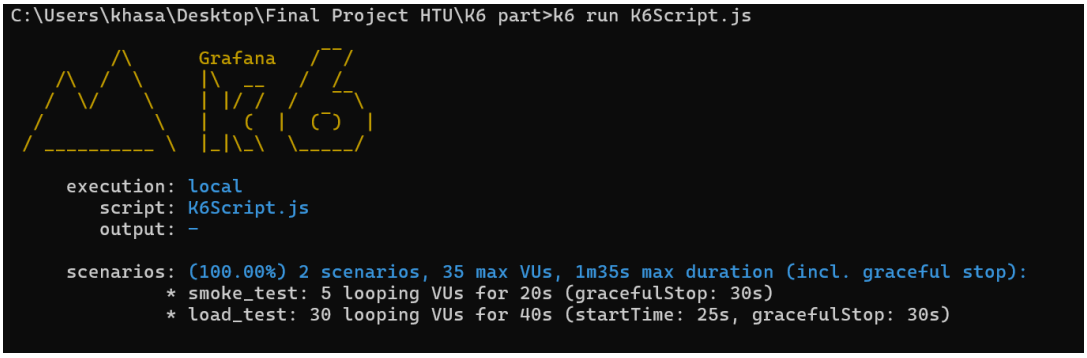
k6 Analysis

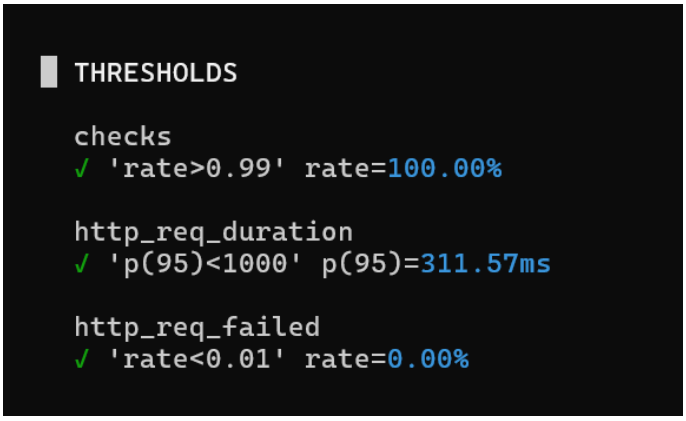
1. Scenarios



Two scenarios were configured

1. a smoke test with a small number of virtual users to validate basic system stability.
2. a load test with increased virtual users to simulate expected load conditions

2. THRESHOLDS

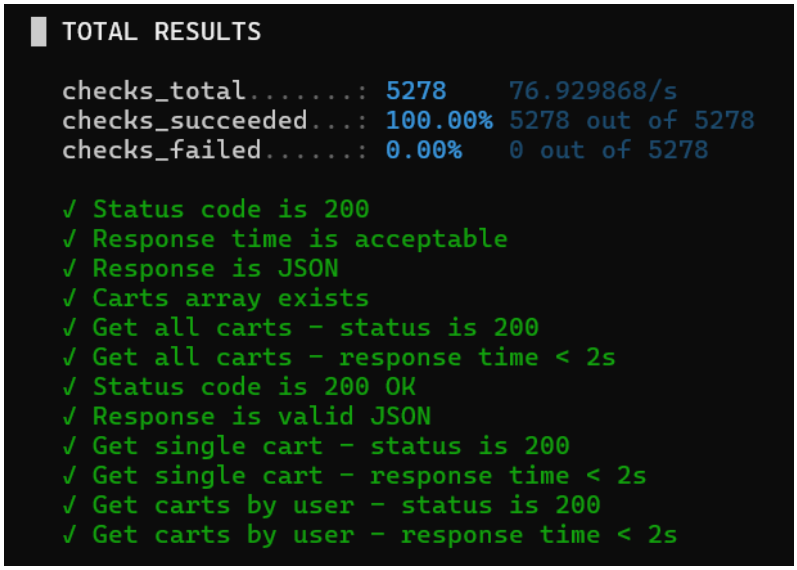


All defined thresholds were successfully met during the test execution.

