

- Name: SNEHA VERMA
- SRN: PES1UG23AM309
- Lab: 02

```
(.venv) C:\Users\ASUS\PES1UG23AM309\CCLab-2\CCLab-2>python insert_events.py
✓ Events inserted successfully!
```

```
(.venv) C:\Users\ASUS\PES1UG23AM309\CCLab-2\CCLab-2>uvicorn main:app
INFO:     Started server process [22812]
INFO:     Waiting for application startup.
INFO:     Application startup complete.
INFO:     Uvicorn running on http://127.0.0.1:8000 (Press CTRL+C to quit)
```

The screenshot shows a web application interface for event registration. At the top, there is a navigation bar with the logo 'Fest Monolith' (CC), user information 'Logged in as PES1UG23AM309', and buttons for 'Events', 'My Events', 'Checkout', and 'Logout'. Below the navigation bar, there is a section titled 'Events' with a sub-section titled 'Welcome PES1UG23AM309. Register for events below.' On the right side of this section, there is a button 'View My Events →'.

The main content area displays six event cards arranged in two columns:

- 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**. **Register**
- Event ID: 6** (₹ 200): **Photography Walk**. **Register**



## 💥 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](#)

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```
*****
File "C:\Users\ASUS\PES1UG23AM309\CCLab-2\CCLab-2\.venv\Lib\site-packages\anyio\_backends\_asyncio.py", line 986, in run
    result = context.run(func, *args)
File "C:\Users\ASUS\PES1UG23AM309\CCLab-2\CCLab-2\main.py", line 113, in checkout
    total = checkout_logic()
File "C:\Users\ASUS\PES1UG23AM309\CCLab-2\CCLab-2\checkout\__init__.py", line 9, in checkout_logic
    1 / 0
    ^
ZeroDivisionError: division by zero
```



## 🛒 Checkout

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

Total Payable

₹ 9500

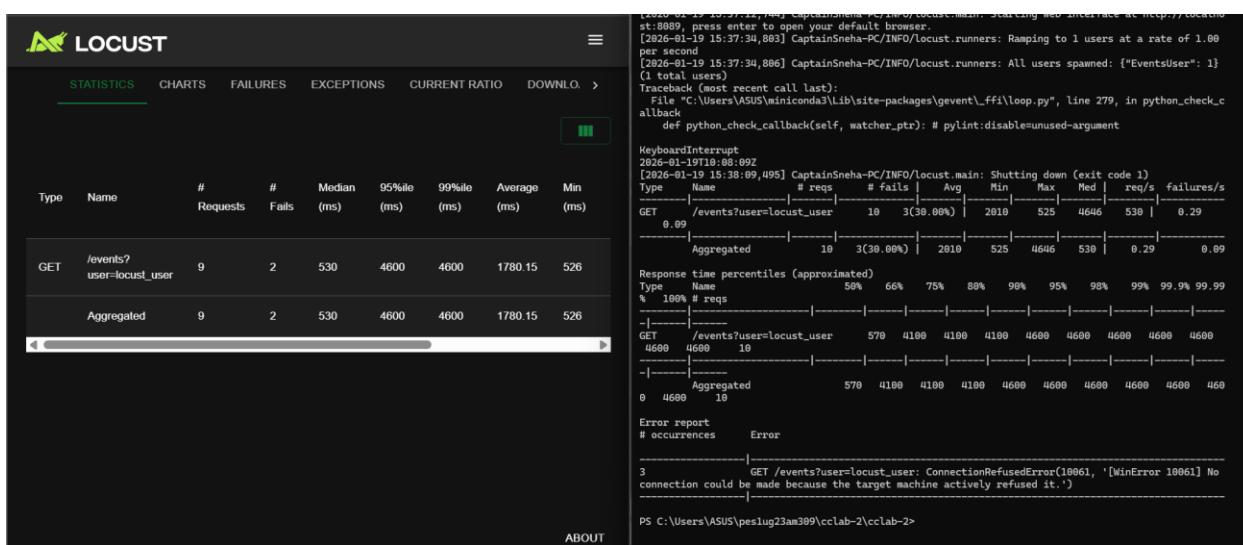
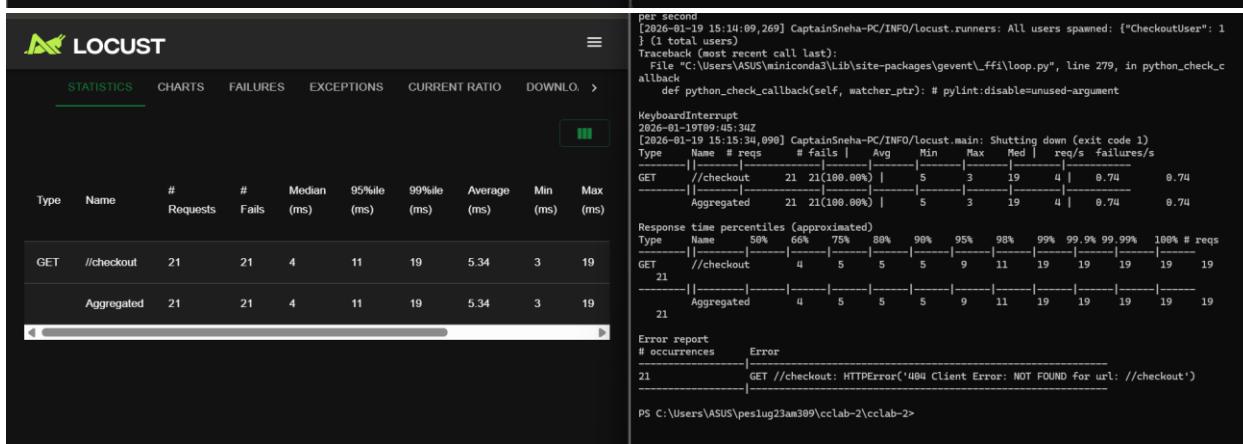
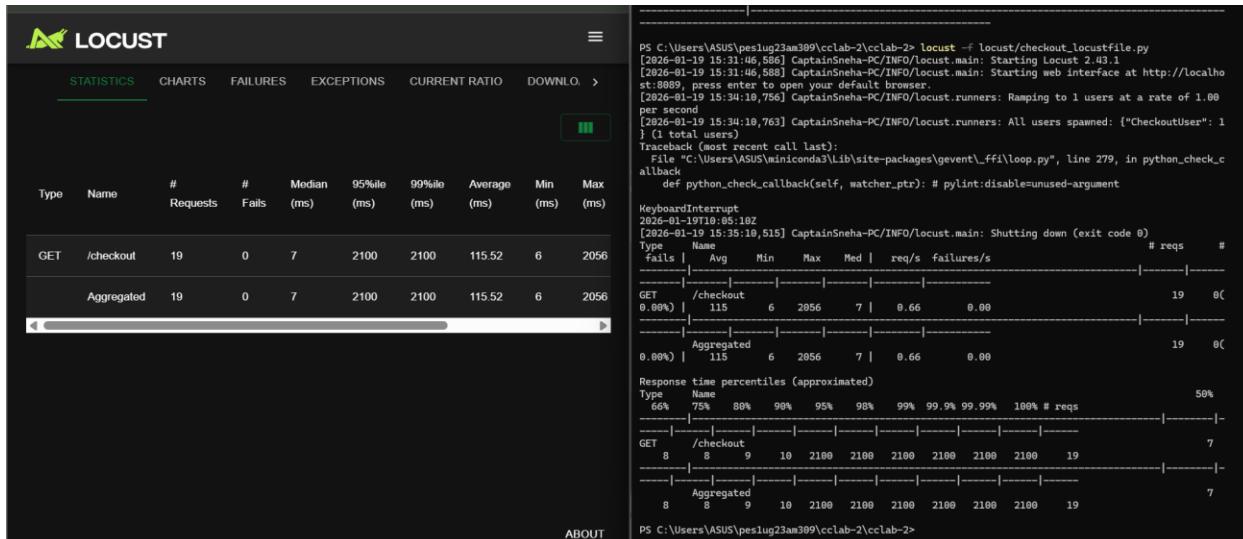
After fixing + optimizing checkout logic, re-run Locust and compare results.

#### 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).

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## Events:

The screenshot shows a browser window displaying Locust test results and a PowerShell window showing Locust logs.

**Locust Test Results (Browser):**

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)
GET	/events?user=locust_user	5	0	610	2700	2700	1000.32	540
	Aggregated	5	0	610	2700	2700	1000.32	540

**Locust Logs (PowerShell):**

