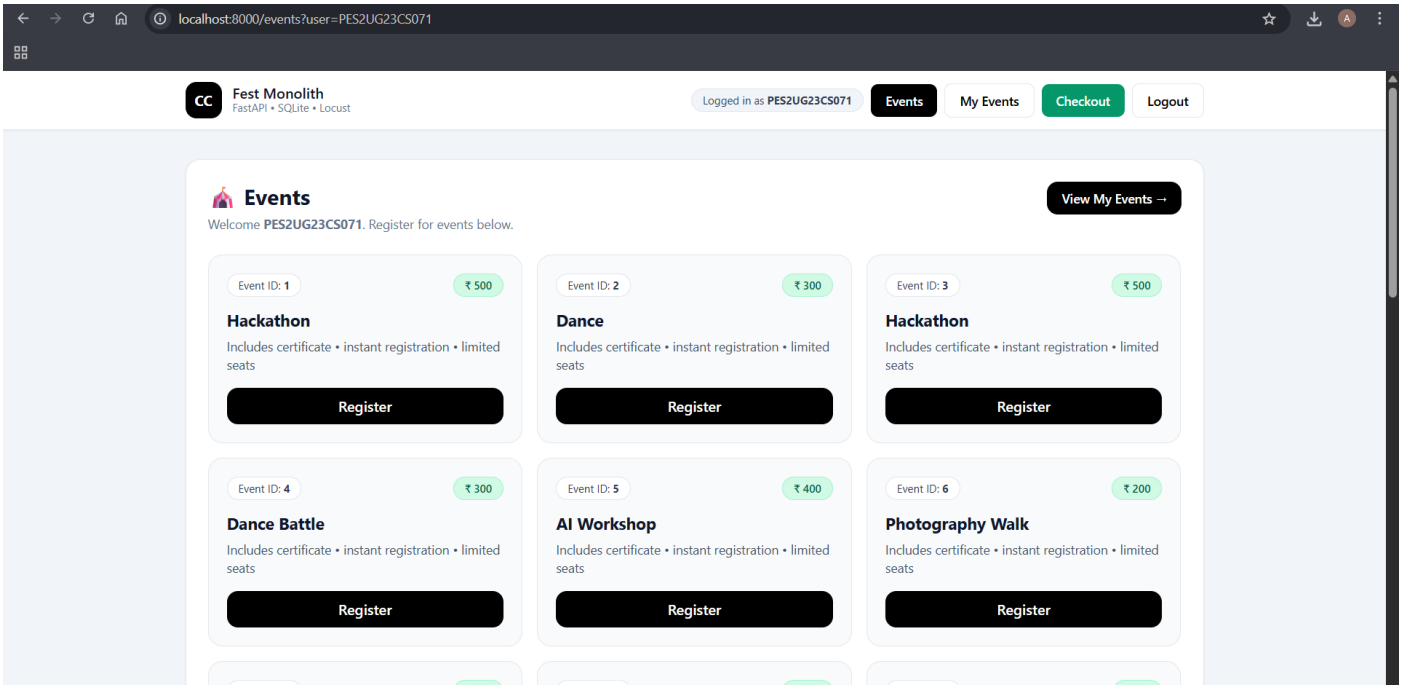
CLOUD COMPUTING

LAB-2

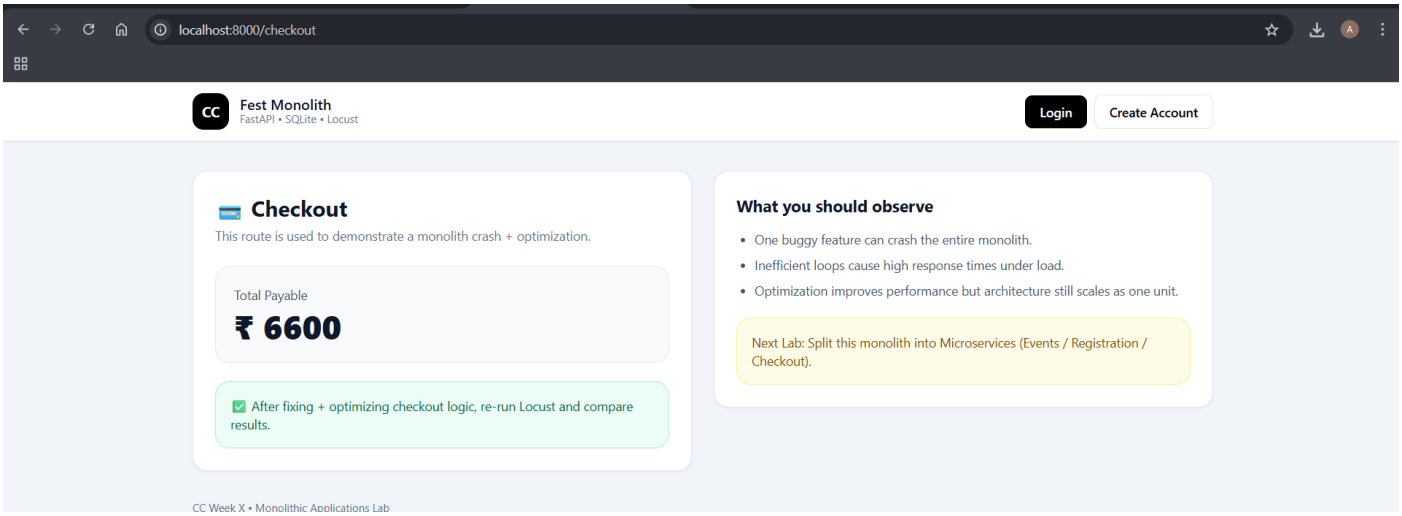
SRN: PES2UG23CS071

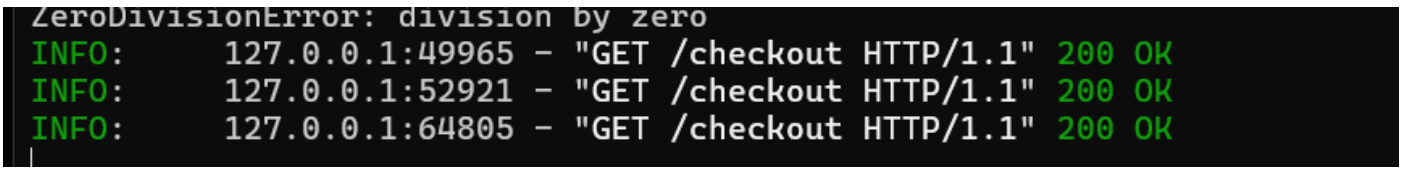
NAME: ANIRUDH MURALEEDHARAN'

SS-1:

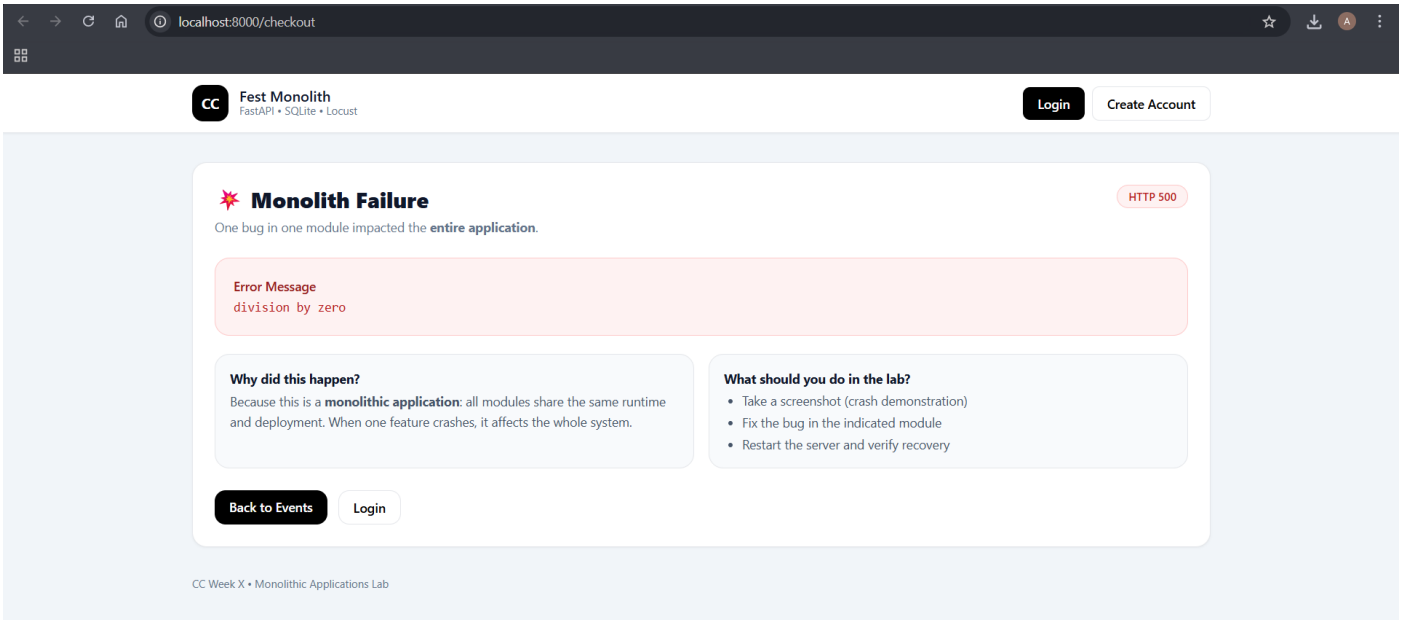


SS-2:



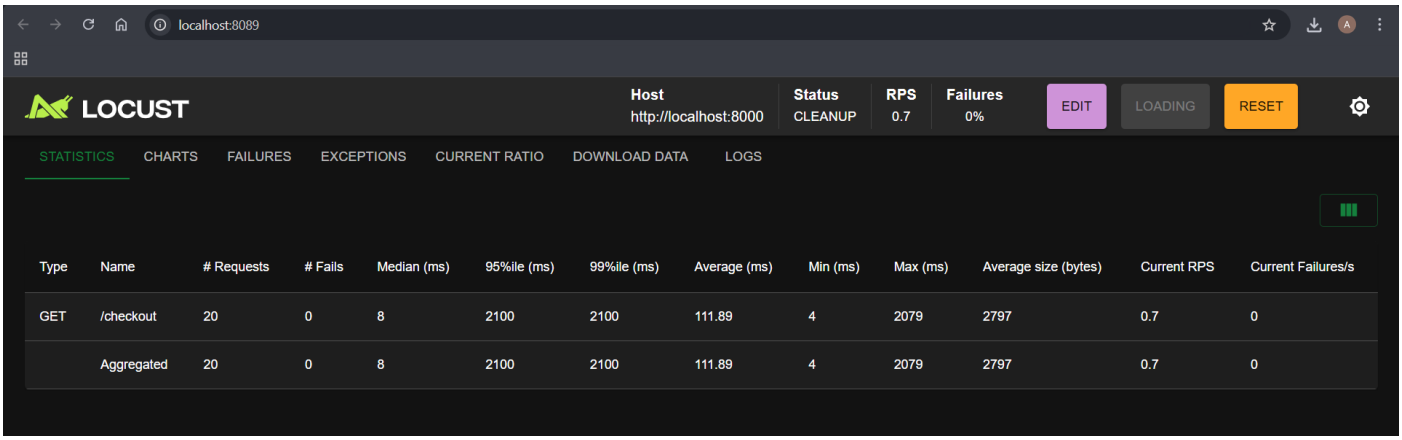


SS-3




```
ZeroDivisionError: division by zero
INFO:     127.0.0.1:64447 - "GET / HTTP/1.1" 404 Not Found
INFO:     127.0.0.1:51395 - "GET /checkout HTTP/1.1" 500 Internal Server Error
ERROR:    Exception in ASGI application
Traceback (most recent call last):
  File "C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\.venv\Lib\site-packages\uvicorn\protocols\http\h11_
impl.py", line 410, in run_asgi
    result = await app(  # type: ignore[func-returns-value]
             ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
        self.scope, self.receive, self.send
```

