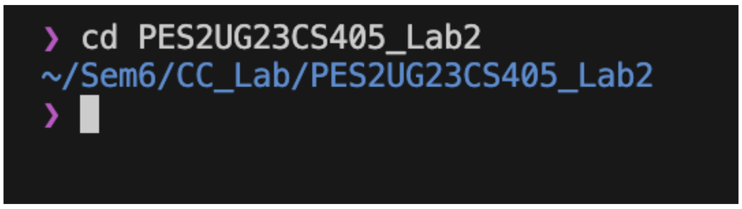
CC Lab 2

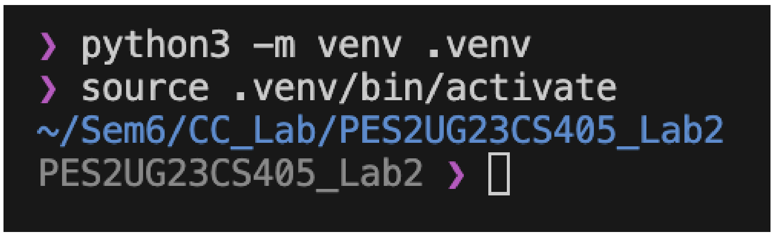
Name: Paruchuri Anshul
Section: G
SRN: PES2UG23CS405

1. Creating Folder with SRN and entering it:



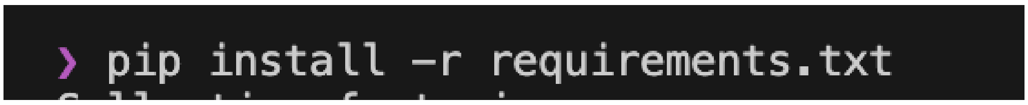
```
❯ cd PES2UG23CS405_Lab2
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
❯
```

2. Create venv:



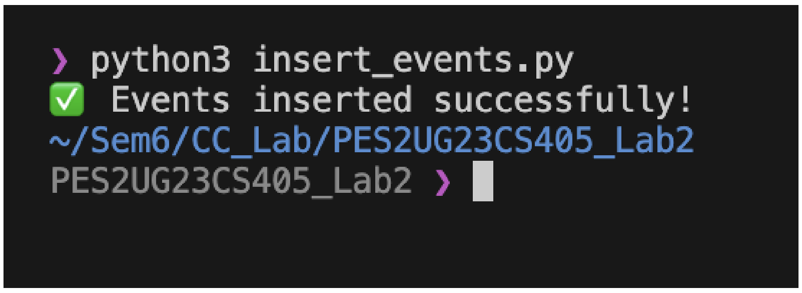
```
❯ python3 -m venv .venv
❯ source .venv/bin/activate
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
PES2UG23CS405_Lab2 ❯
```

3. Installing required libraries:



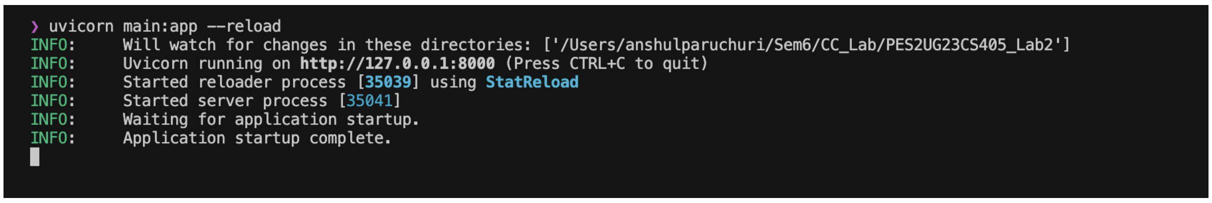
```
❯ pip install -r requirements.txt
```

4. Initializing the DB:



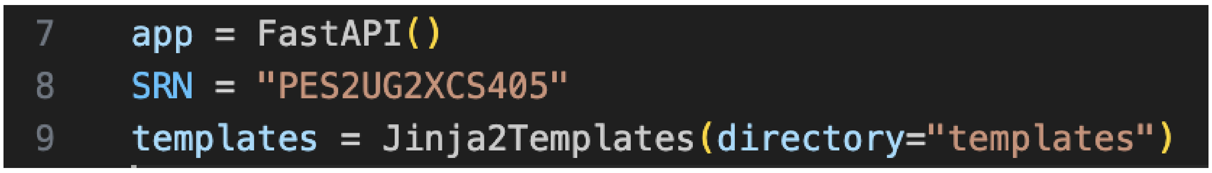
```
❯ python3 insert_events.py
✅ Events inserted successfully!
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
PES2UG23CS405_Lab2 ❯
```

5. Running the Server:



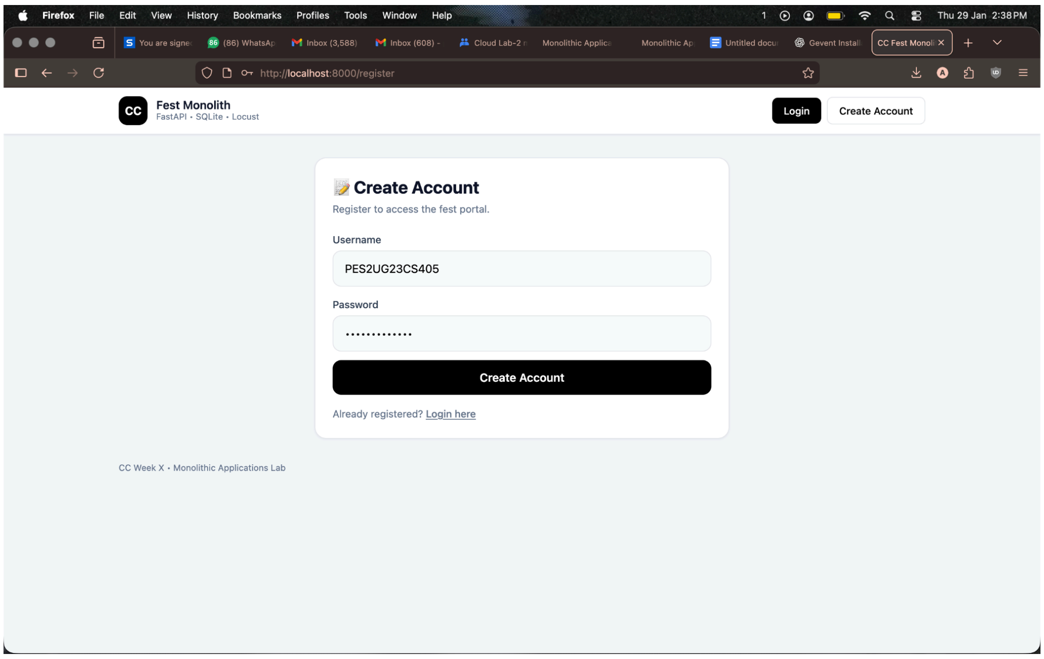
```
❯ uvicorn main:app --reload
INFO:     Will watch for changes in these directories: ['/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2']
INFO:     Uvicorn running on http://127.0.0.1:8000 (Press CTRL+C to quit)
INFO:     Started reloader process [35039] using StatReload
INFO:     Started server process [35041]
INFO:     Waiting for application startup.
INFO:     Application startup complete.
```

