CC LAB-2

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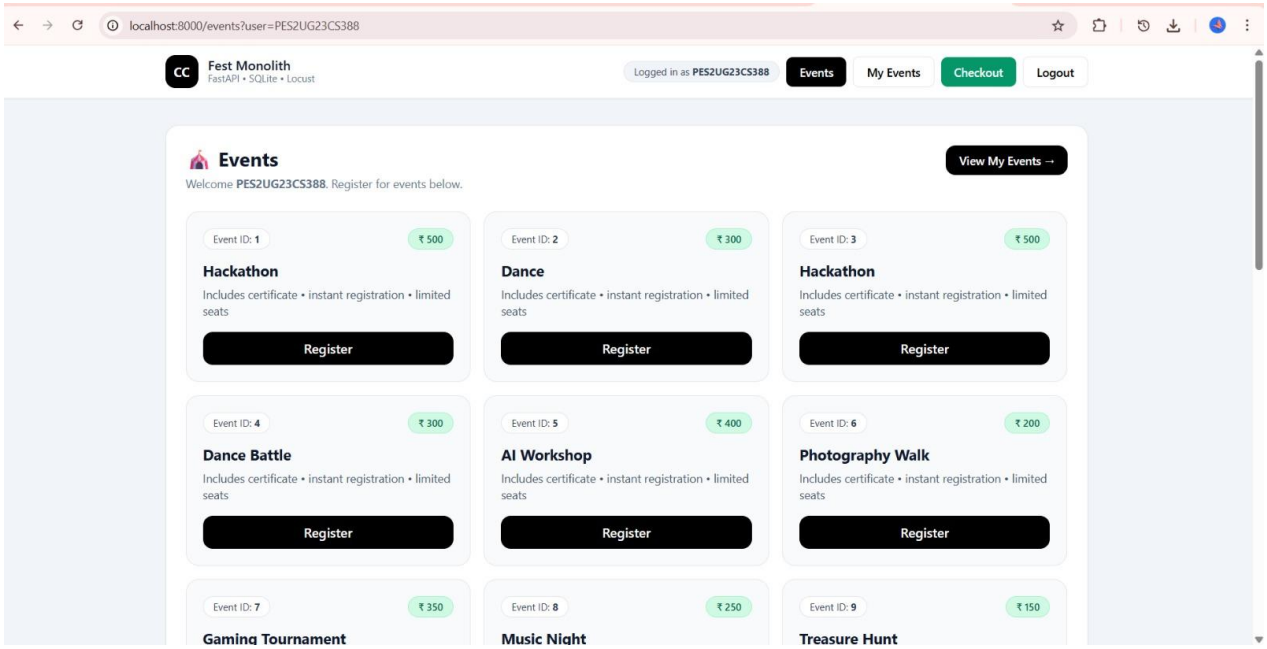
