**DBMS LAB PROJECT**

**ONLINE INVENTORY SYSTEM**

**KEY MILESTONE 03**



## CSE403L Database Management System Lab

Group members

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Class Section: **A**

“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”

Student Signature:

Submitted to:

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(JUNE 02, 2025)

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**Tables and Metadata**

1. **users**

* **Primary Key**: id
* **Attributes**: name, email, username, password, photo
* **Purpose**: Stores system user data (admin/staff)

2. **suppliers**

* **Primary Key**: id
* **Attributes**: name, email, phone, address, shopname, type, bank\_name, account\_holder, account\_number, photo
* **Purpose**: Stores supplier details

3. **customers**

* **Primary Key**: id
* **Attributes**: name, email, phone, address, type, bank\_name, account\_holder, account\_number, photo
* **Purpose**: Stores customer information

4. **categories**

* **Primary Key**: id
* **Attributes**: category\_name
* **Purpose**: Defines product categories

5. **units**

* **Primary Key**: id
* **Attributes**: unit\_name
* **Purpose**: Defines measurement units (e.g., kg, pcs)

6. **products**

* **Primary Key**: id
* **Foreign Keys**: category\_id → categories(id), unit\_id → units(id)
* **Attributes**: product\_name, product\_code, buying\_price, selling\_price, stock, product\_image
* **Purpose**: Stores product details

7. **purchases**

* **Primary Key**: id
* **Foreign Keys**: supplier\_id → suppliers(id), created\_by → users(id), updated\_by → users(id)
* **Attributes**: purchase\_date, purchase\_no, purchase\_status
* **Purpose**: Records purchase transactions

8. **purchase\_details**

* **Primary Key**: (purchase\_id, product\_id)
* **Foreign Keys**: purchase\_id → purchases(id), product\_id → products(id)
* **Attributes**: quantity, unitcost, total
* **Purpose**: Stores line items of each purchase

9. **orders**

* **Primary Key**: id
* **Foreign Key**: customer\_id → customers(id)
* **Attributes**: order\_date, order\_status, total\_products, sub\_total, vat, total, invoice\_no, payment\_type, pay\_int, due\_int
* **Purpose**: Stores customer orders

10. **order\_details**

* **Primary Key**: (order\_id, product\_id)
* **Foreign Keys**: order\_id → orders(id), product\_id → products(id)
* **Attributes**: quantity, unitcost, total
* **Purpose**: Stores line items of each order

**Queries**

1. **Products with category and unit**

SELECT p.product\_name, c.category\_name, u.unit\_name

FROM products p

JOIN categories c ON p.category\_id = c.id

JOIN units u ON p.unit\_id = u.id;

1. **Customers and order count**

SELECT name, COUNT(id) AS total\_orders

FROM customers c

JOIN orders o ON c.id = o.customer\_id

GROUP BY c.id**;**

1. **Total purchases by supplier**

SELECT s.name, COUNT(p.id) AS total\_purchases

FROM suppliers s

JOIN purchases p ON s.id = p.supplier\_id

GROUP BY s.id;

1. **Order details**

SELECT product\_id, quantity, unitcost, total

FROM order\_details

WHERE order\_id = 1;

1. **Total revenue**

SELECT SUM(total) AS total\_revenue FROM orders;

