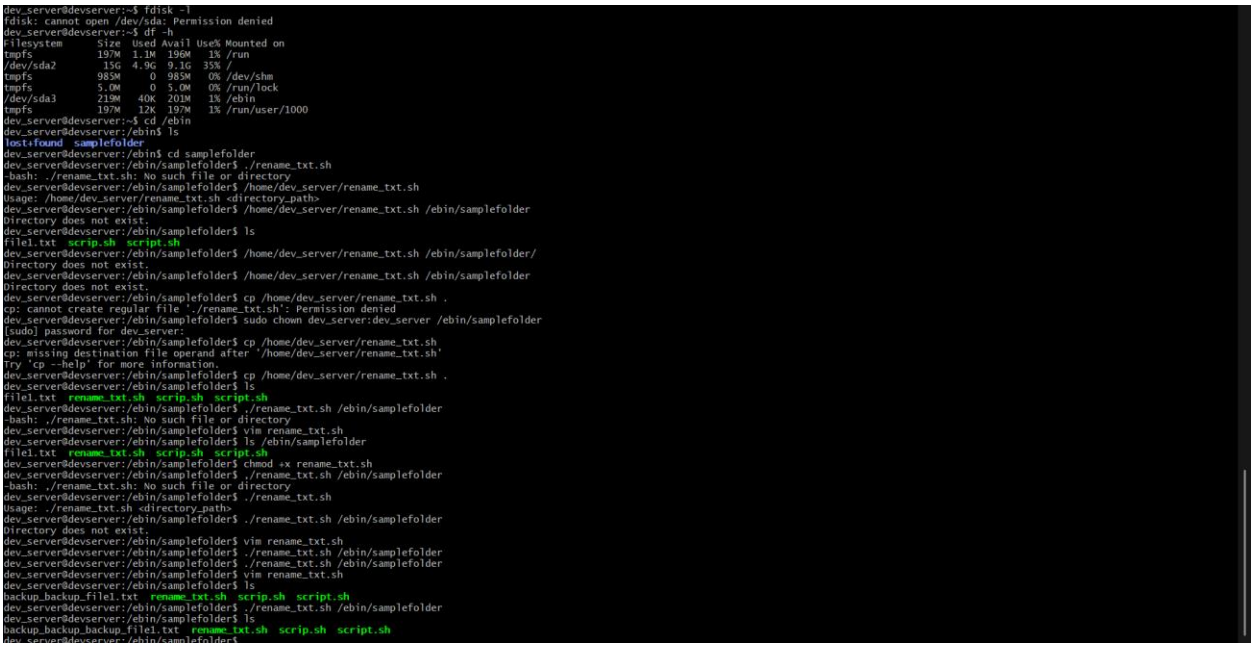
Output +ve and negative

Script 2

Input



Output



Script 3

Input code

```bash
#!/bin/bash
if [ $# -ne 2 ]; then
        echo "Usage: $0 <file1> <file2>"
        exit 1
fi

file1=$1
file2=$2

if [ ! -f "$file1" ] || [ ! -f "$file2" ]; then
        echo "One or both files do not exist."
        exit 1
fi


if [ cmp -s "$file1" "$file2" ]; then
   echo "The files are identical."
else
    echo "The files are different. Differences:"
    diff "$file1" "$file2"
fi
```

Output

```
Last login: Sun Jul  6 09:38:58 2025 from 192.168.56.1
dev_server@devserver:~$ ls
Enter  install_curl.sh  list_files.sh  rename_txt.sh
dev_server@devserver:~$ cd /ebin/samplefolder
dev_server@devserver:/ebin/samplefolder$ ls
backup_backup_file1.txt  compare_file.sh  ctsfile.txt  rename_txt.sh  scrip.sh  script.sh  tcsfile.txt
dev_server@devserver:/ebin/samplefolder$ ./compare_file.sh ctsfile.txt tcsfile.txt
./compare_file.sh: line 16: [: syntax error: `-s' unexpected
The files are different. Differences:
1,2c1
<
<  welcome CTS
---
>  Hi Welcome TCS
dev_server@devserver:/ebin/samplefolder$
```

Assignment 3: System Information

- **Script 1:** Develop a script that displays information about the system, including the operating system, kernel version, CPU information, and available memory.
- **Script 2:** Write a script that checks if a specific process is running. If it is, print a message; otherwise, start the process.
- **Script 3:** Create a script that monitors the disk space usage of a particular partition and sends an email alert if the usage exceeds a specified threshold.

