AI ASSISTED CODING LAB TEST– 1

SET C

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Batch :18

Question :

2. . (2 Marks) Given a list of books with their genres, write a Python function that recommends books based on a user's preferred genre. Use the Cursor AI tool. Use few shot prompting.

Prompt:

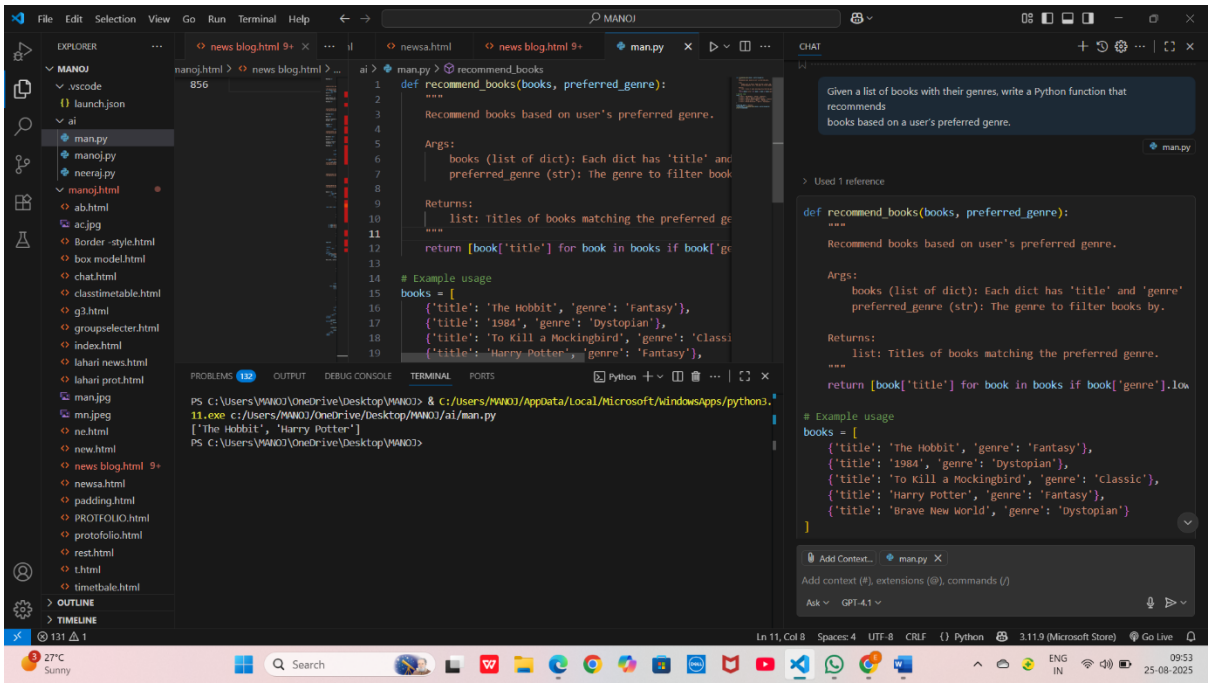
Given a list of books with their genres, write a Python function that recommends books based on a user's preferred genre

Code :

```
def recommend_books(books, preferred_genre):
    """
    Recommend books based on user's preferred genre.

    Args:
        books (list of dict): Each dict has 'title' and 'genre' keys.
        preferred_genre (str): The genre to filter books by.

    Returns:
        list: Titles of books matching the preferred genre.
    """
    return [book['title'] for book in books if book['genre'].lower() ==
preferred_genre.lower()]

# Example usage
books = [
    {'title': 'The Hobbit', 'genre': 'Fantasy'},
    {'title': '1984', 'genre': 'Dystopian'},
    {'title': 'To Kill a Mockingbird', 'genre': 'Classic'},
    {'title': 'Harry Potter', 'genre': 'Fantasy'},
    {'title': 'Brave New World', 'genre': 'Dystopian'}
```

```
]

preferred_genre = 'Fantasy'
recommended = recommend_books(books, preferred_genre)
print(recommended)
```

output :



Question:

3. (2 Marks) Write a Python program that generates all prime numbers between start and end (both inclusive) entered by the user. Use GitHub Copilot along with VS Code. Use few shot prompting

Prompt :

Write a Python program that generates all prime numbers between start and end (both inclusive) entered by the user.

Code:

```
def is_prime(n):
    if n < 2:
        return False
    for i in range(2, int(n**0.5) + 1):
        if n % i == 0:
```

```
            return False
    return True

start = int(input("Enter start value: "))
end = int(input("Enter end value: "))

primes = [num for num in range(start, end + 1) if is_prime(num)]
print("Prime numbers between", start, "and", end, "are:", primes)
```

output :