

TASK 4: Shell Scripting Basics

- Create a shell script file and add shebang line

Check shell " echo \$SHELL "

Create folder and go inside the folder " 'mkdir task-4-shell-scripting'
' cd task-4-shell-scripting' "

- Create First Shell Script (Shebang Included)

Create file:

"touch system_info.sh"

Open file:

"nano system_info.sh"

Content:

```
#!/bin/bash
echo "----- SYSTEM INFORMATION -----"
echo "Hostname: $(hostname)"
echo "Current User: $(whoami)"
echo "Date & Time: $(date)"
echo "Uptime:"
uptime
```

- Make Script Executable

“ chmod +x system_info.sh”

Run script

“./system_info.sh”

- Use Variables in Shell Script

○ Create a new file: “nano variable.sh”

- Content in it

```
#!/bin/bash
NAME="Vishnu"
ROLE="DevOps Intern"
echo "My name is Vishnu"
echo "My role is DevOps Intern"
```

run

```
"chmod +x variables.sh
./variables.sh"
```

- Scripting using conditional statement

- Create file “nano condition.sh”
- Content

```
#!/bin/bash
```

```
read -p "Enter your age: " AGE
```

```
if [ $AGE -ge 18 ]
then
    echo "You are eligible to work"
else
    echo "You are not eligible to work"
fi
```

- Run “chmod +x condition.sh

```
./condition.sh”
```

STEP 5: Script Using Variables

5.1 Create file

```
nano variables.sh
```

5.2 Paste content

```
#!/bin/bash
```

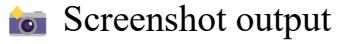
```
# Script using variables

NAME="Vishnu Kumar"
COURSE="DevOps Internship"

echo "Name: $NAME"
echo "Course: $COURSE"
```

5.3 Execute

```
chmod +x variables.sh
./variables.sh
```



Screenshot output

◆ STEP 6: Script Using Conditional Statements

6.1 Create file

```
nano condition.sh
```

6.2 Paste content

```
#!/bin/bash

# Script using if-else
```

```
read -p "Enter a number: " NUM
```

```
if [ $NUM -gt 10 ]
then
    echo "Number is greater than 10"
```

```
else
    echo "Number is less than or equal to 10"
fi
```

6.3 Execute

```
chmod +x condition.sh
./condition.sh
```



Screenshot output

◆ STEP 7: Script Using Loop

7.1 Create file

```
nano loop.sh
```

7.2 Paste content

```
#!/bin/bash
# Script using for loop

for i in 1 2 3 4 5
do
    echo "Iteration number: $i"
done
```

7.3 Execute

```
chmod +x loop.sh
./loop.sh
```



Screenshot output

◆ **STEP 8: Automate Log Backup (DevOps Task)**

8.1 Create file

```
nano log_backup.sh
```

8.2 Paste content

```
#!/bin/bash  
  
# Log backup automation script
```

```
SOURCE_DIR="/var/log"  
  
BACKUP_DIR="$HOME/log_backup"
```

```
mkdir -p $BACKUP_DIR  
cp $SOURCE_DIR/*.log $BACKUP_DIR
```

```
echo "Log files backed up successfully"
```

8.3 Execute

```
chmod +x log_backup.sh  
sudo ./log_backup.sh
```

 Screenshot execution

 Screenshot log_backup directory

◆ **STEP 9: Redirect Output to File**

```
./system_info.sh > system_output.txt
```

Check file:

```
cat system_output.txt
```



Screenshot file content

◆ **STEP 10: Verify Comments in Scripts**

Open any script:

```
nano system_info.sh
```

Confirm:

```
# Script Name
```

```
# Purpose
```

STEP 11: Create README.md (MANDATORY)

```
nano README.md
```

Paste this:

```
# Task 4 – Shell Scripting Basics
```

```
## Description
```

This task demonstrates basic shell scripting concepts used in DevOps.

```
## Scripts Created
```

- system_info.sh – Displays system information
- variables.sh – Uses shell variables
- condition.sh – Demonstrates if-else condition
- loop.sh – Demonstrates loops
- log_backup.sh – Automates log backup

Tools Used

- Bash
- Linux (Ubuntu)

Outcome

Automated repetitive system tasks using shell scripts.

Save file.

