

CLOUD COMPUTING LAB

(WEEK-2: MONLITHIC)

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SEC: C

Login to events page:

The screenshot shows a web application for event registration. At the top, there's a header bar with the URL 'localhost:8000/events/user=PES2UG23CS135'. Below the header, the title 'Fest Monolith' is displayed, along with the text 'FestAPI + SQLite + React'. On the right side of the header, there are navigation links: 'Events' (which is the active tab), 'My Events', 'Checkout', and 'Logout'. A user status message 'Logged in as PES2UG23CS135' is also present.

The main content area is titled 'Events' and displays a list of nine different events, each in its own card:

- 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
Includes certificate + instant registration + limited seats
Register
- Event ID: 6** (₹ 200)
Photography Walk
Includes certificate + instant registration + limited seats
Register
- Event ID: 7** (₹ 350)
Gaming Tournament
Includes certificate + instant registration + limited seats
Register
- Event ID: 8** (₹ 250)
Music Night
Includes certificate + instant registration + limited seats
Register
- Event ID: 9** (₹ 150)
Treasure Hunt
Includes certificate + instant registration + limited seats
Register

Issue encountered:

The screenshot shows a web browser window with the URL `localhost:8000/register_event/404?user=PES2UG23CS135`. The page is titled "Monolith Failure" with a star icon. It displays an error message: "division by zero". Below this, it explains that because it's a monolithic application, one bug can impact the entire system. It also provides instructions for what to do in the lab, such as taking a screenshot and fixing the bug. At the bottom, there are links to "Back to Events" and "Login".

Fest Monolith
FastAPI • SQLite •
Locust

Logged in as PES2UG23CS135

Events My Events Checkout

Logout

HTTP 500

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

CC Week X • Monolithic Applications Lab

After correcting the issue:

localhost:8000/checkout

Fest Monolith
FastAPI • SQLite • Locust

Checkout

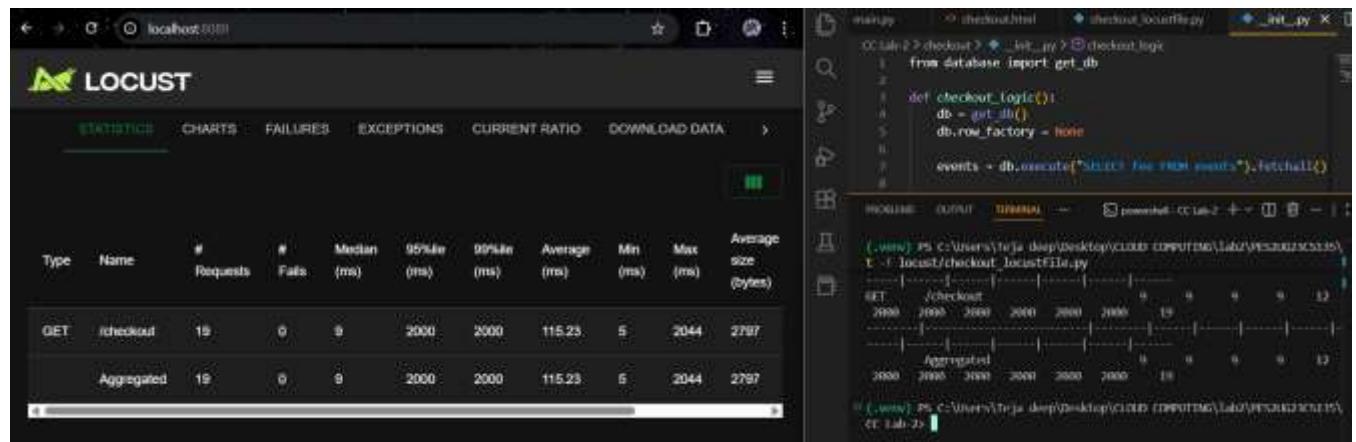
This route is used to demonstrate a monolith crash + optimization.