1. The checks achieved a 100% success rate, confirming that all requests returned to the expected results.
2. The 95th percentile response time remained within the acceptable limit, and no failed requests were recorded.

Overall, the API demonstrated stable and reliable performance under the tested load.

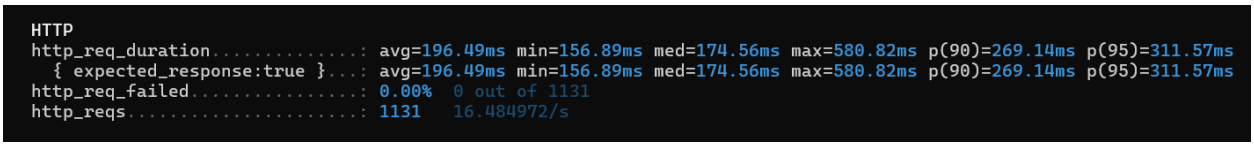
3. TOTAL RESULTS



All validation checks were executed successfully during the test run.
1. A total of 5,278 checks were performed with a 100% success rate and no failed checks.
2. Status codes, response time conditions, and response format validations all passed as expected.

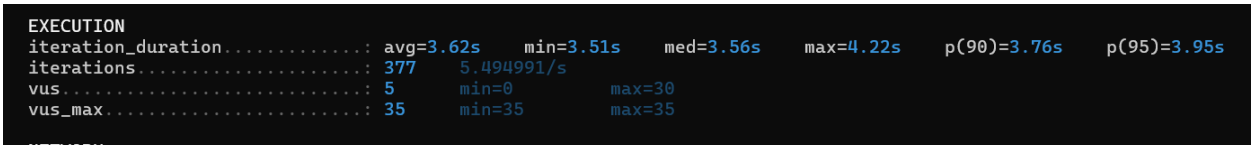
This confirms that the tested endpoints behaved correctly and consistently under the applied load.

4. HTTP



1. The average response time was approximately 196 ms, which indicates fast system responsiveness.
2. The minimum response time was around 157 ms, while the maximum reached 581 ms, showing some natural variation under load but still within acceptable limits.
3. The median response time was 175 ms, meaning that half of the requests were completed in less than this time.
4. Additionally, 95% of all requests were handled within 312 ms, which demonstrates stable and consistent performance for most requests.
5. No failed HTTP requests were recorded, confirming reliable system behavior during the test.

5. EXECUTION



1. The average iteration duration was approximately 3.62 seconds, indicating that each virtual user completed one full test cycle at a reasonable and stable time.
2. The minimum iteration duration was 3.51 seconds, while the maximum reached 4.22 seconds, which shows limited variation even under load conditions.
3. The median iteration duration was 3.56 seconds, meaning that half of the iterations finished in less than this time.
4. Additionally, 95% of iterations were completed within 3.95 seconds, confirming consistent execution performance across users.
5. A total of 377 iterations were executed during the test, with the number of virtual users scaling up to a maximum of 35 VUs, successfully simulating concurrent usage.

6. NETWORK

1.During the test execution, approximately 14 MB of data was received and around 177 KB was sent.
2. The average incoming data rate was about 197 KB/s, while the outgoing data rate remained low at 2.6 KB/s.
These values indicate efficient network usage, with no signs of excessive data transfer or network-related bottlenecks during the test.

7. Test Execution Summary

```
running (1m08.6s), 00/35 VUs, 377 complete and 0 interrupted iterations
smoke_test ✓ [======================================] 5 VUs   20s
load_test  ✓ [======================================] 30 VUs  40s

C:\Users\khasa\Desktop\Final Project HTU\K6 part>
```

1.The performance test completed successfully in approximately 1 minute, with all planned scenarios executed without interruption.
2. The smoke test ran with 5 virtual users for 20 seconds, followed by the load test with 30 virtual users for 40 seconds.
3. A total of 377 iterations were completed, and no iterations were interrupted, indicating a stable and controlled test execution.