

Cloud Computing Lab 3

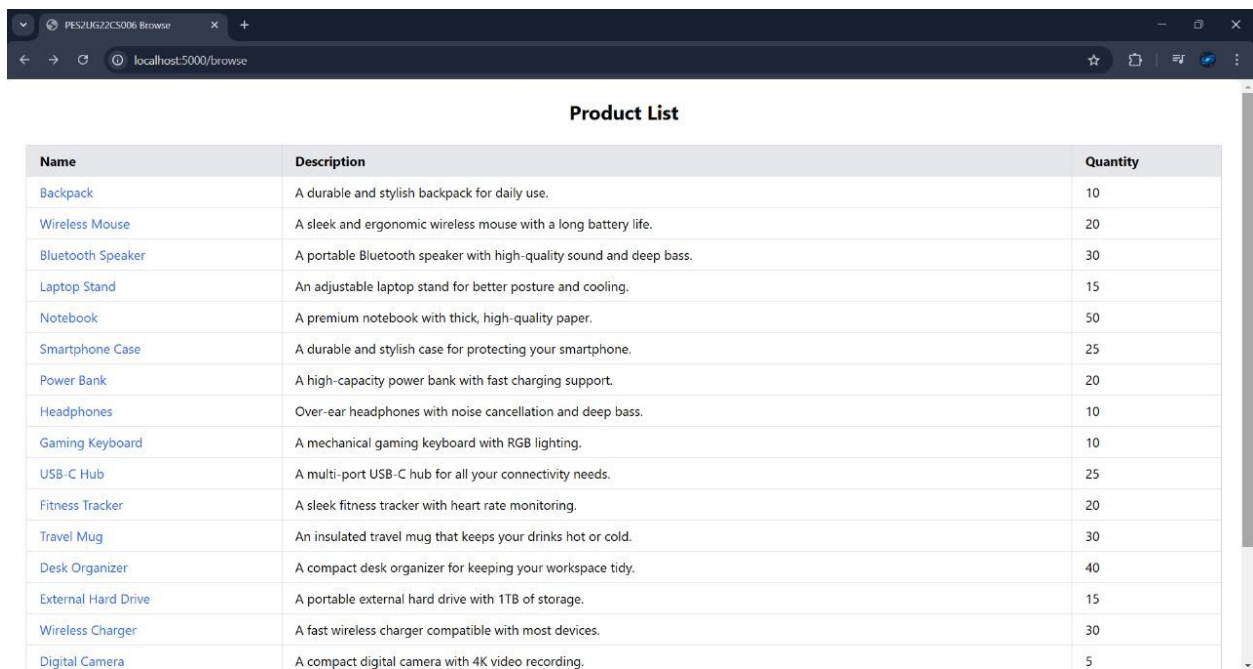
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Section: A

Screenshots:-

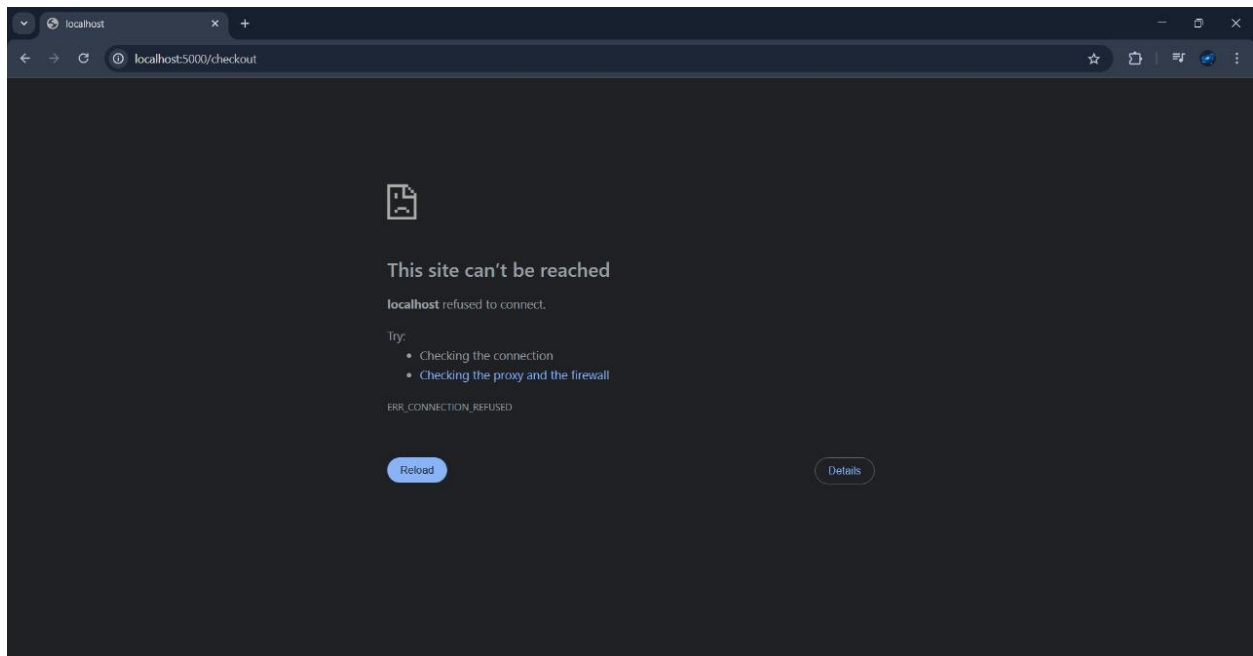
Ss1



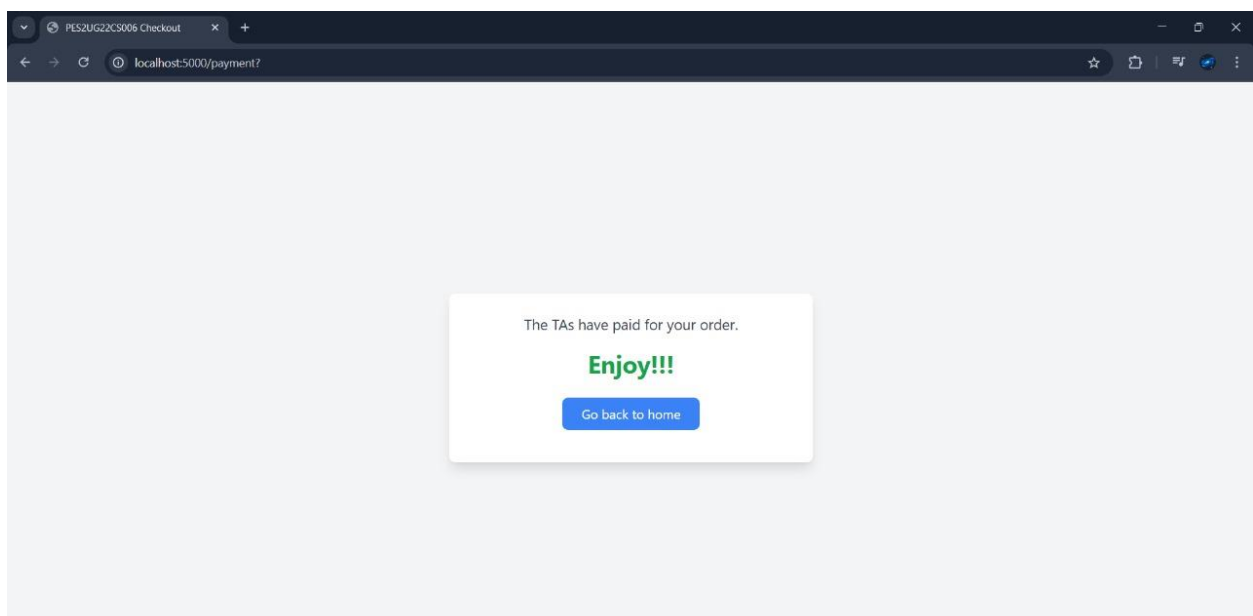
The screenshot shows a web browser window with the address bar displaying 'localhost:5000/browse'. The page title is 'Product List'. Below the title is a table with three columns: 'Name', 'Description', and 'Quantity'. The table contains 15 rows of product information.

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

Ss2



Ss3



Ss4

LOCUST

HOST

http://localhost:5000

STATUS

STOPPED

RPS

0.4

FAILURES

0%

NEW

STATISTICS

CHARTS

FAILURES

EXCEPTIONS

CURRENT RATIO

DOWNLOAD D

III

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)
GET	/checkout	12	0	2101.39	2200	2200	2121.37	2101
Aggregated		12	0	2101.39	2200	2200	2121.37	2101

rate of 1.00 per second
[2025-01-21 15:26:06,873] Aaqiba-PC/INFO/locust.runners: All users spawned: ("checkout": 1) (1 total users)
Traceback (most recent call last):
File "C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PE32UG22CS006\CC_Monolith\.venv\Lib\site-packages\gevent_ffi\loop.py", line 270, in python_check_callback
def python_check_callback(self, watcher_ptr): # pylint:disable=unused-argument
nt

KeyboardInterrupt
2025-01-21T09:57:14Z
[2025-01-21 15:27:14,365] Aaqiba-PC/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Med | req/s failures/s

GET /checkout 12 0(0.00%) | 2121 2101 2160 2101 | 0.41 0.00

Aggregated 12 0(0.00%) | 2121 2101 2160 2101 | 0.41 0.00

Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 99.99% 100% # reqs

GET /checkout 2100 2100 2100 2100 2100 2200 2200 2200 2200 2200 2200 12

Aggregated 2100 2100 2100 2100 2100 2200 2200 2200 2200 2200 2200 12

(.venv) PS C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PE32UG22CS006\CC_Monolith\locust>

Ss5

LOCUST

HOST

http://localhost:5000

STATUS

STOPPED

RPS

0.4

FA

STATISTICS

CHARTS

FAILURES

EXCEPTIONS

CURRENT R

III

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)
GET	/checkout	12	0	2100.83	2200	2200
Aggregated		12	0	2100.83	2200	2200

1-21 15:18:46,919] Aaqiba-PC/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-21 15:18:50,984] Aaqiba-PC/INFO/locust.runners: All users spawned: ("checkout": 1) (1 total users)
Traceback (most recent call last):
File "C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PE32UG22CS006\CC_Monolith\.venv\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
2025-01-21T09:50:14Z
[2025-01-21 15:20:14,199] Aaqiba-PC/INFO/locust.main: Shutting down (exit code 0)
Type Name Avg Min Max Med | req/s failures/s # reqs # fails |

GET /checkout 2140 2100 2165 2100 | 0.40 0.00 12 0(0.00%) |

Aggregated 2140 2100 2165 2100 | 0.40 0.00 12 0(0.00%) |

GET /checkout 2140 2100 2165 2100 | 0.40 0.00 12 0(0.00%) |

Aggregated 2140 2100 2165 2100 | 0.40 0.00 12 0(0.00%) |

Response time percentiles (approximated)
Type Name 75% 80% 90% 95% 98% 99% 99.9% 99.99% 100% # reqs 50% 66%

GET /checkout 2200 2200 2200 2200 2200 2200 2200 2200 2200 12 2100 2200

Aggregated 2200 2200 2200 2200 2200 2200 2200 2200 2200 12 2100 2200

(.venv) PS C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PE32UG22CS006\CC_Monolith\locust>

