NINGAPPA B
PES1UG23AM809

MONOLITHIC ARCHITECTURE

LAB – 1

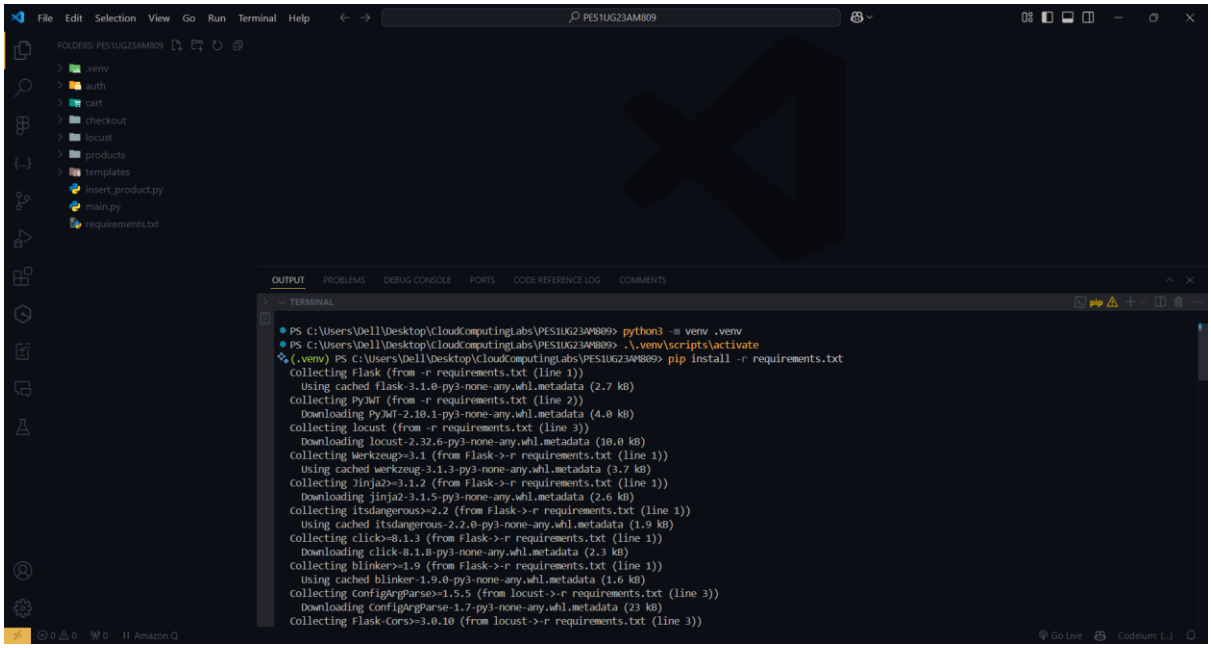
STEP- 1

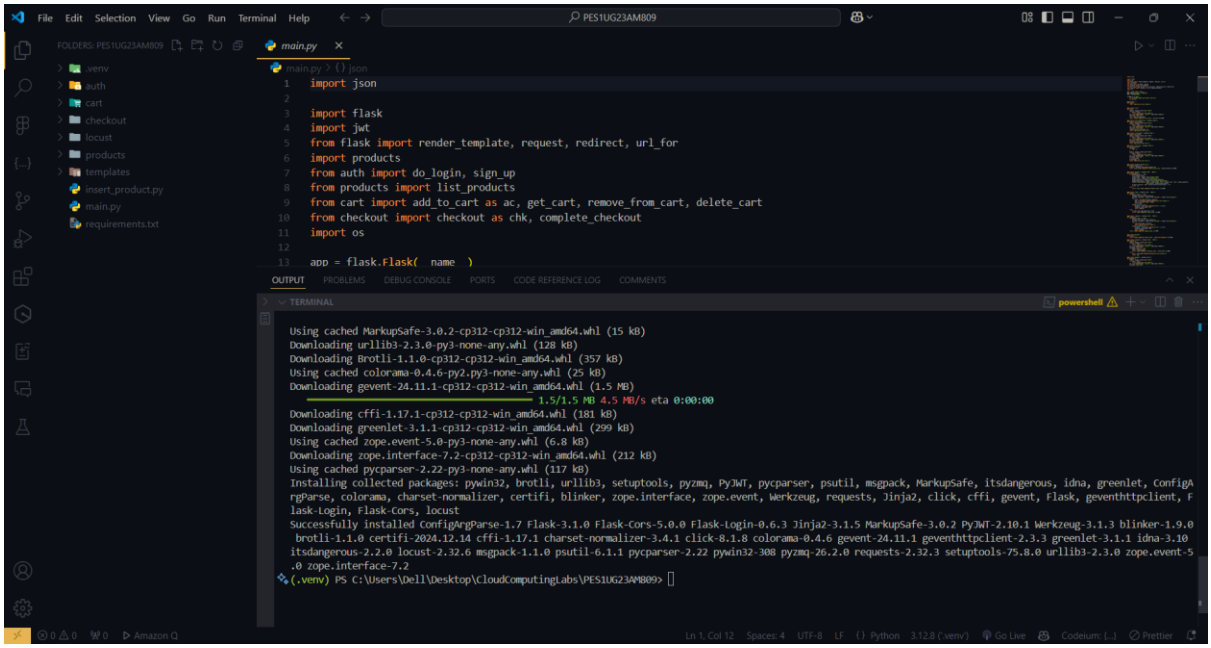
Creating the directory my SRN PES1UG23AM809 and Unzipping the monolithic architecture folder.

STEP – 2 and 3

Now we will run the code

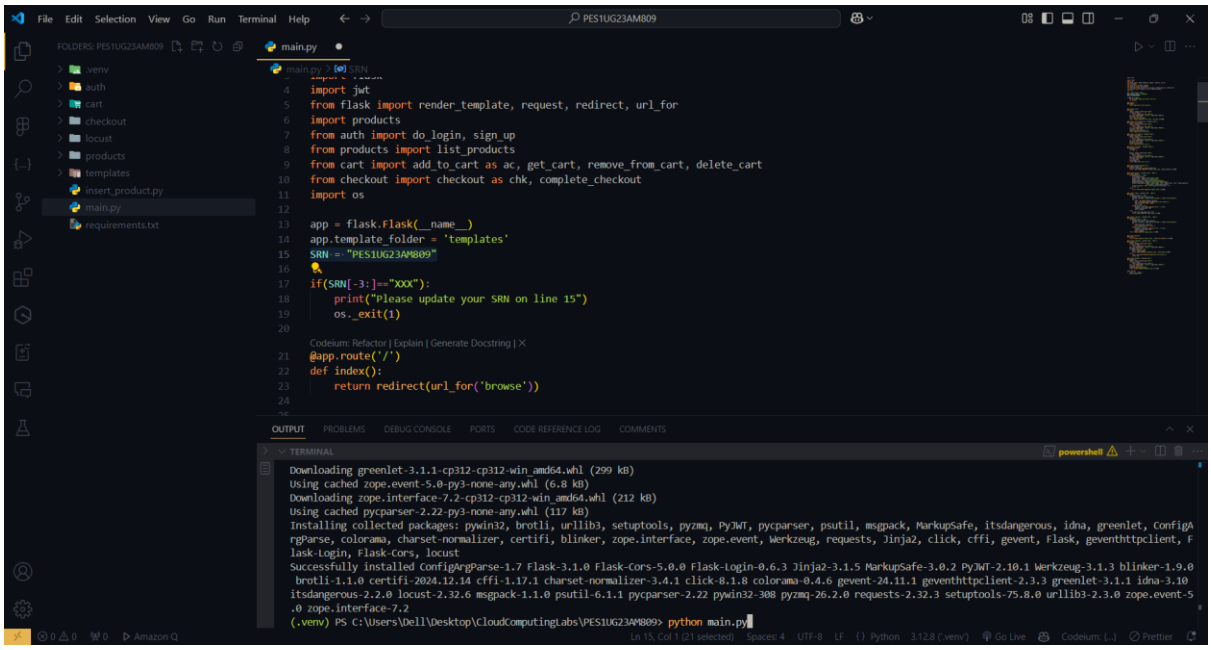
a. We will setup python virtual environment so that there is no collision between module versions
b. In windows





