

# CC LAB 2

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SECTION: B

SS1:

The screenshot shows the 'Events' section of the CC Fest Monolith application. It displays a grid of nine event cards. Each card includes the event ID, name, price, a brief description, and a 'Register' button.

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

SS2:

The screenshot shows the 'Checkout' page of the CC Fest Monolith application, displaying a 'Monolith Failure' error. The error message is 'division by zero'. It also includes sections for 'Why did this happen?' and 'What should you do in the lab?'

**Monolith Failure**  
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](#)

## SS3:

The screenshot shows a web browser window titled "CC Fest Monolith". The URL is "localhost:8000/checkout". The page has a header with the "Fest Monolith" logo and links for "Login" and "Create Account". Below the header, there's a sidebar with a globe icon and a plus sign. The main content area has a title "Checkout" with a subtitle "This route is used to demonstrate a monolith crash + optimization." It displays a total payable amount of ₹ 6600. A note says "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 callout box at the bottom right suggests "Next Lab: Split this monolith into Microservices (Events / Registration / Checkout)". At the bottom left, it says "CC Week X • Monolithic Applications Lab".

## SS4:

The screenshot shows the Locust web interface at "localhost:8089". The top navigation bar includes links for "Gmail", "YouTube", "Maps", "workspace email", "PES University", "ChatGPT", "The Official Home o...", "W3Schools Online...", "Adobe Acrobat", "ChatGPT", and "Adobe Acrobat". The main dashboard shows a summary table with one row: "Host http://127.0.0.1:8000", "Status STOPPED", "RPS 0.7", "Failures 0%", "NEW", and "RESET". Below this is a "STATISTICS" tab showing a table of request details. The table has columns: Type, Name, # Requests, # Fails, Median (ms), 95%ile (ms), Average (ms), Min (ms), Max (ms), Average size (bytes), Current RPS, and Current Failures/s. It shows two rows: "GET /checkout" with 13 requests, 0 fails, and median 25 ms; and "Aggregated" with 13 requests, 0 fails, and median 25 ms. At the bottom, there's a "LOGS" section with a scrollable log of command-line output. The log shows Locust spawning users, a tracebacks for a KeyboardInterrupt, and a summary of the test run.

```
2026-01-29 14:44:02,018] Avanee/INFO/locust.runners: Spawning 10 users at a rate of 1.00 per second
[2026-01-29 14:44:02,018] Avanee/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} {1 total users}
Traceback (most recent call last):
  File "C:\Users\avanee\AppData\Local\Programs\Python\Python313\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
2026-01-29 14:44:53,617] Avanee/INFO/locust.main: Shutting down (exit code 0)
[2026-01-29 14:44:53,617] Avanee/INFO/locust.main: Shutting down (exit code 0)
Type      Name           # reqs   # fails   Avg   Min   Max   Med   req/s   failures/s
----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET   /checkout        13       0(0.00%)  10     7     24     8     0.74     0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated                    13       0(0.00%)  10     7     24     8     0.74     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       9      9     13     16     25     25     25     25     25     25     13
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated                    8       9      9     13     16     25     25     25     25     25     25     13
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
C:\Users\avanee\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC_Lab-2\locust>
C:\Users\avanee\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC_Lab-2\locust>
```

## SS5:

The screenshot shows the Locust web interface at localhost:8089. The top navigation bar includes links for Gmail, YouTube, Maps, workspace email, PES University, ChatGPT, The Official Home of..., W3Schools Online..., Adobe Acrobat, ChatGPT, and Adobe Acrobat, along with a 'All Bookmarks' option. The main header has tabs for STATISTICS (which is selected), CHARTS, FAILURES, EXCEPTIONS, CURRENT RATIO, DOWNLOAD DATA, and LOGS. The Host is set to http://127.0.0.1:8000. The Status is STOPPED, RPS is 0.6, and Failures are 0%. Buttons for NEW, RESET, and a gear icon are visible.