Ss6

LOCUST

HOST
http://localhost:5000

STATUS
STOPPED

RPS
0.3

FAILURES
0%

NEW

STATISTICS

CHARTS

FAILURES

EXCEPTIONS

CURRENT RATIO

DOWNLOAD D

III

Type	Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)	Max (ms)
GET	/cart	6	0	4100	4100	4100	4069.84	4052	4112
Aggregated		6	0	4100	4100	4100	4069.84	4052	4112

```
(.venv) PS C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PES2022CS006\CC Monolith\locust> locust -f .\get-cart-locustfile.py
[2025-01-21 15:56:12,687] Aaqibs-PC/INFO/locust.main: Starting Locust 2.32.6
[2025-01-21 15:56:12,687] Aaqibs-PC/INFO/locust.main: Starting web interface at http://localhost:8089 (accepting connections from all network interfaces)
[2025-01-21 15:56:15,752] Aaqibs-PC/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-21 15:56:19,852] Aaqibs-PC/INFO/locust.runners: All users spawned: ("add to cart": 1) (1 total users)
Traceback (most recent call last):
  File "C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PES2022CS006\CC Monolith\.venv\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
[2025-01-21 15:56:26,482] Aaqibs-PC/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Med | req/s fa
ilures/s
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /cart 6 0(0.00%) | 4069 4051 4112 4100 | 0.21
0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
21 Aggregated 6 0(0.00%) | 4069 4051 4112 4100 | 0.
0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 9
9.99% 100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /cart 4100 4100 4100 4100 4100 4100 4100 4100 4100
4100 6
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated 4100 4100 4100 4100 4100 4100 4100 4100 4100
4100 6
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
(.venv) PS C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PES2022CS006\CC Monolith\locust>
```

Ss7

LOCUST

HOST
http://localhost:5000

STATUS
STOPPED

RPS
0.3

FAILURES
0%

NEW

RESET

STATISTICS

CHARTS

FAILURES

EXCEPTIONS

CURRENT RATIO

DOWNLOAD D

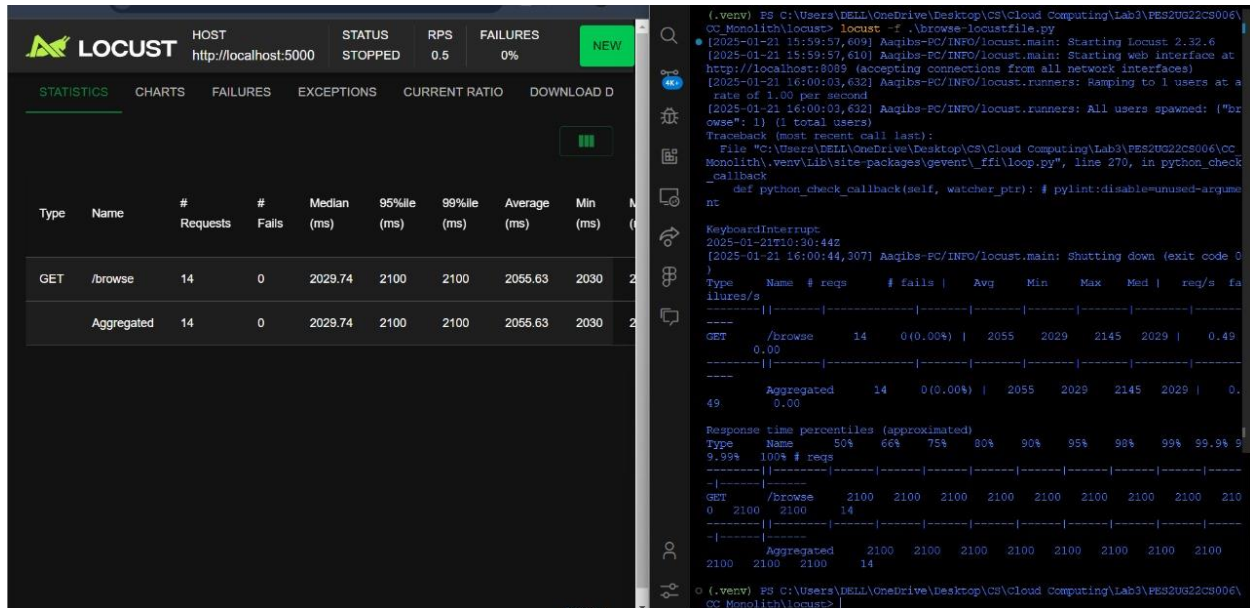
III

Name	# Requests	# Fails	Median (ms)	95%ile (ms)	99%ile (ms)	Average (ms)	Min (ms)	Max (ms)
/cart	6	0	4085.54	4100	4100	4080.39	4075	4086
Aggregated	6	0	4085.54	4100	4100	4080.39	4075	4086