Script1:

Input code

```bash
#!/bin/bash
echo "--------------System Information------------"
cat /etc/os-release

echo "----Kernel Version-------"
uname -r

echo "CPU information"
lscpu

echo "Free Memory"
free -h
```

"sys_info.sh" 13L, 186B 12,7 All

Output

```
dev_server@devserver:/ebin/samplefolder$ ./sys_info.sh
--------------System Information------------
PRETTY_NAME="Ubuntu 24.04.2 LTS"
NAME="Ubuntu"
VERSION_ID="24.04"
VERSION="24.04.2 LTS (Noble Numbat)"
VERSION_CODENAME=noble
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
UBUNTU_CODENAME=noble
LOGO=ubuntu-logo
----Kernel Version-------
6.8.0-62-generic
CPU information
Architecture:             x86_64
  CPU op-mode(s):         32-bit, 64-bit
  Address sizes:          39 bits physical, 48 bits virtual
  Byte Order:             Little Endian
CPU(s):                   1
  On-line CPU(s) list:    0
Vendor ID:                GenuineIntel
  Model name:             13th Gen Intel(R) Core(TM) i7-1355U
    CPU family:           6
    Model:                186
    Thread(s) per core:   1
    Core(s) per socket:   1
    Socket(s):            1
    Stepping:             3
    BogoMIPS:             5222.42
    Flags:                fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx rdtscp lm constant_tsc rep_good nopl xtopology nonstop_tsc cpuid tsc_kno
                          wn_freq pni pclmulqdq ssse3 cx16 sse4_1 sse4_2 movbe popcnt aes rdrand hypervisor lahf_lm abm 3dnowprefetch ibrs_enhanced fsgsbase bmi1 bmi2 invpcid rdseed adx clflushopt sha_ni arat m
                          d_clear flush_l1d arch_capabilities
Virtualization features:
  Hypervisor vendor:      KVM
  Virtualization type:    full
Caches (sum of all):
  L1d:                    48 KiB (1 instance)
  L1i:                    32 KiB (1 instance)
  L2:                     1.3 MiB (1 instance)
  L3:                     12 MiB (1 instance)
NUMA:
  NUMA node(s):           1
  NUMA node0 CPU(s):      0
Vulnerabilities:
  Gather data sampling:   Not affected
  Itlb multihit:          Not affected
```

```
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
UBUNTU_CODENAME=noble
LOGO=ubuntu-logo
------Kernel Version------
6.8.0-62-generic
CPU information
Architecture:            x86_64
  CPU op-mode(s):        32-bit, 64-bit
  Address sizes:         39 bits physical, 48 bits virtual
  Byte Order:            Little Endian
CPU(s):                  1
  On-line CPU(s) list:   0
Vendor ID:               GenuineIntel
  Model name:            13th Gen Intel(R) Core(TM) i7-1355U
    CPU family:          6
    Model:               186
    Thread(s) per core:  1
    Core(s) per socket:  1
    Socket(s):           1
    Stepping:            3
    BogoMIPS:            5222.42
    Flags:               fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx rdtscp lm constant_tsc rep_good nopl xtopology nonstop_tsc cpuid tsc_kno
                         wn_freq pni pclmulqdq ssse3 cx16 sse4_1 sse4_2 movbe popcnt aes rdrand hypervisor lahf_lm abm 3dnowprefetch ibrs_enhanced fsgsbase bmi1 bmi2 invpcid rdseed adx clflushopt sha_ni arat m
                         d_clear flush_l1d arch_capabilities

Virtualization features:
  Hypervisor vendor:     KVM
  Virtualization type:   full
Caches (sum of all):
  L1d:                   48 KiB (1 instance)
  L1i:                   32 KiB (1 instance)
  L2:                    1.3 MiB (1 instance)
  L3:                    12 MiB (1 instance)
NUMA:
  NUMA node(s):          1
  NUMA node0 CPU(s):     0
Vulnerabilities:
  Gather data sampling:  Not affected
  Itlb multihit:         Not affected
  L1tf:                  Not affected
  Mds:                   Not affected
  Meltdown:              Not affected
  Mmio stale data:       Not affected
  Reg file data sampling: Vulnerable: No microcode
  Retbleed:              Mitigation; Enhanced IBRS
  Spec rstack overflow:  Not affected
  Spec store bypass:     Vulnerable
  Spectre v1:            Mitigation; usercopy/swapgs barriers and __user pointer sanitization
  Spectre v2:            Mitigation; Enhanced / Automatic IBRS; RSB filling; PBRSB-eIBRS SW sequence; BHI SW loop, KVM SW loop
  Srbds:                 Not affected
  Tsx async abort:       Not affected
Free Memory
               total        used        free      shared  buff/cache   available
Mem:           1.9Gi       313Mi       1.4Gi       1.1Mi       317Mi       1.6Gi
Swap:          2.0Gi          0B       2.0Gi
dev_server@devserver:/ebin/samplefolder$
```