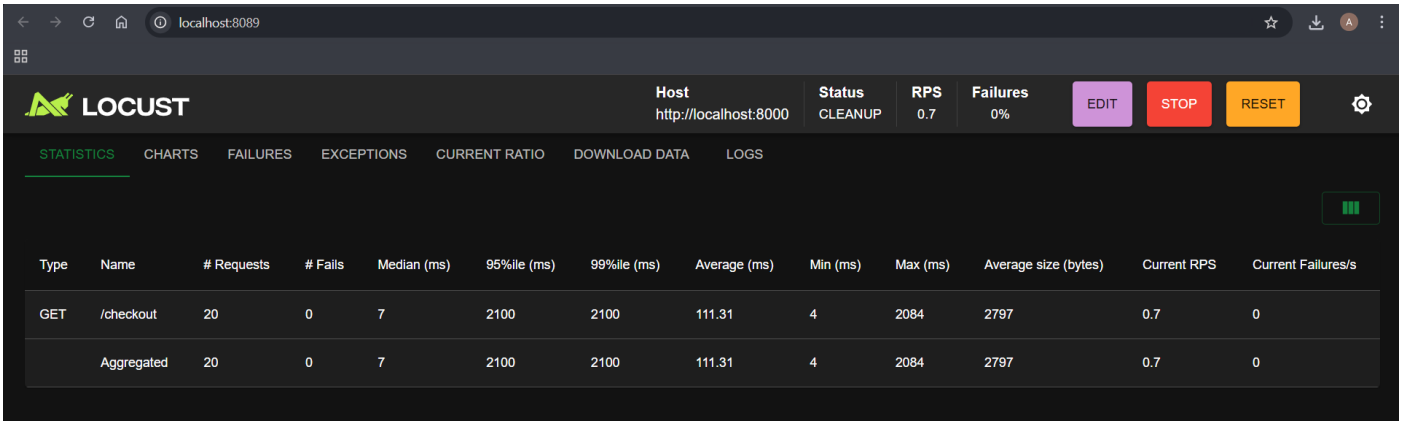
SS-4:



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	20	0	8	2100	2100	111.89	4	2079	2797	0.7	0
	Aggregated	20	0	8	2100	2100	111.89	4	2079	2797	0.7	0

```
[2026-01-29 15:03:06,968] LAPTOP-QRNI4MKI/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-29 15:03:21,137] LAPTOP-QRNI4MKI/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:03:21,146] LAPTOP-QRNI4MKI/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\.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
2026-01-29T09:36:11Z
[2026-01-29 15:06:11,422] LAPTOP-QRNI4MKI/INFO/locust.main: Shutting down (exit code 0)
Type     Name                                                                          # reqs      # fails |    Avg     Min     Max    Med |   req/s  failures/s
--------|-----------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
GET      /checkout                                                                        20     0(0.00%) |    111       3    2079      8 |    0.68        0.00
--------|-----------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                       20     0(0.00%) |    111       3    2079      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      /checkout                                                                          8      9      9      9     35   2100   2100   2100   2100   210
0   2100     20
--------|-----------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-----
-|------|------
         Aggregated                                                                         8      9      9      9     35   2100   2100   2100   2100   210
0   2100     20


(.venv) C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\CC Lab-2>
```

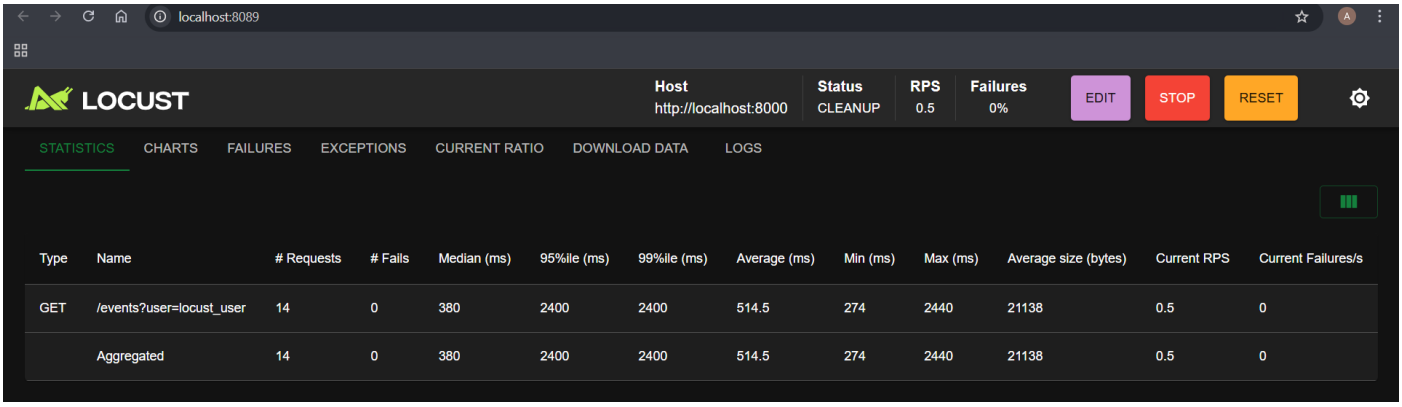
SS-5:




```
[2026-01-29 15:07:15,098] LAPTOP-QRNI4MKI/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\.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
2026-01-29T09:38:47Z
[2026-01-29 15:08:47,996] LAPTOP-QRNI4MKI/INFO/locust.main: Shutting down (exit code 0)
Type     Name                                                                          # reqs      # fails |    Avg     Min     Max    Med |   req/s  failures/s
--------|-----------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
GET      /checkout                                                                        20     0(0.00%) |    111       3    2084      7 |    0.68        0.00
--------|-----------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                       20     0(0.00%) |    111       3    2084      7 |    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      /checkout                                                                         7      8      9      9     25   2100   2100   2100   2100   210
0   2100     20
--------|-----------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-----
-|------|------
         Aggregated                                                                        7      8      9      9     25   2100   2100   2100   2100   210
0   2100     20


(.venv) C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\CC Lab-2>
```