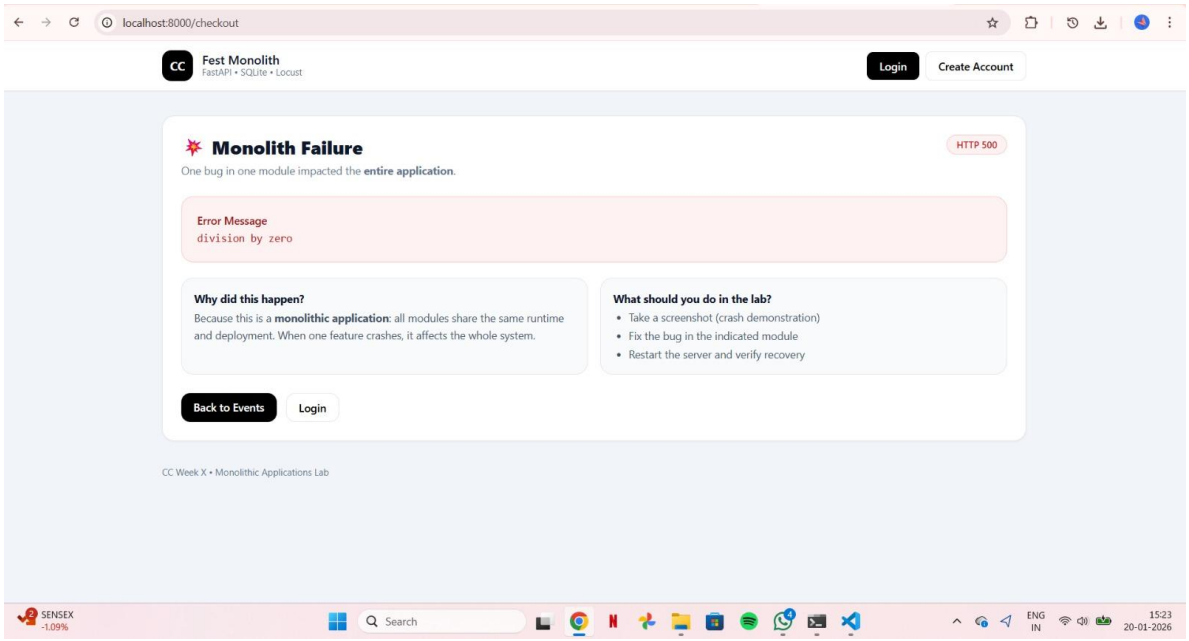
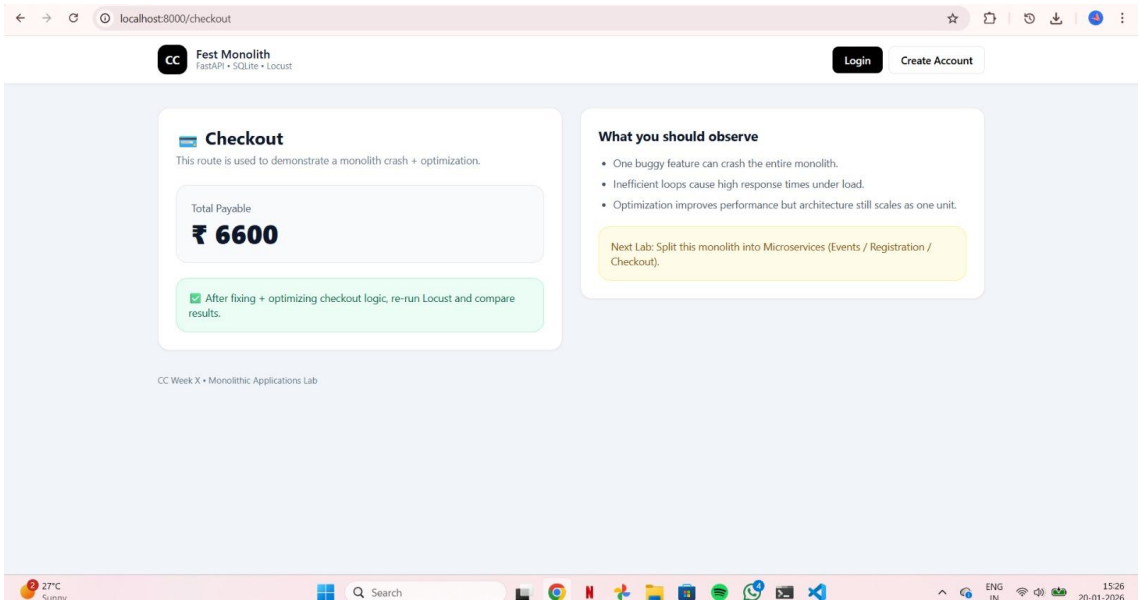
Date : 20.01.2026

