

CC LAB - 2

SRN: PES1UG23AM219

NAME: PRIYANKA S

SECTION: D

SS1:events

CC Fest Monolith
FastAPI • SQLite • Locust

Logged in as PES1UG23AM219

Events

My Events

Checkout

Logout

Events

Welcome PES1UG23AM219. Register for events below.

View My Events →

Event ID: 1

₹ 500

Hackathon

Includes certificate • instant registration • limited seats

Register

Event ID: 2

₹ 300

Dance

Includes certificate • instant registration • limited seats

Register

Event ID: 3

₹ 500

Hackathon

Includes certificate • instant registration • limited seats

Register

Event ID: 4

₹ 300

Dance Battle

Includes certificate • instant registration • limited seats

Register

Event ID: 5

₹ 400

AI Workshop

Includes certificate • instant registration • limited seats

Register

Event ID: 6

₹ 200

Photography Walk

Includes certificate • instant registration • limited seats

Register

Event ID: 7

₹ 350

Gaming Tournament

Includes certificate • instant registration • limited seats

Register

Event ID: 8

₹ 250

Music Night

Includes certificate • instant registration • limited seats

Register

Event ID: 9

₹ 150

Treasure Hunt

Includes certificate • instant registration • limited seats

Register

SS2:monolith failure

CC Fest Monolith
FastAPI • SQLite • Locust

Login

Create Account

Monolith Failure

One bug in one module impacted the entire application.

HTTP 500

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

```
INFO: 127.0.0.1:55534 - "GET /checkout HTTP/1.1" 500 Internal Server Error
ERROR: Exception in ASGI application
```

SS3:after correcting checkout

CC

Fest Monolith

FastAPI • SQLite • Locust

LoginCreate Account

Checkout

This route is used to demonstrate a monolith crash + optimization.