6. Adding SRN in main.py:



```python
app = FastAPI()
SRN = "PES2UG2XCS405"
templates = Jinja2Templates(directory="templates")
```

7. Making an account:



Firefox File Edit View History Bookmarks Profiles Tools Window Help
Thu 29 Jan 2:38 PM
http://localhost:8000/register
Login
Create Account

CC **Fest Monolith**
FastAPI • SQLite • Locust

📝 **Create Account**

Register to access the fest portal.

Username

PES2UG23CS405

Password

•••••••••••••

Create Account

Already registered? Login here

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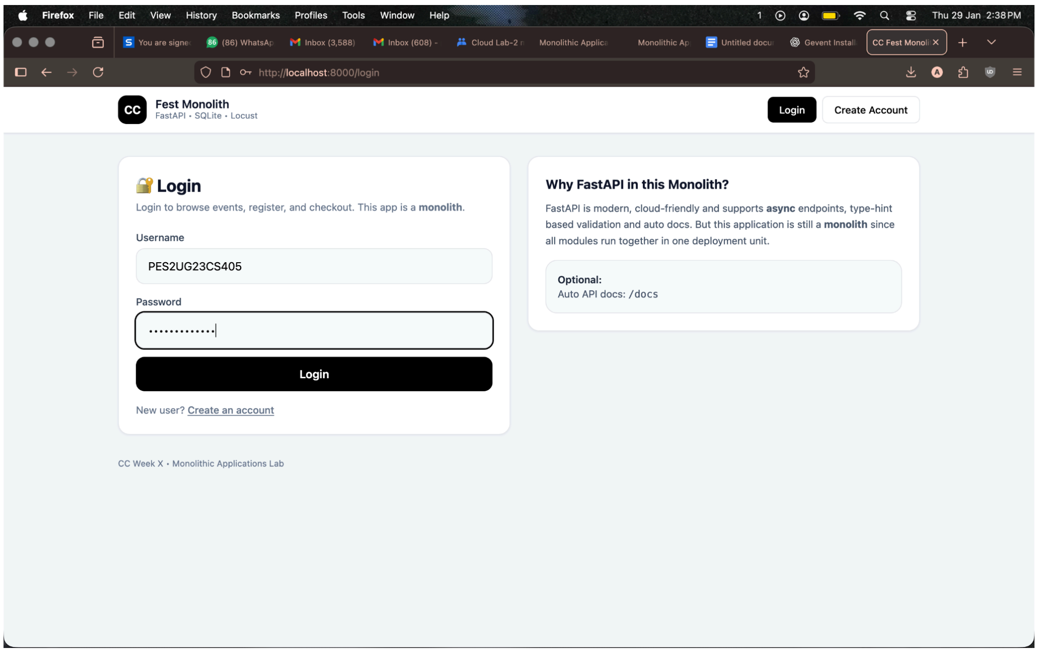
8. Login:



Firefox File Edit View History Bookmarks Profiles Tools Window Help
Thu 29 Jan 2:38 PM
http://localhost:8000/login
Login
Create Account

CC **Fest Monolith**
FastAPI • SQLite • Locust

🔐 **Login**

Login to browse events, register, and checkout. This app is a **monolith**.

Username

PES2UG23CS405

Password

•••••••••••••

Login

New user? Create an account

Why FastAPI in this Monolith?

FastAPI is modern, cloud-friendly and supports **async** endpoints, type-hint based validation and auto docs. But this application is still a **monolith** since all modules run together in one deployment unit.

Optional:
Auto API docs: /docs

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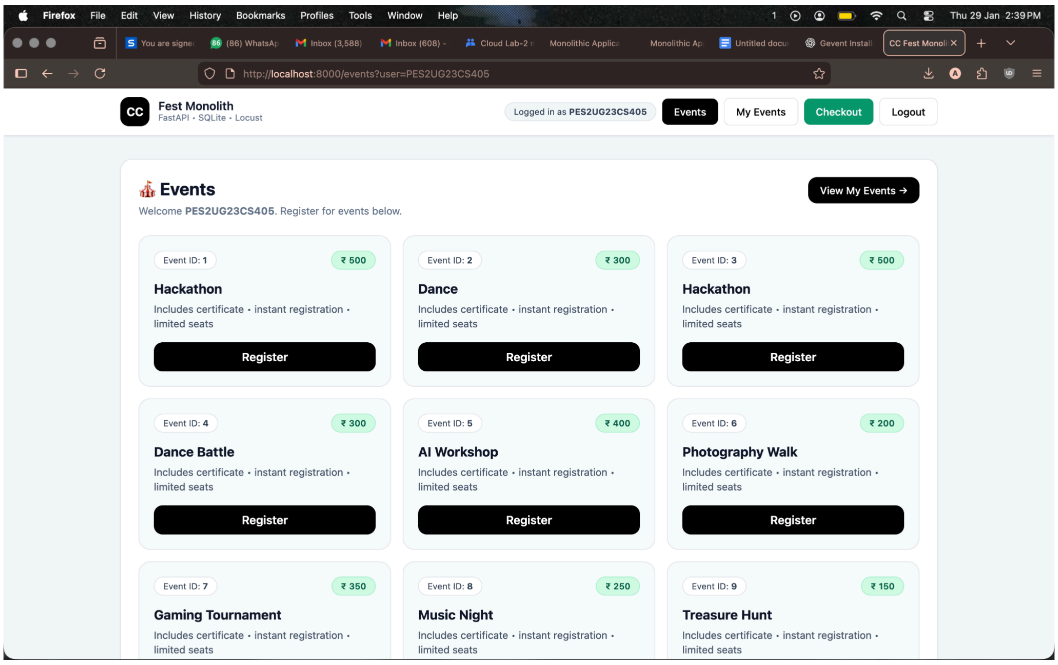
9. Events Page Loaded (SS1):



Firefox File Edit View History Bookmarks Profiles Tools Window Help
Thu 29 Jan 2:39 PM
http://localhost:8000/events?user=PES2UG23CS405
Fest Monolith
FastAPI • SQLite • Locust
Logged in as PES2UG23CS405
Events
My Events
Checkout
Logout
View My Events →
Register

Events

Welcome **PES2UG23CS405**. Register for events below.