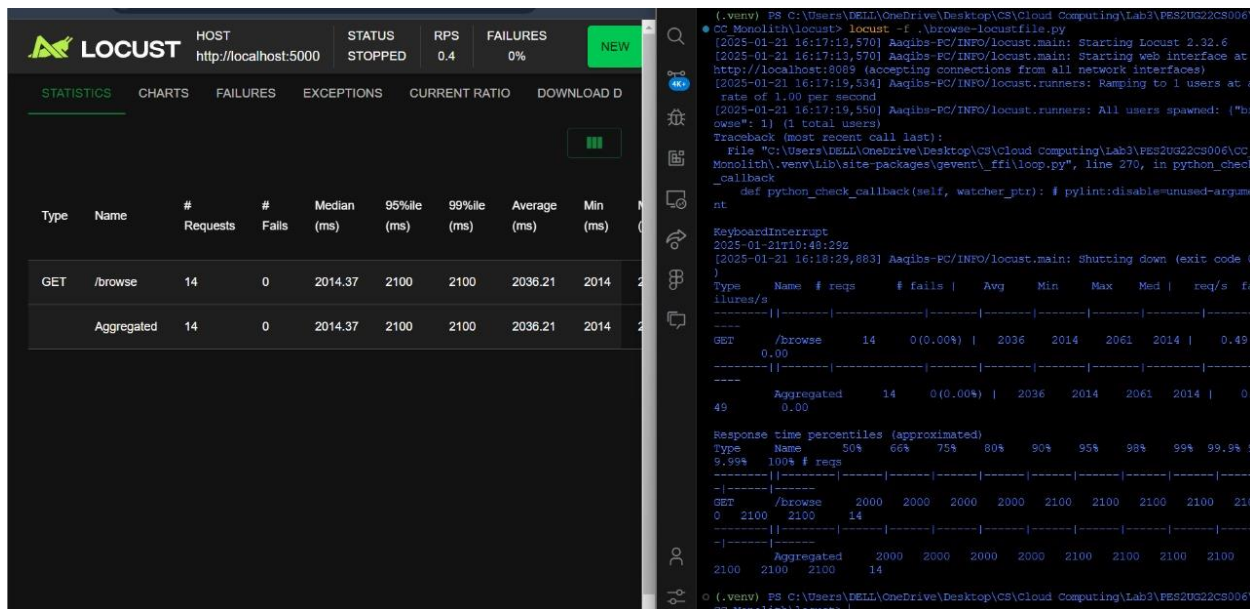
```
CC Monolith\locust> locust -f .\get-cart-locustfile.py
[2025-01-21 15:38:12,142] Aaqibs-PC/INFO/locust.main: Starting Locust 2.32.6
[2025-01-21 15:38:12,143] Aaqibs-PC/INFO/locust.main: Starting web interface at http://localhost:8089 (accepting connections from all network interfaces)
[2025-01-21 15:38:19,891] Aaqibs-PC/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-21 15:38:23,975] Aaqibs-PC/INFO/locust.runners: All users spawned: ("add to cart": 1) (1 total users)
Traceback (most recent call last):
  File "C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PES2022CS006\CC Monolith\.venv\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
[2025-01-21 15:38:53,476] Aaqibs-PC/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Med | req/s fa
ilures/s
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /cart 6 0(0.00%) | 4080 4075 4085 4085 | 0.21
0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
21 Aggregated 6 0(0.00%) | 4080 4075 4085 4085 | 0.
0.00
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 9
9.99% 100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /cart 4100 4100 4100 4100 4100 4100 4100 4100 4100
4100 6
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Aggregated 4100 4100 4100 4100 4100 4100 4100 4100 4100
4100 6
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
(.venv) PS C:\Users\DELL\OneDrive\Desktop\CS\Cloud Computing\Lab3\PES2022CS006\CC Monolith\locust>
```

From the init file, the cursor's fetchall() already returns a list of Row objects, we're just copying the list twice unnecessarily with the temp_cart and final_cart operations. I also eliminated the intermediate items list building step from the dao.py file.

Ss8



Ss9



From the dao.py, I eliminated the unnecessary loop and temporary variable and used list() conversion directly on fetchall() results.