Total Payable

₹ 9500

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

INFO: 127.0.0.1:57447 - "GET /checkout HTTP/1.1" 200 OK

SS4:before optimizing checkout

LOCUST

Hosthttp://localhost:8000

StatusRUNNING

Users1

RPS0.6

Failures0%

EDIT

STOP

RESET

STATISTICSCHARTSFAILURES EXCEPTIONSCURRENT RATIODOWNLOAD DATALOGS

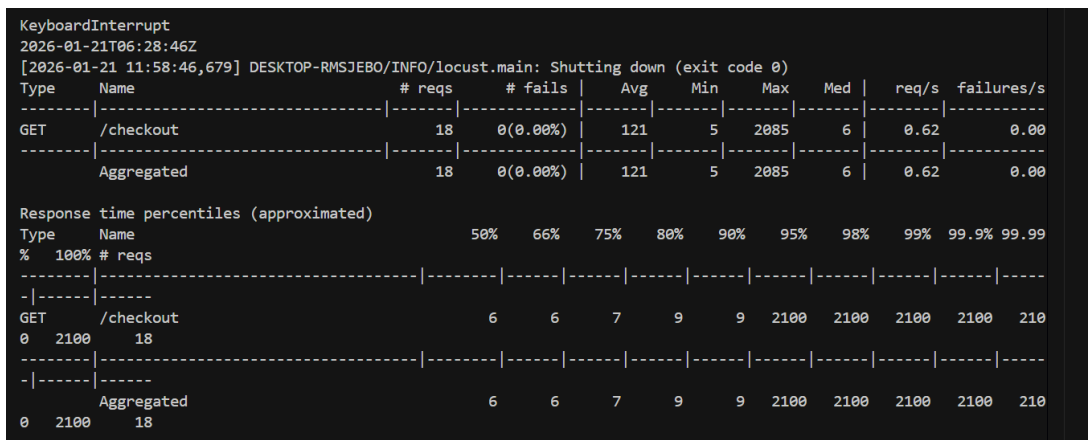
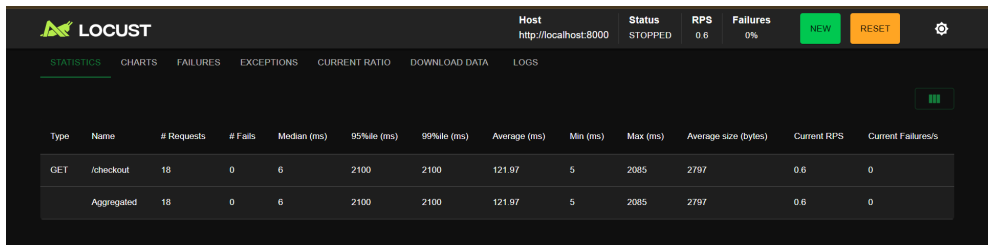
| Type | Name | # Requests | # Fails | Median (ms) | 95%ile (ms) | 99%ile (ms) | Average (ms) | Min (ms) | Max (ms) | Average size (bytes) | Current RPS | Current Failures/s |
|------|------------|------------|---------|-------------|-------------|-------------|--------------|----------|----------|----------------------|-------------|--------------------|
| GET | /checkout | 17 | 0 | 9 | 2000 | 2000 | 128.57 | 5 | 2040 | 2797 | 0.6 | 0 |
| | Aggregated | 17 | 0 | 9 | 2000 | 2000 | 128.57 | 5 | 2040 | 2797 | 0.6 | 0 |

```
Traceback (most recent call last):
  File "C:\Users\priyanka\OneDrive\Desktop\uni\sem_6\CC\Lab\21-01-2026\PES1UG23AM219\.venv\Lib\site-packages\gevent\
_ffil\loop.py", line 279, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument

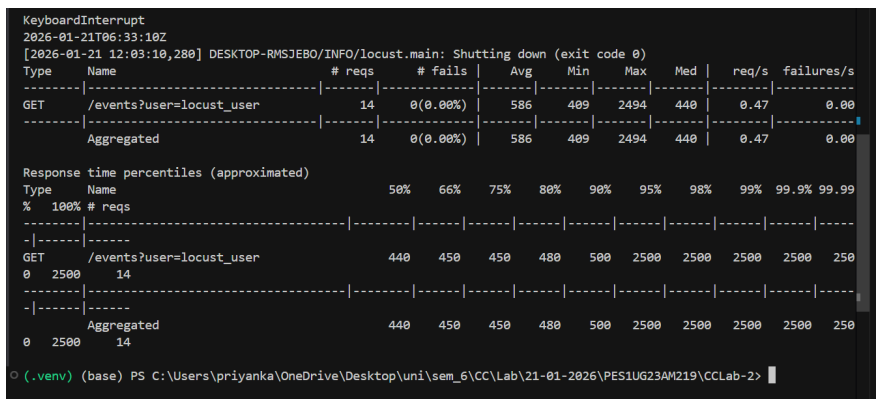
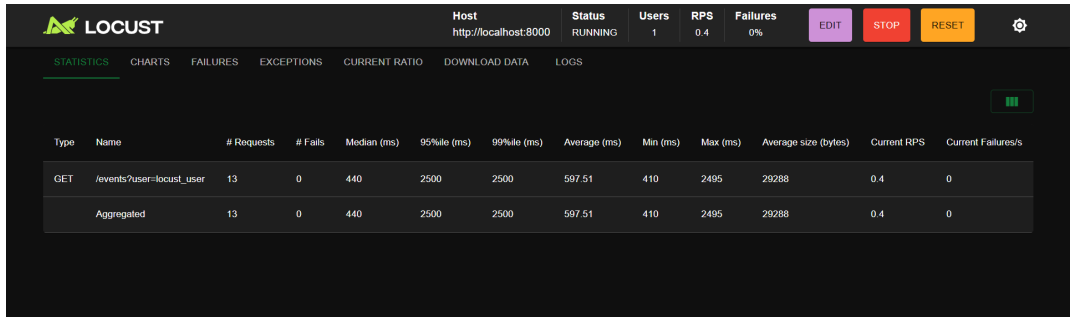
KeyboardInterrupt
2026-01-21T06:24:02Z
[2026-01-21 11:54:02.947] DESKTOP-RMSJEBO/INFO/locust.main: Shutting down (exit code 0)
Type      Name      # reqs      # fails | Avg      Min      Max      Med | req/s  failures/s
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET      /checkout    19         0(0.00%) | 116       4      2039     9 | 0.64    0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated    19         0(0.00%) | 116       4      2039     9 | 0.64    0.00

Response time percentiles (approximated)
Type      Name      50%      66%      75%      80%      90%      95%      98%      99%      99.9%  99.99%  100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET      /checkout     9      10      11      12      17     2000     2000     2000     2000     2000     2000    19
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated     9      10      11      12      17     2000     2000     2000     2000     2000     2000    19
```