SS-6:

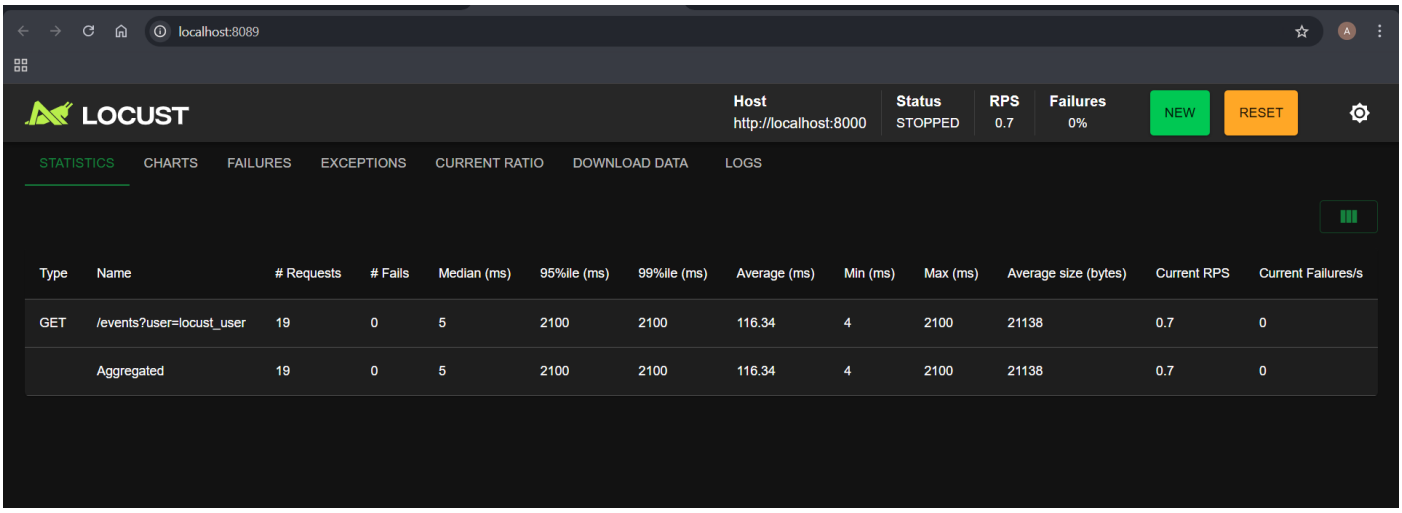
BEFORE:




```
[2026-01-29 15:13:38,266] LAPTOP-QRNI4MKI/INFO/locust.runners: All users spawned: {"EventsUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\.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
2026-01-29T09:43:51Z
[2026-01-29 15:13:51,342] LAPTOP-QRNI4MKI/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%) |    514     274    2440    380 |    0.49        0.00
--------|-----------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                       14     0(0.00%) |    514     274    2440    380 |    0.49        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                                                        380    400    400    410    420   2400   2400   2400   2400   240
0   2400     14
--------|-----------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-----
-|------|------
         Aggregated                                                                      380    400    400    410    420   2400   2400   2400   2400   240
0   2400     14


(.venv) C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\CC Lab-2>
```

SS-7:

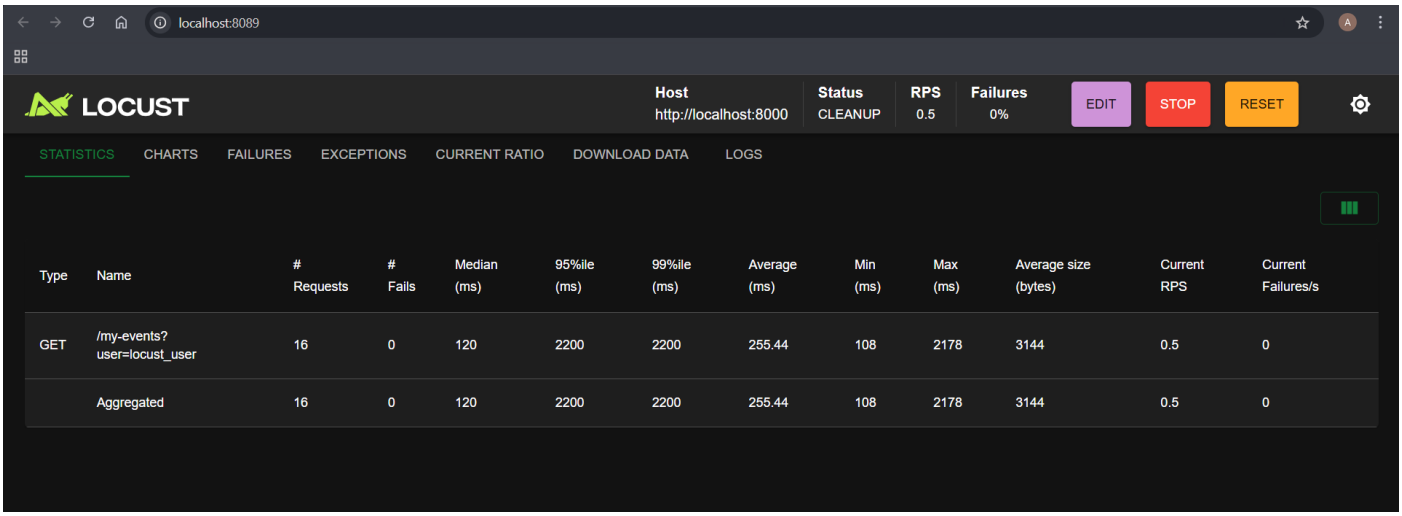
AFTER:

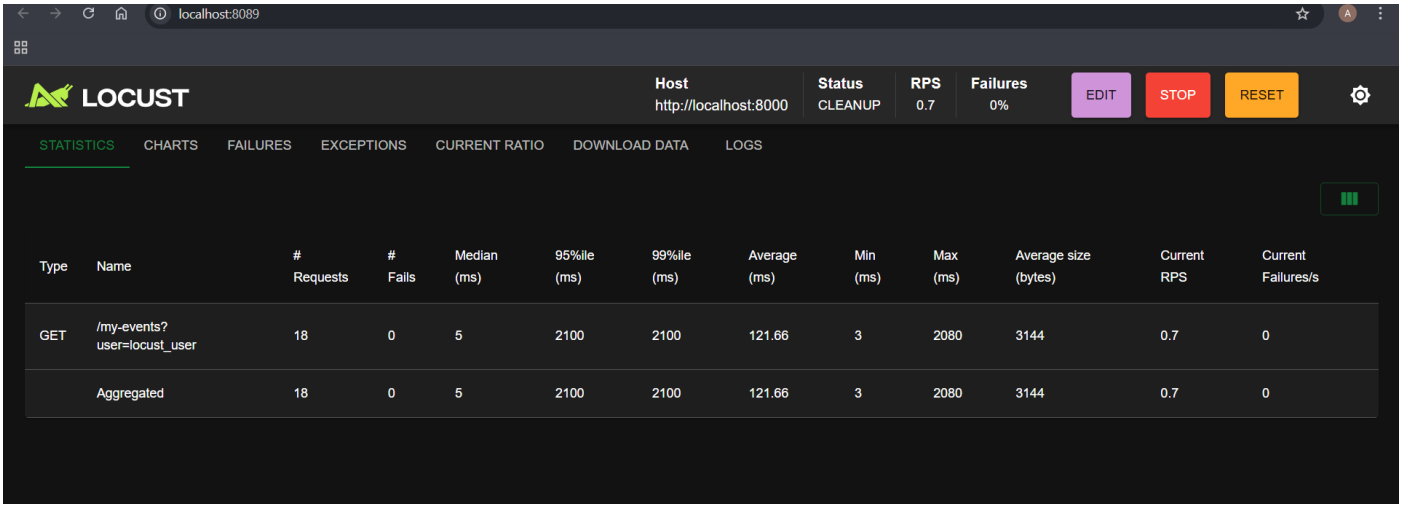



```
[2026-01-29 15:17:16,369] LAPTOP-QRNI4MKI/INFO/locust.runners: All users spawned: {"EventsUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\.venv\Lib\site-packages\gevent\_ffi\loop.py", line 279, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument

KeyboardInterrupt
2026-01-29T09:48:35Z
[2026-01-29 15:18:35,644] LAPTOP-QRNI4MKI/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                                                         19     0(0.00%) |    116       3    2099      5 |    0.64        0.00
--------|-----------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                       19     0(0.00%) |    116       3    2099      5 |    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      /events?user=locust_user                                                               5      7      7      9     18   2100   2100   2100   2100   210
0   2100     19
--------|-----------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-----
-|------|------
         Aggregated                                                                             5      7      7      9     18   2100   2100   2100   2100   210
0   2100     19


(.venv) C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\CC Lab-2>
```

