

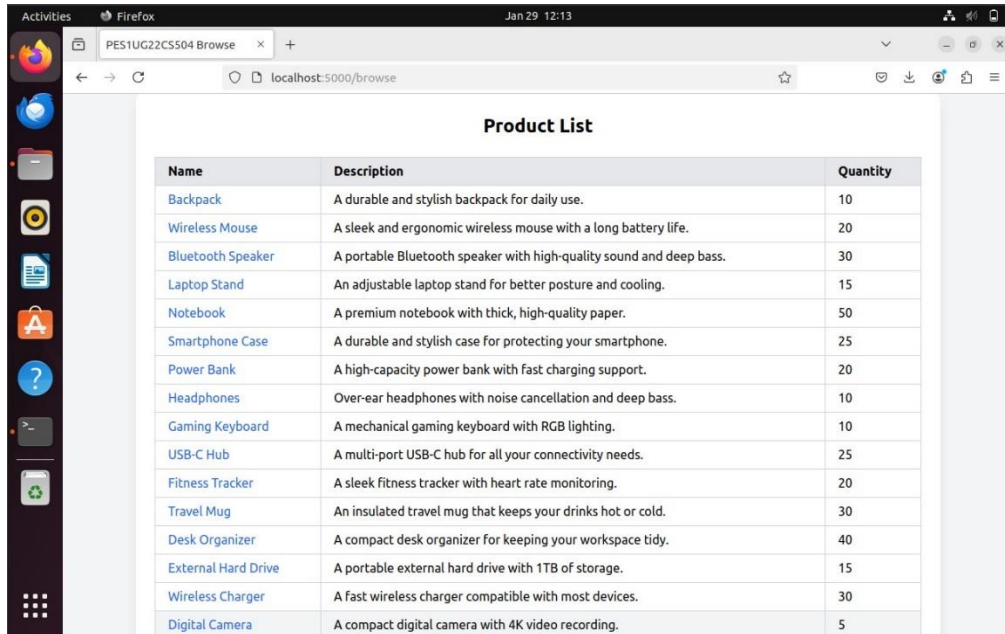
Cloud Computing

Lab 3

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Github link: https://github.com/skullcrushr11/CC_lab3

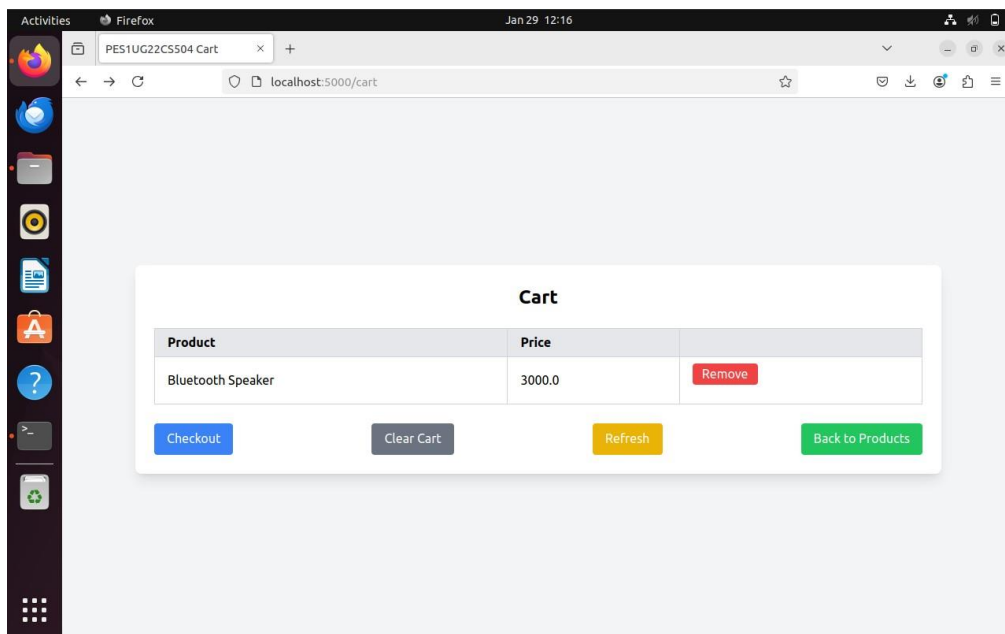
SS1



The screenshot shows a web browser window with the address bar displaying 'localhost:5000/browse'. The page title is 'Product List'. It contains a table with three columns: Name, Description, and Quantity. The table lists 16 products, including Backpack, Wireless Mouse, Bluetooth Speaker, Laptop Stand, Notebook, Smartphone Case, Power Bank, Headphones, Gaming Keyboard, USB-C Hub, Fitness Tracker, Travel Mug, Desk Organizer, External Hard Drive, Wireless Charger, and Digital Camera.