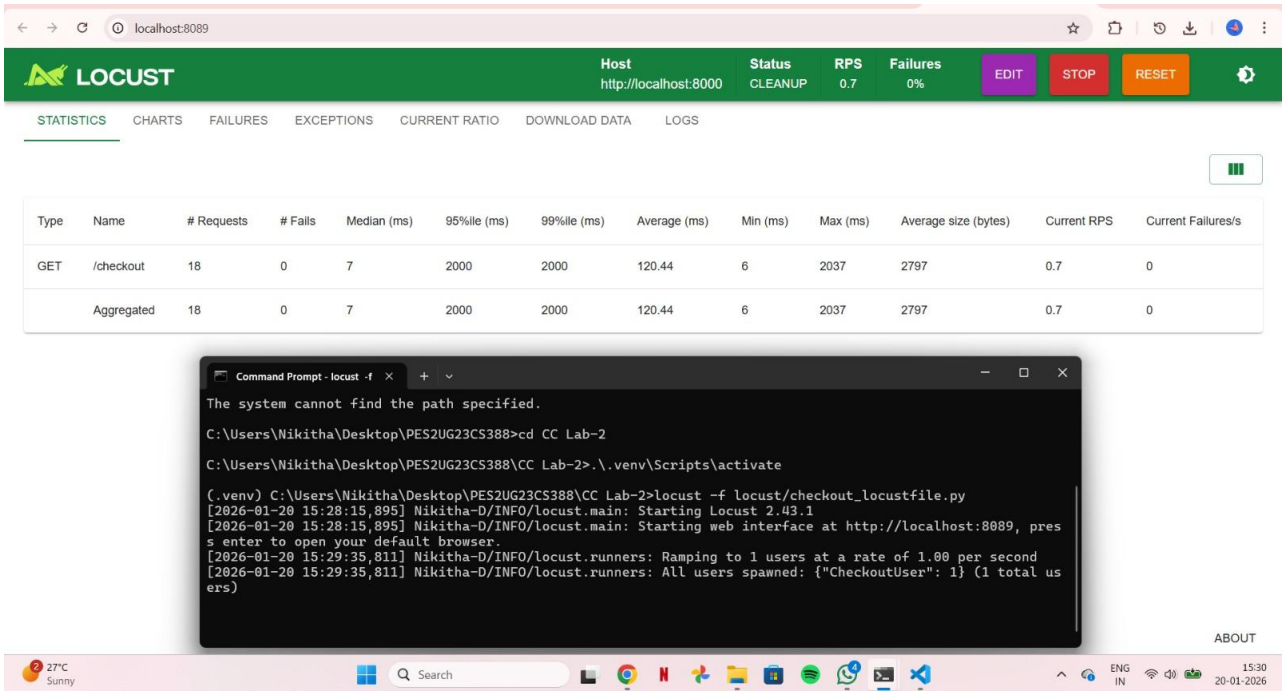
Github repository link :