Script 2

Input code

```
dev_server@devserver: /ebin/samplefolder
#!/bin/bash

if [ $# -eq 0 ]; then
    echo "Usage: $0 <process_name> <command_to_start>"
    exit 1
fi

process_name=$1
start_command=$2

if pgrep "$process_name" > /dev/null; then
    echo "Process '$process_name' is already running."
else
    echo "Process '$process_name' is not running. Starting..."
    $start_command &
    echo "Process started."
fi
```

Outputcode

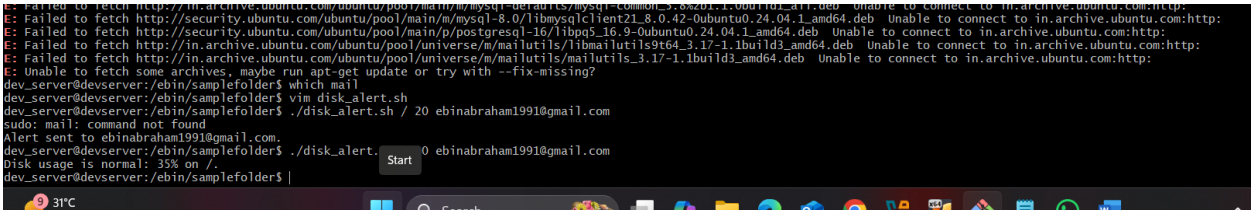
```
dev_server@devserver:/ebin/samplefolder$ pggrep apache2
Command 'pggrep' not found, did you mean:
  command 'pogrep' from deb translate-toolkit (3.12.1-1)
  command 'pgrep' from deb procps (2:4.0.4-4ubuntu3.2)
  command 'pegrep' from deb hxtools (20231101-1)
Try: sudo apt install <deb name>
dev_server@devserver:/ebin/samplefolder$ pgrep apache2
dev_server@devserver:/ebin/samplefolder$ cat pgrep apache2
cat: pgrep: No such file or directory
cat: apache2: No such file or directory
dev_server@devserver:/ebin/samplefolder$ pgrep apache2
dev_server@devserver:/ebin/samplefolder$ which apache2
dev_server@devserver:/ebin/samplefolder$ which sshd
/usr/sbin/sshd
dev_server@devserver:/ebin/samplefolder$ pgrep sshd
706
1452
1503
dev_server@devserver:/ebin/samplefolder$ vim check_start.sh
dev_server@devserver:/ebin/samplefolder$ chmod +x check_start.sh
dev_server@devserver:/ebin/samplefolder$ ./check_start.sh ssh sudo systemctl start ssh
Process 'ssh' is already running.
dev_server@devserver:/ebin/samplefolder$
```

Script 3

Input code

Ouputcode

```
dev_server@devserver:/ebin/samplefolder$ vim disk_alert.sh
dev_server@devserver:/ebin/samplefolder$ ./disk_alert.sh / 20 ebinabraham1991@gmail.com
sudo: mail: command not found
Alert sent to ebinabraham1991@gmail.com.
dev_server@devserver:/ebin/samplefolder$
```



Assignment 4: Data Manipulation

- **Script 1:** Write a script that reads a CSV file (comma-separated values) and prints the sum of values in a specific column.

