

Task A

Steps 1-3)

I first created the file through the **vi** utility and named it **dhill036Script**. I then executed the **chmod + x** command to make the file an executable. I later changed it to **TaskA.sh** as shown in the instructions. I then ran the script from my home directory.

```
File Actions Edit View Help
(derek@kali)-[~]
$ vi dhill036Script

(derek@kali)-[~]
$ ll
total 60
-rw-r--r-- 1 derek derek 5341 Sep 15 12:56 copyright_cyse270
drwxrwxr-x 2 derek derek 4096 Sep  7 03:30 data
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Desktop
-rw-rw-r-- 1 derek derek 3902 Oct  5 16:11 dhill036.hash
-rw-rw-r-- 1 derek derek  0 Nov  2 10:29 dhill036Script
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Documents
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Downloads
-rw-rw-r-- 1 derek derek  66 Oct  5 17:17 hashes.md5
-rw-rw-r-- 1 derek derek  327 Oct  5 17:12 john_run.log
-rw-rw-r-- 1 derek derek  53 Oct  5 17:19 john_shown.txt
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Music
drwxr-xr-x 2 derek derek 4096 Oct 26 17:28 Pictures
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Public
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Templates
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Videos

(derek@kali)-[~]
$ chmod +x dhill036Script
```

Below is the **TaskA.sh** script I created utilizing the **vi** utility and its output

```
$ cat TaskA.sh
#!/bin/bash
# Task A - Check if a number is greater than 10

read -p "Enter a number: " num

if [ "$num" -gt 10 ]; then
    echo "Input number is greater than 10"
else
    echo "Input number is not greater than 10"
fi
```

```
(derek@kali)-[~]
$ ./TaskA.sh
Enter a number: 9
Input number is not greater than 10

(derek@kali)-[~]
$ ./TaskA.sh
Enter a number: 11
Input number is greater than 10
```

Task B

Step 1-3.)

I first created the file through the **vi** utility and named it **TaskB.sh** I then executed the **chmod +x** command to make the file an executable. After running the shells cript I executed a **ll** to show the creation of the new file **'?'**.

```
(derek@kali)-[~]
$ chmod +x ./TaskB.sh

(derek@kali)-[~]
$ ./TaskB.sh
Enter a filename or directory name: ?
No such file or directory found. Creating a new file: ?
New file created: ?

(derek@kali)-[~]
$ ll
total 68
-rw-rw-r-- 1 derek derek    0 Nov  2 10:48 '?'
-rw-r--r-- 1 derek derek 5341 Sep 15 12:56 copyright_cyse270
drwxrwxr-x 2 derek derek 4096 Sep  7 03:30 data
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Desktop
-rw-rw-r-- 1 derek derek 3902 Oct  5 16:11 dhill036.hash
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Documents
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Downloads
-rw-rw-r-- 1 derek derek   66 Oct  5 17:17 hashes.md5
-rw-rw-r-- 1 derek derek  327 Oct  5 17:12 john_run.log
-rw-rw-r-- 1 derek derek   53 Oct  5 17:19 john_shown.txt
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Music
drwxr-xr-x 2 derek derek 4096 Nov  2 10:34 Pictures
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Public
-rwxrwxr-x 1 derek derek  219 Nov  2 10:33 TaskA.sh
-rwxrwxr-x 1 derek derek  929 Nov  2 10:46 TaskB.sh
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Templates
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Videos
```