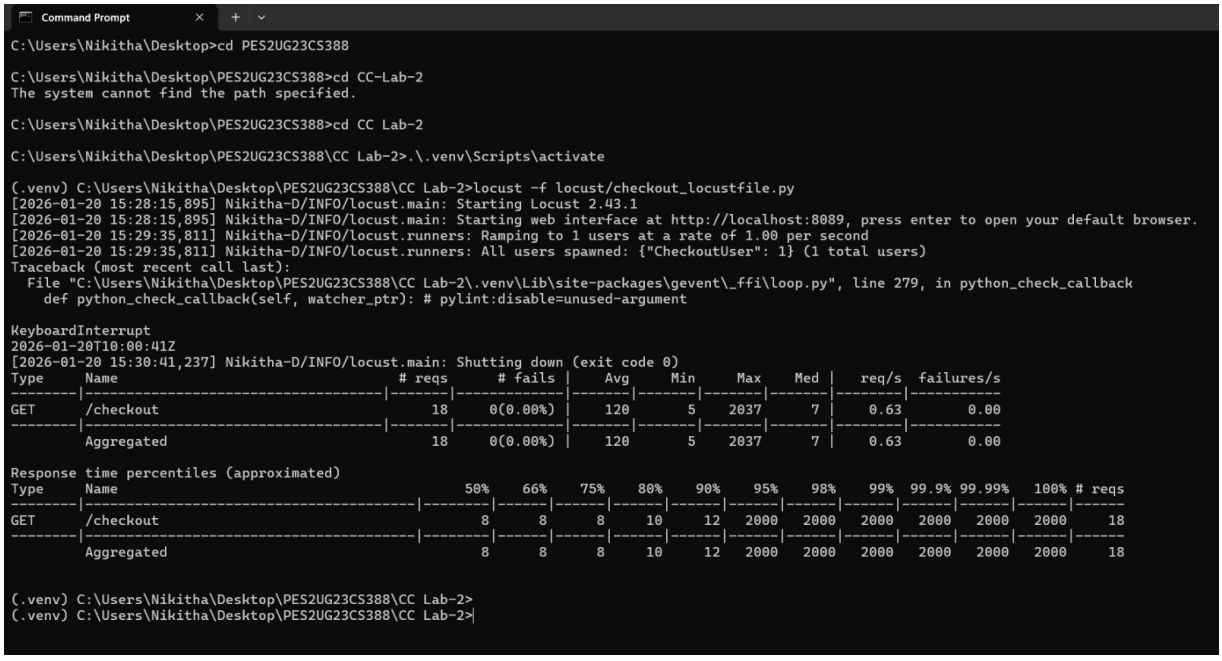
https://github.com/PES2UG23CS388/CC-Lab-2_PES2UG23CS388

