



Ethical Hacking Assignment

SEMESTER-3

ASSIGNMENT – 1

Assignment 8: Directory Monitoring Bash Script

Assigned to: BARATH C G

Reg No:2462507

Class: 3BTCSE IOT

[illegible]

Findings:

- The script detected all CREATE, MODIFY, and DELETE events in real-time.
- The log file maintained a detailed history for later review.
- Recursive monitoring ensured detection in subfolders as well.

Conclusions:

Monitoring a directory in real time is a simple yet effective security measure. This script acts like a file system surveillance camera, useful in detecting malware, insider threats, or accidental deletions. It can be extended to trigger alerts or automated responses.

Code:

```
bash

#!/bin/bash
MONITOR_DIR="/home/barathcg/Downloads"
LOG_FILE="file_monitor.log"

echo "Monitoring directory: $MONITOR_DIR"
echo "Logging changes to: $LOG_FILE"
echo "Press [CTRL+C] to stop."

inotifywait -m -e create -e delete -e modify --format '%T %e %f' \
--timefmt '%Y-%m-%d %H:%M:%S' "$MONITOR_DIR" | while read DATE TIME EVENT FILE
do
    echo "$DATE $TIME | $EVENT | $FILE" | tee -a "$LOG_FILE"
done
```