STEP – 4

In main.py I have updated the SRN, on line number 15



STEP – 5

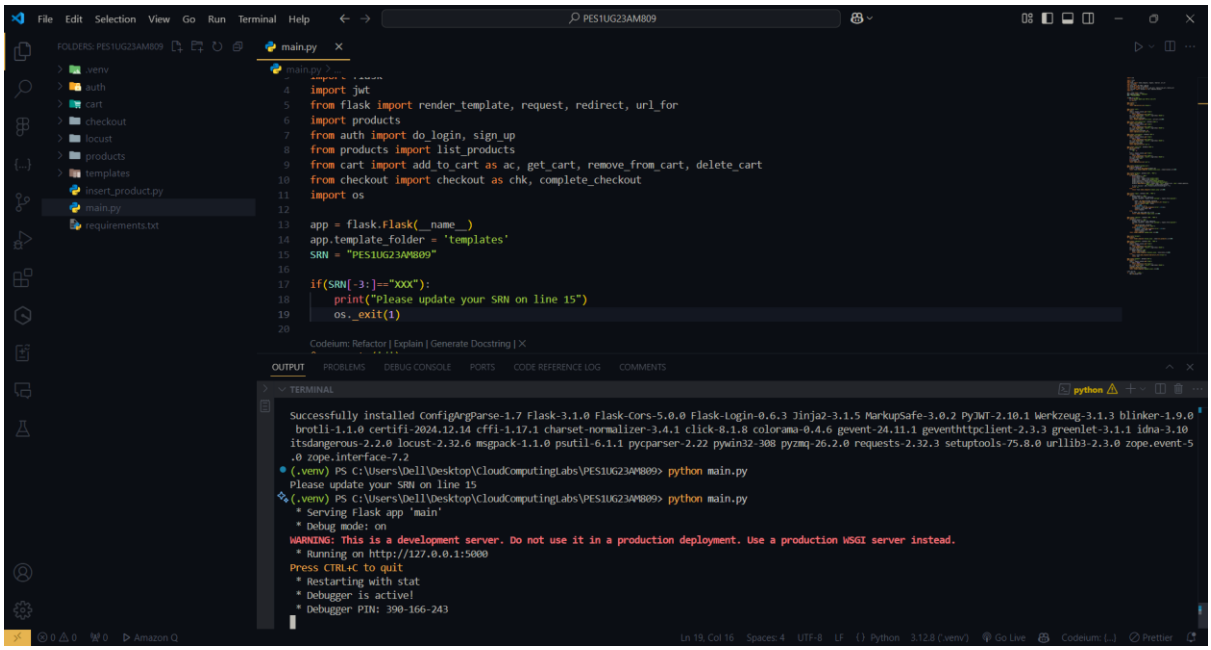
Visit the site (note if localhost didn't work try with 127.0.0.1)

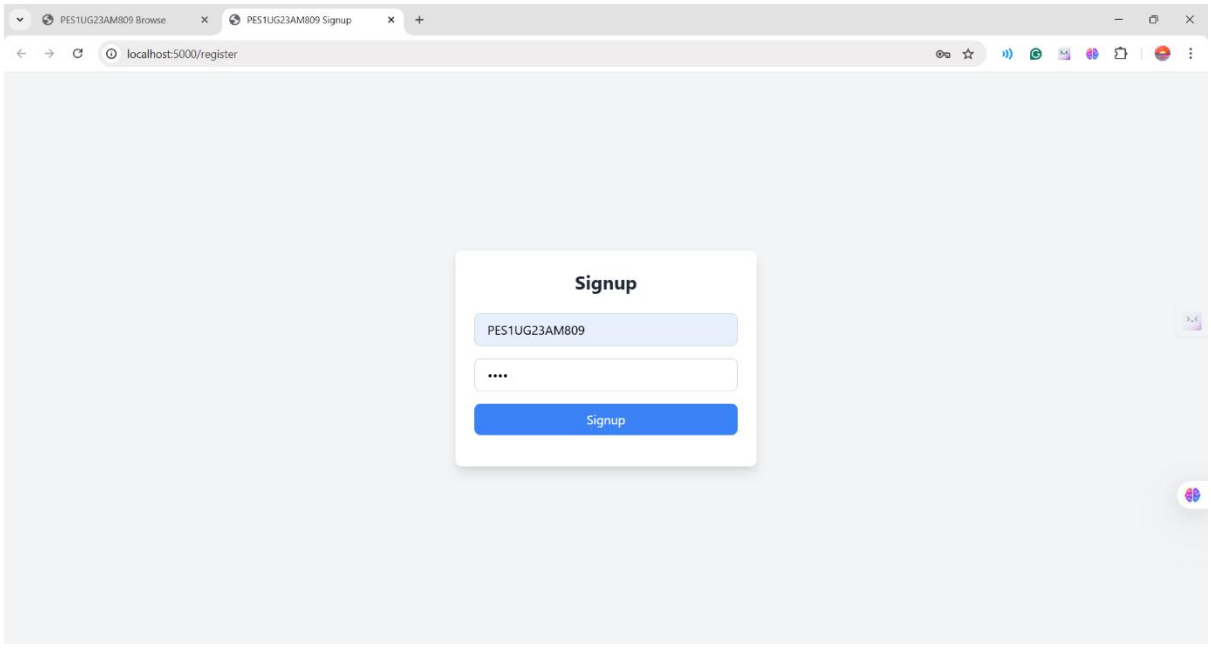
a. http://localhost:5000/register to register a user