- **Script 2:** Develop a script that reads a log file and extracts IP addresses that made more than a specified number of requests.
- **Script 3:** Create a script that takes a sentence as input and prints the number of occurrences of each word.

Scrip1:

Creaye csv file

```
dev_server@devserver:/ebin/samplefolder$ echo "Name,Amount" > data.csv
echo "John,100" >> data.csv
echo "Alice,200" >> data.csv
echo "Bob,150" >> data.csv
dev_server@devserver:/ebin/samplefolder$ cat data.csv
Name,Amount
John,100
Alice,200
Bob,150
dev_server@devserver:/ebin/samplefolder$
```

Inputcode

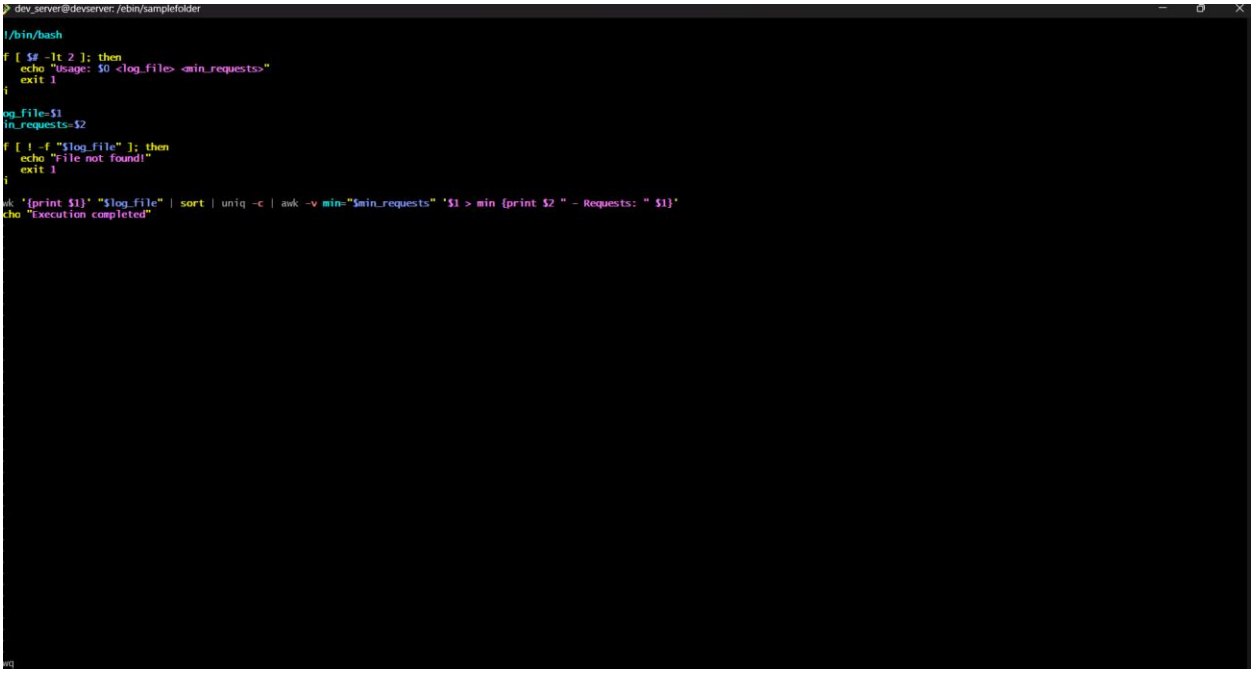
```
#!/bin/bash

if [ $# -lt 2 ]; then
    echo "Usage: $0 <csv_file> <column_number>"
    exit 1
fi

csv_file=$1
column=$2

if [ ! -f "$csv_file" ]; then
    echo "File not found!"
    exit 1
fi

sum=0

# Use input redirection to avoid subshell
while IFS=',' read -r name amount
do
    if [ "$column" -eq 2 ]; then
        sum=$(echo "$sum + $amount" | bc)
    fi
done < <(tail -n +2 "$csv_file")

echo "Total sum of column $column: $sum"
```