Event ID: 1 ₹ 500
Hackathon
Includes certificate • instant registration • limited seats

Event ID: 2 ₹ 300
Dance
Includes certificate • instant registration • limited seats

Event ID: 3 ₹ 500
Hackathon
Includes certificate • instant registration • limited seats

Event ID: 4 ₹ 300
Dance Battle
Includes certificate • instant registration • limited seats

Event ID: 5 ₹ 400
AI Workshop
Includes certificate • instant registration • limited seats

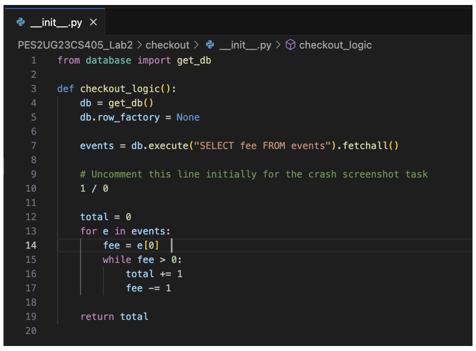
Event ID: 6 ₹ 200
Photography Walk
Includes certificate • instant registration • limited seats

Event ID: 7 ₹ 350
Gaming Tournament
Includes certificate • instant registration • limited seats

Event ID: 8 ₹ 250
Music Night
Includes certificate • instant registration • limited seats

Event ID: 9 ₹ 150
Treasure Hunt
Includes certificate • instant registration • limited seats

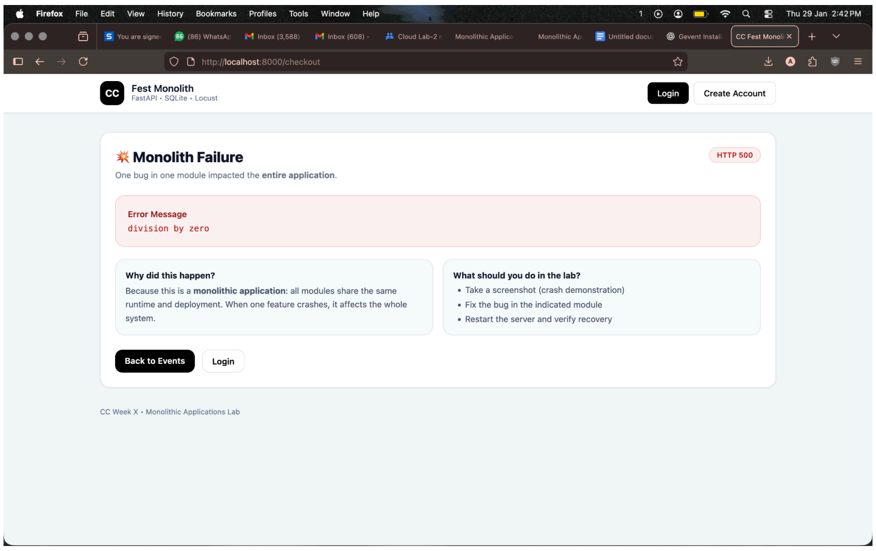
10. Checkout Page (SS2):



__init__.py
PES2UG23CS405_Lab2 > checkout > __init__.py > checkout_logic

```
1   from database import get_db
2
3   def checkout_logic():
4       db = get_db()
5       db.row_factory = None
6
7       events = db.execute("SELECT fee FROM events").fetchall()
8
9       # Uncomment this line initially for the crash screenshot task
10      1 / 0
11
12      total = 0
13      for e in events:
14          fee = e[0]
15          while fee > 0:
16              total += 1
17              fee -= 1
18
19      return total
20
```

Uncommenting line 10



Firefox File Edit View History Bookmarks Profiles Tools Window Help
Thu 29 Jan 2:42 PM
http://localhost:8000/checkout
Fest Monolith
FastAPI • SQLite • Locust
Login
Create Account
HTTP 500
Back to Events
Login

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

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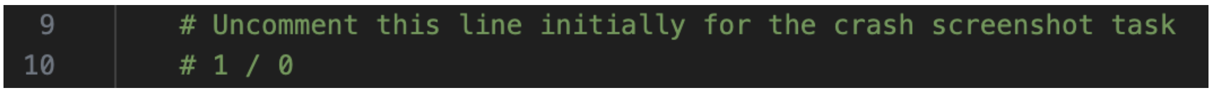
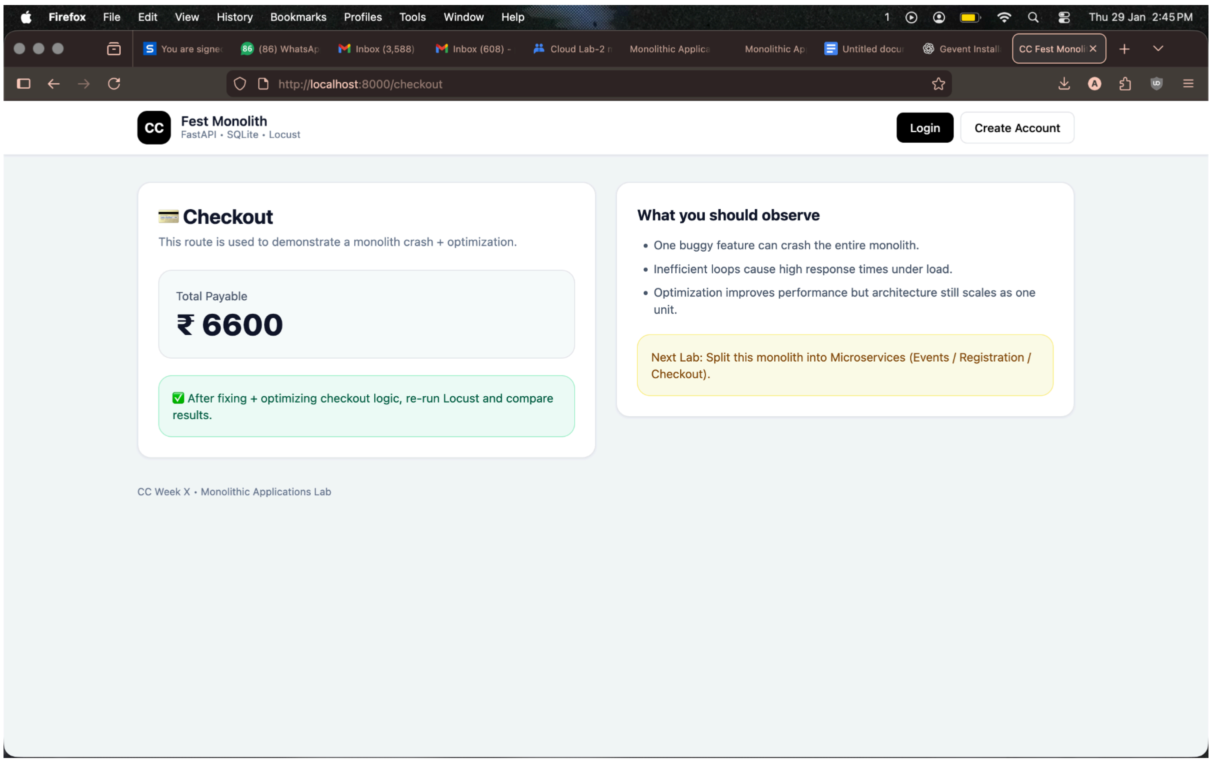
11. Fixing the Bug (SS3):



```
# Uncomment this line initially for the crash screenshot task
# 1 / 0
```