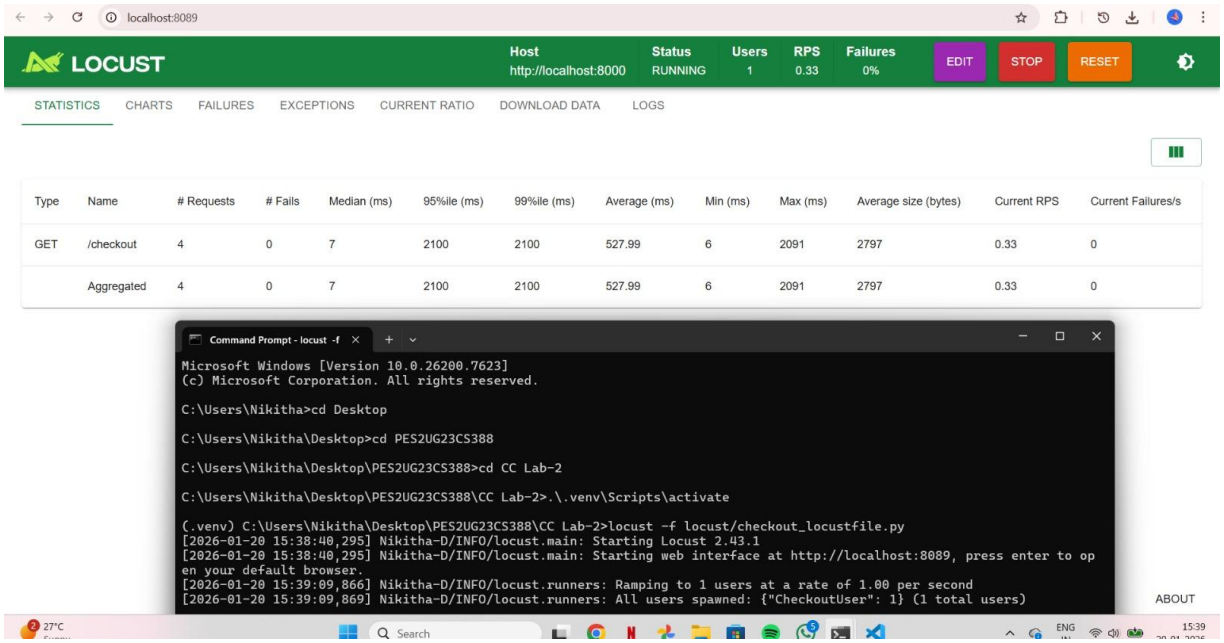


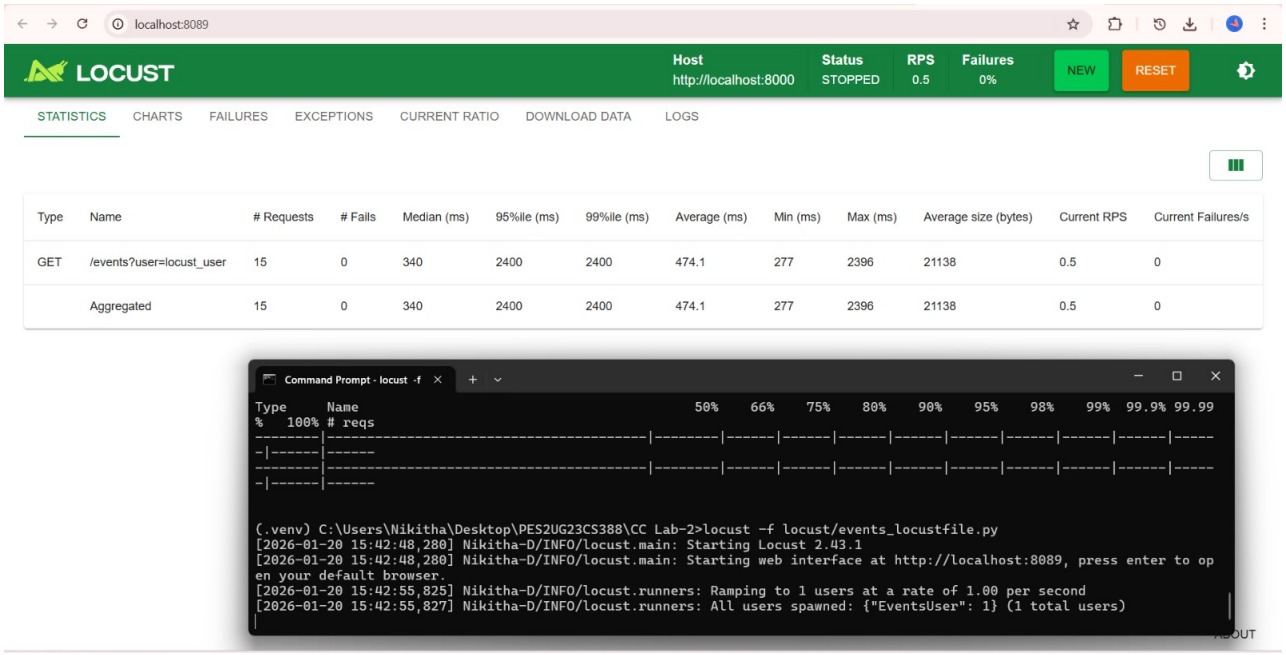

localhost:8000/checkout
CC
Fest Monolith
FastAPI • SQLite • Locust
Login
Create Account
Monolith Failure
HTTP 500
One bug in one module impacted the entire application.
Error Message
division by zero
Why did this happen?
Because this is a monolithic application: all modules share the same runtime and deployment. When one feature crashes, it affects the whole system.
What should you do in the lab?
• Take a screenshot (crash demonstration)
• Fix the bug in the indicated module
• Restart the server and verify recovery
Back to Events
Login
CC Week X • Monolithic Applications Lab
SENSEX
-1.09%
Search
ENG
IN
15:23
20-01-2026