**STATISTICS**

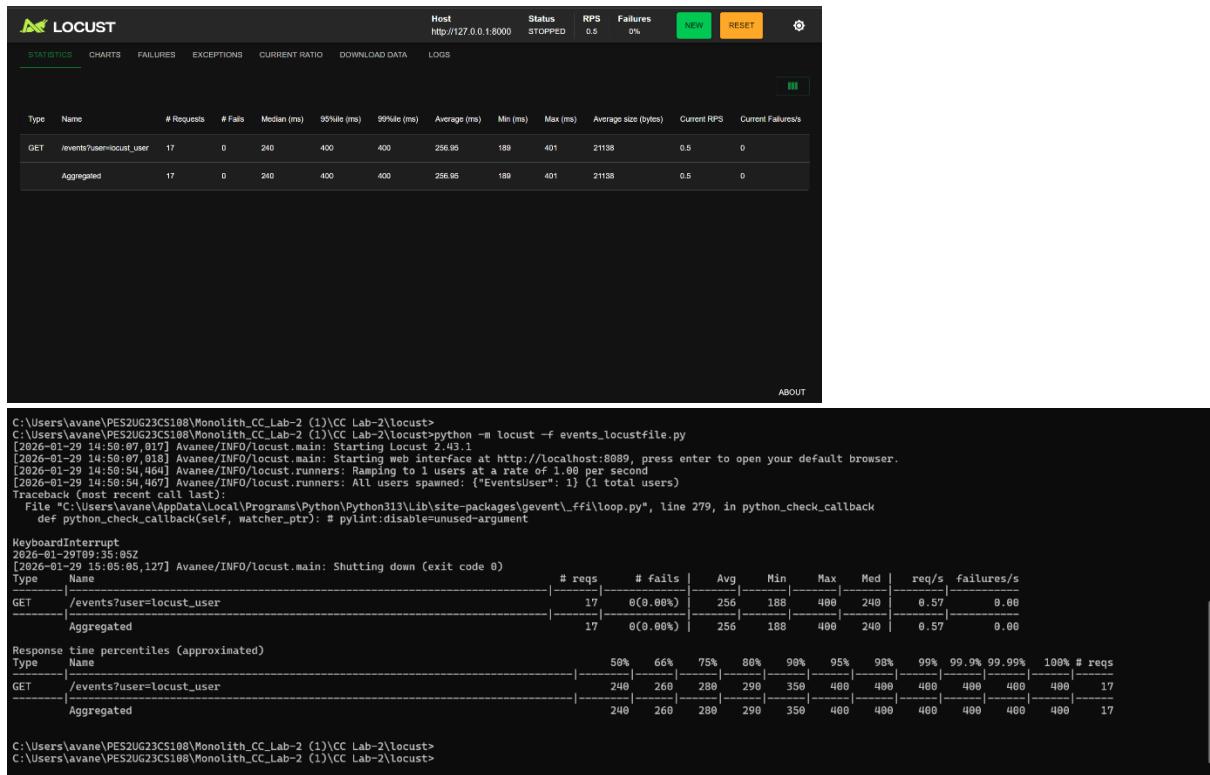
Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)	Current RPS	Current Failures/s
GET	/checkout	21	0	9	15	39	9.83	3	39	2797	0.6
Aggregated		21	0	9	15	39	9.83	3	39	2797	0.6