◆ **STEP 12: Create Screenshots Folder**

mkdir screenshots

 Put **ALL screenshots** inside this folder

◆ **STEP 13: Final Folder Structure (CHECK THIS)**

task-4-shell-scripting/

```
|  
|   └── system_info.sh  
|   └── variables.sh  
|   └── condition.sh  
|   └── loop.sh  
|   └── log_backup.sh  
|   └── system_output.txt  
|   └── README.md  
└── screenshots/
```

◆ STEP 14: Push to GitHub

git init

```
git add .
```

```
git commit -m "Completed Task 4 - Shell Scripting"
```

```
git branch -M main
```

```
git remote add origin https://github.com/<your-username>/task-4-shell-scripting.git
```

```
git push -u origin main
```

```
command 'chmod' from deb coreutils (9.4-3ubuntu6.1)
Try: sudo apt install <deb name>
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x system_info.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ ./system_info.sh
----- SYSTEM INFORMATION -----
A Hostname: Vishnu
Current User: Vishnu
Date & Time: 26/01/2026
Uptime:
 05:40:53 up 13 min, 1 user, load average: 1.09, 1.67, 1.19
vishnu@ubuntu22:~/task-4-shell-scripting$ nano variables.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x variables.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ ./variables.sh
Name: Vtshnu Kumar
Course: DevOps Internship
vishnu@ubuntu22:~/task-4-shell-scripting$ nano condition.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x condition.sh
./condition.sh
Enter a number: 22
Number is greater than 10
vishnu@ubuntu22:~/task-4-shell-scripting$ nano loop.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x loop.sh
./loop.sh
Iteration number: 1
Iteration number: 2
Iteration number: 3
Iteration number: 4
Iteration number: 5
vishnu@ubuntu22:~/task-4-shell-scripting$ nano log_backup.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x log_backup.sh
sudo ./log_backup.sh
[sudo] password for vishnu:
Sorry, try again.
[sudo] password for vishnu:
Log files backed up successfully
vishnu@ubuntu22:~/task-4-shell-scripting$
```

```
vishnu@ubuntu22:~/task-4-shell-scripting/screenshots$ rm pictures
vishnu@ubuntu22:~/task-4-shell-scripting/screenshots$ ls
'Screenshot from 2026-01-20 05:42:38.png' 'Screenshot from 2026-01-20 06:35:25.png' 'Screenshot from 2026-01-20 06:35:59.png' 'Screenshot from 2026-01-20 07:02:25.png'
vishnu@ubuntu22:~/task-4-shell-scripting/screenshots$ cd ..
vishnu@ubuntu22:~/task-4-shell-scripting$ git add .
A: error: 'screenshots/' does not have a commit checked out
fatal: adding files failed
vishnu@ubuntu22:~/task-4-shell-scripting$ cd task-4-shell-scripting
bash: cd: task-4-shell-scripting: No such file or directory
vishnu@ubuntu22:~/task-4-shell-scripting$ ls -a screenshots
. : 'Screenshot from 2026-01-20 06:35:25.png' 'Screenshot from 2026-01-20 07:02:25.png'
.. : 'Screenshot from 2026-01-20 05:42:38.png' 'Screenshot from 2026-01-20 06:35:59.png'
vishnu@ubuntu22:~/task-4-shell-scripting$ rm -rf screenshots/.git
vishnu@ubuntu22:~/task-4-shell-scripting$ ls -a screenshots
. : 'Screenshot from 2026-01-20 05:42:38.png' 'Screenshot from 2026-01-20 06:35:25.png' 'Screenshot from 2026-01-20 06:35:59.png' 'Screenshot from 2026-01-20 07:02:25.png'
vishnu@ubuntu22:~/task-4-shell-scripting$ git add .
vishnu@ubuntu22:~/task-4-shell-scripting$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file: README.md
    new file: condition.sh
    new file: log_backup.sh
    new file: loop.sh
    new file: screenshots/Screenshot from 2026-01-20 05:42:38.png
    new file: screenshots/Screenshot from 2026-01-20 06:35:25.png
    new file: screenshots/Screenshot from 2026-01-20 06:35:59.png
    new file: screenshots/Screenshot from 2026-01-20 07:02:25.png
    new file: system_info.sh
    new file: system_output.txt
    new file: variables.sh

vishnu@ubuntu22:~/task-4-shell-scripting$
```

Jan 20 07:02

```
vishnu@ubuntu22:~/task-4-shell-scripting/screenshots$ ls
pictures 'Screenshot from 2026-01-20 05-42-38.png' 'Screenshot from 2026-01-20 06-35-25.png' 'Screenshot from 2026-01-20 06-35-59.png'
vishnu@ubuntu22:~/task-4-shell-scripting/screenshots$
```