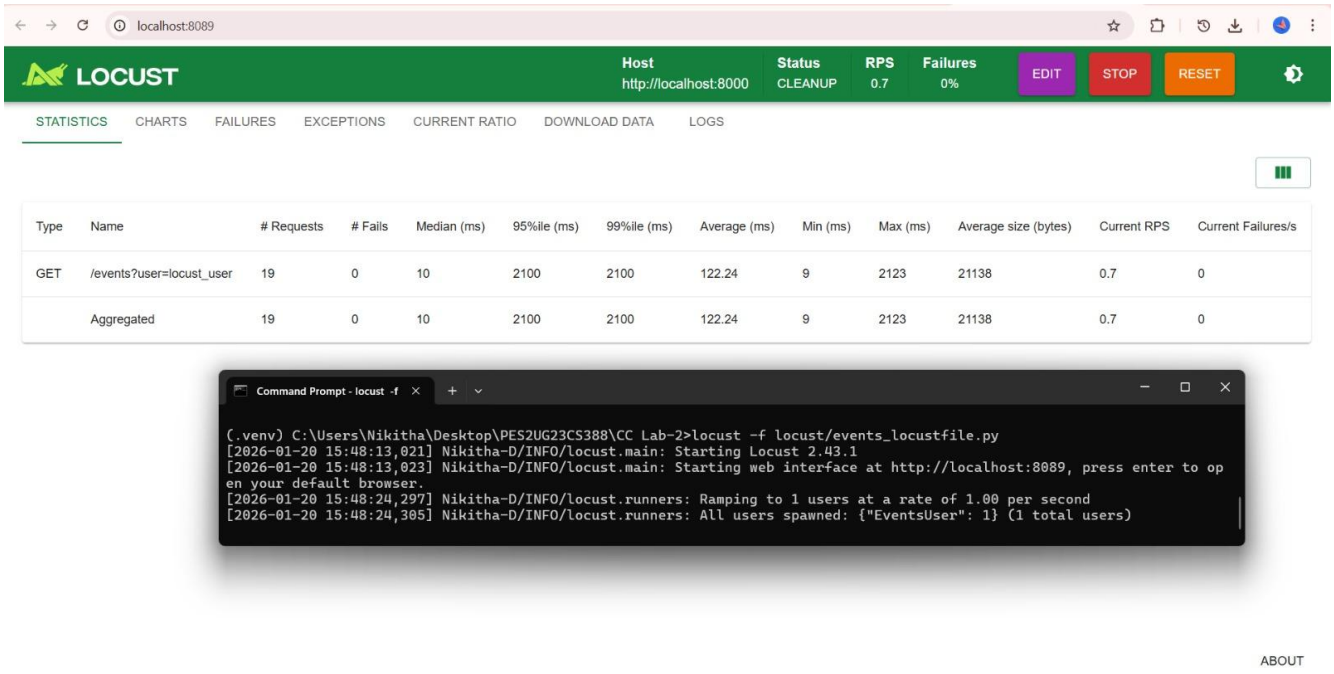

localhost:8000/checkout
CC
Fest Monolith
FastAPI • SQLite • Locust
Login
Create Account
Checkout
This route is used to demonstrate a monolith crash + optimization.
Total Payable
₹ 6600
After fixing + optimizing checkout logic, re-run Locust and compare results.
What you should observe
• One buggy feature can crash the entire monolith.
• Inefficient loops cause high response times under load.
• Optimization improves performance but architecture still scales as one unit.
Next Lab: Split this monolith into Microservices (Events / Registration / Checkout).
CC Week X • Monolithic Applications Lab
27°C
Search
ENG
IN
15:26
20-01-2026


localhost:8089
LOCUST
Host
http://localhost:8000
Status
CLEANUP
RPS
0.7
Failures
0%
EDIT
STOP
RESET
STATISTICS
CHARTS
FAILURES
EXCEPTIONS
CURRENT RATIO
DOWNLOAD DATA
LOGS
Type Name # Requests # Fails Median (ms) 95%ile (ms) 99%ile (ms) Average (ms) Min (ms) Max (ms) Average size (bytes) Current RPS Current Failures/s
GET /checkout 18 0 7 2000 2000 120.44 6 2037 2797 0.7 0
Aggregated 18 0 7 2000 2000 120.44 6 2037 2797 0.7 0
Command Prompt - locust -f
The system cannot find the path specified.
C:\Users\Nikitha\Desktop\PES2UG23CS388>cd CC Lab-2
C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>.\.venv\Scripts\activate
(.venv) C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>locust -f locust/checkout_locustfile.py
[2026-01-20 15:28:15,895] Nikitha-D/INFO/locust.main: Starting Locust 2.43.1
[2026-01-20 15:28:15,895] Nikitha-D/INFO/locust.main: Starting web interface at http://localhost:8089, pres
s enter to open your default browser.
[2026-01-20 15:29:35,811] Nikitha-D/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-20 15:29:35,811] Nikitha-D/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total us
ers)
ABOUT
27°C
Sunny
Search
ENG
IN
15:30
20-01-2026