CC **Fest Monolith**
FastAPI • SQLite • Locust

Login | Create Account

Checkout

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

Total Payable

₹ 6600

✅ 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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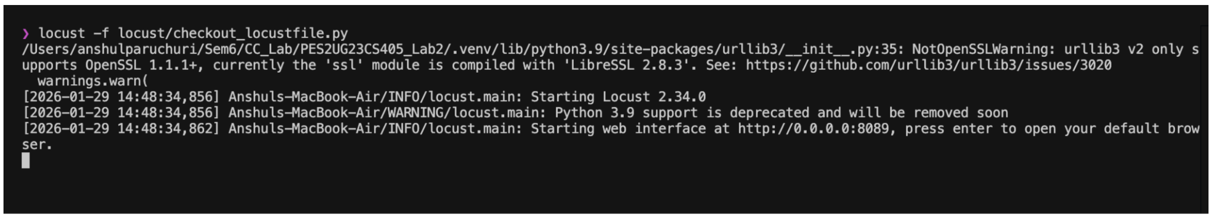
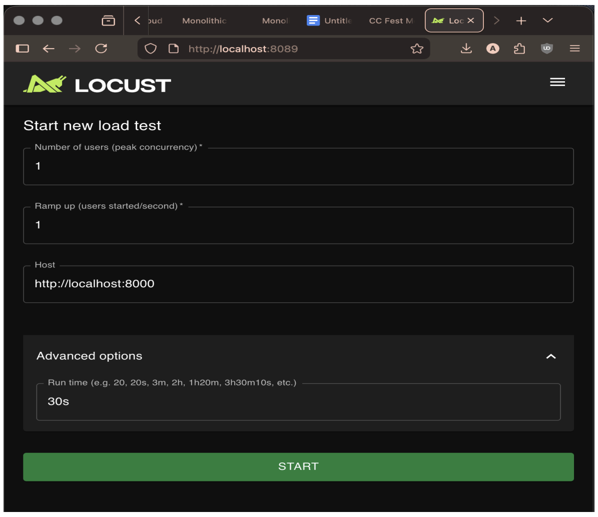
12. Run Locust for Checkout:



```
❯ locust -f locust/checkout_locustfile.py
/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2/.venv/lib/python3.9/site-packages/urllib3/__init__.py:35: NotOpenSSLWarning: urllib3 v2 only s
upports OpenSSL 1.1.1+, currently the 'ssl' module is compiled with 'LibreSSL 2.8.3'. See: https://github.com/urllib3/urllib3/issues/3020
  warnings.warn(
[2026-01-29 14:48:34,856] Anshuls-MacBook-Air/INFO/locust.main: Starting Locust 2.34.0
[2026-01-29 14:48:34,856] Anshuls-MacBook-Air/WARNING/locust.main: Python 3.9 support is deprecated and will be removed soon
[2026-01-29 14:48:34,862] Anshuls-MacBook-Air/INFO/locust.main: Starting web interface at http://0.0.0.0:8089, press enter to open your default brow
ser.
```

13. Open Locust and Specify Parameters:



Start new load test

Number of users (peak concurrency) *: 1

Ramp up (users started/second) *: 1

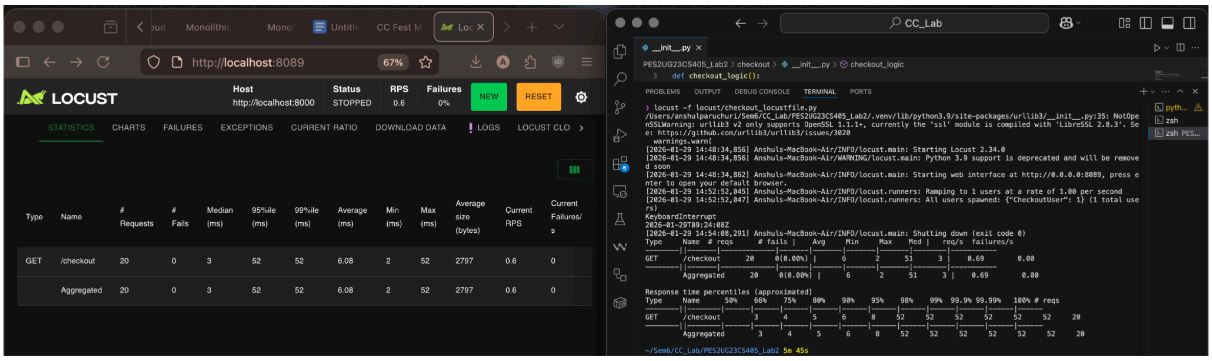
Host: http://localhost:8000

Advanced options

Run time (e.g. 20, 20s, 3m, 2h, 1h20m, 3h30m10s, etc.): 30s

START

14. Screenshot of Terminal and Locust Dashboard (SS4):



http://localhost:8089

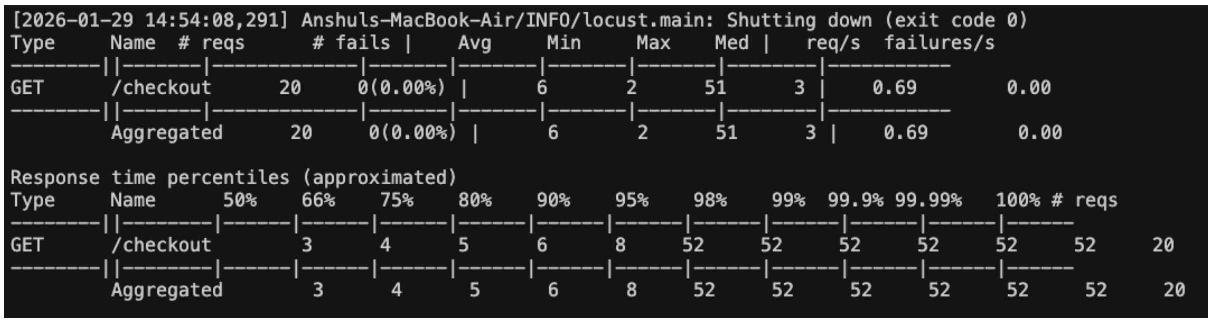
Host	Status	RPS	Failures
http://localhost:8089	STOPPED	0.6	0%