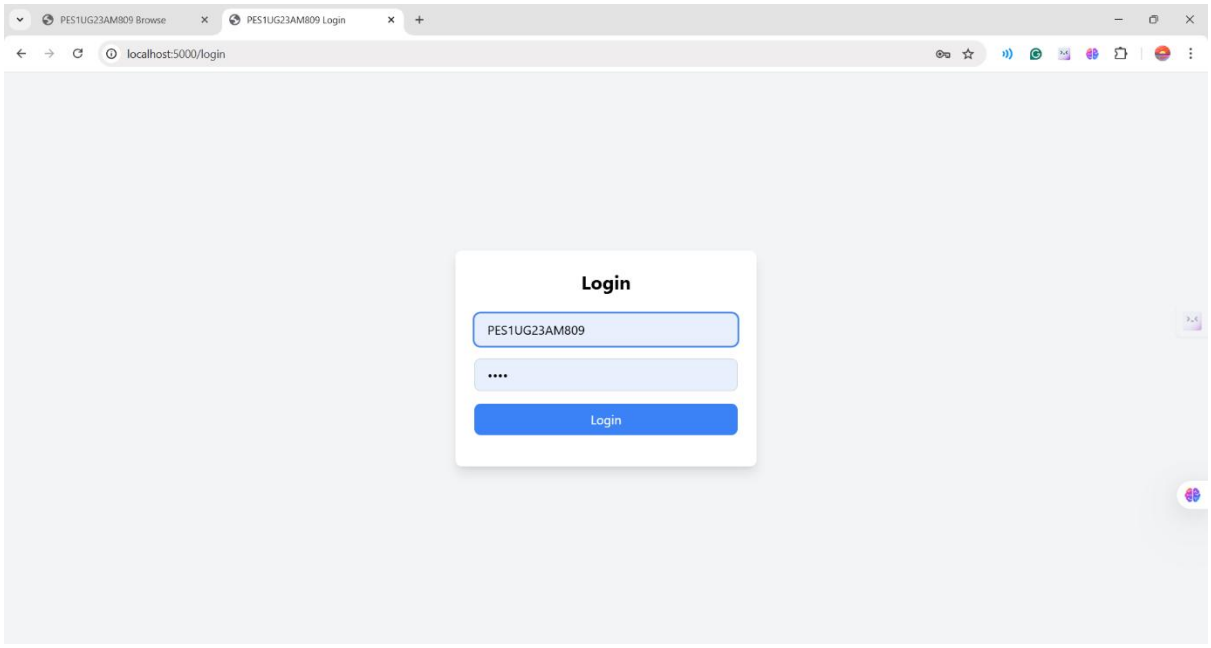
b. http://localhost:5000/login to login

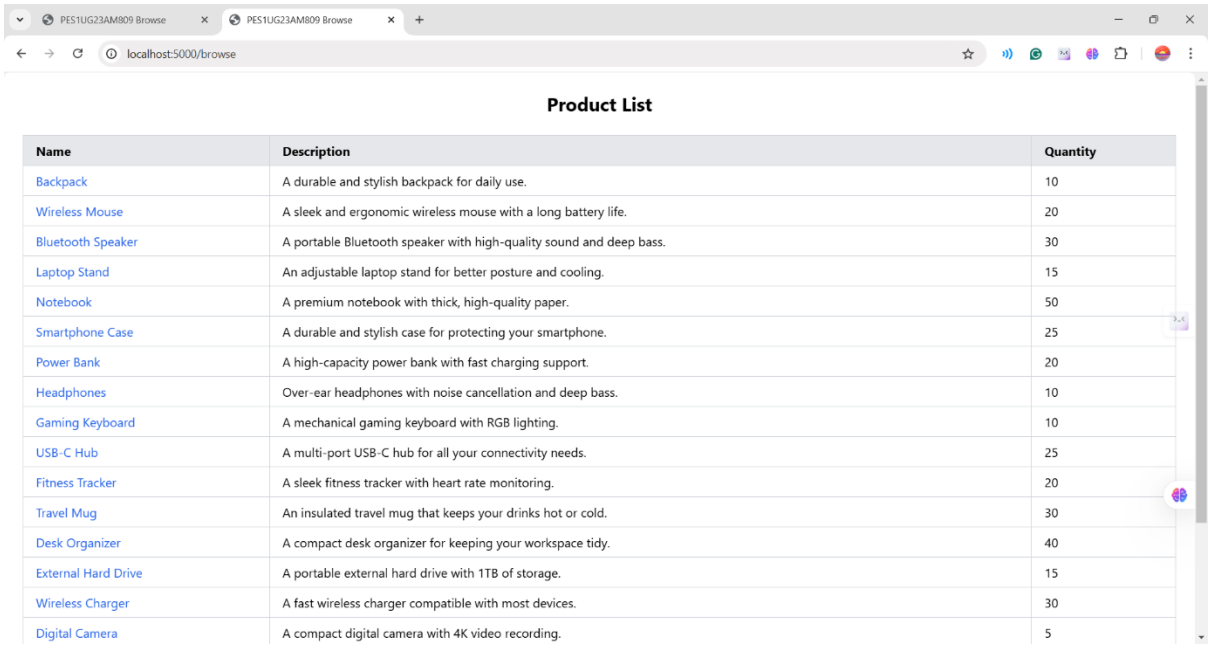
c. http://localhost:5000/browse to browse for stuff

d. When you are done adding to the cart, you can check out. http://localhost:5000/cart





