Content Engineering interview homework assignment:

Please create a system health monitoring script that collects and reports key system metrics. This assignment is designed to take approximately 2-3 hours and reflects the type of work you'd be doing in this role. Use of generative AI is acceptable, but we expect candidates to be able to explain the design and code during the review process with the team.

Requirements:

You may write this in PowerShell, bash, zsh, or Python - whichever you're most comfortable with. No compiled code will be accepted.

Core Functionality (Required):

- Collect and display the following metrics:
    - CPU Usage (current percentage)
    - Memory Usage (used/total in GB or MB, plus percentage)
    - Disk Usage (for primary/system drive: used/total and percentage)
    - System Uptime (how long the system has been running)
- Output as a single delimited line with headers to the console
- Include a timestamp for when metrics were collected

Bonus Features (Optional but encouraged):

- Network connectivity check
- Top 5 processes by memory or CPU usage
- Check for specific critical services/processes
- Export to JSON or CSV format
- Periodic logging with automatic cleanup

Example Output Format:

```
None

  Timestamp|CPU|UsedMemory|TotalMemory|UsedDiskSpace|TotalDiskSpace|DiskUsedPer
  cent|Uptime

  2025-11-20T10:30:00|12%|12GB|32GB|400GB|2TB|20%|17 Days
```

What We're Looking For:

- Clean, organized code with clear variable names and comments
- Proper error handling
- Accurate calculations and parsing
- Well-formatted, readable output
- Efficient, straightforward approach
- Understanding of script safety and endpoint impact

Submission Instructions:

- Please submit your completed script within 5 business days
- Include a brief README with:
    - How to run your script
    - Any prerequisites or dependencies
    - Which optional features you implemented

Next Steps:

After we receive your submission, we'll schedule a 60 minute follow-up discussion where we'll:

- Review your code together
- Discuss your design decisions
- Explore potential modifications and production considerations