1. **Top 5 selling products**

SELECT product\_id, SUM(quantity) AS sold

FROM order\_details

GROUP BY product\_id

ORDER BY sold DESC

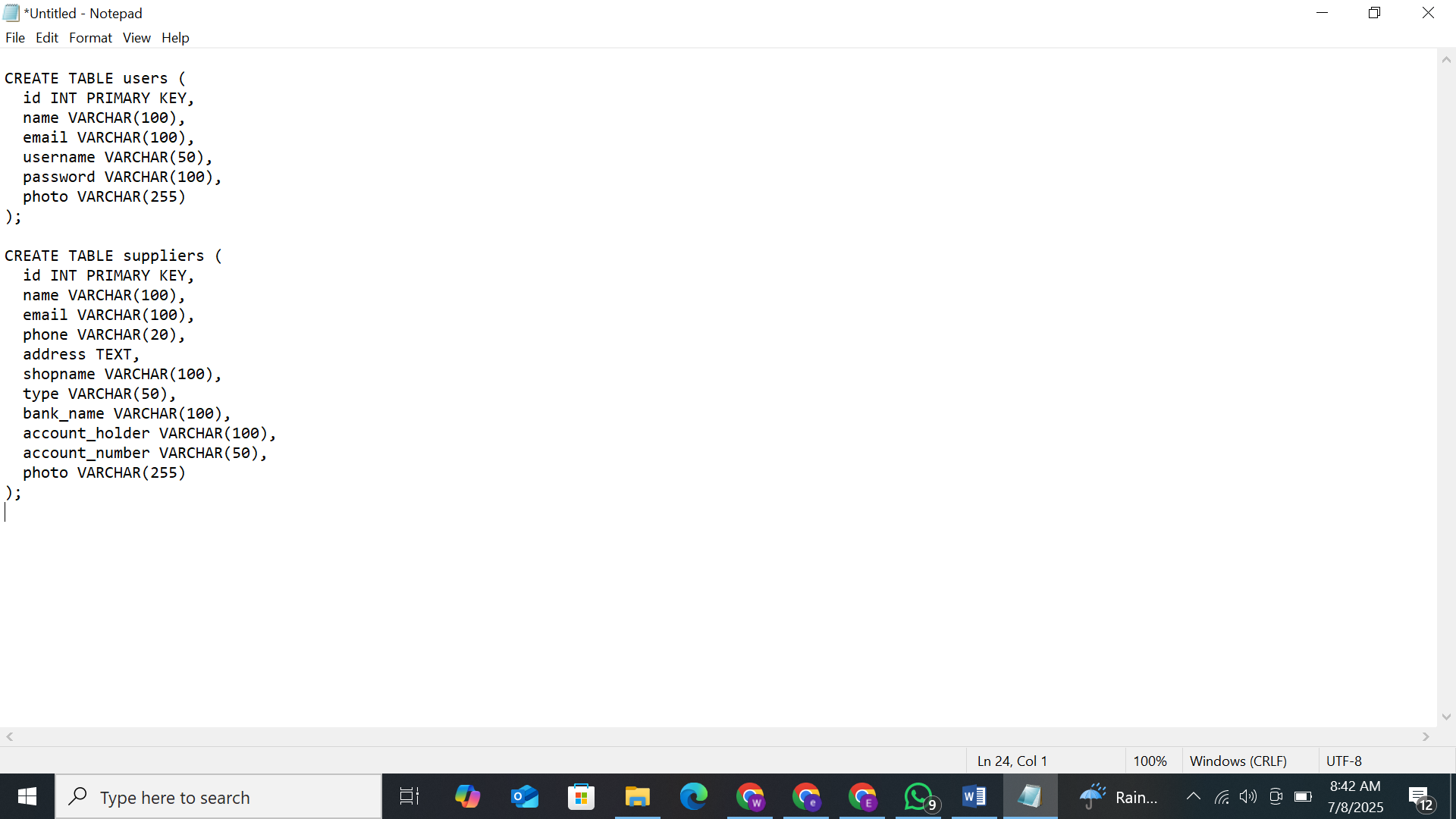
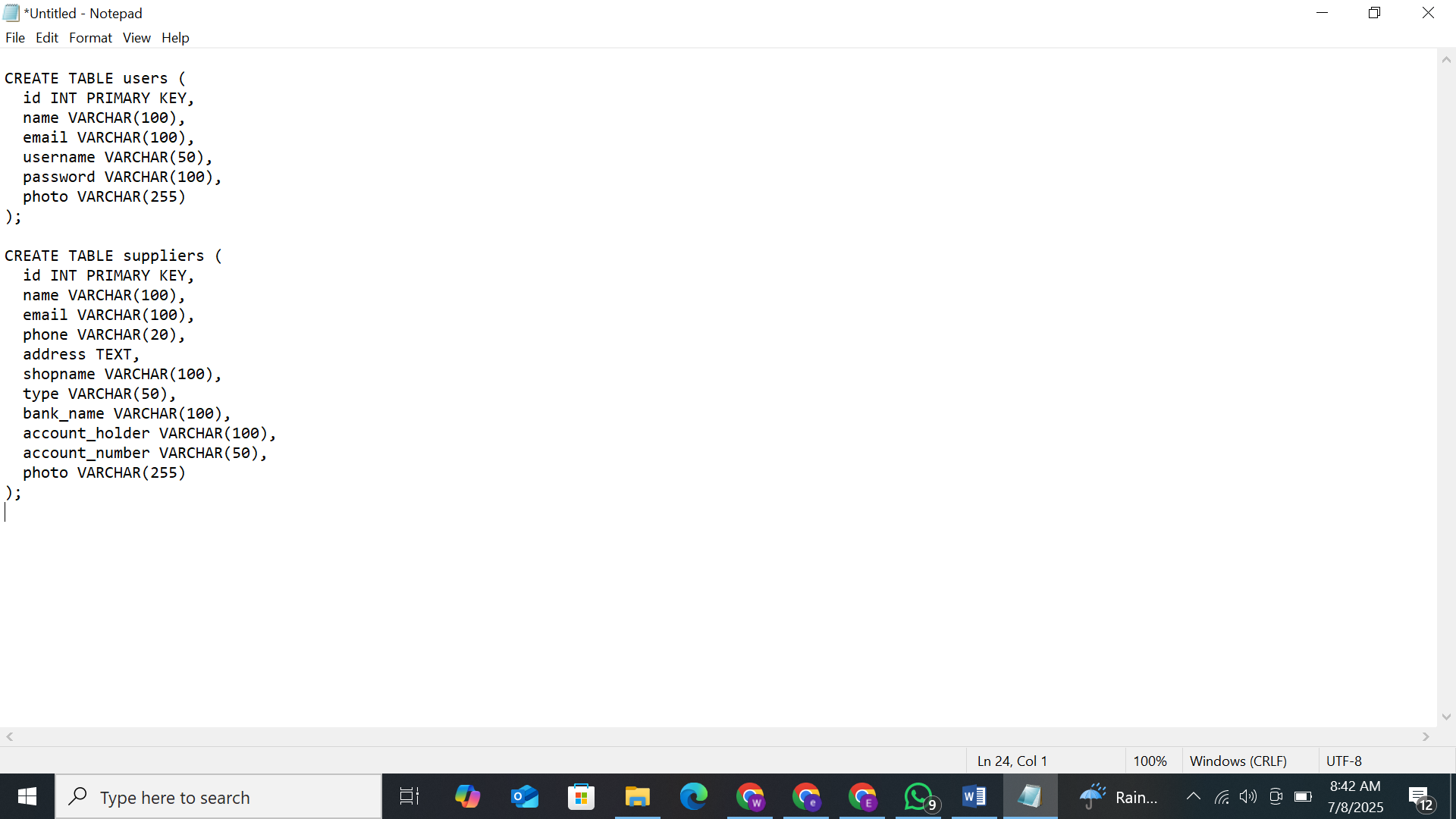
LIMIT 5;