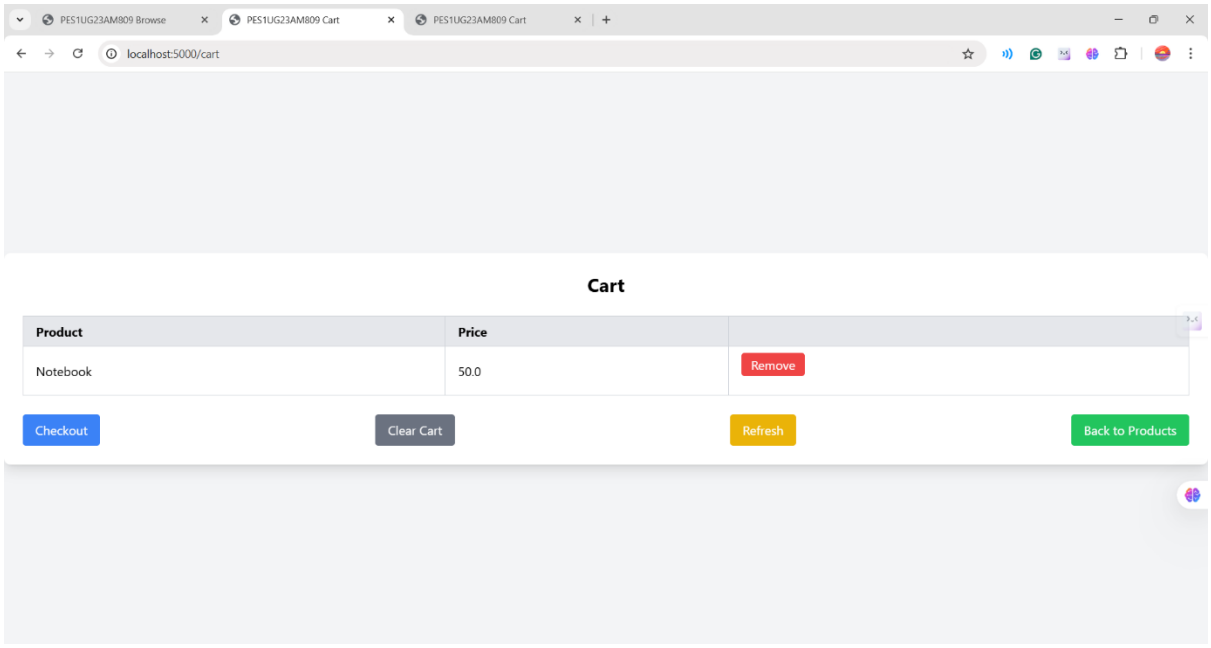


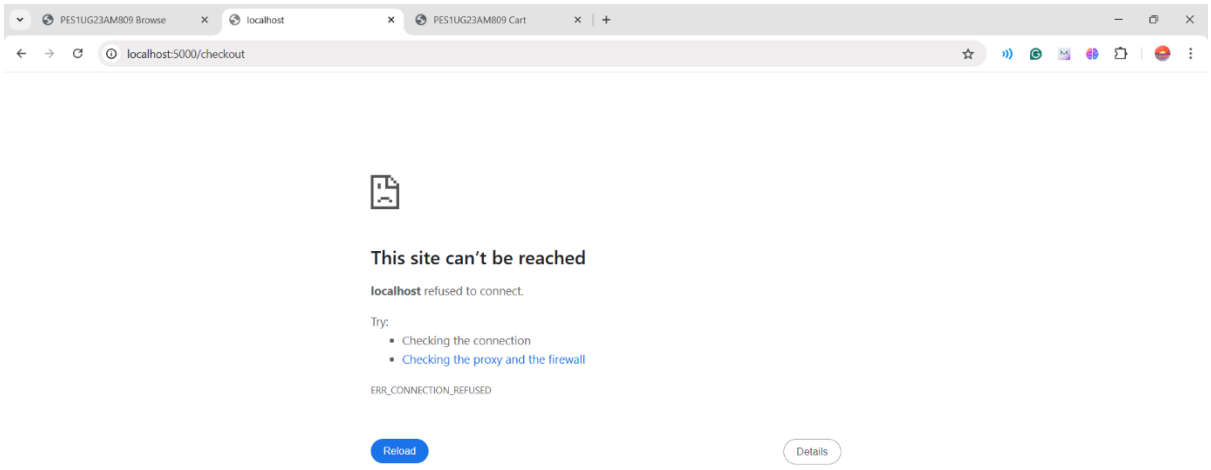


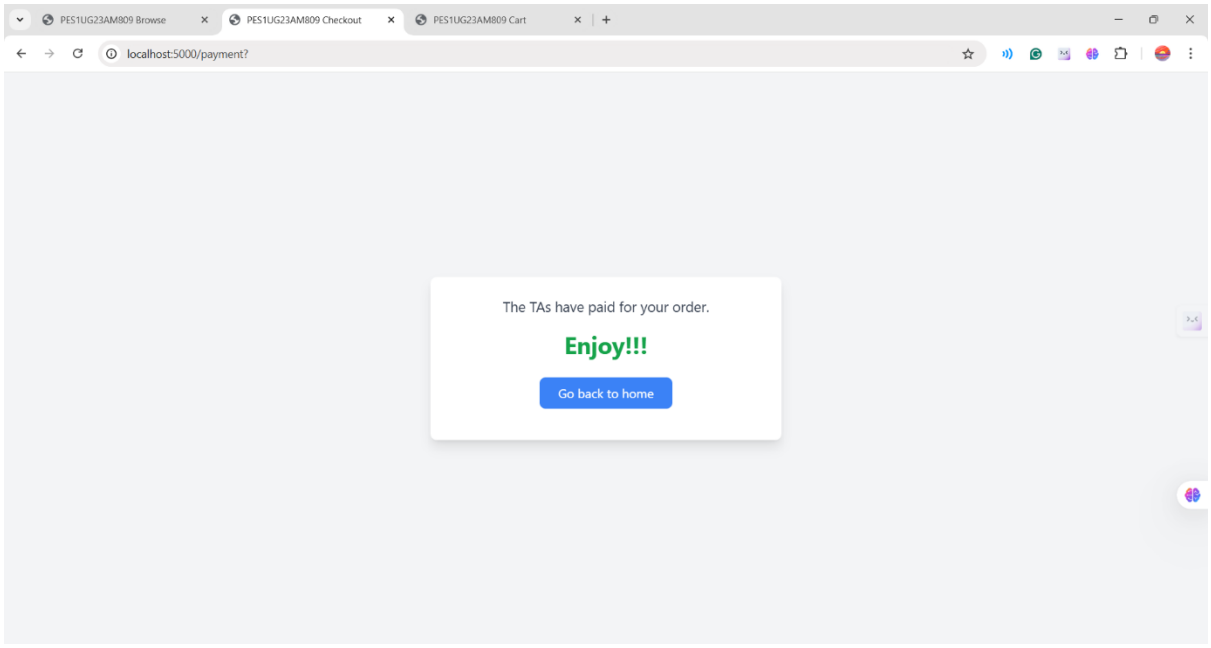
Name	Description	Quantity
Backpack	A durable and stylish backpack for daily use.	10
Wireless Mouse	A sleek and ergonomic wireless mouse with a long battery life.	20
Bluetooth Speaker	A portable Bluetooth speaker with high-quality sound and deep bass.	30
Laptop Stand	An adjustable laptop stand for better 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