**ABOUT**

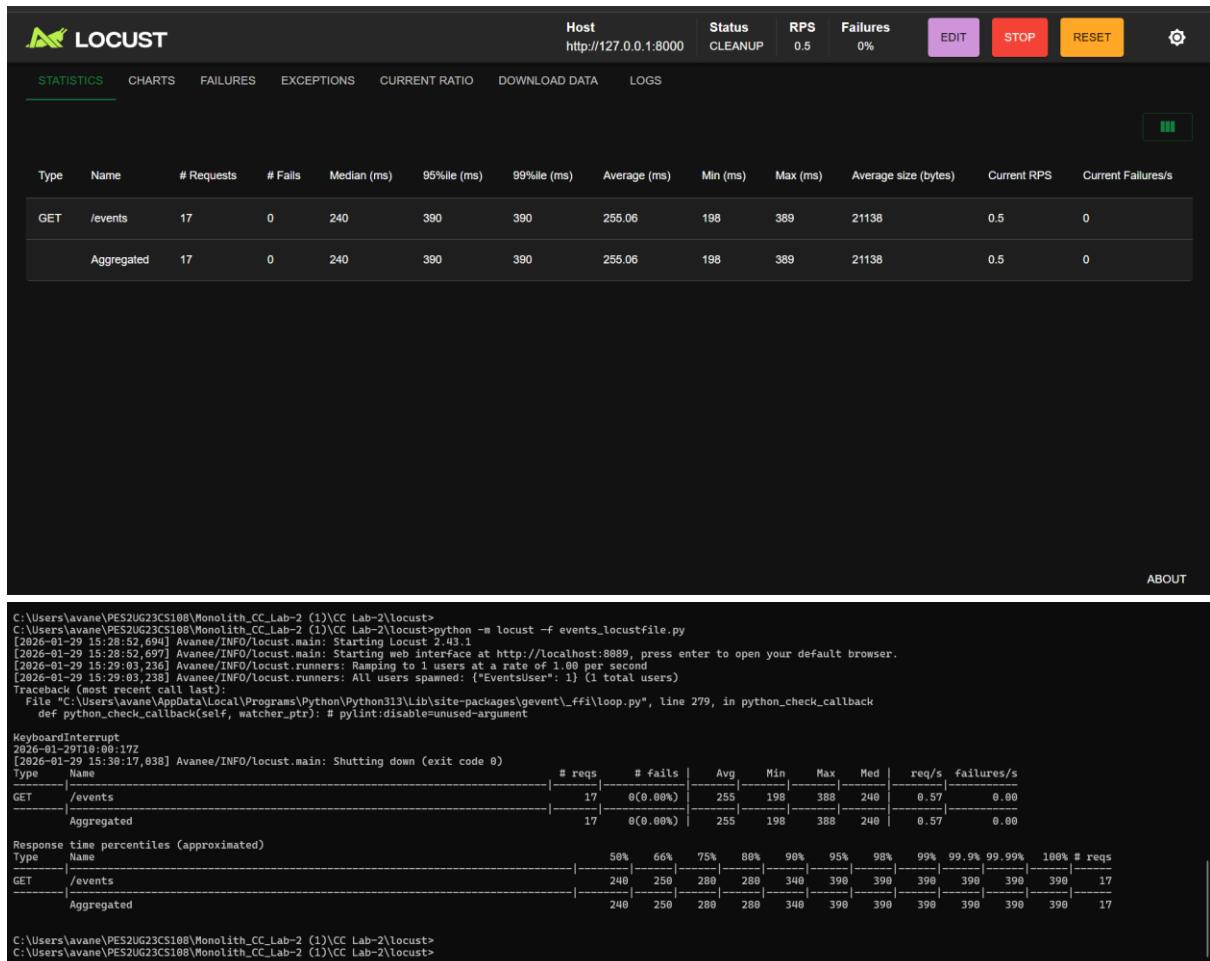
```
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC Lab-2\locust>
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC Lab-2\locust>python -m locust -f checkout_locustfile.py
[2026-01-29 14:46:47,685] Avanee/INFO/locust.main: Starting Locust 2.43.1
[2026-01-29 14:46:47,685] Avanee/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-29 14:46:47,685] Avanee/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 14:47:07,368] Avanee/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\avane\AppData\Local\Programs\Python\Python313\lib\site-packages\gevent\ffileloop.py", line 279, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
[2026-01-29 14:48:18,187]
[2026-01-29 14:48:18,897] Avanee/INFO/locust.main: Shutting down (exit code 0)
Type:      Name:          # reqs  # fails | Avg   Min   Max   Med | req/s failures/s
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
GET   /checkout           21     0(0.00%) | 9     2     39     9 | 0.78   0.00
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
Aggregated                   21     0(0.00%) | 9     2     39     9 | 0.78   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    11    12    15    39    39    39    39    39    21
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
Aggregated                   9     10    11    11    12    15    39    39    39    39    39    21
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```

C:\Users\avane\PES2UG23CS108\Monolith\_CC\_Lab-2 (1)\CC Lab-2\locust>
C:\Users\avane\PES2UG23CS108\Monolith\_CC\_Lab-2 (1)\CC Lab-2\locust>

## SS6:



SS7:



## SS8:

The screenshot shows the Locust web interface. At the top, it displays the host as `http://127.0.0.1:8000`, status as `CLEANUP`, RPS as `0.7`, and Failures as `0%`. Below this is a navigation bar with links for STATISTICS, CHARTS, FAILURES, EXCEPTIONS, CURRENT RATIO, DOWNLOAD DATA, and LOGS. The STATISTICS tab is selected. The main content area shows a table of test results:

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	19	0	180	250	250	183.39	133	254	3144	0.7	0
	Aggregated	19	0	180	250	250	183.39	133	254	3144	0.7	0

At the bottom right of the interface is a link labeled "ABOUT".

Below the interface, the terminal output shows the command used to run the test and the log messages from Locust:

```
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC_Lab-2\locust> locust --host=http://127.0.0.1:8000 -r 1 -c 1 -t 10s --run-time=10s --no-web --no-har --no-screenshot --no-gzip --no-ssl & python -m locust -f myevents_locustfile.py
[2026-01-29 15:33:16,817] Avance/INFO/locust.main: Starting Locust 2.43.1
[2026-01-29 15:33:15,618] Avance/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-29 15:33:25,543] Avance/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:33:25,545] Avance/INFO/locust.runners: All users spawned: {"MyEventsUser": 1} {1 total users}
Traceback (most recent call last):
  File "C:\Users\avane\AppData\Local\Programs\Python\Python313\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
2026-01-29T18:04:11Z
[2026-01-29 15:34:11,206] Avance/INFO/locust.main: Shutting down (exit code 0)
Type      Name          # reqs  # fails  Avg  Min  Max  Med  req/s  failures/s
-----+-----+-----+-----+-----+-----+-----+-----+-----+
GET      /my-events    19      0(0.00%)  183   133   253   180   0.64   0.00
-----+-----+-----+-----+-----+-----+-----+-----+-----+
Aggregated                      19      0(0.00%)  183   133   253   180   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      /my-events    180   190   199   198   200   256   250   250   250   250   250   19
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
Aggregated                      180   190   199   198   200   250   250   250   250   250   250   19
```

## SS9:

**LOCUST**

Host: http://127.0.0.1:8000 | Status: CLEANUP | RPS: 0.5 | 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	17	0	190	200	200	175.47	85	204	3144	0.5	0
	Aggregated	17	0	190	200	200	175.47	85	204	3144	0.5	0

[ABOUT](#)

```
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC Lab-2\locust>
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC Lab-2\locust>
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC Lab-2\locust>python -m locust -f myevents_locustfile.py
[2026-01-29 15:31:19,455] Avanee/INFO/locust.main: Starting Locust 2.43.1
[2026-01-29 15:31:19,455] Avanee/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-29 15:31:25,203] Avanee/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:31:25,205] Avanee/INFO/locust.runners: All users spawned: {"MyEventsUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\avane\AppData\Local\Programs\Python\Python313\Lib\site-packages\gevent\_fffi\loop.py", line 279, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
[2026-01-29T16:02:34Z]
[2026-01-29 15:32:34,869] Avanee/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  17  0(0.00%)  175  84  203  190  0.57  0.00
-----  -----  -----  -----  -----  -----  -----  -----  -----  -----
Aggregated                    17  0(0.00%)  175  84  203  190  0.57  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  190  199  198  200  200  200  200  200  200  200  200  17
-----  -----  -----  -----  -----  -----  -----  -----  -----  -----  -----  -----  -----
Aggregated                    190  199  198  200  200  200  200  200  200  200  200  17
-----  -----  -----  -----  -----  -----  -----  -----  -----  -----  -----  -----  -----
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC Lab-2\locust>
C:\Users\avane\PES2UG23CS108\Monolith_CC_Lab-2 (1)\CC Lab-2\locust>
```

## Bottleneck:

The /my-events route performed unnecessary processing for each request, resulting in additional overhead when handling concurrent users.

## Change Made:

Redundant operations were removed and request handling was simplified to ensure that only required logic executes during each request.

## Why Performance Improved:

By reducing unnecessary processing per request, CPU usage was lowered and the endpoint responded faster under load, improving overall throughput and response time.

Bottleneck:

The /events endpoint included inefficient processing that increased request handling time and reduced performance under concurrent load.

Change Made:

The route logic was optimized by removing unnecessary computation and simplifying request handling.

Why Performance Improved:

With reduced computational overhead, the server handled requests more efficiently, resulting in improved response times and more stable performance during load testing.