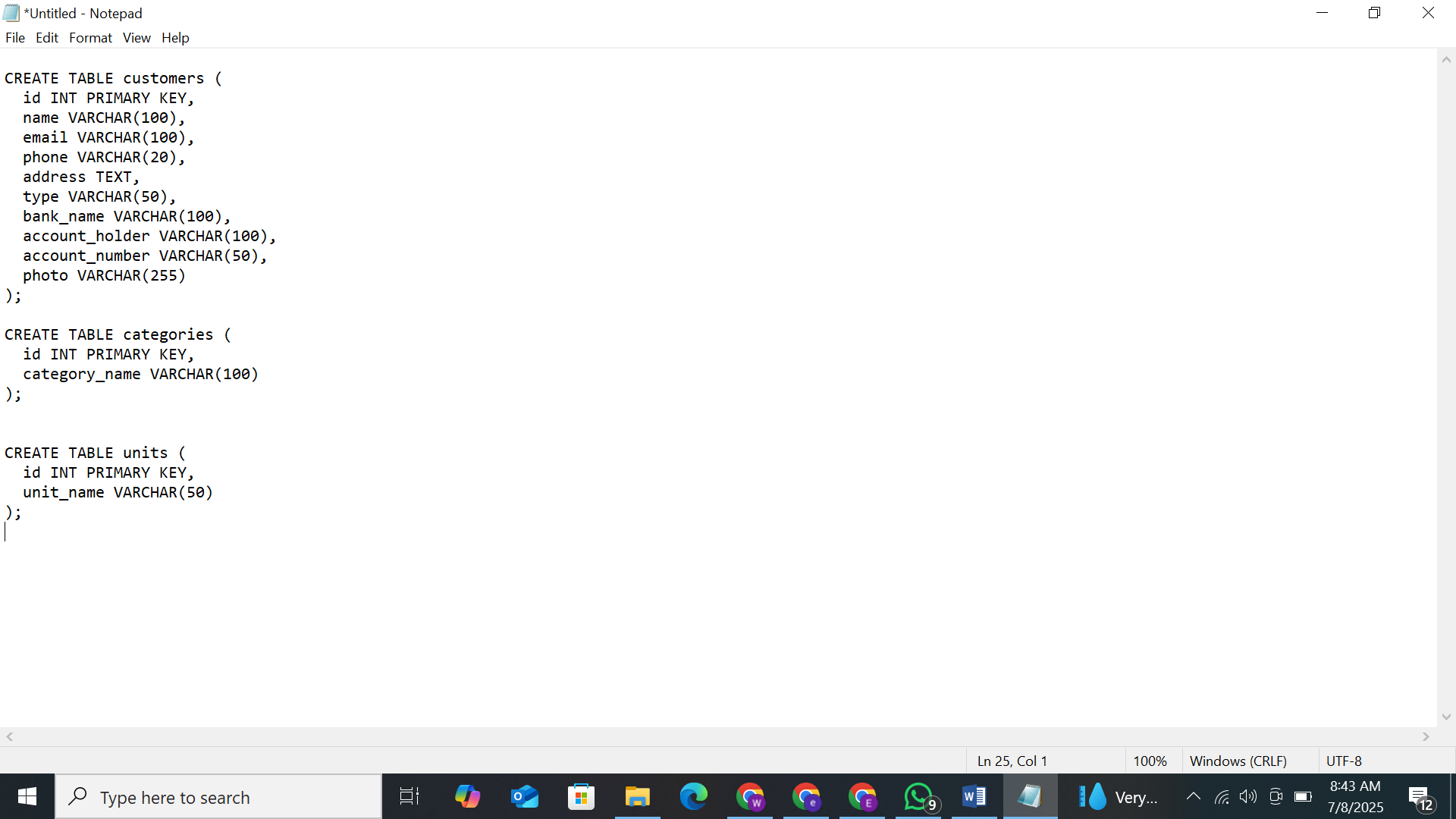
**7. Low stock products**