STEP – 6

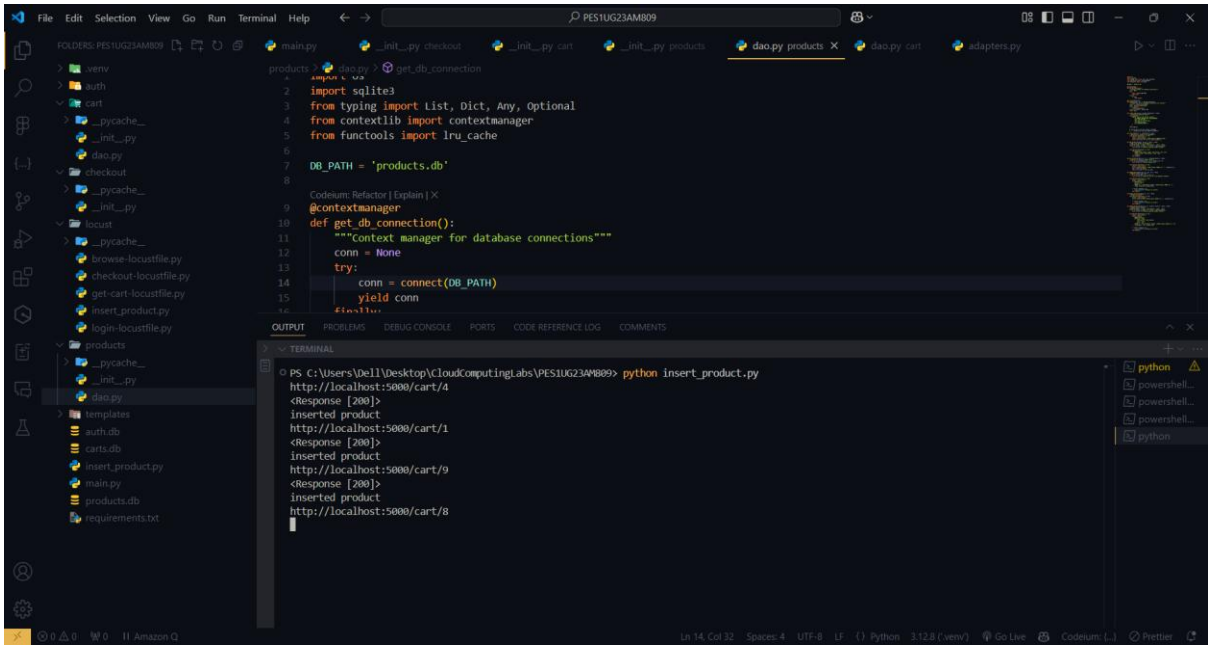
When you are done adding to the cart, you can checkout.
http://localhost:5000/cart

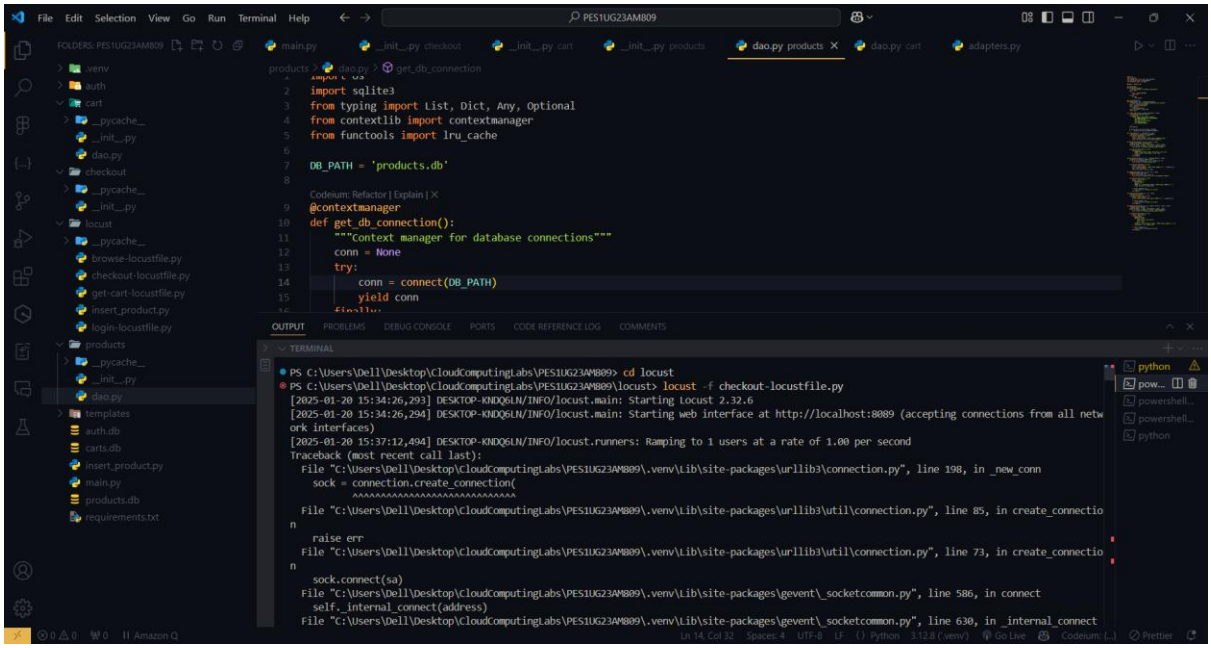

PES1UG23AM809 Browse
PES1UG23AM809 Cart
PES1UG23AM809 Cart
localhost:5000/cart
Cart
Product
Price
Notebook
50.0
Remove
Checkout
Clear Cart
Refresh
Back to Products

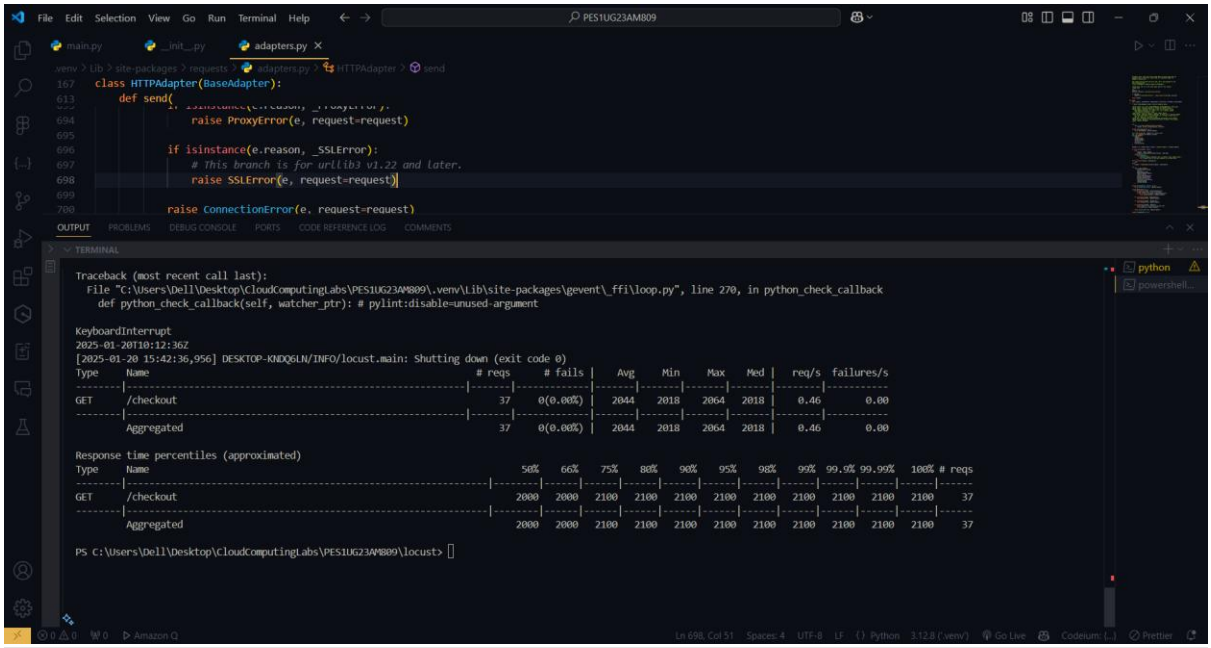

PES1UG23AM809 Browse
localhost
PES1UG23AM809 Cart
localhost:5000/checkout
This site can't be reached
localhost refused to connect.
Try:
Checking the connection
Checking the proxy and the firewall
ERR_CONNECTION_REFUSED
Reload
Details