Command Prompt
C:\Users\Nikitha\Desktop>cd PES2UG23CS388
C:\Users\Nikitha\Desktop\PES2UG23CS388>cd CC-Lab-2
The system cannot find the path specified.
C:\Users\Nikitha\Desktop\PES2UG23CS388>cd CC Lab-2
C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>.\.venv\Scripts\activate
(.venv) C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>locust -f locust/checkout_locustfile.py
[2026-01-20 15:28:15,895] Nikitha-D/INFO/locust.main: Starting Locust 2.43.1
[2026-01-20 15:28:15,895] Nikitha-D/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-20 15:29:35,811] Nikitha-D/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-20 15:29:35,811] Nikitha-D/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total users)
Traceback (most recent call last):
File "C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2\.venv\Lib\site-packages\gevent_ffi\loop.py", line 279, in python_check_callback
def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
2026-01-20T10:00:41Z
[2026-01-20 15:30:41,237] Nikitha-D/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Med | req/s failures/s
GET /checkout 18 0(0.00%) | 120 5 2037 7 | 0.63 0.00
Aggregated 18 0(0.00%) | 120 5 2037 7 | 0.63 0.00
Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 99.99% 100% # reqs
GET /checkout 8 8 8 10 12 2000 2000 2000 2000 2000 2000 18
Aggregated 8 8 8 10 12 2000 2000 2000 2000 2000 2000 18
(.venv) C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>
(.venv) C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>


localhost:8089
LOCUST
Host
http://localhost:8000
Status
RUNNING
Users
1
RPS
0.33
Failures
0%
EDIT
STOP
RESET
STATISTICS
CHARTS
FAILURES
EXCEPTIONS
CURRENT RATIO
DOWNLOAD DATA
LOGS
Type Name # Requests # Fails Median (ms) 95%ile (ms) 99%ile (ms) Average (ms) Min (ms) Max (ms) Average size (bytes) Current RPS Current Failures/s
GET /checkout 4 0 7 2100 2100 527.99 6 2091 2797 0.33 0
Aggregated 4 0 7 2100 2100 527.99 6 2091 2797 0.33 0
Command Prompt - locust -f
Microsoft Windows [Version 10.0.26200.7623]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Nikitha>cd Desktop
C:\Users\Nikitha\Desktop>cd PES2UG23CS388
C:\Users\Nikitha\Desktop\PES2UG23CS388>cd CC Lab-2
C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>.\.venv\Scripts\activate
(.venv) C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>locust -f locust/checkout_locustfile.py
[2026-01-20 15:38:40,295] Nikitha-D/INFO/locust.main: Starting Locust 2.43.1
[2026-01-20 15:38:40,295] Nikitha-D/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to op
en your default browser.
[2026-01-20 15:39:09,866] Nikitha-D/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-20 15:39:09,869] Nikitha-D/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total users)
ABOUT


localhost:8089
LOCUST
Host
http://localhost:8000
Status
STOPPED
RPS
0.5
Failures
0%
NEW
RESET
STATISTICS
CHARTS
FAILURES
EXCEPTIONS
CURRENT RATIO
DOWNLOAD DATA
LOGS
Type Name # Requests # Fails Median (ms) 95%ile (ms) 99%ile (ms) Average (ms) Min (ms) Max (ms) Average size (bytes) Current RPS Current Failures/s
GET /events?user=locust_user 15 0 340 2400 2400 474.1 277 2396 21138 0.5 0
Aggregated 15 0 340 2400 2400 474.1 277 2396 21138 0.5 0
Command Prompt - locust -f
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 99.99
% 100% # reqs
(.venv) C:\Users\Nikitha\Desktop\PES2UG23CS388\CC Lab-2>locust -f locust/events_locustfile.py
[2026-01-20 15:42:48,280] Nikitha-D/INFO/locust.main: Starting Locust 2.43.1
[2026-01-20 15:42:48,280] Nikitha-D/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to op
en your default browser.
[2026-01-20 15:42:55,825] Nikitha-D/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-20 15:42:55,827] Nikitha-D/INFO/locust.runners: All users spawned: {"EventsUser": 1} (1 total users)
ABOUT



Checkout Route

Earlier, the checkout code was slow because it used unnecessary loops to calculate the total amount. I simplified the logic by adding all the event fees using a single loop. This reduced extra processing and made the checkout faster.

Events Route

The events page was slow because the data was processed multiple times. I optimized the code by removing repeated loops and handling the data only once. This reduced the response time and improved performance.

My-Events Route

The my-events page was slow due to inefficient handling of user data. I simplified the logic by avoiding repeated processing and using a direct approach. This made the page load faster.