The image below displays the contents of the shell script **TaskB**.

```
$ cat TaskB.sh
#!/bin/bash
# Task B - Check directory or file, create file if it doesn't exist

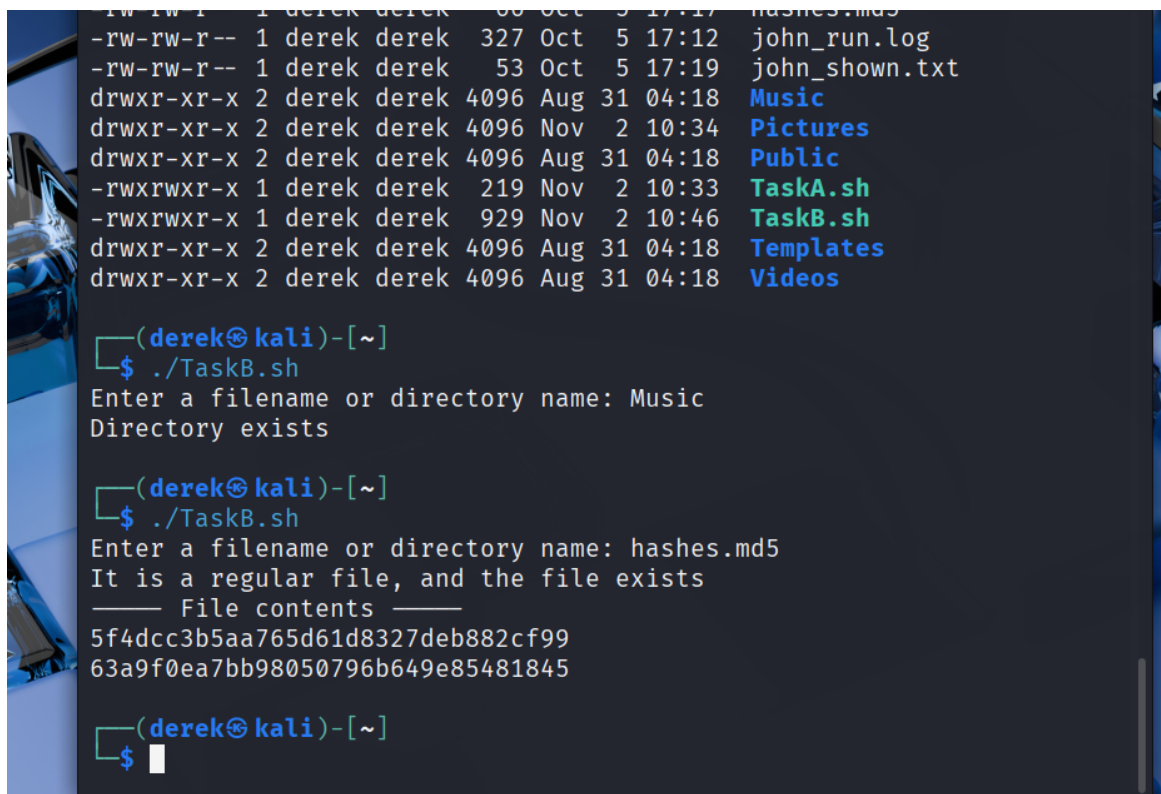
read -p "Enter a filename or directory name: " target

# Check if input is a directory
if [ -d "$target" ]; then
    echo "Directory exists"

# Check if input is a regular file
elif [ -f "$target" ]; then
    echo "It is a regular file, and the file exists"
    echo "—— File contents ——"
    cat "$target"

# Input does not exist → create the file
else
    echo "The input name does not exist. Creating a new file: $target"
    : > "$target"
    echo "New file created: $target"
fi
```

Below is the output generated from the TaskB script if a existing directory is present.

A terminal window on a Kali Linux system. The top part shows a directory listing with permissions, owner, size, date, and file names. The file names are color-coded: Music (blue), Pictures (blue), Public (blue), TaskA.sh (green), TaskB.sh (green), Templates (blue), and Videos (blue). Below the listing, the user runs the TaskB script. The first run with 'Music' as input outputs 'Directory exists'. The second run with 'hashes.md5' as input outputs 'It is a regular file, and the file exists' followed by the file's contents.

```
drwxr-xr-x 1 derek derek 327 Oct 5 17:17 hashes.md5
-rw-rw-r-- 1 derek derek 53 Oct 5 17:19 john_run.log
-rw-rw-r-- 1 derek derek 53 Oct 5 17:19 john_shown.txt
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Music
drwxr-xr-x 2 derek derek 4096 Nov 2 10:34 Pictures
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Public
-rwxrwxr-x 1 derek derek 219 Nov 2 10:33 TaskA.sh
-rwxrwxr-x 1 derek derek 929 Nov 2 10:46 TaskB.sh
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Templates
drwxr-xr-x 2 derek derek 4096 Aug 31 04:18 Videos

(derek@kali)-[~]
$ ./TaskB.sh
Enter a filename or directory name: Music
Directory exists

(derek@kali)-[~]
$ ./TaskB.sh
Enter a filename or directory name: hashes.md5
It is a regular file, and the file exists
—— File contents ——
5f4dcc3b5aa765d61d8327deb882cf99
63a9f0ea7bb98050796b649e85481845

(derek@kali)-[~]
$
```

Task B Extra Credit

I first created the file through the **vi** utility and named it **extracreditTaskB** I then executed the **chmod +x** command to make the file an executable.

```
(derek@kali)-[~]  
$ vi extracreditTaskB.sh
```

```
(derek@kali)-[~]  
$ chmod +x extracreditTaskB.sh
```