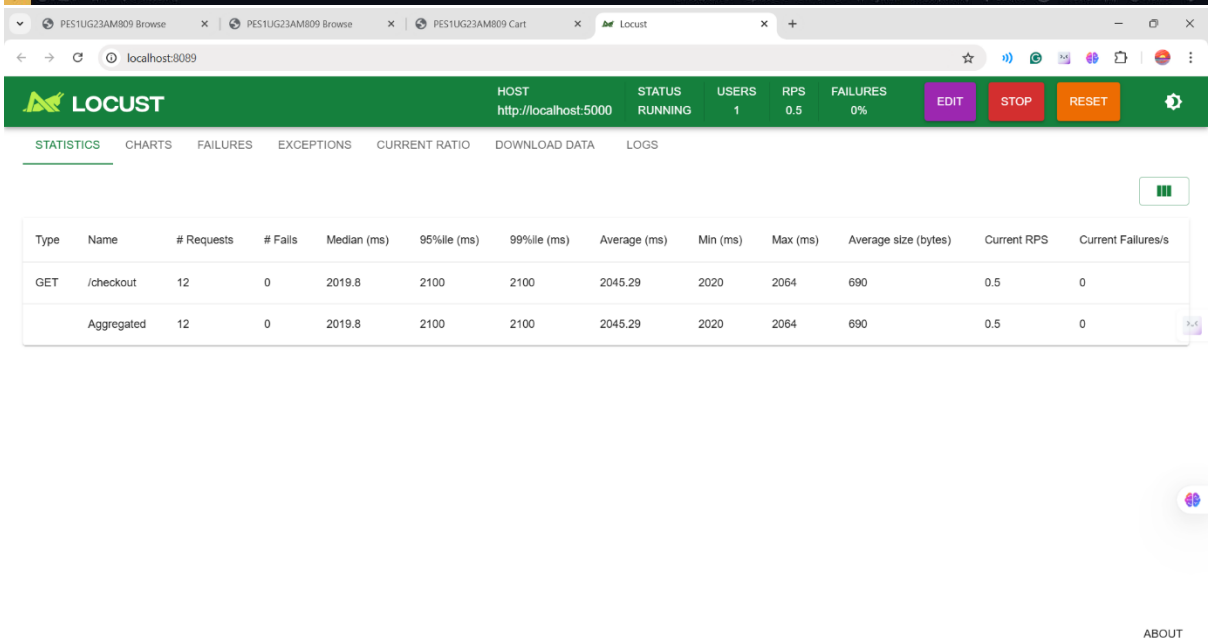


Locust - A load-testing tool, where you can define a test and run it on your endpoints.




File Edit Selection View Go Run Terminal Help
PES1UG23AM809
main.py
dao.py products
dao.py cart
adapters.py
import sqlite3
from typing import List, Dict, Any, Optional
from contextlib import contextmanager
from functools import lru_cache
DB_PATH = 'products.db'
@contextmanager
def get_db_connection():
"""Context manager for database connections"""
conn = None
try:
conn = connect(DB_PATH)
yield conn
OUTPUT PROBLEMS DEBUG CONSOLE PORTS CODE REFERENCE LOG COMMENTS
TERMINAL
PS C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809> cd locust
PS C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\locust> locust -f checkout-locustfile.py
[2025-01-20 15:34:26,293] DESKTOP-KNDQ6LN/INFO/locust.main: Starting Locust 2.32.6
[2025-01-20 15:34:26,294] DESKTOP-KNDQ6LN/INFO/locust.main: Starting web interface at http://localhost:8089 (accepting connections from all netw
ork interfaces)
[2025-01-20 15:37:12,494] DESKTOP-KNDQ6LN/INFO/locust.runners: Ramping to 1 users at a rate of 1.00 per second
Traceback (most recent call last):
File "C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\.venv\Lib\site-packages\urllib3\connection.py", line 198, in _new_conn
sock = connection.create_connection(
File "C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\.venv\Lib\site-packages\urllib3\util\connection.py", line 85, in create_connectio
n
raise err
File "C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\.venv\Lib\site-packages\urllib3\util\connection.py", line 73, in create_connectio
n
sock.connect(sa)
File "C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\.venv\Lib\site-packages\gevent_socketcommon.py", line 586, in connect
self._internal_connect(address)
File "C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\.venv\Lib\site-packages\gevent_socketcommon.py", line 630, in _internal_connect


File Edit Selection View Go Run Terminal Help
PES1UG23AM809
main.py
__init__.py
adapters.py
class HTTPAdapter(BaseAdapter):
def send(
raise ProxyError(e, request=request)
if isinstance(e.reason, _SSLError):
# This branch is for urllib3 v1.22 and later.
raise SSLError(e, request=request)
raise ConnectionError(e, request=request)
OUTPUT PROBLEMS DEBUG CONSOLE PORTS CODE REFERENCE LOG COMMENTS
TERMINAL
Traceback (most recent call last):
File "C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\.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
2025-01-20T10:12:36Z
[2025-01-20 15:42:36,956] DESKTOP-KNDQ6LN/INFO/locust.main: Shutting down (exit code 0)
Type Name # reqs # fails | Avg Min Max Med | req/s failures/s
GET /checkout 37 0(0.00%) | 2044 2018 2064 2018 | 0.46 0.00
Aggregated 37 0(0.00%) | 2044 2018 2064 2018 | 0.46 0.00
Response time percentiles (approximated)
Type Name 50% 66% 75% 80% 90% 95% 98% 99% 99.9% 99.99% 100% # reqs
GET /checkout 2000 2000 2100 2100 2100 2100 2100 2100 2100 2100 2100 37
Aggregated 2000 2000 2100 2100 2100 2100 2100 2100 2100 2100 2100 37
PS C:\Users\Dell\Desktop\CloudComputingLabs\PES1UG23AM809\locust>


PES1UG23AM809 Browse
PES1UG23AM809 Browse
PES1UG23AM809 Cart
Locust
localhost:8089
LOCUST
HOST
http://localhost:5000
STATUS
RUNNING
USERS
1
RPS
0.5
FAILURES
0%
EDIT
STOP
RESET
STATISTICS
CHARTS
FAILURES
EXCEPTIONS
CURRENT RATIO
DOWNLOAD DATA
LOGS
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 12 0 2019.8 2100 2100 2045.29 2020 2064 690 0.5 0
Aggregated 12 0 2019.8 2100 2100 2045.29 2020 2064 690 0.5 0
ABOUT

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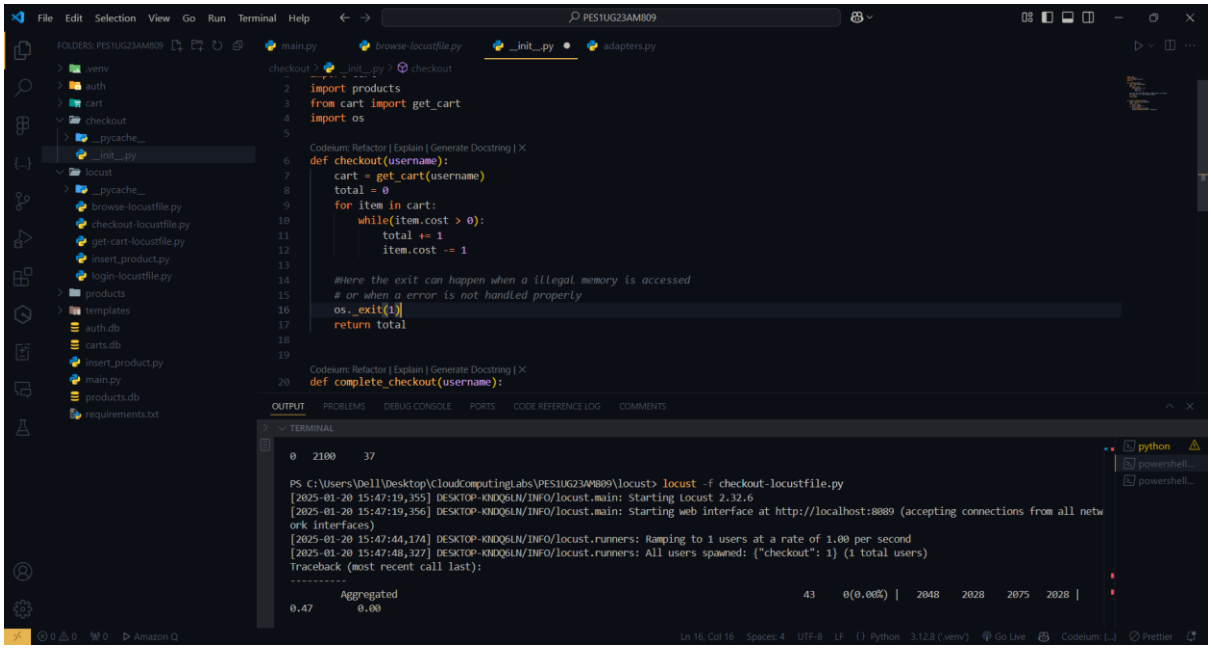
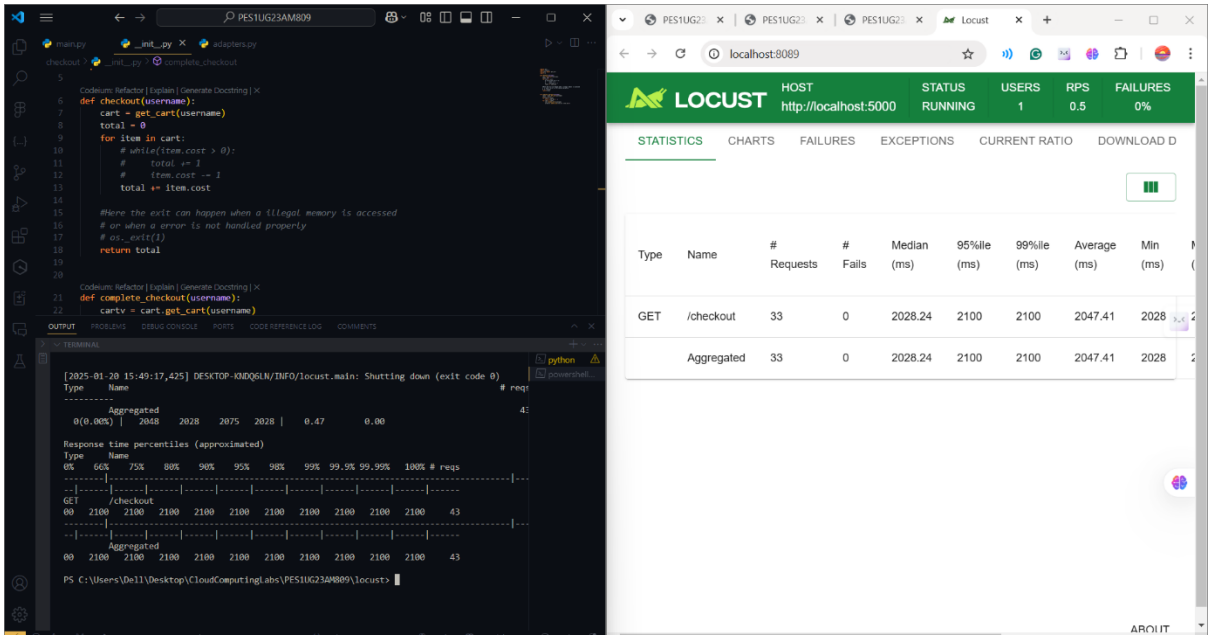
Optimise the route /checkout