```

PS C:\Users\ASUS\peslug23am309\cclab-2\cclab-2> locust -f locust/events_locustfile.py
[2026-01-19 15:47:15,451] CaptainSneha-PC/INFO/locust.main: Starting Locust 2.43.1
[2026-01-19 15:47:15,452] CaptainSneha-PC/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-19 15:47:25,095] CaptainSneha-PC/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 user/second
[2026-01-19 15:47:25,096] CaptainSneha-PC/INFO/locust.runners: All users spawned: {"EventsUser": 1}
(1 total users)
Traceback (most recent call last):
  File "C:/Users/ASUS/miniconda3/lib/site-packages/gevent/_ffl/loop.py", line 279, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
[2026-01-19T10:17:39Z]
[2026-01-19 15:47:39,439] CaptainSneha-PC/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 6 0(0.0%) | 926 539 2671 568 | 0.43
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated 6 0(0.0%) | 926 539 2671 568 | 0.43 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 610 610 628 620 2700 2700 2700 2700 2700 2700
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated 610 610 620 620 2700 2700 2700 2700 2700 2700
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
0 2700
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
PS C:\Users\ASUS\peslug23am309\cclab-2\cclab-2>

```

The screenshot shows a browser window displaying Locust test results and a PowerShell window showing Locust logs for a different event set.

**Locust Test Results (Browser):**

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)
GET	/events?user=23	1	0	564.43	560	560	564.43	564
GET	/events?user=31	1	0	645.88	650	650	645.88	646
GET	/events?user=362	1	0	2623.41	2600	2600	2623.41	2623
GET	/events?user=365	1	0	568.23	570	570	568.23	568
GET	/events?user=437	1	0	561.45	560	560	561.45	561
GET	/events?user=503	1	0	597.63	600	600	597.63	598

**Locust Logs (PowerShell):**

```

[2026-01-19 15:54:44,196] CaptainSneha-PC/INFO/locust.runners: All users spawned: {"EventsUser": 1}
(1 total users)
Traceback (most recent call last):
  File "C:/Users/ASUS/miniconda3/lib/site-packages/gevent/_ffl/loop.py", line 279, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
[2026-01-19T10:25:14Z]
[2026-01-19 15:55:14,617] CaptainSneha-PC/INFO/locust.main: Shutting down (exit code 0)
Type      Name      # reqs   # fails | Avg   Min   Max   Med | req/s failures/s
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=23 1 0(0.0%) | 564 564 564 564 | 0.03 0.00
GET /events?user=31 1 0(0.0%) | 645 645 645 645 | 0.03 0.00
GET /events?user=362 1 0(0.0%) | 2623 2623 2623 2623 | 0.03 0.00
GET /events?user=365 1 0(0.0%) | 568 568 568 568 | 0.03 0.00
GET /events?user=437 1 0(0.0%) | 561 561 561 561 | 0.03 0.00
GET /events?user=503 1 0(0.0%) | 597 597 597 597 | 0.03 0.00
GET /events?user=597 1 0(0.0%) | 545 545 545 545 | 0.03 0.00
GET /events?user=663 1 0(0.0%) | 588 588 588 588 | 0.03 0.00
GET /events?user=768 1 0(0.0%) | 581 581 581 581 | 0.03 0.00
GET /events?user=805 1 0(0.0%) | 594 594 594 594 | 0.03 0.00
GET /events?user=903 1 0(0.0%) | 545 545 545 545 | 0.03 0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated 11 0(0.0%) | 765 545 2623 588 | 0.37 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=23 560 560 560 560 560 560 560 560 560 560
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=31 650 650 650 650 650 650 650 650 650 650
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=362 2600 2600 2600 2600 2600 2600 2600 2600 2600 2600
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=365 570 570 570 570 570 570 570 570 570 570
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=437 560 560 560 560 560 560 560 560 560 560
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=503 600 600 600 600 600 600 600 600 600 600
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=597 550 550 550 550 550 550 550 550 550 550
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=663 590 590 590 590 590 590 590 590 590 590
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /events?user=768 580 580 580 580 580 580 580 580 580 580
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
0 590
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
PS C:\Users\ASUS\peslug23am309\cclab-2\cclab-2>

```

## MyEvent:

