Assignment

Tasks to be completed are as follows:

1. Setup AI Coding Tool:

- Install and configure GitHub Copilot or Kite with VS Code or JetBrains IDE.
- Enable real-time code suggestions.

2. Class Design Using AI Assistance:

- Begin defining a `Product` class with attributes: **name, price, quantity**.
- Use the AI suggestion feature to automatically complete the `__init__()` method.
- Add a method `calculate_value()` to return **price × quantity**.

3. Create Another Class:

- Define a `Warehouse` class with a list of `Product` objects.
- Use code suggestions to help implement:
  - A method to add a product.
  - A method to display the total value of all products.

4. Reflection:

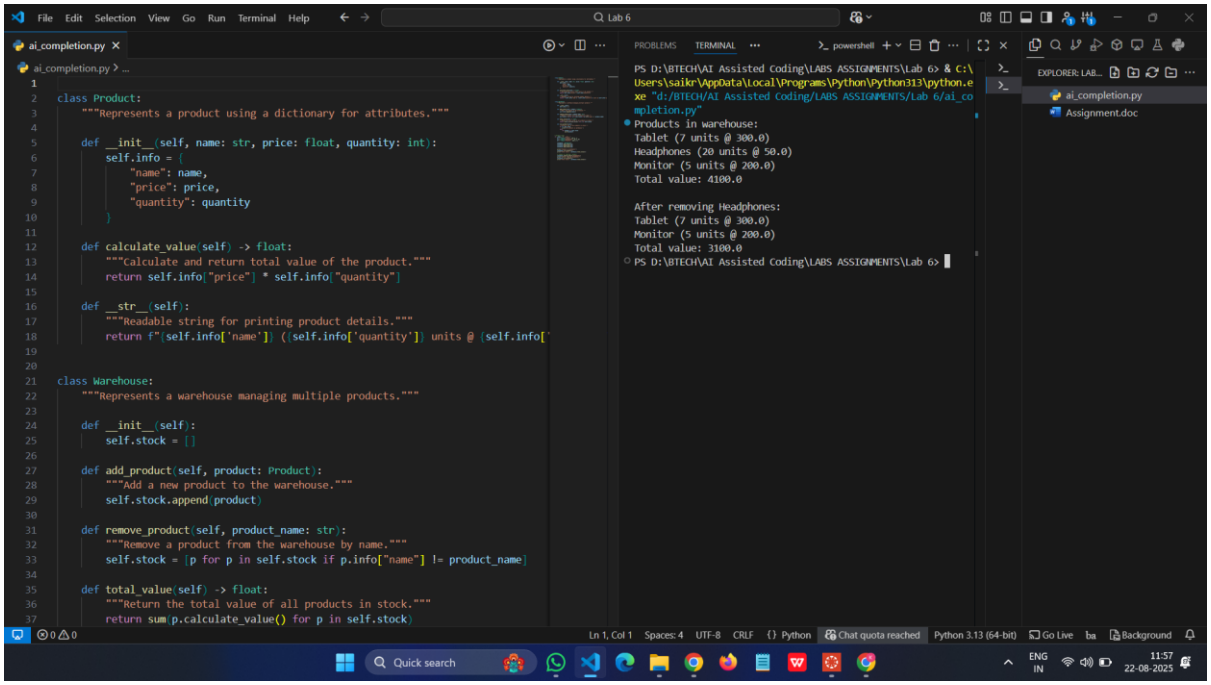
- Identify how much of the code was completed by AI and what manual edits were needed.
- Comment on the relevance and accuracy of AI suggestions.

5. Presentation:

- VS Code with GitHub Copilot or Cursor API and/or Google Colab with Gemini.

Deliverables:

1. Python script with both classes and comments on AI-generated suggestions.
2. Short report (1 page) summarizing your experience with AI code completion.


File Edit Selection View Go Run Terminal Help
Lab 6
ai_completion.py
class Product:
"""Represents a product using a dictionary for attributes."""
def __init__(self, name: str, price: float, quantity: int):
self.info = {
"name": name,
"price": price,
"quantity": quantity
}
def calculate_value(self) -> float:
"""Calculate and return total value of the product."""
return self.info["price"] * self.info["quantity"]
def __str__(self):
"""Readable string for printing product details."""
return f"{self.info['name']} ({self.info['quantity']} units @ {self.info[
class Warehouse:
"""Represents a warehouse managing multiple products."""
def __init__(self):
self.stock = []
def add_product(self, product: Product):
"""Add a new product to the warehouse."""
self.stock.append(product)
def remove_product(self, product_name: str):
"""Remove a product from the warehouse by name."""
self.stock = [p for p in self.stock if p.info["name"] != product_name]
def total_value(self) -> float:
"""Return the total value of all products in stock."""
return sum(p.calculate_value() for p in self.stock)
PROBLEMS TERMINAL
powershell
PS D:\BTECH\AI Assisted Coding\LABS ASSIGNMENTS\Lab 6> & C:\Users\saikr\AppData\Local\Programs\Python\Python313\python.exe "d:/BTECH/AI Assisted Coding/LABS ASSIGNMENTS/Lab 6/ai_completion.py"
Products in warehouse:
Tablet (7 units @ 300.0)
Headphones (20 units @ 50.0)
Monitor (5 units @ 200.0)
Total value: 4100.0
After removing Headphones:
Tablet (7 units @ 300.0)
Monitor (5 units @ 200.0)
Total value: 3100.0
PS D:\BTECH\AI Assisted Coding\LABS ASSIGNMENTS\Lab 6>
EXPLORER: LAB...
ai_completion.py
Assignment.doc
Ln 1, Col 1
Spaces: 4
UTF-8
CRLF
Python
Chat quota reached
Python 3.13 (64-bit)
Go Live
Background
Quick search
ENG
IN
11:57
22-08-2025