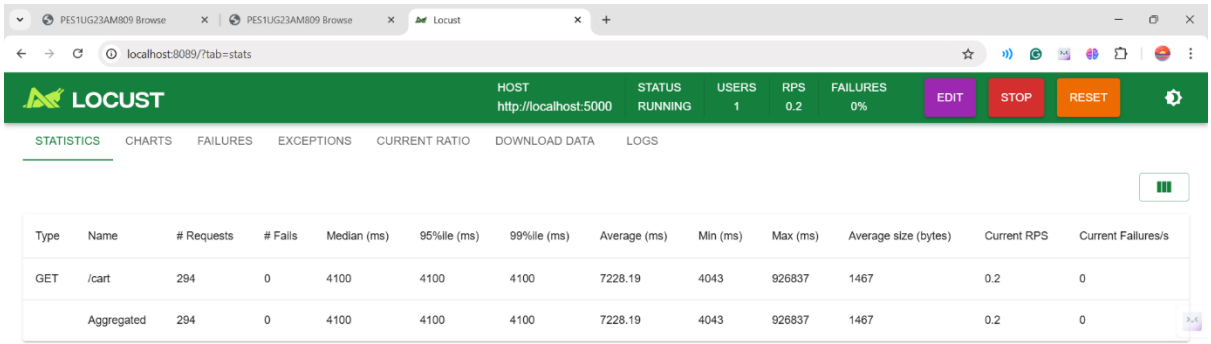


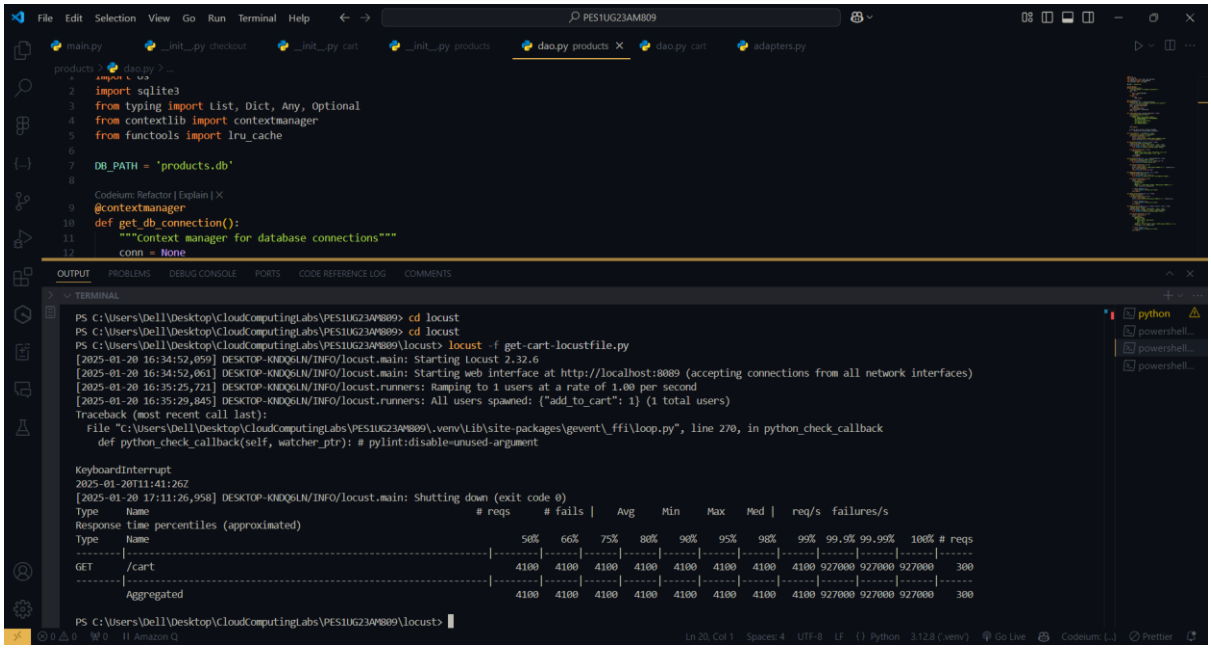


STEP - 7

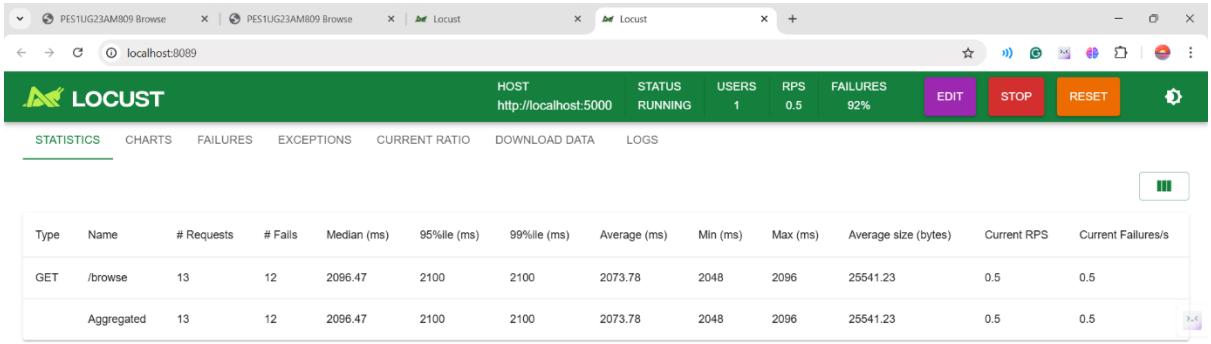
Optimizing **the browse and cart locust files** from the **cart/** and **products/** folder.

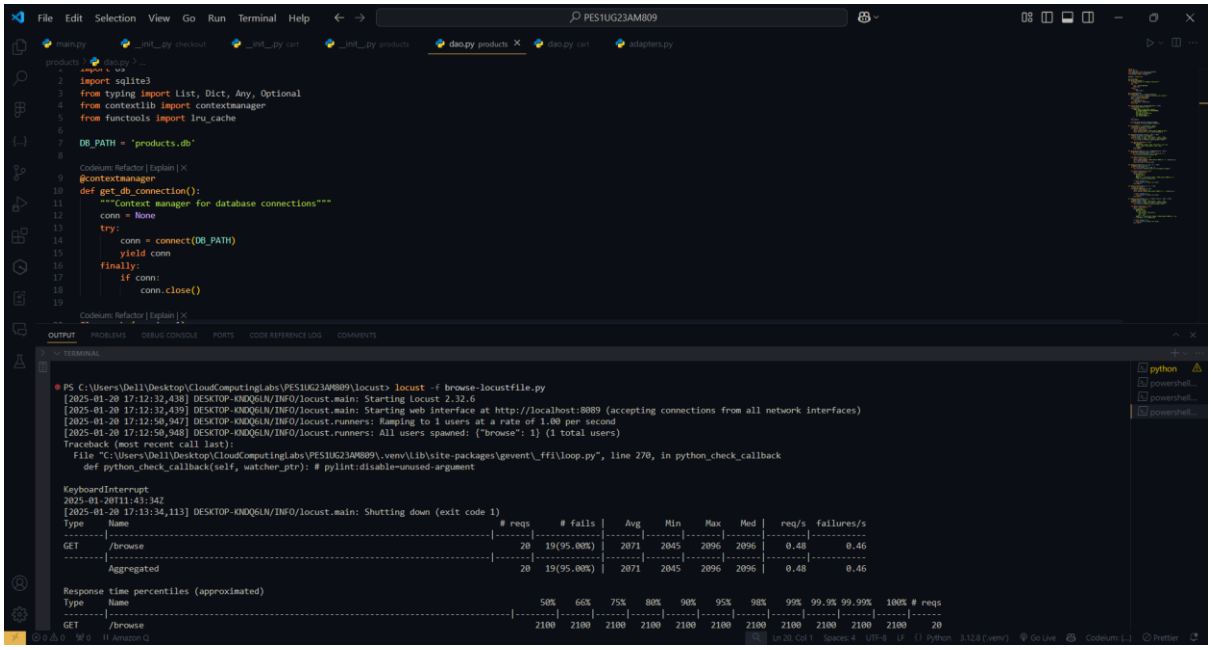
/cart/__init__.py





/products/__init__.py





STEP – 8

GitHub Link to the Optimized code and folder of the Monolithic Architecture

Link :
git@github.com:tgo460/PES1UG23AM809_CC_MONOLITHIC_ARC_LAB3_.git