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	3	52	52	6.08	2	52	2797	0.6	0
	Aggregated	20	0	3	52	52	6.08	2	52	2797	0.6	0

PES2UG23CS405_Lab2 > checkout > __init__.py > checkout_logic

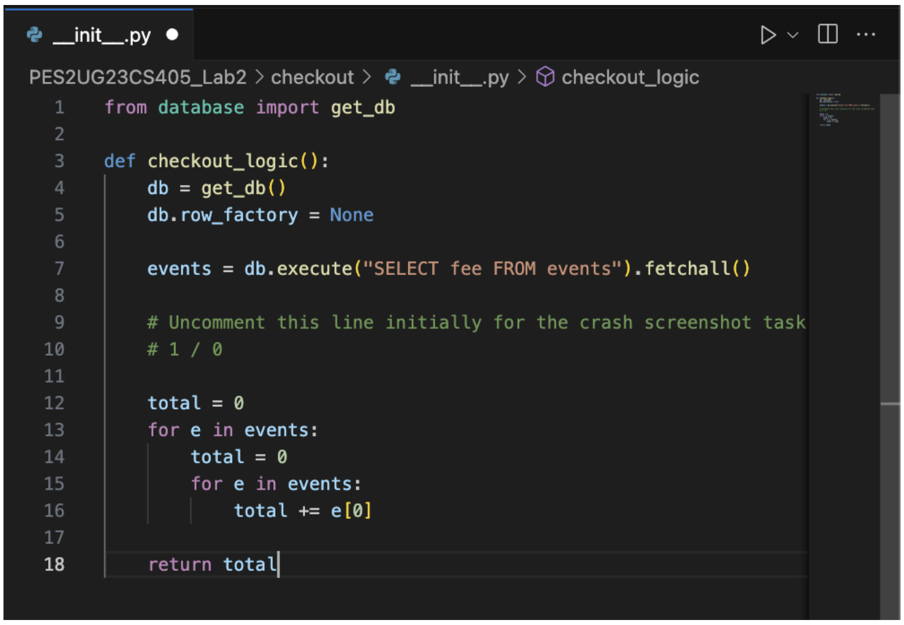
```
3    def checkout_logic():
```

```
❯ locust -f locust/checkout_locustfile.py
/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2/.venv/lib/python3.9/site-packages/urllib3/__init__.py:35: NotOpe
nSSLWarning: urllib3 v2 only supports OpenSSL 1.1.1+, currently the 'ssl' module is compiled with 'LibreSSL 2.8.3'. Se
e: https://github.com/urllib3/urllib3/issues/3020
  warnings.warn(
[2026-01-29 14:48:34,856] Anshuls-MacBook-Air/INFO/locust.main: Starting Locust 2.34.0
[2026-01-29 14:48:34,856] Anshuls-MacBook-Air/WARNING/locust.main: Python 3.9 support is deprecated and will be remove
d soon
[2026-01-29 14:48:34,862] Anshuls-MacBook-Air/INFO/locust.main: Starting web interface at http://0.0.0.0:8089, press e
nter to open your default browser.
[2026-01-29 14:52:52,045] Anshuls-MacBook-Air/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 14:52:52,047] Anshuls-MacBook-Air/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total use
rs)
KeyboardInterrupt
2026-01-29T09:24:08Z
[2026-01-29 14:54:08,291] Anshuls-MacBook-Air/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%) |      6       2      51      3 |    0.69        0.00
--------||-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated      20     0(0.00%) |      6       2      51      3 |    0.69        0.00

Response time percentiles (approximated)
Type     Name      50%    66%    75%    80%    90%    95%    98%    99%  99.9% 99.99%   100% # reqs
--------||--------|------|------|------|------|------|------|------|------|------|------|------
GET      /checkout        3      4      5      6      8     52     52     52     52     52     52     20
--------||--------|------|------|------|------|------|------|------|------|------|------|------
         Aggregated        3      4      5      6      8     52     52     52     52     52     52     20

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 5m 45s
```



```
[2026-01-29 14:54:08,291] Anshuls-MacBook-Air/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%) |      6       2      51      3 |    0.69        0.00
--------||-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated      20     0(0.00%) |      6       2      51      3 |    0.69        0.00

Response time percentiles (approximated)
Type     Name      50%    66%    75%    80%    90%    95%    98%    99%  99.9% 99.99%   100% # reqs
--------||--------|------|------|------|------|------|------|------|------|------|------|------
GET      /checkout        3      4      5      6      8     52     52     52     52     52     52     20
--------||--------|------|------|------|------|------|------|------|------|------|------|------
         Aggregated        3      4      5      6      8     52     52     52     52     52     52     20
```

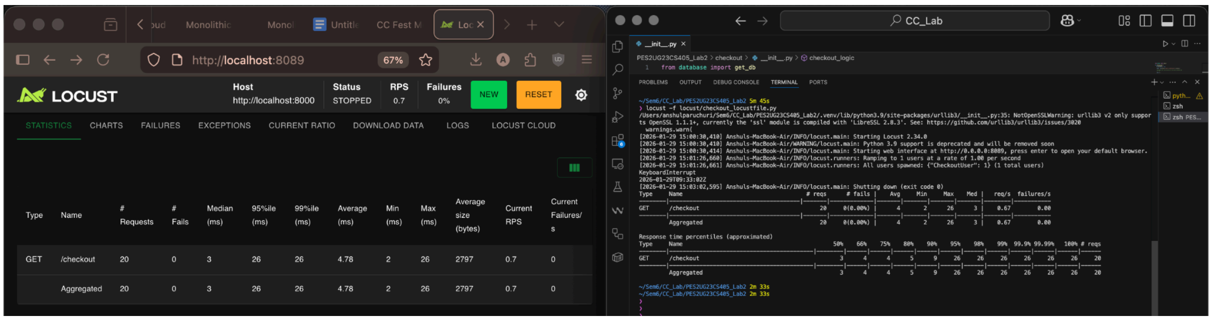
15. Updating checkout/__init__.py:



__init__.py
PES2UG23CS405_Lab2 > checkout > __init__.py > checkout_logic

```python
from database import get_db

def checkout_logic():
    db = get_db()
    db.row_factory = None

    events = db.execute("SELECT fee FROM events").fetchall()

    # Uncomment this line initially for the crash screenshot task
    # 1 / 0

    total = 0
    for e in events:
        total = 0
        for e in events:
            total += e[0]

    return total
```

16. Re-running Locust (SS5):



http://localhost:8089

Host	Status	RPS	Failures
http://localhost:8089	STOPPED	0.7	0%

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	3	26	26	4.78	2	26	2797	0.7	0
	Aggregated	20	0	3	26	26	4.78	2	26	2797	0.7	0

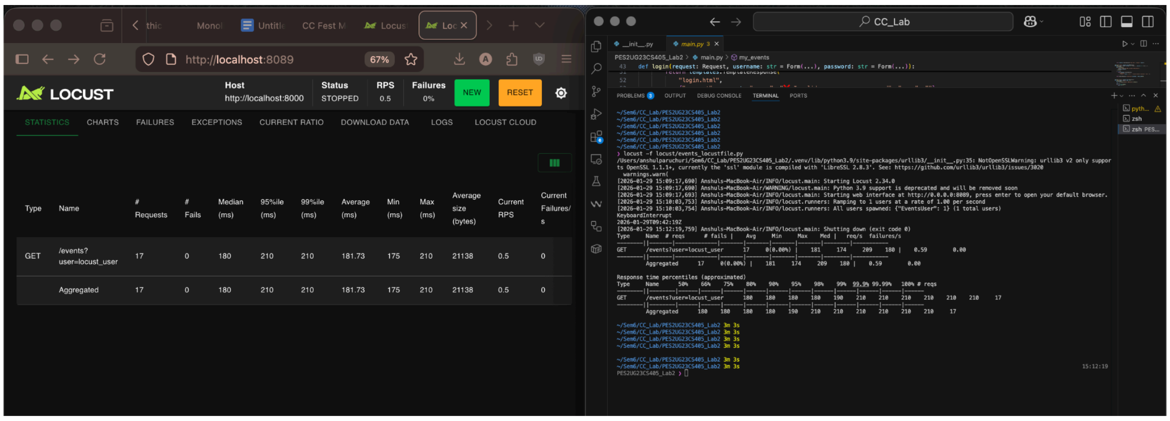
PES2UG23CS405_Lab2 > checkout > __init__.py > checkout_logic

```
1    from database import get_db
```

```
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 5m 45s
❯ locust -f locust/checkout_locustfile.py
/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2/.venv/lib/python3.9/site-packages/urllib3/__init__.py:35: NotOpenSSLWarning: urllib3 v2 only suppor
ts OpenSSL 1.1.1+, currently the 'ssl' module is compiled with 'LibreSSL 2.8.3'. See: https://github.com/urllib3/urllib3/issues/3020
  warnings.warn(
[2026-01-29 15:00:30,410] Anshuls-MacBook-Air/INFO/locust.main: Starting Locust 2.34.0
[2026-01-29 15:00:30,410] Anshuls-MacBook-Air/WARNING/locust.main: Python 3.9 support is deprecated and will be removed soon
[2026-01-29 15:00:30,414] Anshuls-MacBook-Air/INFO/locust.main: Starting web interface at http://0.0.0.0:8089, press enter to open your default browser.
[2026-01-29 15:01:26,660] Anshuls-MacBook-Air/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:01:26,661] Anshuls-MacBook-Air/INFO/locust.runners: All users spawned: {"CheckoutUser": 1} (1 total users)
KeyboardInterrupt
2026-01-29T09:33:02Z
[2026-01-29 15:03:02,595] Anshuls-MacBook-Air/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%) |      4       2      26      3 |    0.67        0.00
--------|----------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                        20     0(0.00%) |      4       2      26      3 |    0.67        0.00

Response time percentiles (approximated)
Type     Name                                                                                  50%    66%    75%    80%    90%    95%    98%    99%  99.9% 99.99%   100% # reqs
--------|--------------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------
GET      /checkout                                                                                3      4      4      5      9     26     26     26     26     26     26     20
--------|--------------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------
         Aggregated                                                                               3      4      4      5      9     26     26     26     26     26     26     20

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s
❯
❯
```

Observation: Avg. Response time reduced from 6.08ms to 4.78ms after optimization. Requests/second increased from 0.6 to 0.7

17. events Before Optimization (SS6):



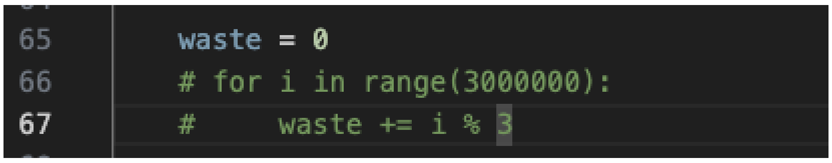
Host	Status	RPS	Failures
http://localhost:8000	STOPPED	0.5	0%

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	17	0	180	210	210	181.73	175	210	21138	0.5	0
	Aggregated	17	0	180	210	210	181.73	175	210	21138	0.5	0

```python
def login(request: Request, username: str = Form(...), password: str = Form(...)):
            "login.html",
```

