☑ System CPU Monitor

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Version: 1.0

License: MIT

Platform: Python 3.x

Dependencies: `psutil`

📄 Overview

This Python script continuously monitors system-wide CPU usage and alerts the user when usage exceeds a defined threshold. It's ideal for system administrators, developers, or anyone needing real-time performance insights.

⚙️ Features

- 🔍 Monitors CPU usage in real-time
- 🚨 Alerts when usage exceeds a configurable threshold
- 🕐 Logs timestamped usage data
- ⏱️ Adjustable monitoring interval
- 🔴 Graceful shutdown with `Ctrl+C`
- 🧠 Uses `psutil` for cross-platform compatibility

🚀 Usage

1. **Install Dependencies**

pip install psutil

2. **Run the Script**

python cpu_monitor.py

🔧 Configuration

You can modify these variables in the script to suit your needs:

CPU_THRESHOLD = 80.0   # Alert if CPU usage exceeds 80%

MONITOR_INTERVAL = 5   # Check every 5 seconds

📝 Sample Output

```
📈 Starting System Monitor...
Alert threshold set to 80.0% CPU usage.
Checking every 5 seconds.
Press Ctrl+C to stop.
[2025-08-29 21:30:00] Current CPU Usage: 45.2%
[2025-08-29 21:30:05] Current CPU Usage: 82.7%
🚨 ALERT! 🚨
[2025-08-29 21:30:05] High CPU usage detected: 82.7%
This is above the threshold of 80.0%.
--------------------------------------------------
```

📑 Lessons Learned

- **Real-time monitoring** helps catch performance spikes early
- **Graceful exits** improve user experience
- **Timestamped logs** aid in diagnostics and reporting
- **Cross-platform tools** like `psutil` simplify system scripting

🛡 Disclaimer

This script is intended for monitoring and educational purposes. It does not take corrective action—only alerts. Use in conjunction with other system tools for full performance management.