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

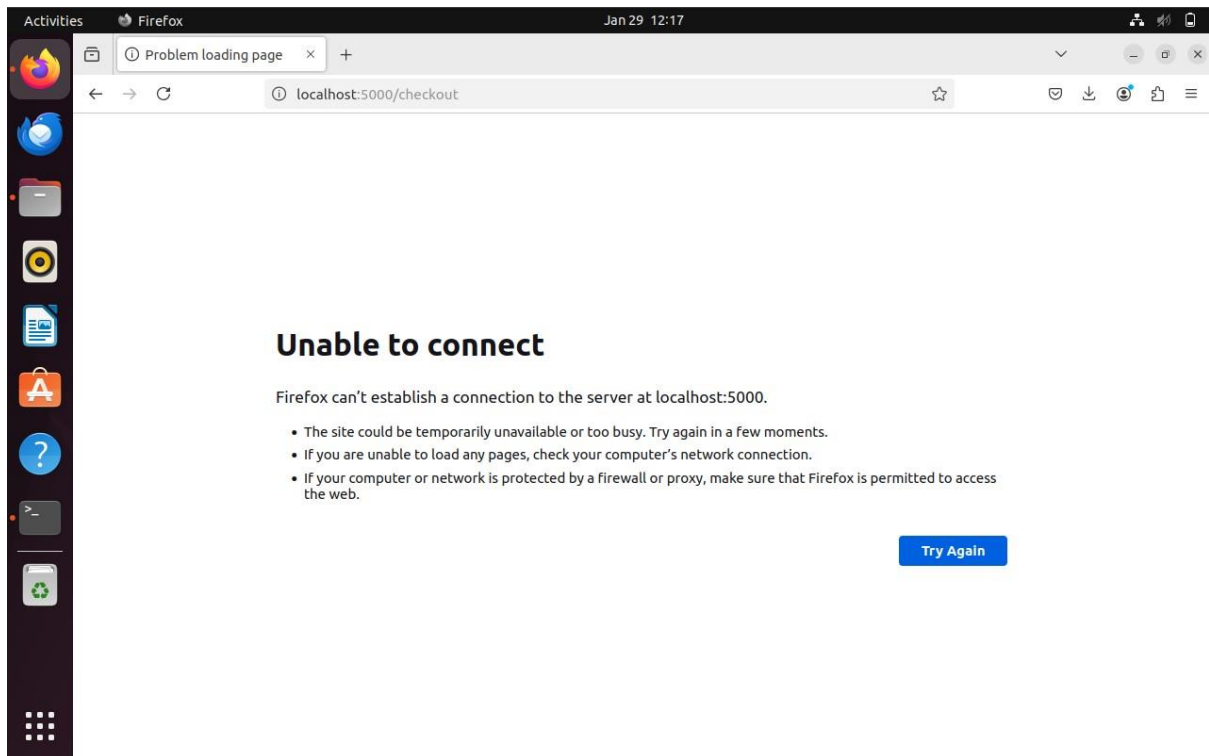
SS2



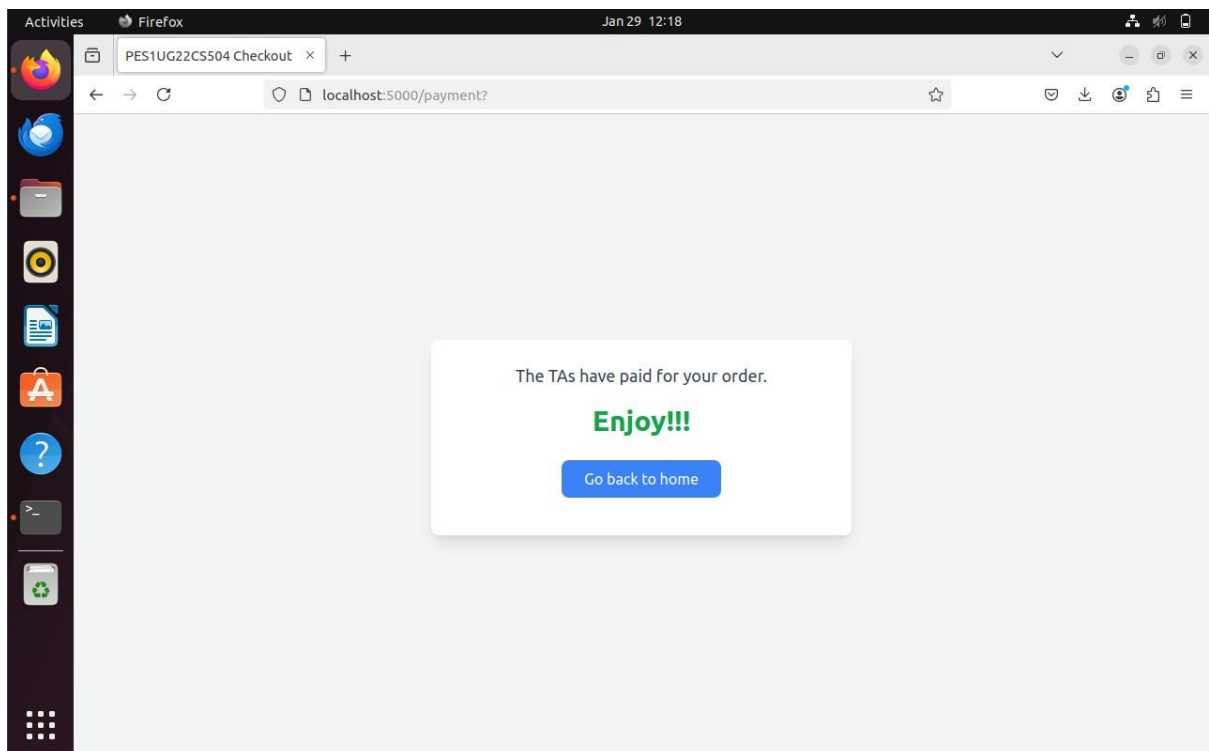
The screenshot shows a web browser window with the address bar displaying 'localhost:5000/cart'. The page title is 'Cart'. It contains a table with two columns: Product and Price. The table lists one product: Bluetooth Speaker with a price of 3000.0. Below the table, there are four buttons: Checkout, Clear Cart, Refresh, and Back to Products.

Product	Price
Bluetooth Speaker	3000.0

Buttons: Checkout, Clear Cart, Refresh, Back to Products



SS3

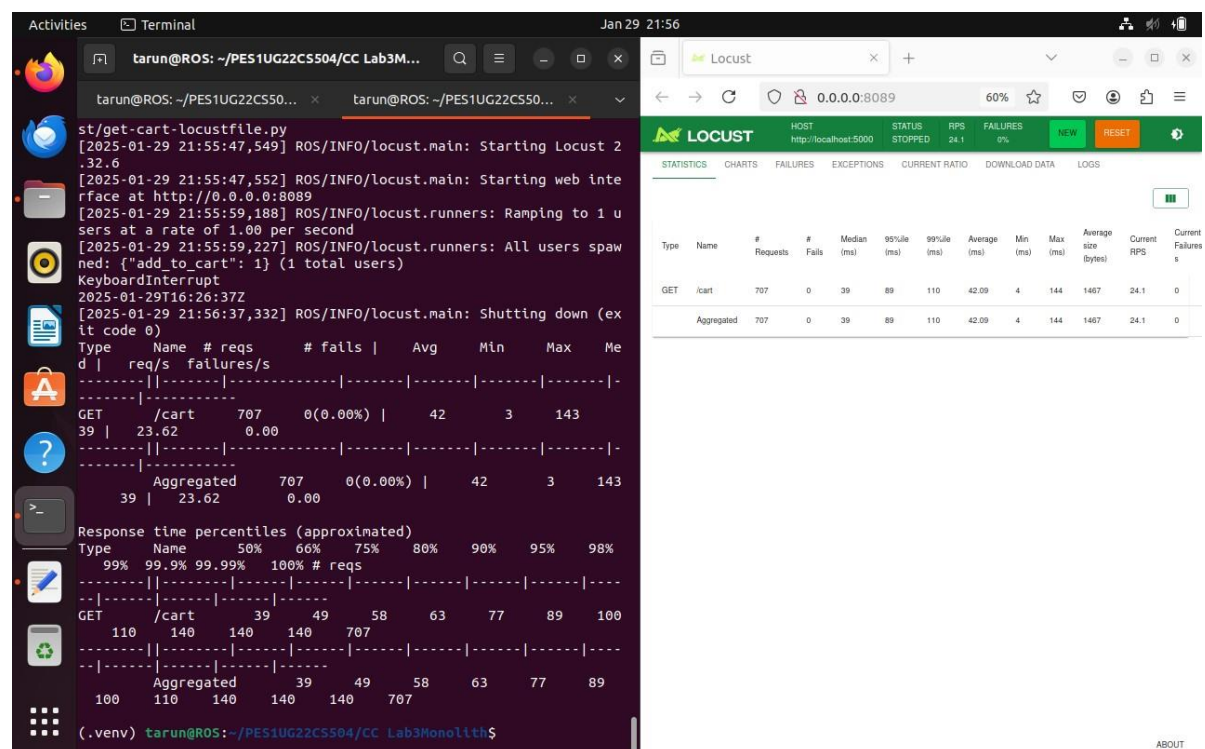



```

tarun@ROS: ~/PES1UG22CS504/CC Lab3M...
tarun@ROS: ~/PES1UG22CS504/CC Lab3M...
st/get-cart-locustfile.py
[2025-01-29 21:47:09,443] ROS/INFO/locust.main: Starting Locust 2.32.6
[2025-01-29 21:47:09,443] ROS/INFO/locust.main: Starting web interface at http://0.0.0.0:8089
[2025-01-29 21:47:17,420] ROS/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-29 21:47:17,616] ROS/INFO/locust.runners: All users spawned: {"add_to_cart": 1} (1 total users)
KeyboardInterrupt
2025-01-29T16:18:01Z
[2025-01-29 21:48:01,503] ROS/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Me
d | req/s failures/s
-----|-----|-----|-----|-----|-----
GET /cart 356 0(0.00%) | 83 5 340
69 | 11.81 0.00
-----|-----|-----|-----|-----|-----
Aggregated 356 0(0.00%) | 83 5 340
69 | 11.81 0.00
-----|-----|-----|-----|-----|-----
Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98%
99% 99.9% 99.99% 100% # reqs
-----|-----|-----|-----|-----|-----|-----
GET /cart 69 90 100 120 180 210 260
320 340 340 340 356
-----|-----|-----|-----|-----|-----
Aggregated 69 90 100 120 180 210
260 320 340 340 340 356
-----|-----|-----|-----|-----|-----
(.venv) tarun@ROS:~/PES1UG22CS504/CC Lab3Monolith$