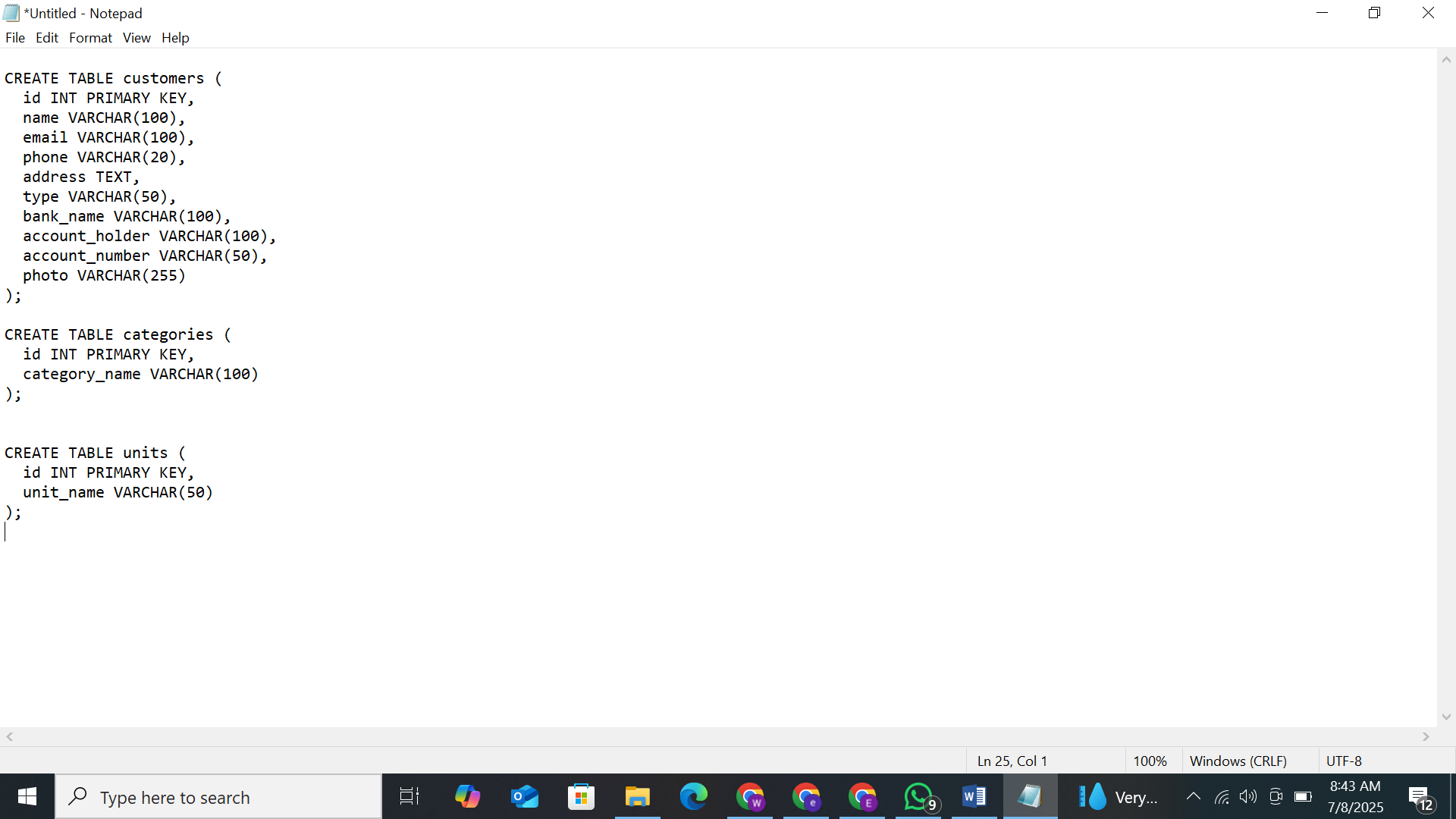
SELECT product\_name, stock FROM products WHERE stock < 10;