The image below displays the contents of the **extracreditTaskB.sh** script and its output.

```
$ cat extracreditTaskB.sh  
#!/bin/bash  
# Task B with Extra Credit - Check directory/file, create file if missing, add your  
# name  
  
read -p "Enter the filename to check: " target  
  
# If it's a directory  
if [ -d "$target" ]; then  
    echo "Directory exists"  
  
# If it's a regular file  
elif [ -f "$target" ]; then  
    echo "It is a regular file, and the file exists"  
    echo "The contents of the file are:"  
    cat "$target"  
  
# If it doesn't exist → create & add your name (extra credit)  
else  
    echo "File does not exist. Creating new file: $target"  
    echo "Derek D. Hillman" > "$target"  
    echo "New file created. The contents of the file are:"  
    cat "$target"  
fi
```

```
$ ./extracreditTaskB.sh  
Enter the filename to check: hashes.md5  
It is a regular file, and the file exists  
The contents of the file are:  
5f4dcc3b5aa765d61d8327deb882cf99  
63a9f0ea7bb98050796b649e85481845  
  
(derek@kali)-[~]  
$ ./extracreditTaskB.sh  
Enter the filename to check: newfile2  
File does not exist. Creating new file: newfile2  
New file created. The contents of the file are:  
Derek D. Hillman
```

Extra Credit (15 Points)

I first created the file through the **vi** utility and named it **lab8_extra_credit.sh** I then executed the **chmod +x** command to make the file an executable. I executed the script and pasted its output below.

Below is the **Lab8_extra_credit.sh** script.

```
#!/bin/bash
# Extra Credit - Check Directory

# Read your name
read -p "Enter your name: " myname

# Read the directory name
read -p "Enter the directory name to check: " dirname

echo "Hello $myname!"

# Check if entered name is a valid directory
if [ -d "$dirname" ]; then
    echo "The directory \"$dirname\" exists."
    echo "—— Directory Contents ——"
    ls -l "$dirname"
else
    echo "Sorry, the entered directory name is not a valid directory name."
fi
```

```
(derek@kali) [~]
$ vi lab8_extra_credit.sh

(derek@kali) [~]
$ chmod +x lab8_extra_credit.sh

(derek@kali) [~]
$ ./lab8_extra_credit.sh
Enter your name: Derek
Enter the directory name to check: /etc/systemd
Hello Derek!
The directory "/etc/systemd" exists.
—— Directory Contents ——
total 44
-rw-r--r--  1 root root 1429 Apr  3  2025 journald.conf
-rw-r--r--  1 root root 1785 Apr  7  2025 logind.conf
drwxr-xr-x  2 root root 4096 Aug 31 03:44 network
-rw-r--r--  1 root root 1213 Apr  3  2025 networkd.conf
-rw-r--r--  1 root root  879 Apr  3  2025 pstore.conf
-rw-r--r--  1 root root 1102 Apr  3  2025 sleep.conf
drwxr-xr-x 11 root root 4096 Aug 31 03:53 system
-rw-r--r--  1 root root 2342 Apr  7  2025 system.conf
-rw-r--r--  1 root root 1076 Apr  7  2025 timesyncd.conf
drwxr-xr-x  6 root root 4096 Aug 31 03:52 user
-rw-r--r--  1 root root 1768 Apr  7  2025 user.conf
```

Below displays the output of a directory that exists.

```
(derek@kali) [~]
$ ./lab8_extra_credit.sh
Enter your name: Derek
Enter the directory name to check: /home
Hello Derek!
The directory "/home" exists.
—— Directory Contents ——
total 44
drwxrws--T  2 root  dhill036 4096 Oct 12 15:50 cyse_project
drwx----- 18 derek  derek    4096 Nov  2 11:19 derek
drwx-----  5 emma   admin    4096 Oct 12 07:39 emma
drwx-----  5 olivia payroll  4096 Oct 12 11:26 olivia
drwx-----  5 sophia employee 4096 Oct 12 07:28 sophia
drwx-----  5 user1  user1    4096 Oct  5 15:49 user1
drwx-----  5 user2  user2    4096 Oct  5 15:49 user2
drwx-----  5 user3  user3    4096 Oct  5 15:49 user3
drwx-----  5 user4  user4    4096 Oct  5 15:49 user4
drwx-----  5 user5  user5    4096 Oct  5 15:49 user5
drwx-----  5 user6  user6    4096 Oct  5 15:49 user6
```

Below displays the output of the script when a directory is not present.

```
(derek@kali) [~]
$ ./lab8_extra_credit.sh
Enter your name: Derek
Enter the directory name to check: /fake_directory
Hello Derek!
Sorry, the entered directory name is not a valid directory name.

(derek@kali) [~]
$
```