TASK : 3 MINI SERVER MONITOR SCRIPT

Step 1: Write the `monitor.sh` script

Create the script in `/usr/local/bin/monitor.sh` (so cron can easily access it):

```
sudo nano /usr/local/bin/monitor.sh
```

Paste this code:

```
#!/bin/bash

LOG_FILE="/var/log/mini_server_monitor.log"
TIMESTAMP=$(date "+%Y-%m-%d %H:%M:%S")

echo "[$TIMESTAMP] 🔍 Starting server monitor check..." >> "$LOG_FILE"

# 1️⃣ Check if nginx is running
if systemctl is-active --quiet nginx; then
   echo "[$TIMESTAMP] ✅ nginx is running." >> "$LOG_FILE"
else
   echo "[$TIMESTAMP] ⚠️ nginx is NOT running. Attempting to start..." >>
"$LOG_FILE"
   systemctl start nginx
   if systemctl is-active --quiet nginx; then
      echo "[$TIMESTAMP] 🚀 nginx started successfully." >> "$LOG_FILE"
   else
      echo "[$TIMESTAMP] ❌ Failed to start nginx!" >> "$LOG_FILE"
   fi
fi

# 2️⃣ Capture system stats
MEMORY=$(free -h | awk '/Mem:/ {print $3 "/" $2}')
CPU_LOAD=$(uptime | awk -F'load average:' '{print $2}' | xargs)
DISK=$(df -h / | awk 'NR==2 {print $3 "/" $2 " (" $5 " used)"}')

echo "[$TIMESTAMP] 📊 Memory: $MEMORY | CPU Load: $CPU_LOAD | Dis
```

```
k: $DISK" >> "$LOG_FILE"

echo "[$TIMESTAMP] ✅ Check complete." >> "$LOG_FILE"
echo "------------------------------------------------------" >> "$LOG_FIL
E"
```

Step 2: Make it executable

```
sudo chmod +x /usr/local/bin/monitor.sh
```

Step 3: Test the script manually

```
sudo /usr/local/bin/monitor.sh
```

Check the log file:

```
cat /var/log/mini_server_monitor.log
```

You should see logs like:

```
[2025-07-28 10:15:01] 🔍 Starting server monitor check...
[2025-07-28 10:15:01] ✅ nginx is running.
[2025-07-28 10:15:01] 📊 Memory: 2.1G/8G | CPU Load: 0.12, 0.20, 0.18 | Disk:
14G/50G (28% used)
[2025-07-28 10:15:01] ✅ Check complete.
------------------------------------------------------
```

Step 4: Schedule via cron (every 5 minutes)

Edit cron jobs:

```
sudo crontab -e
```

Add this line at the bottom:

```
*/5 * * * * /usr/local/bin/monitor.sh
```

Save & exit.

Step 5: Verify cron job

Check if cron logs are writing:

```
tail -f /var/log/mini_server_monitor.log
```

After 5 minutes, you should see new log entries every run.