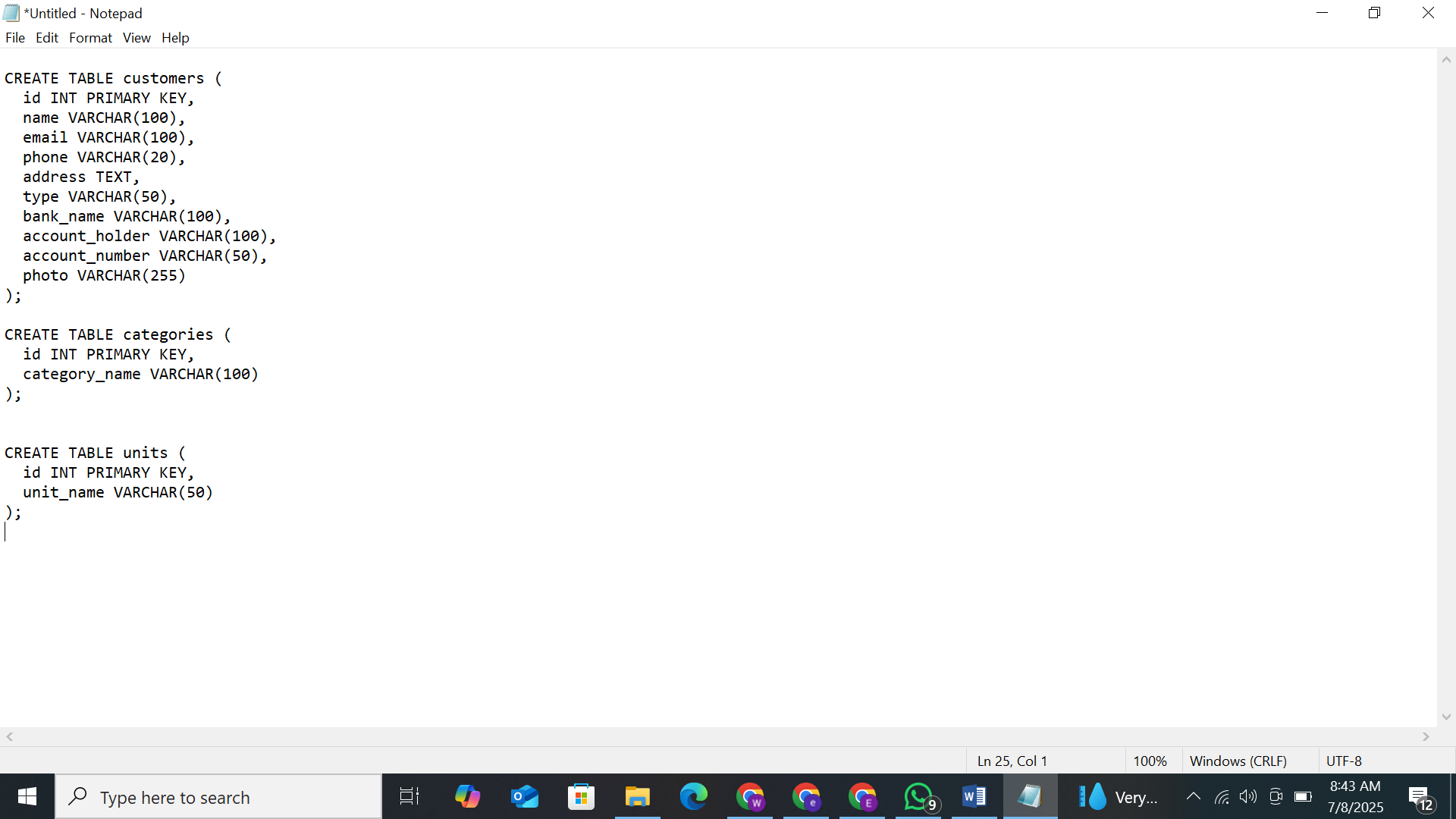
**SQL Implementation**

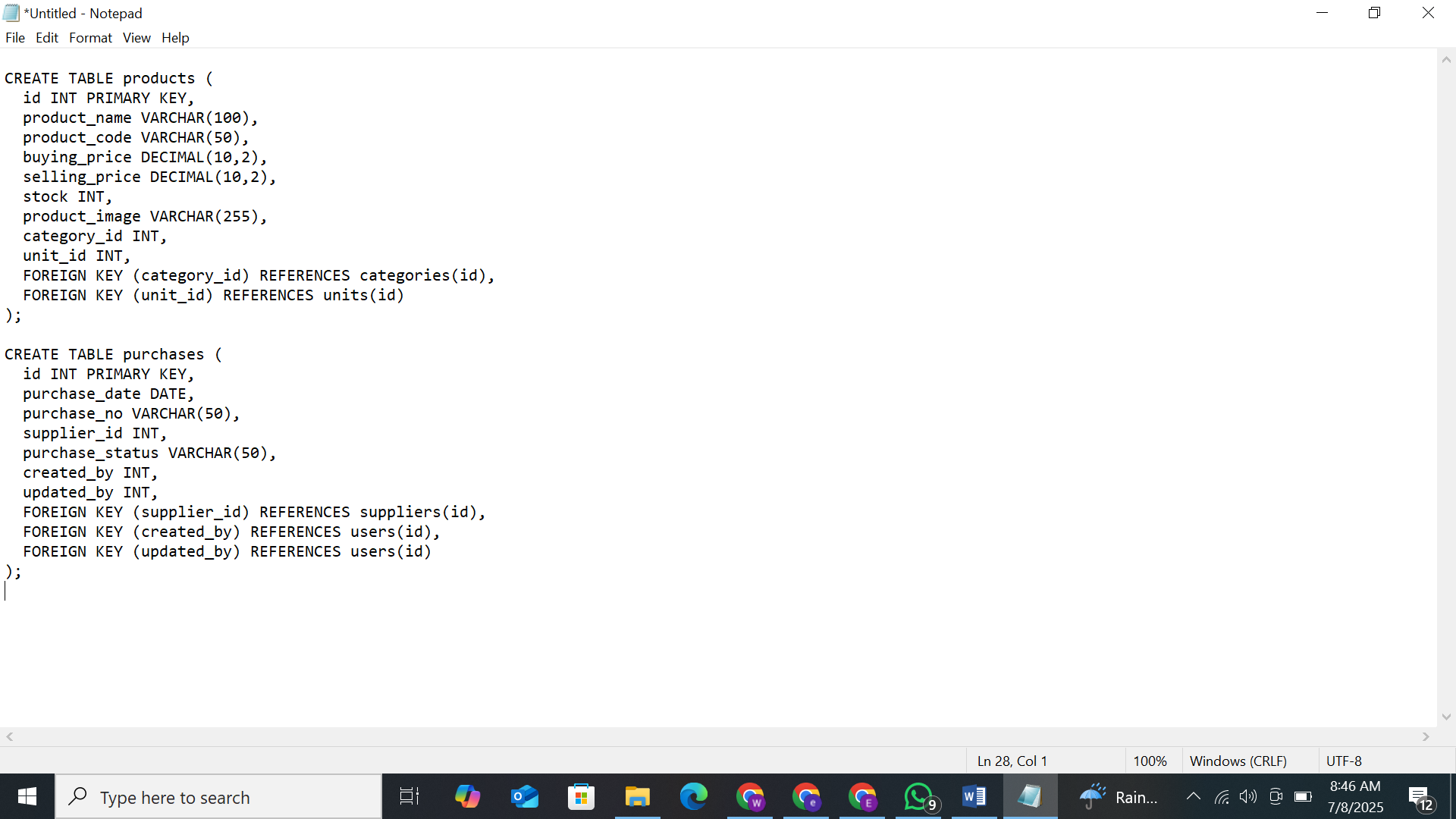