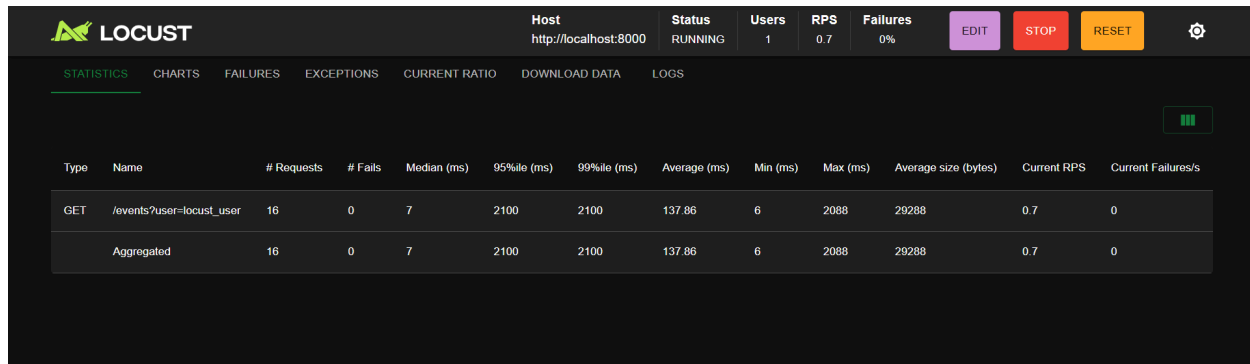
SS5:after optimizing checkout



SS6: Before optimizing events



SS7: After optimizing events



```
KeyboardInterrupt
2026-01-21T06:38:30Z
[2026-01-21 12:08:30,337] DESKTOP-RMSJEBO/INFO/locust.main: Shutting down (exit code 0)
Type      Name                               # reqs  # fails | Avg    Min    Max    Med | req/s  failures/s
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET       /events?user=locust_user              20      0(0.00%) | 112    6    2088    8 | 0.68    0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated                                20      0(0.00%) | 112    6    2088    8 | 0.68    0.00

Response time percentiles (approximated)
Type      Name                               50%    66%    75%    80%    90%    95%    98%    99%    99.9%  99.99
% 100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET       /events?user=locust_user              8      8     10     10     12    2100    2100    2100    2100    2100
0 2100    20
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated                                8      8     10     10     12    2100    2100    2100    2100    2100
0 2100    20

(.venv) (base) PS C:\Users\priyanka\OneDrive\Desktop\uni\sem_6\CC\Lab\21-01-2026\PES1UG23AM219\CCLab-2>
```

/events:

Bottleneck:

A CPU-intensive loop was executed on every request, unnecessarily increasing response time.


Change Made:

Removed the redundant computation from the request handling code.

Why Performance Improved:

Eliminating the blocking operation reduced CPU usage, allowing faster responses and higher throughput.

SS8: Before optimizing myevents

 **LOCUST**

Host

http://localhost:8000

Status

RUNNING

Users

1

RPS

0.4


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 | /my-events?user=locust_user | 4 | 0 | 180 | 2200 | 2200 | 692.81 | 175 | 2226 | 3144 | 0.4 | 0 |
| | Aggregated | 4 | 0 | 180 | 2200 | 2200 | 692.81 | 175 | 2226 | 3144 | 0.4 | 0 |

KeyboardInterrupt

2026-01-21T06:41:09Z

[2026-01-21 12:11:09,653] DESKTOP-RMSJEBO/INFO/locust.main: Shutting down (exit code 0)


Follow link (ctrl + click)

| Type | Name | # reqs | # fails | Avg | Min | Max | Med | req/s | failures/s |
|------|-----------------------------|--------|----------|-----|-----|------|-----|-------|------------|
| GET | /my-events?user=locust_user | 17 | 0(0.00%) | 303 | 165 | 2226 | 180 | 0.59 | 0.00 |
| | Aggregated | 17 | 0(0.00%) | 303 | 165 | 2226 | 180 | 0.59 | 0.00 |

Response time percentiles (approximated)

| Type | Name | 50% | 66% | 75% | 80% | 90% | 95% | 98% | 99% | 99.9% | 99.99% |
|------|-----------------------------|-----|-----|-----|-----|-----|------|------|------|-------|--------|
| GET | /my-events?user=locust_user | 180 | 180 | 190 | 200 | 210 | 2200 | 2200 | 2200 | 2200 | 220 |
| | Aggregated | 180 | 180 | 190 | 200 | 210 | 2200 | 2200 | 2200 | 2200 | 220 |

SS9: After optimizing myevents

 **LOCUST**

Host

http://localhost:8000

Status

STOPPED

RPS


0.7

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 | /my-events?user=locust_user | 21 | 0 | 6 | 12 | 2100 | 105.18 | 4 | 2080 | 3144 | 0.7 | 0 |
| | Aggregated | 21 | 0 | 6 | 12 | 2100 | 105.18 | 4 | 2080 | 3144 | 0.7 | 0 |

KeyboardInterrupt

2026-01-21T06:43:31Z

[2026-01-21 12:13:31,585] DESKTOP-RMSJEBO/INFO/locust.main: Shutting down (exit code 0)

| Type | Name | # reqs | # fails | Avg | Min | Max | Med | req/s | failures/s |
|------|-----------------------------|--------|----------|-----|-----|------|-----|-------|------------|
| GET | /my-events?user=locust_user | 21 | 0(0.00%) | 105 | 3 | 2080 | 6 | 0.72 | 0.00 |
| | Aggregated | 21 | 0(0.00%) | 105 | 3 | 2080 | 6 | 0.72 | 0.00 |

Response time percentiles (approximated)

| Type | Name | 50% | 66% | 75% | 80% | 90% | 95% | 98% | 99% | 99.9% | 99.99% |
|------|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|-------|--------|
| GET | /my-events?user=locust_user | 6 | 7 | 9 | 9 | 10 | 12 | 2100 | 2100 | 2100 | 210 |
| | Aggregated | 6 | 7 | 9 | 9 | 10 | 12 | 2100 | 2100 | 2100 | 210 |

\myevents:

Bottleneck:

An unnecessary loop caused the server to spend extra time processing each request.

Change Made:

Removed the redundant loop from the route implementation.

Why Performance Improved:

Requests completed faster with reduced processing overhead, improving concurrency and response time.