Output

```
dev_server@devserver:/ebin/samplefolder$ cat data.csv
Name,Amount
John,100
Alice,200
Bob,150
dev_server@devserver:/ebin/samplefolder$ vim sum.sh
dev_server@devserver:/ebin/samplefolder$ ./sum.sh data.csv 2
Total sum of column 2: 450
dev_server@devserver:/ebin/samplefolder$
```

Script 2

Input code



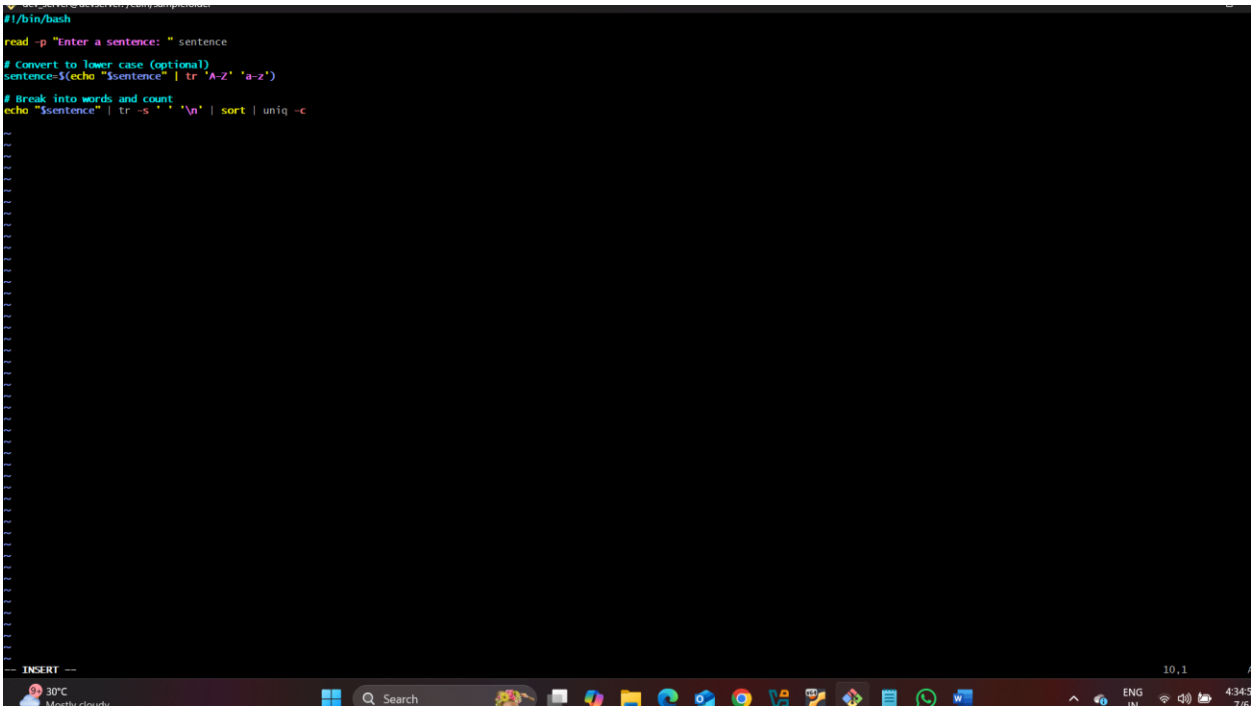
Outputcode

```
dev_server@devserver:/ebin/samplefolder$ ./find_ips.sh access.log 100
Execution completed
dev_server@devserver:/ebin/samplefolder$ ./find_ips.sh access.log 10
Execution completed
dev_server@devserver:/ebin/samplefolder$ vim find_ips.sh
dev_server@devserver:/ebin/samplefolder$
```

```
dev_server@devserver:/ebin/samplefolder$ ./find_ips.sh access.log 20
dev_server@devserver:/ebin/samplefolder$ vim find_ips.sh
dev_server@devserver:/ebin/samplefolder$ ./find_ips.sh access.log 100
Execution completed
dev_server@devserver:/ebin/samplefolder$ ./find_ips.sh access.log 10
Execution completed
dev_server@devserver:/ebin/samplefolder$ vim find_ips.sh
dev_server@devserver:/ebin/samplefolder$ vim find_ips.sh
dev_server@devserver:/ebin/samplefolder$ ./find_ips.sh access.log 10
      1 192.168.1.10
Execution completed
dev_server@devserver:/ebin/samplefolder$
```

