

# Task 4: File Watcher Script

1. Install `inotify-tools` :

```
sudo apt update
```

```
sudo apt install inotify-tools -y
```

2. Create the script file:

```
nano watch_dir.sh
```

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

```
WATCH_DIR="/home/studentuser/projectX/logs"
```

```
LOG_FILE="/home/studentuser/projectX/log_monitor.txt"
```

```
if [ ! -d "$WATCH_DIR" ]; then
```

```
echo "Directory $WATCH_DIR does not exist."
```

```
exit 1
```

```
fi
```

```
inotifywait -m -e create --format '%f' "$WATCH_DIR" | while read FILENAME
```

```
do
```

```
if [[ "$FILENAME" == *.txt ]]; then
```

```
TIMESTAMP=$(date "+%Y-%m-%d %H:%M:%S")
```

```
echo "[$TIMESTAMP] New file detected: $FILENAME" >> "$LOG_FILE"
```

```
fi
```

```
done
```

3. Make the script executable:

```
chmod +x watch_dir.sh
```

```
./watch_dir.sh
```

4. Test It in another terminal:

```
touch /home/studentuser/projectX/logs/test123.txt
```

5. Check the log:

**cat /home/studentuser/projectX/log\_monitor.txt**

```
studentuser@kali: /home/hari

touch: cannot touch '/home/studentuser/projectX/logs/test_again.txt': Permission denied

(hari@kali)-[~]
$ ls -ld /home/studentuser/projectX/logs
ls: cannot access '/home/studentuser/projectX/logs': Permission denied

(hari@kali)-[~]
$ sudo su
[sudo] password for hari:
(root@kali)-[/home/hari]
# chown -R studentuser:studentuser /home/studentuser/projectX

(root@kali)-[/home/hari]
# chmod -R u+rwX /home/studentuser/projectX

(root@kali)-[/home/hari]
# exit

(hari@kali)-[~]
$ touch /home/studentuser/projectX/logs/test_final.txt
zsh: bad pattern: "[[200-touch

(hari@kali)-[~]
$ touch /home/studentuser/projectX/logs/test_final.txt
Command '-touch' not found, did you mean:
  command 'touch' from deb coreutils
  command 'ktouch' from deb ktouch
Try: sudo apt install <deb name>

(hari@kali)-[~]
$ touch /home/studentuser/projectX/logs/test_final.txt
touch: cannot touch '/home/studentuser/projectX/logs/test_final.txt': Permission denied

(hari@kali)-[~]
$ sudo -u studentuser bash

(studentuser@kali)-[/home/hari]
$ touch /home/studentuser/projectX/logs/test_final.txt

(studentuser@kali)-[/home/hari]
$ cat /home/studentuser/projectX/log_monitor.txt
[2025-07-27 23:29:39] New file detected: test_final.txt

(studentuser@kali)-[/home/hari]
$
```

**Conclusion:** Task 4 involved creating a `watch_dir.sh` script to monitor the `/logs` directory for new `.txt` files. When a file is added, its name and timestamp are logged to `log_monitor.txt`. This task demonstrated real-time file monitoring using `inotifywait`.