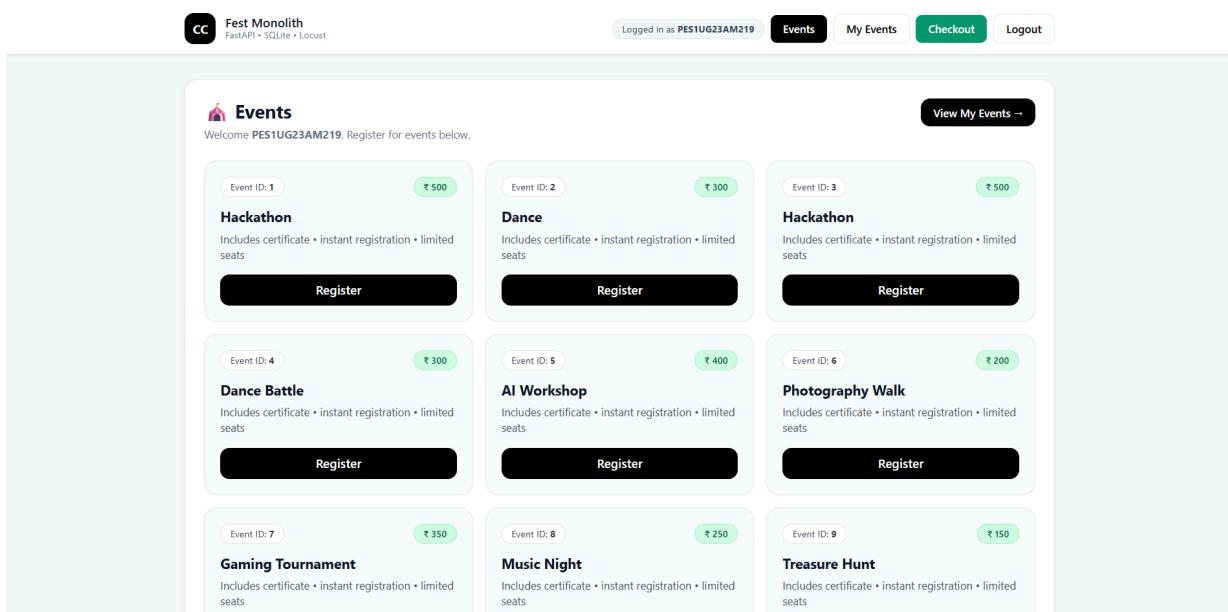


CC LAB - 2

SRN: PES1UG23AM219
NAME: PRIYANKA S
SECTION: D

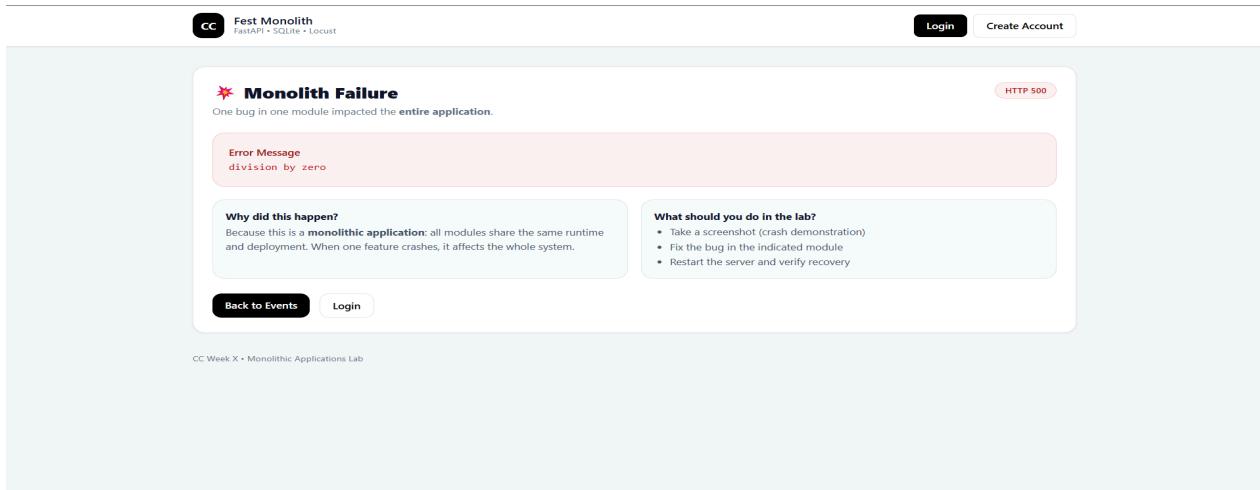
SS1:events



The screenshot shows the 'Events' page of the CC application. At the top, there's a header with the logo 'Fest Monolith' and the text 'FastAPI • SQLite • Locust'. To the right are buttons for 'Logged in as PES1UG23AM219', 'Events', 'My Events' (which is green), 'Checkout', and 'Logout'. Below the header, a sub-header says 'Welcome PES1UG23AM219. Register for events below.' On the right, there's a link 'View My Events →'. The main content area displays nine event cards arranged in a grid:

Event ID	Event Name	Price	Action
1	Hackathon	₹ 500	Register
2	Dance	₹ 300	Register
3	Hackathon	₹ 500	Register
4	Dance Battle	₹ 300	Register
5	AI Workshop	₹ 400	Register
6	Photography Walk	₹ 200	Register
7	Gaming Tournament	₹ 350	Register
8	Music Night	₹ 250	Register
9	Treasure Hunt	₹ 150	Register

SS2:monolith failure



The screenshot shows the 'Monolith Failure' page. At the top, there's a header with the logo 'Fest Monolith' and the text 'FastAPI • SQLite • Locust'. To the right are buttons for 'Login' and 'Create Account'. Below the header, a large red box contains the text 'HTTP 500' and 'Monolith Failure'. It says 'One bug in one module impacted the entire application.' Inside the box, there's an 'Error Message' section with the text 'division by zero' and a 'Why did this happen?' section explaining that it's a monolithic application where all modules share the same runtime and deployment. A 'What should you do in the lab?' section lists three steps: taking a screenshot, fixing the bug, and restarting the server.

Back to Events Login

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

SS3:after correcting checkout

The screenshot shows a web interface for a monolithic application. At the top, there's a header with the Fest Monolith logo, FastAPI + SQLite + Locust, Login, and Create Account buttons. The main content area has a section titled "Checkout" with a sub-section "Total Payable" showing ₹ 9500. A note says: "This route is used to demonstrate a monolith crash + optimization." Below this is a button with a checkmark and the text: "After fixing + optimizing checkout logic, re-run Locust and compare results." To the right, a box titled "What you should observe" lists three bullet points: "One buggy feature can crash the entire monolith.", "Inefficient loops cause high response times under load.", and "Optimization improves performance but architecture still scales as one unit." A yellow box at the bottom right says: "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

The screenshot shows the Locust test results for a "/checkout" endpoint. The statistics table includes columns for Type, Name, # Requests, # Fails, Median (ms), 95%ile (ms), 99%ile (ms), Average (ms), Min (ms), Max (ms), Average size (bytes), Current RPS, and Current Failures/s. The table shows 17 requests, 0 fails, and a median response time of 9 ms.

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_ffileloop.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-RMSJEB0/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 2000 19
 Aggregated 9 10 11 12 17 2000 2000 2000 2000 2000 2000 2000 19

SS5:after optimizing checkout

The Locust interface shows the following statistics for the '/checkout' endpoint:

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	6	2100	2100	121.97	5	2085	2797	0.6	0
	Aggregated	18	0	6	2100	2100	121.97	5	2085	2797	0.6	0

Logs output:

```

KeyboardInterrupt
2026-01-21T06:28:46Z
[2026-01-21 11:58:46,679] DESKTOP-RMSJEBO/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%) | 121     5      2085    6 | 0.62    0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated          18        0(0.00%) | 121     5      2085    6 | 0.62    0.00

Response time percentiles (approximated)
Type      Name           50%    66%    75%    80%    90%    95%    98%    99%    99.9% 99.99
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
% 100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET      /checkout       6        6      7      9      9      2100   2100   2100   2100   2100
0      2100   18
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated          6        6      7      9      9      2100   2100   2100   2100   2100
0      2100   18

```

SS6: Before optimizing events

The Locust interface shows the following statistics for the '/events?user=locust_user' endpoint:

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	13	0	440	2500	2500	597.51	410	2495	29288	0.4	0
	Aggregated	13	0	440	2500	2500	597.51	410	2495	29288	0.4	0

Logs output:

```

KeyboardInterrupt
2026-01-21T06:33:10Z
[2026-01-21 12:03:10,280] 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 14        0(0.00%) | 586     409    2494    448 | 0.47    0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated          14        0(0.00%) | 586     409    2494    448 | 0.47    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 440    450    450    480    500    2500   2500   2500   2500   250
0      2500   14
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated          440    450    450    480    500    2500   2500   2500   2500   250
0      2500   14

```

Terminal prompt:

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

SS7: After optimizing events

/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%	<button>EDIT</button>	<button>STOP</button>	<button>RESET</button>			
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
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
%     100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET    /my-events?user=locust_user    180     180     190     200     210     2200    2200    2200   2200  2200
0     2200    17
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated                    180     180     190     200     210     2200    2200    2200   2200  2200
0     2200    17

```

SS9: After optimizing myevents

Host http://localhost:8000										Status STOPPED	RPS 0.7	Failures 0%	<button>NEW</button>	<button>RESET</button>	
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%
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
%      100% # reqs
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
-----+-----+
GET      /my-events?user=locust_user    6     7     9     9     10    12   2100   2100   2100   2100
0  2100  21
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
-----+-----+
                                         Aggregated    6     7     9     9     10    12   2100   2100   2100   2100
0  2100  21

```

\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.