**Code**

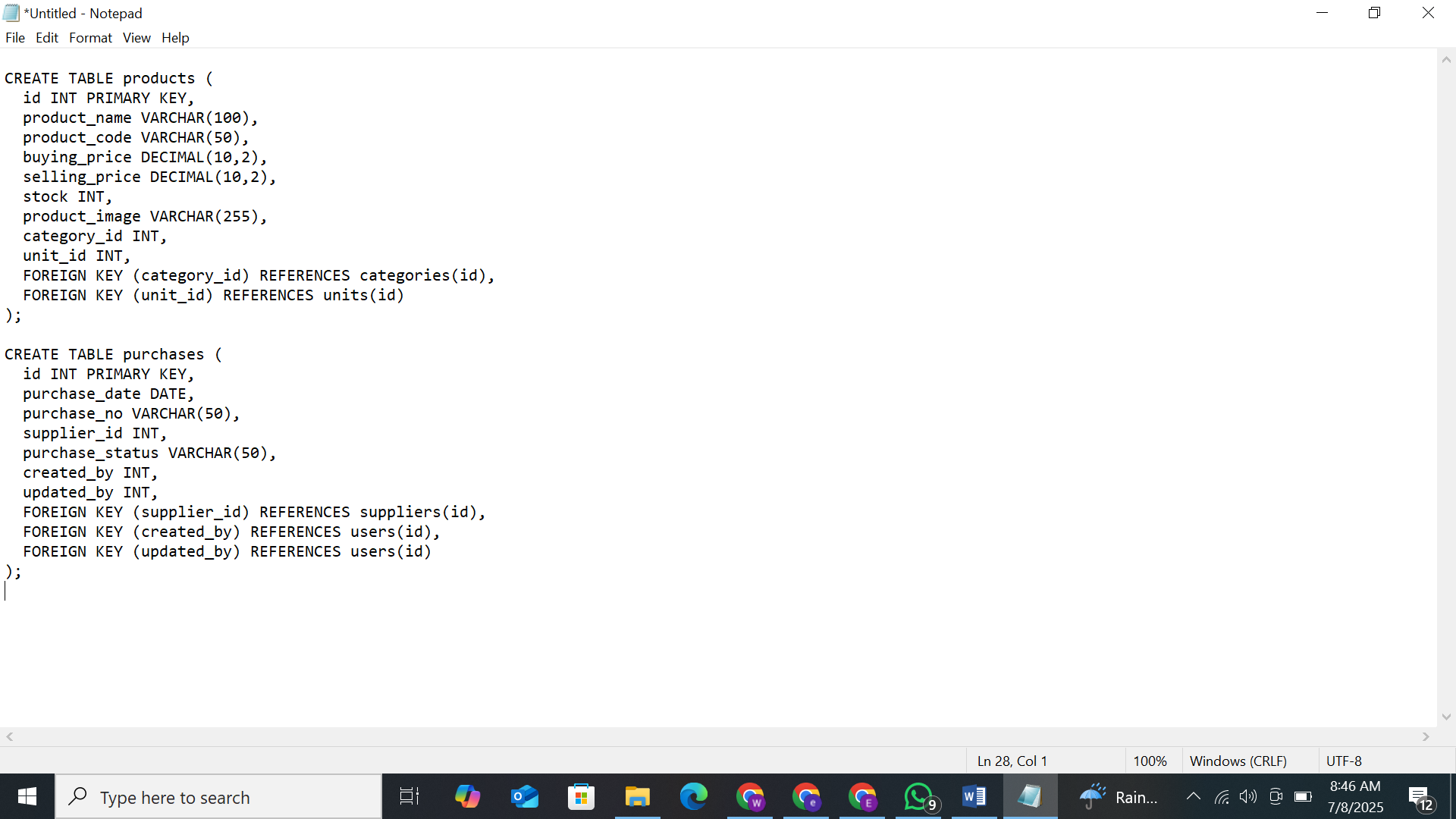
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