

CLOUD COMPUTING

LAB 3

Monolithic Applications: The Great Indian Paratha

NAME : MOHAMMED KAIF
SRN: PES1UG22CS355
SEC : F

GITHUB LINK:

https://github.com/KAIF1409/CC_LAB3_Monolith/tree/main

First Screenshot(SS1)

PESTUG22CS355 Browse

http://localhost:5000/browse

GmailYouTubePES UniversityPopAi: Your Persona...Leonardo AI Prompt...Adobe AcrobatBD_2024_StudentSh...BetterPES : ContentSE _ Section B and C...PYQP - Sem 5 (CSE...


Name	Description	Quantity
Backpack	A durable and stylish backpack for daily use.	10
Wireless Mouse	A sleek and ergonomic wireless mouse with a long battery life.	20
Bluetooth Speaker	A portable Bluetooth speaker with high-quality sound and deep bass.	30
Laptop Stand	An adjustable laptop stand for better posture and cooling.	15
Notebook	A premium notebook with thick, high-quality paper.	50
Smartphone Case	A durable and stylish case for protecting your smartphone.	25
Power Bank	A high-capacity power bank with fast charging support.	20
Headphones	Over-ear headphones with noise cancellation and deep bass.	10
Gaming Keyboard	A mechanical gaming keyboard with RGB lighting.	10
USB-C Hub	A multi-port USB-C hub for all your connectivity needs.	25
Fitness Tracker	A sleek fitness tracker with heart rate monitoring.	20
Travel Mug	An insulated travel mug that keeps your drinks hot or cold.	30
Desk Organizer	A compact desk organizer for keeping your workspace tidy.	40
External Hard Drive	A portable external hard drive with 1TB of storage.	15
Wireless Charger	A fast wireless charger compatible with most devices.	30
Digital Camera	A compact digital camera with 4K video recording.	5
Electric Kettle	A fast-boiling electric kettle with auto shut-off.	20
Smart Watch	A stylish smartwatch with fitness and notification features.	10
LED Desk Lamp	A modern LED desk lamp with adjustable brightness.	35
Portable Projector	A mini portable projector with HD resolution.	8

Screenshot(SS2).

PESTUG22CS355 Browselocalhost

http://localhost:5000/checkout

GmailYouTubePES UniversityPopAi: Your Persona...Leonardo AI Prompt...Adobe AcrobatBD_2024_StudentSh...BetterPES : ContentSE _ Section B and C...PYQP - Sem 5 (CSE...



This site can't be reached

localhost refused to connect.

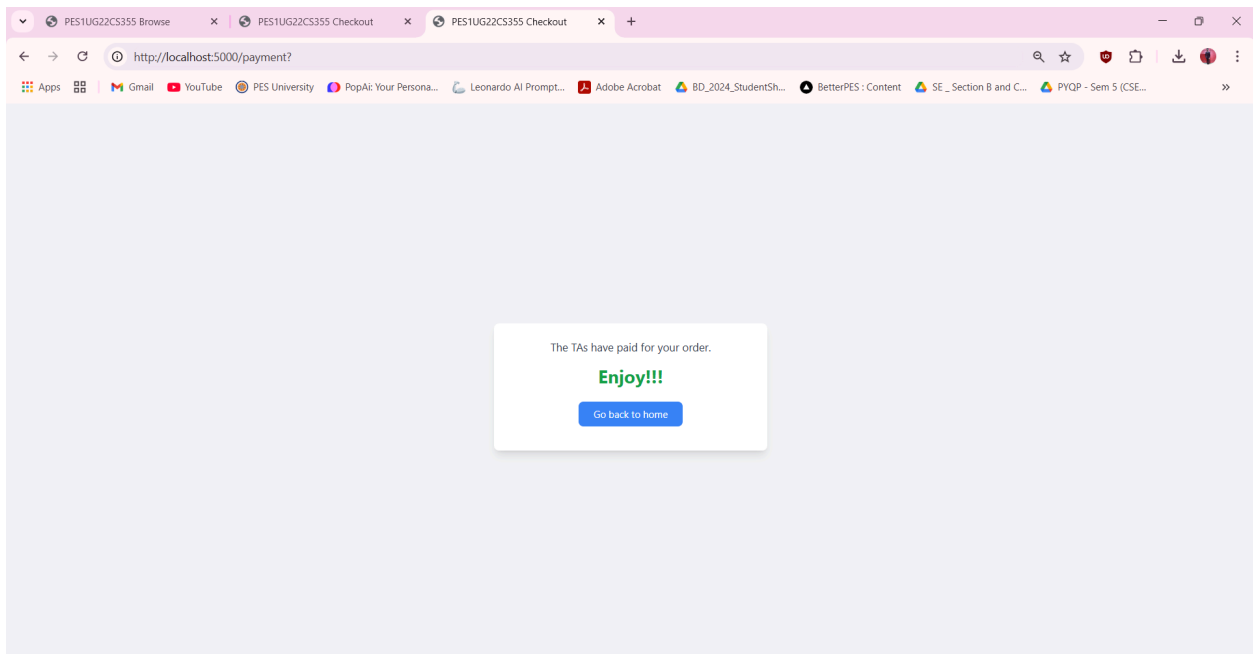
Try:

- Checking the connection
- Checking the proxy and the firewall

ERR_CONNECTION_REFUSED

ReloadDetails

Screenshot(SS3)



Screenshot(SS4)

The Locust web interface displays the following statistics for the `GET /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 Fails
GET	/checkout	11	0	2200	2300	2300	2216.05	2134	2292	700	0.5	0
Aggregated		11	0	2200	2300	2300	2216.05	2134	2292	700	0.5	0

```
line 270, in python_check_callback
def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
[2025-01-23 15:35:34,650] Mohammedkaif/INFO/locust.main: Shutting down (exit code 0)
Type Name Avg Min Max Med req/s failures/s # reqs # f
GET /checkout 11 0(0.00%) 2216 2133 2292 2200 0.38 0.00
Aggregated 11 0(0.00%) 2216 2133 2292 2200 0.38 0.00
Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 99.99% 100%
% # reqs
GET /checkout 2200 2200 2200 2200 2200 2300 2300 2300 2300 2300 230
0 11
Aggregated 2200 2200 2200 2200 2200 2300 2300 2300 2300 230
0 11
PS C:\Users\91998\PES1UG22CS355\CC_Monolith>
```

Screenshot(SS5)

The screenshot shows a Windows terminal window on the left and a web browser window on the right. The terminal displays the execution of a Locust test script, including startup logs, a traceback, and performance statistics. The browser shows the Locust web interface at http://localhost:8089, displaying the test results for the /checkout endpoint.

Terminal Output:

```
PS C:\Users\91998\PES1UG22C5355\CC_Monolith> locust -f locust/checkout-locustfile.py
[2025-01-23 15:46:45.419] MohammedKaif/INFO/locust.main: Starting Locust 2.32.6
[2025-01-23 15:46:45.420] MohammedKaif/INFO/locust.main: Starting web interface at http://localhost:8089 (accepting connections from all network interfaces)
[2025-01-23 15:46:52.373] MohammedKaif/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-23 15:46:56.529] MohammedKaif/INFO/locust.runners: All users spawned: {"checkout": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\91998\AppData\Local\Programs\Python\Python310\lib\site-packages\gevent\ffi\loop.py", line 270, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
2025-01-23T18:17:25Z
[2025-01-23 15:47:25.937] MohammedKaif/INFO/locust.main: Shutting down (exit code 0)
```

Type	Name	# reqs	# fails	Avg	Min	Max	Med	req/s	failures/s
Aggregated		0	0(0.00%)	0	0	0	0	0.00	0.00

Web Interface Statistics:

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)	Current RPS	Cumulative Failures
GET	/checkout	12	0	2103.92	2100	2100	2119.62	2104	2136	704	0.5	0
Aggregated		12	0	2103.92	2100	2100	2119.62	2104	2136	704	0.5	0

Screenshot(SS6)

The screenshot shows a Windows terminal window on the left and a web browser window on the right. The terminal displays the execution of a Locust test script for the /cart endpoint, including startup logs, a traceback, and performance statistics. The browser shows the Locust web interface at http://localhost:8089, displaying the test results for the /cart endpoint.

Terminal Output:

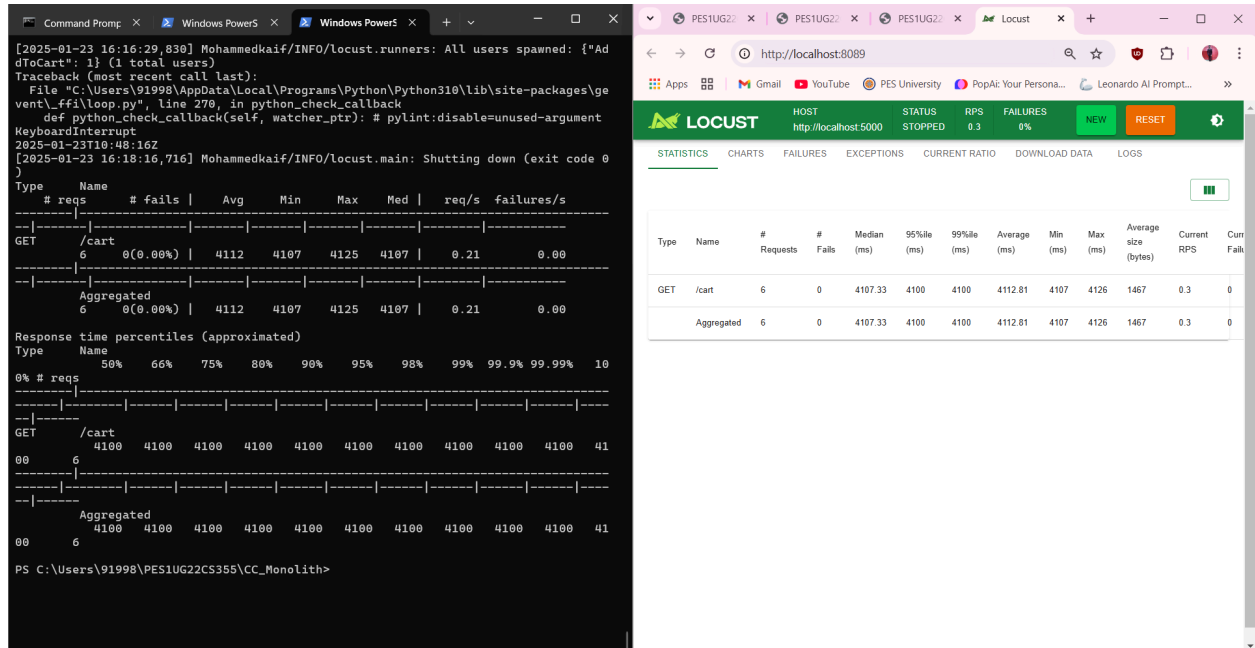
```
PS C:\Users\91998\PES1UG22C5355\CC_Monolith> locust -f locust/get-cart-locustfile.py
[2025-01-23 15:52:34.738] MohammedKaif/INFO/locust.main: Starting Locust 2.32.6
[2025-01-23 15:52:34.740] MohammedKaif/INFO/locust.main: Starting web interface at http://localhost:8089 (accepting connections from all network interfaces)
[2025-01-23 15:53:04.531] MohammedKaif/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-23 15:53:08.669] MohammedKaif/INFO/locust.runners: All users spawned: {"add_to_cart": 1} (1 total users)
Traceback (most recent call last):
  File "C:\Users\91998\AppData\Local\Programs\Python\Python310\lib\site-packages\gevent\ffi\loop.py", line 270, in python_check_callback
    def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
KeyboardInterrupt
2025-01-23T18:25:13Z
[2025-01-23 15:55:13.497] MohammedKaif/INFO/locust.main: Shutting down (exit code 0)
```

Type	Name	# reqs	# fails	Avg	Min	Max	Med	req/s	failures/s
GET	/cart	6	0(0.00%)	4121	4109	4137	4109	0.21	0.00
Aggregated		6	0(0.00%)	4121	4109	4137	4109	0.21	0.00

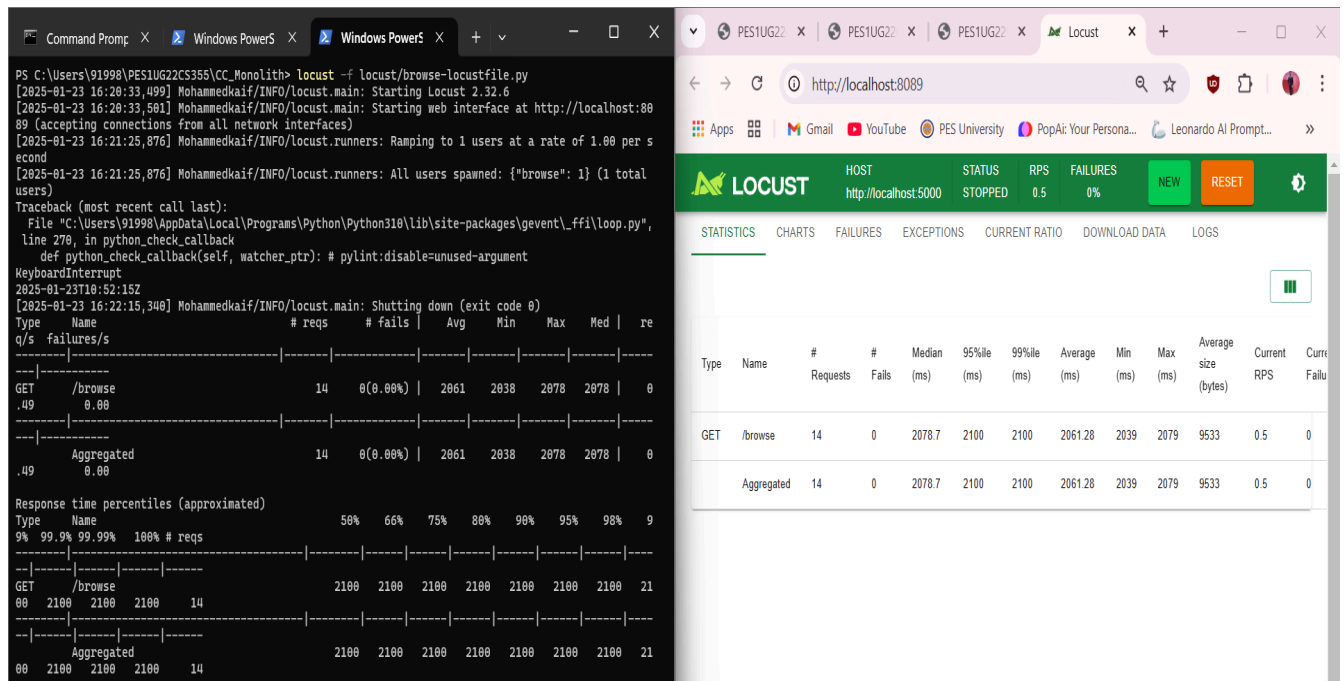
Web Interface Statistics:

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)	Current RPS	Cumulative Failures
GET	/cart	6	0	4109.49	4100	4100	4121.57	4109	4137	1467	0.3	0
Aggregated		6	0	4109.49	4100	4100	4121.57	4109	4137	1467	0.3	0

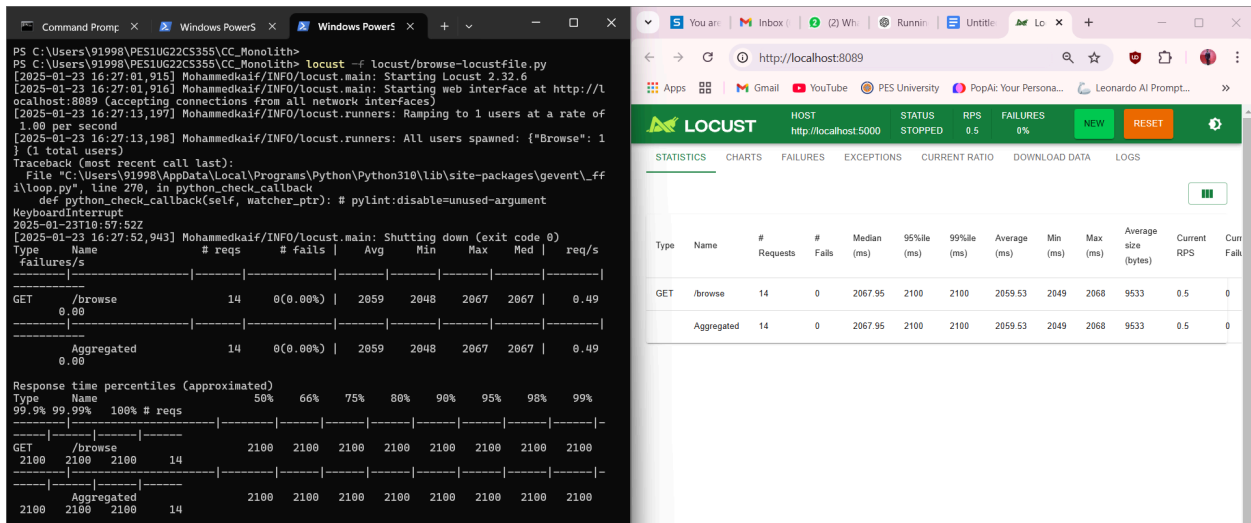
Screenshot(SS7)



Screenshot(SS8)



Screenshot(SS9)



Why and How I Optimized the Code:

- Centralized Headers:** Reduced repetition by storing common headers in a single dictionary, making it easier to update and maintain.
- Improved Readability:** Simplified the code by renaming the task function and removing unnecessary variables, making the code more readable.
- Error Handling:** Added response validation to capture failures and ensure the status code is as expected, improving reliability in tests.
- Efficient Code:** Combined header setup and request into fewer lines, making the code cleaner and easier to manage.