```

Optimizations made: cart/__init__.py: get_cart() replacing the for loops with the list comprehension and prevent unnecessary variable initialization.



SS8

Terminal Output:

```

st/browse-locustfile.py
[2025-01-29 21:57:23,308] ROS/INFO/locust.main: Starting Locust 2.32.6
[2025-01-29 21:57:23,310] ROS/INFO/locust.main: Starting web interface at http://0.0.0.0:8089
[2025-01-29 21:57:44,640] ROS/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-29 21:57:44,640] ROS/INFO/locust.runners: All users spawned: {"browse": 1} (1 total users)
KeyboardInterrupt
2025-01-29T16:28:37Z
[2025-01-29 21:58:37,994] ROS/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Med | req/s failures/s
-----|-----|-----|-----|-----|-----|
GET /browse 952 0(0.00%) | 31 2 274 22 | 31.74 0.00
Aggregated 952 0(0.00%) | 31 2 274 22 | 31.74 0.00

Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 99.99% 100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /browse 22 32 40 45 64 85 120 170 270 270 270 952
Aggregated 22 32 40 45 64 85 120 170 270 270 270 952

```

Locust 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	Current Failures/s
GET	/browse	952	0	22	85	170	31.22	2	275	9534	38.5	0
Aggregated		952	0	22	85	170	31.22	2	275	9534	38.5	0

SS9

Optimizations made: products/___init___py : list_products() replace for loop with list comprehension and avoid unnecessary variable initialisations.

Terminal Output:

```

st/browse-locustfile.py
[2025-01-29 22:01:02,264] ROS/INFO/locust.main: Starting Locust 2.32.6
[2025-01-29 22:01:02,265] ROS/INFO/locust.main: Starting web interface at http://0.0.0.0:8089
[2025-01-29 22:01:15,947] ROS/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
[2025-01-29 22:01:15,949] ROS/INFO/locust.runners: All users spawned: {"browse": 1} (1 total users)
KeyboardInterrupt
2025-01-29T16:31:56Z
[2025-01-29 22:01:56,892] ROS/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Med | req/s failures/s
-----|-----|-----|-----|-----|-----|
GET /browse 2855 0(0.00%) | 10 2 127 7 | 95.25 0.00
Aggregated 2855 0(0.00%) | 10 2 127 7 | 95.25 0.00

Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 99.99% 100% # reqs
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GET /browse 7 9 11 13 19 28 41 49 83 130 130 2855
Aggregated 7 9 11 13 19 28 41 49 83 130 130 2855

```

Locust 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	Current Failures/s
GET	/browse	2855	0	7	28	49	10.4	2	127	9534	102.7	0
Aggregated		2855	0	7	28	49	10.4	2	127	9534	102.7	0