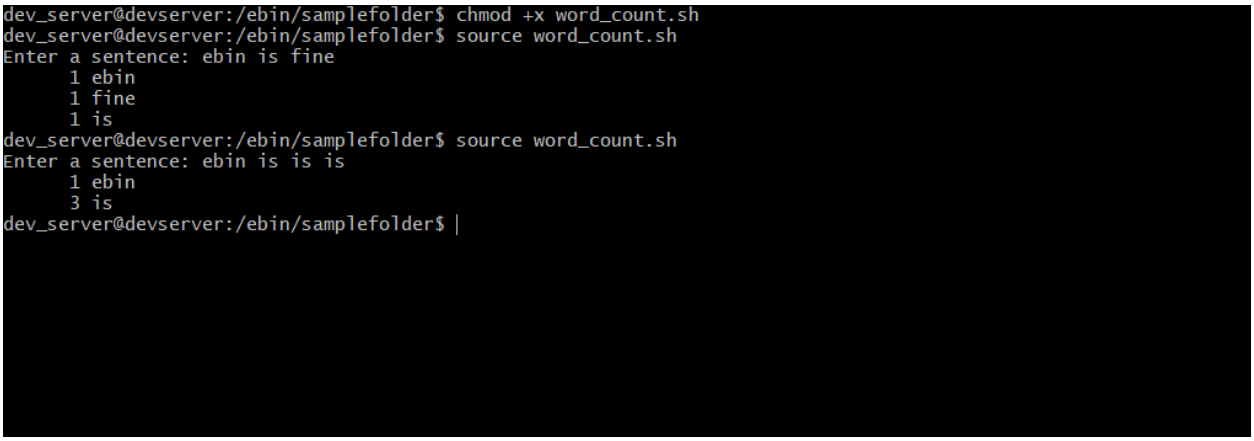
Script 3

Input code



Output

```
dev_server@devserver:/ebin/samplefolder$ vim word_count.sh
dev_server@devserver:/ebin/samplefolder$ chmod +x word_count.sh
dev_server@devserver:/ebin/samplefolder$ source word_count.sh
Enter a sentence: ebin is fine
      1 ebin
      1 fine
      1 is
dev_server@devserver:/ebin/samplefolder$
```