Total Payable
₹ 6600

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

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Before optimizing checkout:



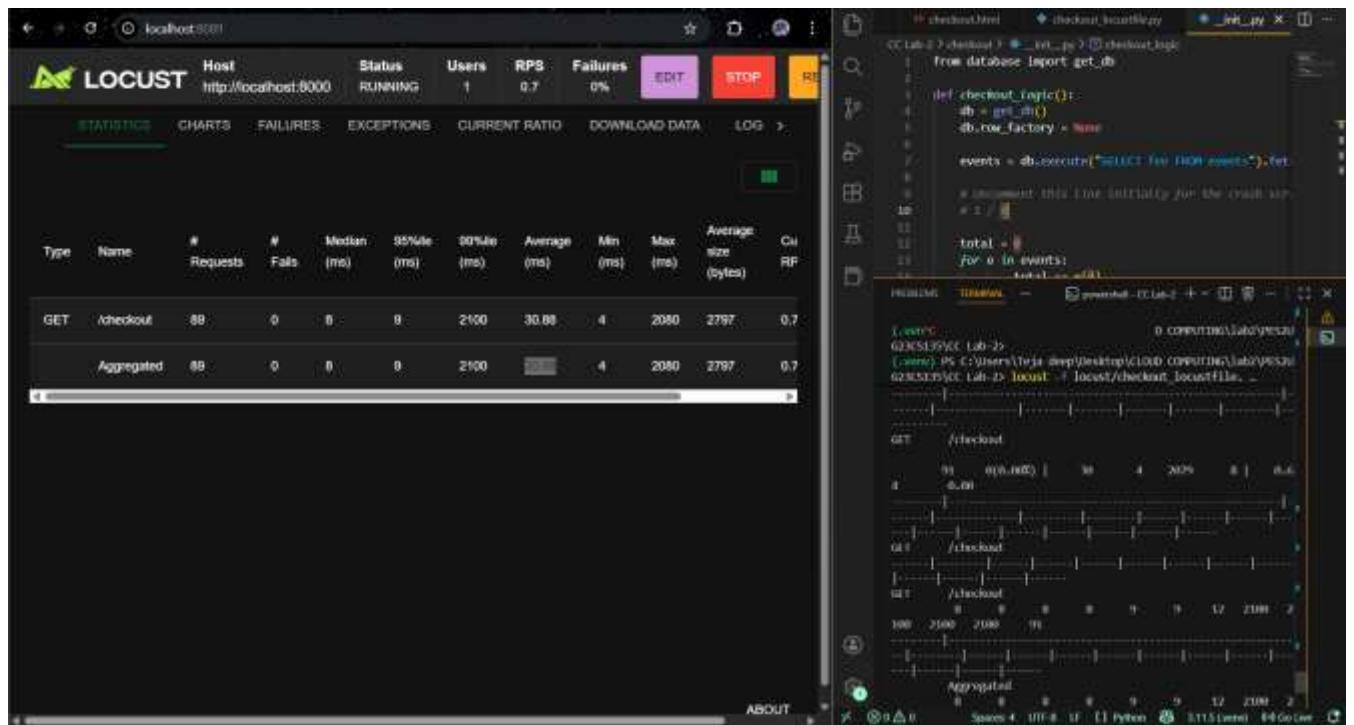
The screenshot shows a dual-pane interface. On the left is the Locust web interface displaying performance statistics for a 'checkout' task. The table shows 19 requests, 0 fails, and a median response time of 2000ms. On the right is a code editor with Python files: `checkout.html`, `checkout_locust.py`, and `__init__.py`. The `checkout_locust.py` file contains the following code:

```
from database import get_db

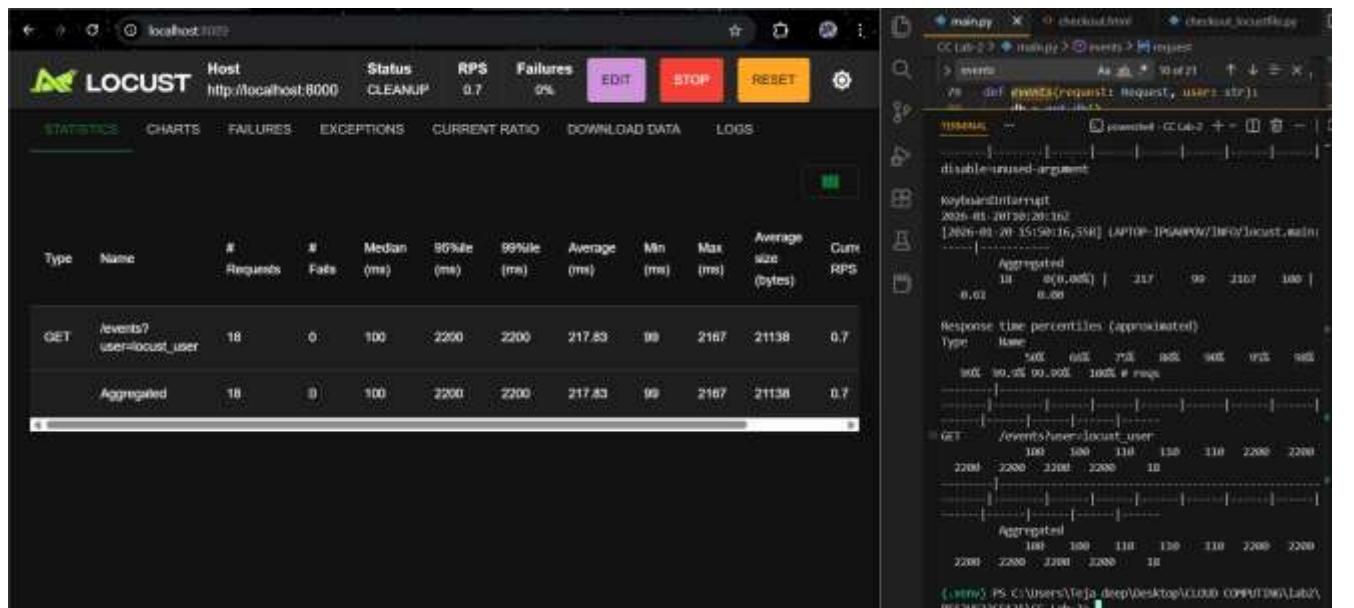
def checkout_logic():
    db = get_db()
    db.row_factory = None

    events = db.execute("SELECT * FROM users").fetchall()
```