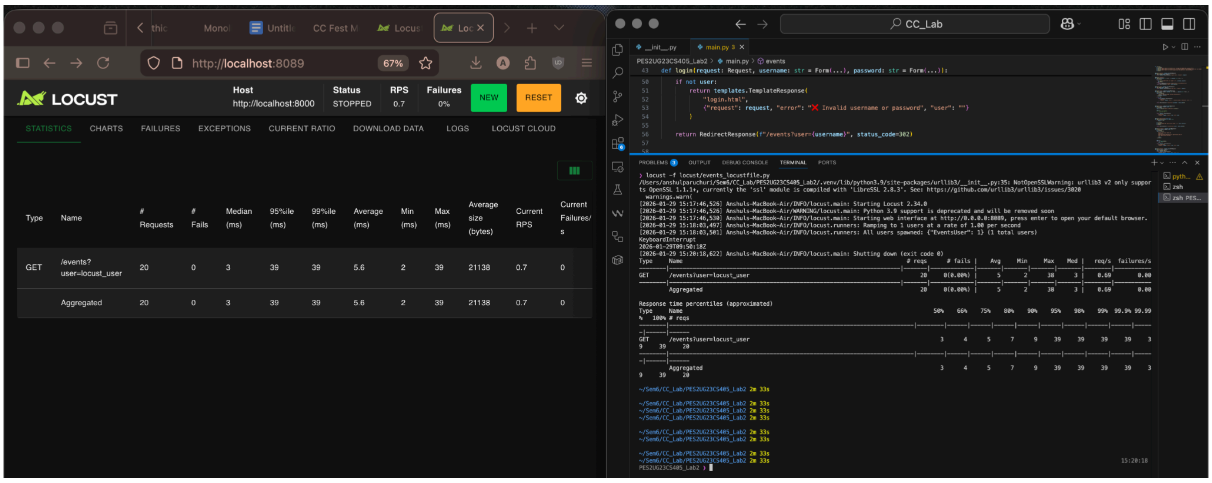
```
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
~/Sem6/CC_Lab/PES2UG23CS405_Lab2
❯ locust -f locust/events_locustfile.py
/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2/.venv/lib/python3.9/site-packages/urllib3/__init__.py:35: NotOpenSSLWarning: urllib3 v2 only suppor
ts OpenSSL 1.1.1+, currently the 'ssl' module is compiled with 'LibreSSL 2.8.3'. See: https://github.com/urllib3/urllib3/issues/3020
  warnings.warn(
[2026-01-29 15:09:17,690] Anshuls-MacBook-Air/INFO/locust.main: Starting Locust 2.34.0
[2026-01-29 15:09:17,690] Anshuls-MacBook-Air/WARNING/locust.main: Python 3.9 support is deprecated and will be removed soon
[2026-01-29 15:09:17,693] Anshuls-MacBook-Air/INFO/locust.main: Starting web interface at http://0.0.0.0:8089, press enter to open your default browser.
[2026-01-29 15:10:03,753] Anshuls-MacBook-Air/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:10:03,754] Anshuls-MacBook-Air/INFO/locust.runners: All users spawned: {"EventsUser": 1} (1 total users)
KeyboardInterrupt
2026-01-29T09:42:19Z
[2026-01-29 15:12:19,759] Anshuls-MacBook-Air/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      17     0(0.00%) |    181     174     209    180 |    0.59        0.00
--------||-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated      17     0(0.00%) |    181     174     209    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      /events?user=locust_user      180    180    180    180    190    210    210    210    210    210    210     17
--------||--------|------|------|------|------|------|------|------|------|------|------|------
         Aggregated      180    180    180    180    190    210    210    210    210    210    210     17

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 3m 3s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 3m 3s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 3m 3s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 3m 3s

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 3m 3s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 3m 3s                                                                    15:12:19
PES2UG23CS405_Lab2 ❯
```

18. Optimizing the code:



```python
    waste = 0
    # for i in range(3000000):
    #       waste += i % 3
```

19. Events After Optimization (SS7):



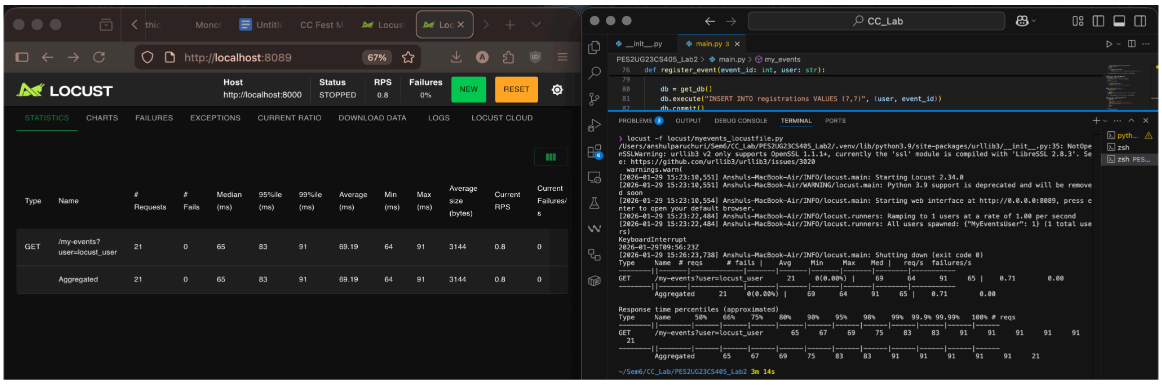
Host	Status	RPS	Failures
http://localhost:8000	STOPPED	0.7	0%

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	20	0	3	39	39	5.6	2	39	21138	0.7	0
	Aggregated	20	0	3	39	39	5.6	2	39	21138	0.7	0

```python
def login(request: Request, username: str = Form(...), password: str = Form(...)):
    if not user:
        return templates.TemplateResponse(
            "login.html",
            {"request": request, "error": "❌ Invalid username or password", "user": ""}
        )

    return RedirectResponse(f"/events?user={username}", status_code=302)
```

```
❯ locust -f locust/events_locustfile.py
/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2/.venv/lib/python3.9/site-packages/urllib3/__init__.py:35: NotOpenSSLWarning: urllib3 v2 only suppor
ts OpenSSL 1.1.1+, currently the 'ssl' module is compiled with 'LibreSSL 2.8.3'. See: https://github.com/urllib3/urllib3/issues/3020
  warnings.warn(
[2026-01-29 15:17:46,526] Anshuls-MacBook-Air/INFO/locust.main: Starting Locust 2.34.0
[2026-01-29 15:17:46,526] Anshuls-MacBook-Air/WARNING/locust.main: Python 3.9 support is deprecated and will be removed soon
[2026-01-29 15:17:46,530] Anshuls-MacBook-Air/INFO/locust.main: Starting web interface at http://0.0.0.0:8089, press enter to open your default browser.
[2026-01-29 15:18:03,497] Anshuls-MacBook-Air/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:18:03,501] Anshuls-MacBook-Air/INFO/locust.runners: All users spawned: {"EventsUser": 1} (1 total users)
KeyboardInterrupt
2026-01-29T09:50:18Z
[2026-01-29 15:20:18,622] Anshuls-MacBook-Air/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%) |      5       2      38      3 |    0.69        0.00
--------|--------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                                                                    20     0(0.00%) |      5       2      38      3 |    0.69        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                                                            3      4      5      7      9     39     39     39     39      3
9     39     20
--------|--------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-----
-|------|------
         Aggregated                                                                          3      4      5      7      9     39     39     39     39      3
9     39     20

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s
~/Sem6/CC_Lab/PES2UG23CS405_Lab2 2m 33s                                                                    15:20:18
PES2UG23CS405_Lab2 ❯
```

20. my_events Before Optimization (SS8):



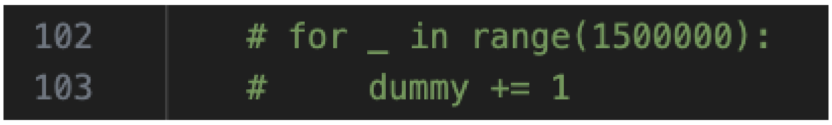
Host	Status	RPS	Failures
http://localhost:8000	STOPPED	0.8	0%