SS-8:

BEFORE:

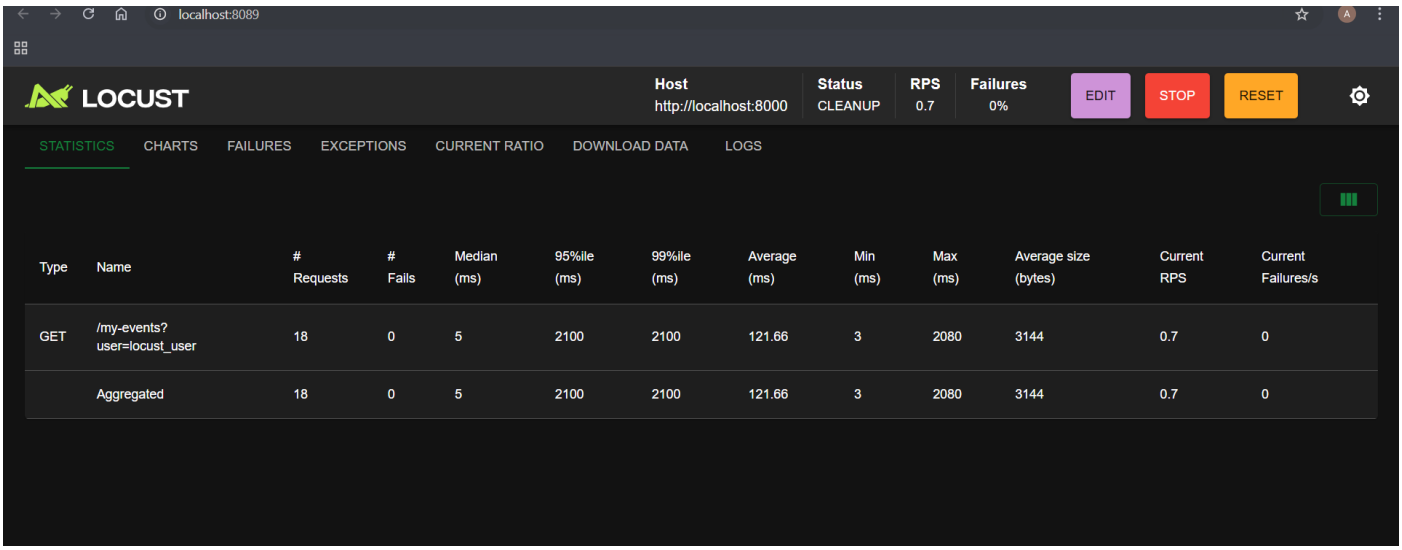


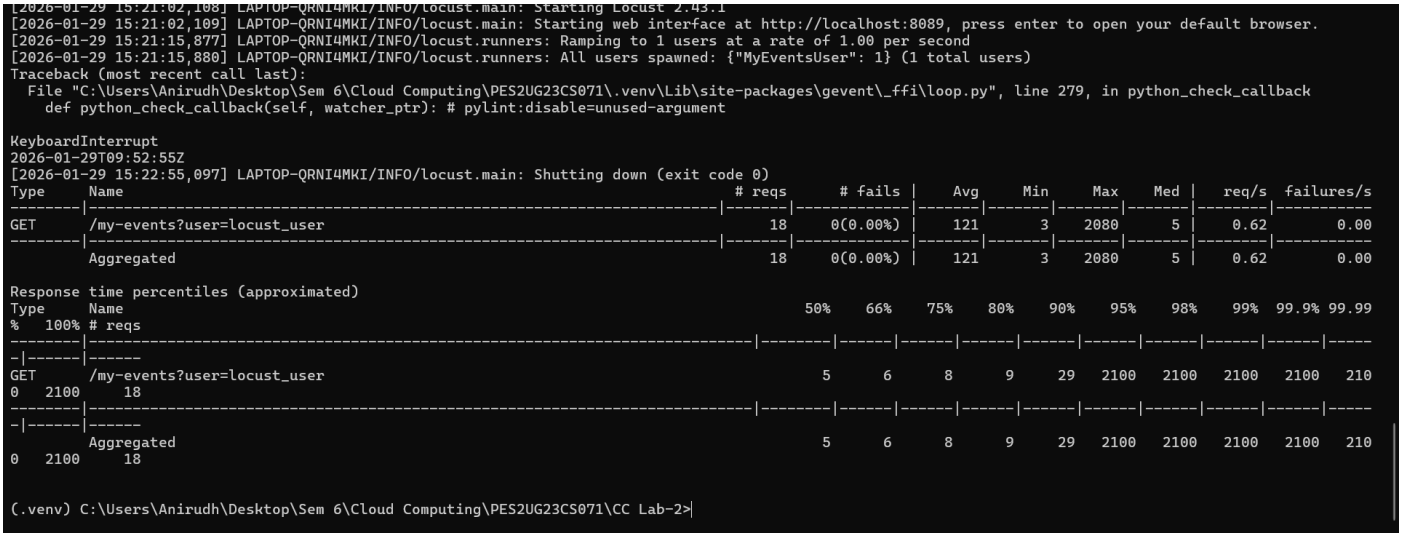



```
[2026-01-29 15:19:21,360] LAPTOP-QRNI4MKI/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-29 15:19:37,305] LAPTOP-QRNI4MKI/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:19:37,310] LAPTOP-QRNI4MKI/INFO/locust.runners: All users spawned: {"MyEventsUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\.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
2026-01-29T09:50:21Z
[2026-01-29 15:20:21,727] LAPTOP-QRNI4MKI/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                                                      16     0(0.00%) |    255     107    2178    120 |    0.57        0.00
--------|-----------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                       16     0(0.00%) |    255     107    2178    120 |    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                                                     130    140    150    150    160   2200   2200   2200   2200   220
0   2200     16
--------|-----------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-----
-|------|------
         Aggregated                                                                      130    140    150    150    160   2200   2200   2200   2200   220
0   2200     16


(.venv) C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\CC Lab-2>
```

SS-9:

AFTER:





```
[2026-01-29 15:21:02,108] LAPTOP-QRNI4MKI/INFO/locust.main: Starting Locust 2.43.1
[2026-01-29 15:21:02,109] LAPTOP-QRNI4MKI/INFO/locust.main: Starting web interface at http://localhost:8089, press enter to open your default browser.
[2026-01-29 15:21:15,877] LAPTOP-QRNI4MKI/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:21:15,880] LAPTOP-QRNI4MKI/INFO/locust.runners: All users spawned: {"MyEventsUser": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\.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