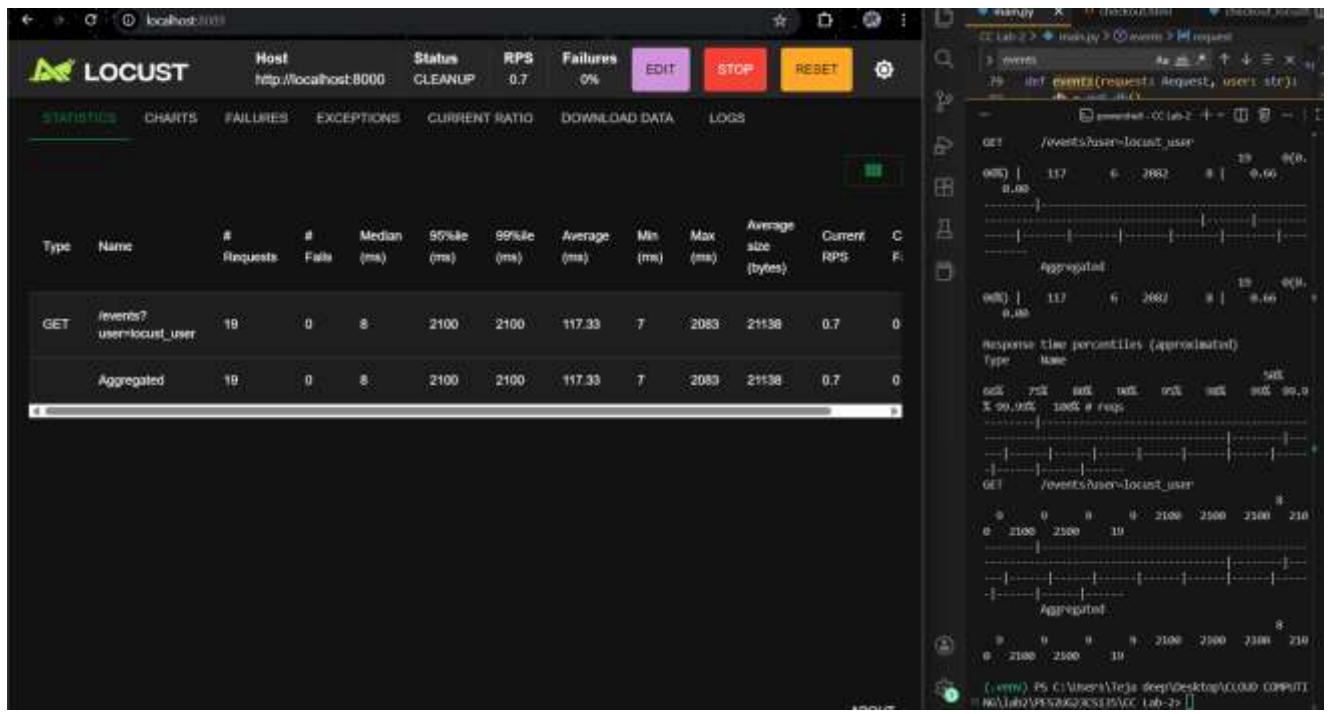
After optimization of checkout:



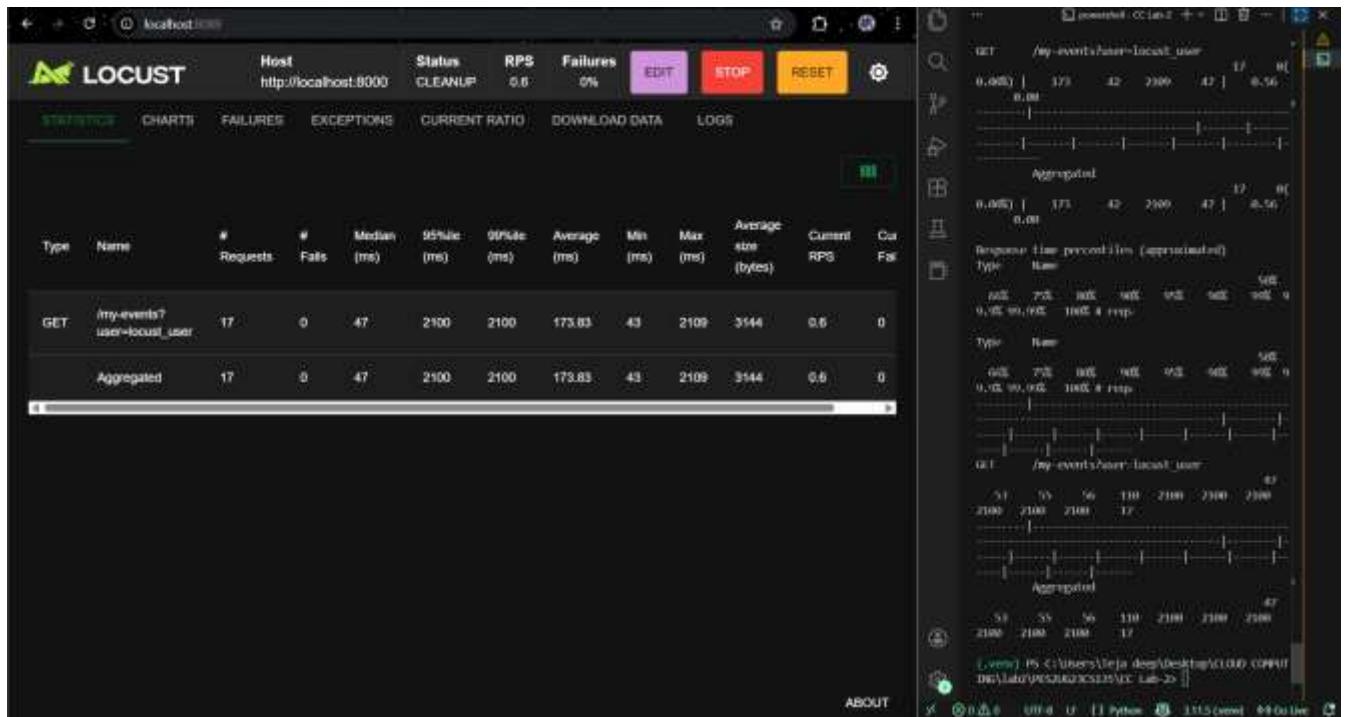
Before events optimization:



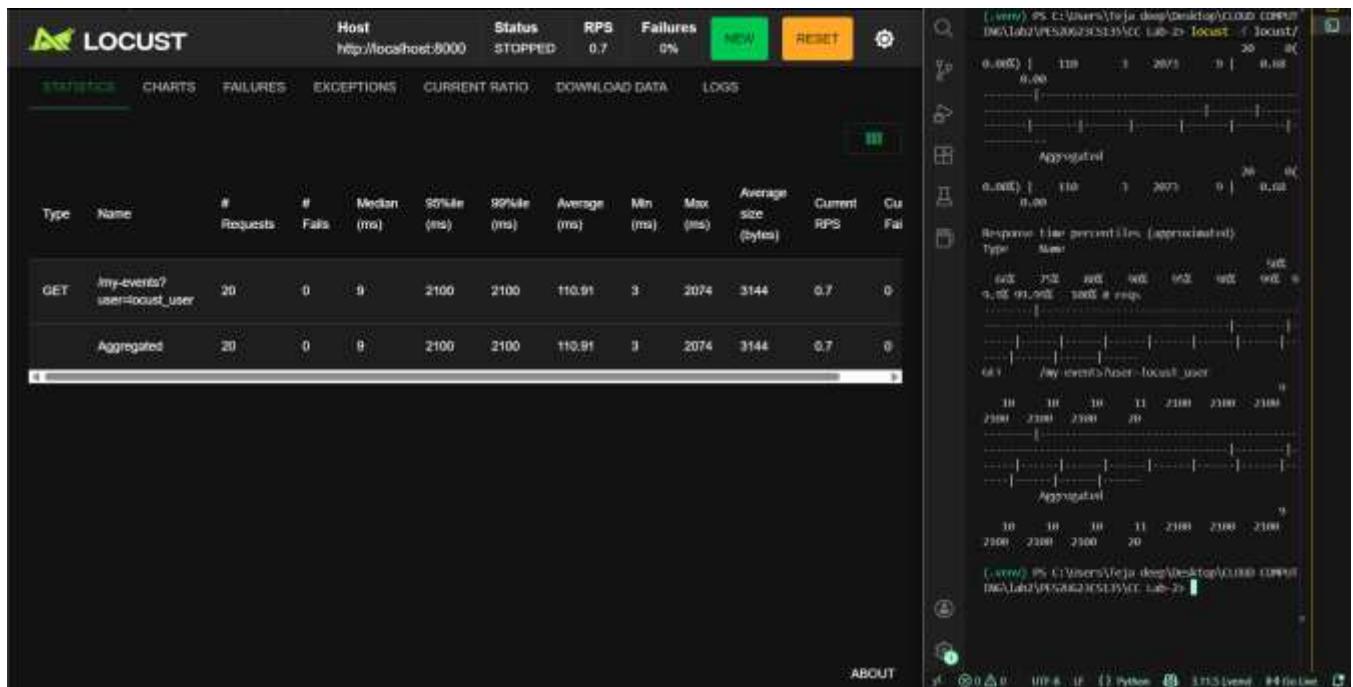
After events optimization:



Before myevents optimization:



After myevents optimization:



GITHUB REPO:

<https://github.com/TejaDeep11/CLOUD-COMPUTING-LAB/tree/main/CC%20LAB%202>