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	65	83	91	69.19	64	91	3144	0.8	0
	Aggregated	21	0	65	83	91	69.19	64	91	3144	0.8	0

```python
def register_event(event_id: int, user: str):

    db = get_db()
    db.execute("INSERT INTO registrations VALUES (?,?)", (user, event_id))
    db.commit()
```

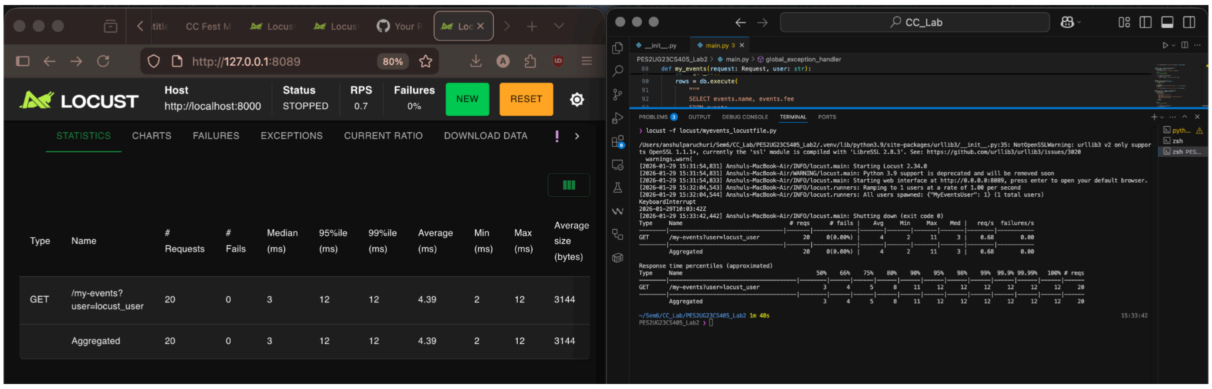
```
❯ locust -f locust/myevents_locustfile.py
/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2/.venv/lib/python3.9/site-packages/urllib3/__init__.py:35: NotOpe
nSSLWarning: urllib3 v2 only supports OpenSSL 1.1.1+, currently the 'ssl' module is compiled with 'LibreSSL 2.8.3'. Se
e: https://github.com/urllib3/urllib3/issues/3020
  warnings.warn(
[2026-01-29 15:23:10,551] Anshuls-MacBook-Air/INFO/locust.main: Starting Locust 2.34.0
[2026-01-29 15:23:10,551] Anshuls-MacBook-Air/WARNING/locust.main: Python 3.9 support is deprecated and will be remove
d soon
[2026-01-29 15:23:10,554] Anshuls-MacBook-Air/INFO/locust.main: Starting web interface at http://0.0.0.0:8089, press e
nter to open your default browser.
[2026-01-29 15:23:22,484] Anshuls-MacBook-Air/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:23:22,484] Anshuls-MacBook-Air/INFO/locust.runners: All users spawned: {"MyEventsUser": 1} (1 total use
rs)
KeyboardInterrupt
2026-01-29T09:56:23Z
[2026-01-29 15:26:23,738] Anshuls-MacBook-Air/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%) |     69      64      91     65 |    0.71        0.00
--------||-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated      21     0(0.00%) |     69      64      91     65 |    0.71        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       65     67     69     75     83     83     91     91     91     91     91
  21
--------||--------|------|------|------|------|------|------|------|------|------|------|------
         Aggregated       65     67     69     75     83     83     91     91     91     91     91     21

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 3m 14s
```

21. Updating my_events:



```
        # for _ in range(1500000):
        #       dummy += 1
```

22. My_events After Optimization (SS9):



Host http://localhost:8000 | Status STOPPED | RPS 0.7 | Failures 0%

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)
GET	/my-events?user=locust_user	20	0	3	12	12	4.39	2	12	3144
	Aggregated	20	0	3	12	12	4.39	2	12	3144

```
PES2UG23CS405_Lab2 > main.py > global_exception_handler
def my_events(request: Request, user: str):
    rows = db.execute(
        """
        SELECT events.name, events.fee
```

```
❯ locust -f locust/myevents_locustfile.py

/Users/anshulparuchuri/Sem6/CC_Lab/PES2UG23CS405_Lab2/.venv/lib/python3.9/site-packages/urllib3/__init__.py:35: NotOpenSSLWarning: urllib3 v2 only suppor
ts OpenSSL 1.1.1+, currently the 'ssl' module is compiled with 'LibreSSL 2.8.3'. See: https://github.com/urllib3/urllib3/issues/3020
  warnings.warn(
[2026-01-29 15:31:54,831] Anshuls-MacBook-Air/INFO/locust.main: Starting Locust 2.34.0
[2026-01-29 15:31:54,831] Anshuls-MacBook-Air/WARNING/locust.main: Python 3.9 support is deprecated and will be removed soon
[2026-01-29 15:31:54,833] Anshuls-MacBook-Air/INFO/locust.main: Starting web interface at http://0.0.0.0:8089, press enter to open your default browser.
[2026-01-29 15:32:04,543] Anshuls-MacBook-Air/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2026-01-29 15:32:04,544] Anshuls-MacBook-Air/INFO/locust.runners: All users spawned: {"MyEventsUser": 1} (1 total users)
KeyboardInterrupt
2026-01-29T10:03:42Z
[2026-01-29 15:33:42,442] Anshuls-MacBook-Air/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              20     0(0.00%) |      4       2      11       3 |    0.68        0.00
--------|-------------------------------------|-------|-------------|-------|-------|-------|-------|--------|-----------
         Aggregated                               20     0(0.00%) |      4       2      11       3 |    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      /my-events?user=locust_user                   3      4      5      8     11     12     12     12     12     12     12     20
--------|-------------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------
         Aggregated                                    3      4      5      8     11     12     12     12     12     12     12     20

~/Sem6/CC_Lab/PES2UG23CS405_Lab2 1m 48s                                                                                  15:33:42
PES2UG23CS405_Lab2 ❯
```

Questions (events):

1. What was the Bottleneck?
   A dummy loop running 3000000 times caused the bottleneck.

2. What changes did you make?
   Remove the dummy loop

3. Why did the performance improve?
   The performance improved because the dummy loop was not run

   Average dropped from 181.73ms to 5.6ms

Questions (my_events):

1. What was the Bottleneck?
   A dummy loop running 1500000 times caused the bottleneck.

2. What changes did you make?
   Remove the dummy loop

3. Why did the performance improve?
   The performance improved because the dummy loop was not run

   Average dropped from 69.19ms to 4.39ms