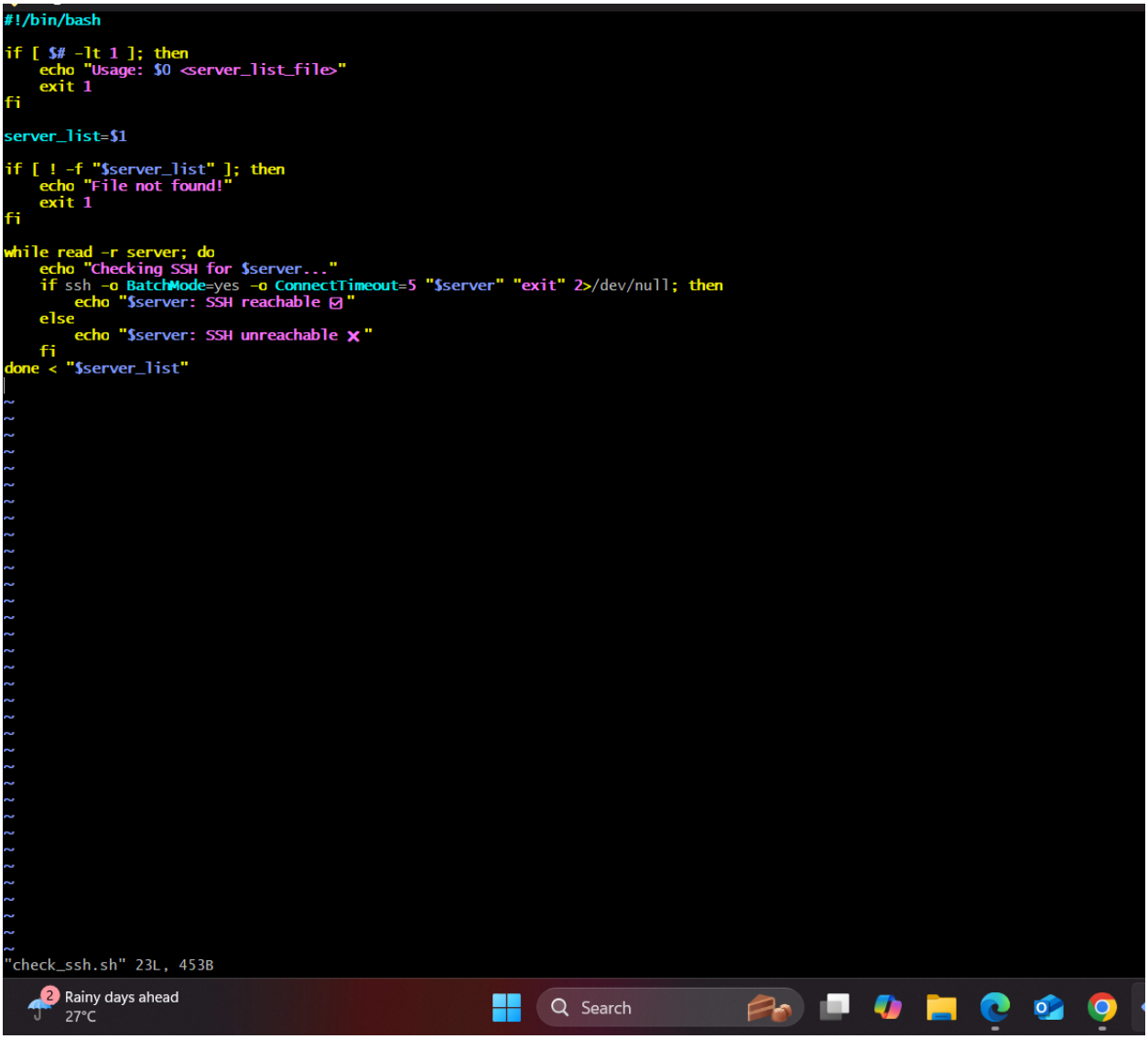


Assignment 5: Network Operations

- **Script 1:** Write a script that checks if a list of remote servers is reachable over SSH.
- **Script 2:** Develop a script that pings a list of IP addresses and reports the average response time.
- **Script 3:** Create a script that checks if a website is up by sending an HTTP request and analyzing the response.

Script 1

Input code



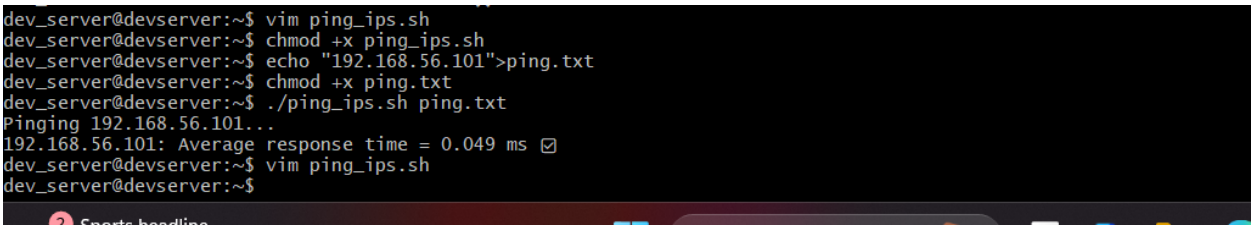
Output

Script2

Source Code

```
#!/bin/bash

if [ $# -lt 1 ]; then
    echo "Usage: $0 <ip_list_file>"
    exit 1
fi

ip_list=$1

if [ ! -f "$ip_list" ]; then
    echo "File not found!"
    exit 1
fi

while read -r ip; do
    echo "Pinging $ip..."
    avg_time=$(ping -c 4 "$ip" | tail -1 | awk -F '/' '{print $5}')
    if [ -z "$avg_time" ]; then
        echo "$ip: Unreachable ✗"
    else
        echo "$ip: Average response time = $avg_time ms ☑"
    fi
done < "$ip_list"
```