Jan 20 06:35

```
vishnu@ubuntu22: ~/task-4-shell-scripting
Uptime:
05:40:53 up 13 min, 1 user, load average: 1.09, 1.67, 1.19
vishnu@ubuntu22:~/task-4-shell-scripting$ nano variables.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x variables.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ ./variables.sh
Name: Vishnu Kumar
Course: DevOps Internship
vishnu@ubuntu22:~/task-4-shell-scripting$ nano condition.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x condition.sh
./condition.sh
Enter a number: 22
Number is greater than 10
vishnu@ubuntu22:~/task-4-shell-scripting$ nano loop.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x loop.sh
./loop.sh
Iteration number: 1
Iteration number: 2
Iteration number: 3
Iteration number: 4
Iteration number: 5
vishnu@ubuntu22:~/task-4-shell-scripting$ nano log_backup.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x log_backup.sh
sudo ./log_backup.sh
[sudo] password for vishnu:
Sorry, try again.
[sudo] password for vishnu:
Log files backed up successfully
vishnu@ubuntu22:~/task-4-shell-scripting$ ./system.info.sh > system_output.txt
vishnu@ubuntu22:~/task-4-shell-scripting$ cat system_output.txt
----- SYSTEM INFORMATION -----
Hostname: Vishnu
Current User: Vishnu
Date & Time: 26/01/2026
Uptime:
06:35:41 up 1:08, 1 user, load average: 0.78, 0.98, 1.12
vishnu@ubuntu22:~/task-4-shell-scripting$
```

```
Jan 20 08:56
vishnu@ubuntu22:~/task-4-shell-scripting
... 'Screenshot from 2026-01-20 05-42-38.png' 'Screenshot from 2026-01-20 06-35-25.png' 'Screenshot from 2026-01-20 06-35-59.png' 'Screenshot from 2026-01-20 07-02-25.png'
vishnu@ubuntu22:~/task-4-shell-scripting$ git add .
vishnu@ubuntu22:~/task-4-shell-scripting$ git status
On branch master
  No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file: README.md
    new file: condition.sh
    new file: log_backup.sh
    new file: loop.sh
    new file: screenshots/Screenshot from 2026-01-20 05-42-38.png
    new file: screenshots/Screenshot from 2026-01-20 06-35-25.png
    new file: screenshots/Screenshot from 2026-01-20 06-35-59.png
    new file: screenshots/Screenshot from 2026-01-20 07-02-25.png
    new file: system_info.sh
    new file: system_output.txt
    new file: variables.sh

vishnu@ubuntu22:~/task-4-shell-scripting$ git commit -m "Completed Task 4 - Shell Scripting"
[master (root-commit) a23/c03] Completed Task 4 - Shell Scripting
  11 files changed, 71 insertions(+)
create mode 106644 README.md
create mode 106755 condition.sh
create mode 106755 log_backup.sh
create mode 106755 loop.sh
create mode 106644 screenshots/Screenshot from 2026-01-20 05-42-38.png
create mode 106644 screenshots/Screenshot from 2026-01-20 06-35-25.png
create mode 106644 screenshots/Screenshot from 2026-01-20 06-35-59.png
create mode 106644 screenshots/Screenshot from 2026-01-20 07-02-25.png
create mode 106755 system_info.sh
create mode 106644 system_output.txt
create mode 106755 variables.sh
vishnu@ubuntu22:~/task-4-shell-scripting$
```

```
Jan 20 05:42
vishnu@ubuntu22:~/task-4-shell-scripting
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

vishnu@ubuntu22:~$ echo $SHELL
/bin/bash
vishnu@ubuntu22:~$ mkdir task-4-shell-scripting
vishnu@ubuntu22:~$ cd task-4-shell-scripting/
vishnu@ubuntu22:~/task-4-shell-scripting$ touch system_info.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ nano system_info.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ cat system_info.sh
#!/bin/bash
# Script Name: system_info.sh
# Purpose: Display system information

echo "----- SYSTEM INFORMATION -----"
echo "Hostname: Vlshnu"
echo "Current User: Vlshnu"
echo "Date & Time: 26/01/2026"
echo "Uptime:"
uptime
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x system_info.sh
Command 'chond' not found, did you mean:
  command 'chmod' from deb coreutils (9.4-3ubuntu6.1)
Try: sudo apt install <deb name>
vishnu@ubuntu22:~/task-4-shell-scripting$ chmod +x system_info.sh
vishnu@ubuntu22:~/task-4-shell-scripting$ ./system_info.sh
----- SYSTEM INFORMATION -----
Hostname: Vlshnu
Current User: Vlshnu
Date & Time: 26/01/2026
Uptime:
  05:40:53 up 13 min,  1 user,  load average: 1.09, 1.67, 1.19
vishnu@ubuntu22:~/task-4-shell-scripting$
```