2026-01-29T09:52:55Z
[2026-01-29 15:22:55,097] LAPTOP-QRNI4MKI/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                                                      18     0(0.00%) |    121       3    2080      5 |    0.62        0.00
--------|-----------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                       18     0(0.00%) |    121       3    2080      5 |    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      /my-events?user=locust_user                                                          5      6      8      9     29   2100   2100   2100   2100   210
0   2100     18
--------|-----------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-----
-|------|------
         Aggregated                                                                           5      6      8      9     29   2100   2100   2100   2100   210
0   2100     18


(.venv) C:\Users\Anirudh\Desktop\Sem 6\Cloud Computing\PES2UG23CS071\CC Lab-2>
```

/events Route:

Performance Issue: Each time this route was accessed, the server executed a large loop that served no functional purpose. This caused unnecessary CPU usage and increased the page load time.

Modification: The redundant loop was removed so that the route now only retrieves event information from the database and renders the page.

Performance Benefit: By eliminating the extra processing, the server handles requests more efficiently, resulting in faster responses.

/my-events Route:

Performance Issue: This endpoint contained an artificial loop that iterated millions of times, introducing avoidable delays for every request.

Modification: The loop was removed, leaving only the essential database query and template rendering logic.

Performance Benefit: With unnecessary computations eliminated, the server responds quicker and the endpoint performs noticeably better.