Output



Script3

Source code

```
#!/bin/bash

if [ $# -lt 1 ]; then
    echo "Usage: $0 <url>"
    exit 1
fi

url=$1

status_code=$(curl -o /dev/null -s -w "%{http_code}" "$url")

if [ "$status_code" -eq 200 ]; then
    echo "$url is UP ✅"
else
    echo "$url might be DOWN or returned code $status_code ❌"
fi
```

Output

```
dev_server@devserver:~$ which curlo
dev_server@devserver:~$ which curl
/usr/bin/curl
dev_server@devserver:~$ vim check_website.sh
dev_server@devserver:~$ ./check_website.sh https://www.lms.in.net/
000
https://www.lms.in.net/ might be DOWN or returned code 000 ❌
dev_server@devserver:~$
```

Assignment 6: User Management

- **Script 1:** Write a script that adds a new user to the system with a specified username, home directory and password.
- **Script 2:** Develop a script that checks the strength of a user's password.
- **Script 3:** Create a script that lists all users in the system and their login times.

Script1

Source code

```
#!/bin/bash
if [ $# -eq 0 ]; then
        echo "Usage: $0 <directory_path>"
        exit 1
fi

dir=$1

if [ ! -d "$dir" ]; then
        echo "Directory doesnot exist"
        exit 1
fi

echo "Listing file in Directory $dir"

ls -p "$dir" | grep -v /
```

Output

```
Last login: Mon Jul  7 13:24:04 2025 from 192.168.56.1
dev_server@devserver:~$ vim list_files.sh
dev_server@devserver:~$ chmod +x list_files.sh
dev_server@devserver:~$ ./list_files.sh /ebin/samplefolder
Listing file in Directory /ebin/samplefolder
access.log
backup_backup_backup_file1.txt
check_start.sh
compare_file.sh
ctsfile.txt
data.csv
disk_alert.sh
find_ips.sh
rename_txt.sh
scrip.sh
script.sh
sum.sh
sys_info.sh
tcsfile.txt
word_count.sh
dev_server@devserver:~$
```

Script2

SourceCode

```bash
#!/bin/bash

if [ $# -lt 1 ]; then
    echo "Usage: $0 <password>"
    exit 1
fi

password=$1

score=0

# Check length
if [ ${#password} -ge 8 ]; then
    ((score++))
fi

# Check for numbers
if [[ "$password" =~ [0-9] ]]; then
    ((score++))
fi

# Check for uppercase
if [[ "$password" =~ [A-Z] ]]; then
    ((score++))
fi

# Check for lowercase
if [[ "$password" =~ [a-z] ]]; then
    ((score++))
fi

# Check for special characters
if [[ "$password" =~ [\@\#\$\%\^\&\*\(\)\-\+] ]]; then
    ((score++))
fi

if [ "$score" -ge 4 ]; then
    echo "Password is strong 👍"
else
    echo "Password is weak ✖"
fi
~
~
~
~
~
~
~
```

output

```
dev_server@devserver:~$ vim check_password.sh
dev_server@devserver:~$ chmod +X check_password.sh
dev_server@devserver:~$ ./check_password.sh ebin@123
-bash: ./check_password.sh: Permission denied
dev_server@devserver:~$ chmod +x check_password.sh
dev_server@devserver:~$ ./check_password.sh ebin@123
Directory does not exist.
dev_server@devserver:~$ vim check_password.sh
dev_server@devserver:~$ vim check_password.sh
dev_server@devserver:~$ ./check_password.sh ebin@123
Password is strong 👍
dev_server@devserver:~$ ./check_password.sh 123
Password is weak ✖
dev_server@devserver:~$ vim check_password.sh
```

Script3

SourceCode

```
#!/bin/bash

echo "User list and last login times:"

# Get list of normal users (UID >= 1000 on most Linux)
awk -F: '$3 >= 1000 && $1 != "nobody" {print $1}' /etc/passwd | while read -r user; do
    last_login=$(lastlog -u "$user" | awk 'NR==2 {print $4, $5, $6, $7}')
    echo "$user: $last_login"
done
```

Ouputcode

```
dev_server@devserver:~$ vim list_users.sh
dev_server@devserver:~$ chmod +x list_users.sh
dev_server@devserver:~$ ./list_users.sh
User list and last login times:
dev_server: Tue Jul 8 17:18:06
dev_server@devserver:~$
```