

1 . Make directory.

```
Last login: Thu Aug 31 13:18:49 on ttys000
saraaimukhalid@MacBook-Pro-alkhas-b-Sara: ~ % export PATH=$PATH:/Applications/Docker.app/Contents/Resources/bin/"
saraaimukhalid@MacBook-Pro-alkhas-b-Sara: ~ % docker start -ai tuwalq-centos

> ^C
[root@f6e68b1c4781 scripts]# cd /
[root@f6e68b1c4781 /]# mkdir Server_Project
[root@f6e68b1c4781 /]# cd Server_Project
[root@f6e68b1c4781 /Server_Project]#
```

2. Source Code

```
GNU nano 2.9.8 Server_project.sh

#!/bin/bash

authenticate_user() {
    read -p "Enter username: " input_username
    read -s -p "Enter password: " input_password
    echo

    if [[ $input_username == $username && $input_password == $password ]]; then
        echo "Authentication successful!"
        authenticated=true
        sleep 2
    else
        echo "Authentication failed. Please try again."
        authenticated=false
        sleep 2
    fi
}

username="root"
password="root"

authenticated=false

while [ $authenticated == false ]; do
    authenticate_user
done

while true; do
    echo "Welcome $username! "
    echo "Server Monitoring Script"
    echo "-----"
    echo "1. CPU Usage"
    echo "2. Memory Usage"
    echo "3. Disk Space"
    echo "4. Network stats"
    echo "5. Exit"
    echo

    read -p "Enter your choice: " choice
    echo

    case $choice in
        1)
            cpu_usage=$(top -bn1 | grep "Cpu(s)" | awk '{print $2 + $4}')
            echo "CPU Usage: $cpu_usage%"
            ;;
        2)
            memory_usage=$(free -m | awk 'NR==2{printf "%.2f%%", ($3/$2)*100}')
            echo "Memory Usage: $memory_usage%"
            ;;
        3)
            disk_usage=$(df -h | awk 'NR==2{printf "%.2f%%", ($3/$2)*100}')
            echo "Disk Space Usage: $disk_usage%"
            ;;
        4)
            network_stats=$(ss -s)
            echo "Network Statistics:"
            ;;
        5)
            echo "Exiting Server Monitoring Script..."
            exit 0
            ;;
        *)
            echo "Invalid choice. Please try again."
            ;;
    esac

    sleep 2
done
```

3. Authentication

```
[root@f6e8b1c4701 Server_Project]# nano Server_project.sh
[root@f6e8b1c4701 Server_Project]# ./Server_project.sh
Enter username: root
Enter password:
Authentication failed. Please try again.
Enter username: root
Enter password:
Authentication successful!
Welcome root!
Server Monitoring Script
-----
1. CPU Usage
2. Memory Usage
3. Disk Space
4. Network stats
5. Exit
Enter your choice: █
```

4. Result

```
6. Exit
Enter your choice: 1
CPU Usage: 0%
Welcome root!
Server Monitoring Script
-----
1. CPU Usage
2. Memory Usage
3. Disk Space
4. Network stats
5. Exit
Enter your choice: 2
Memory Usage: 11.44%
Welcome root!
Server Monitoring Script
-----
1. CPU Usage
2. Memory Usage
3. Disk Space
4. Network stats
5. Exit
Enter your choice: 3
Disk Space Usage: 5%
Welcome root!
Server Monitoring Script
-----
1. CPU Usage
2. Memory Usage
3. Disk Space
4. Network stats
5. Exit
Enter your choice: 4
Network Statistics:
Total: 1
TCP: 0 (estab 0, closed 0, orphaned 0, timewait 0)

Transport Total  IP      IPv6
RAW              0      0
UDP              0      0
TCP              0      0
INET             0      0
FRAG             0      0
Welcome root!
Server Monitoring Script
-----
1. CPU Usage
2. Memory Usage
3. Disk Space
4. Network stats
5. Exit
Enter your choice: 5
Exiting Server Monitoring Script...
[root@f6e8b1c4701 Server_Project]# █
```