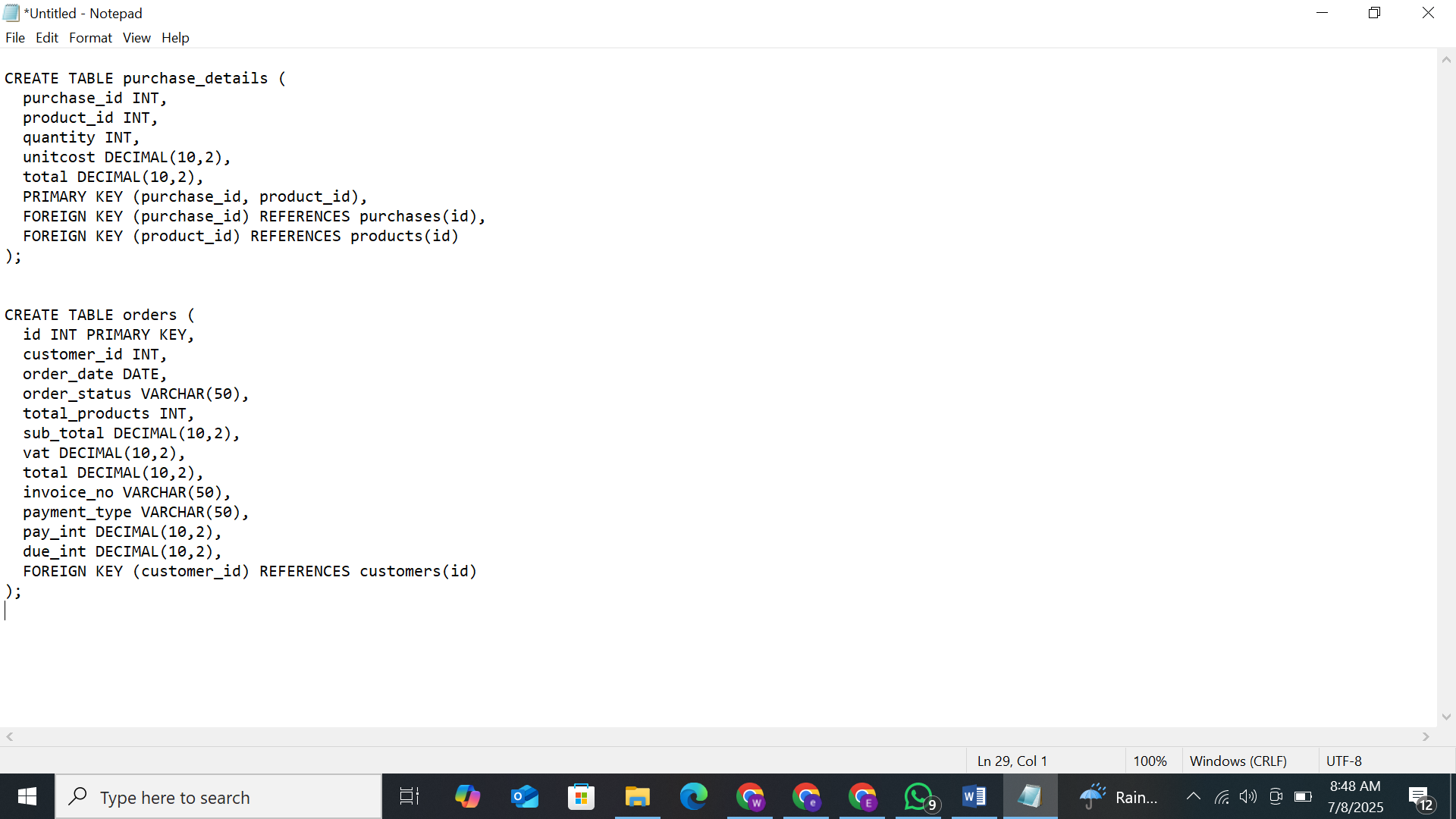
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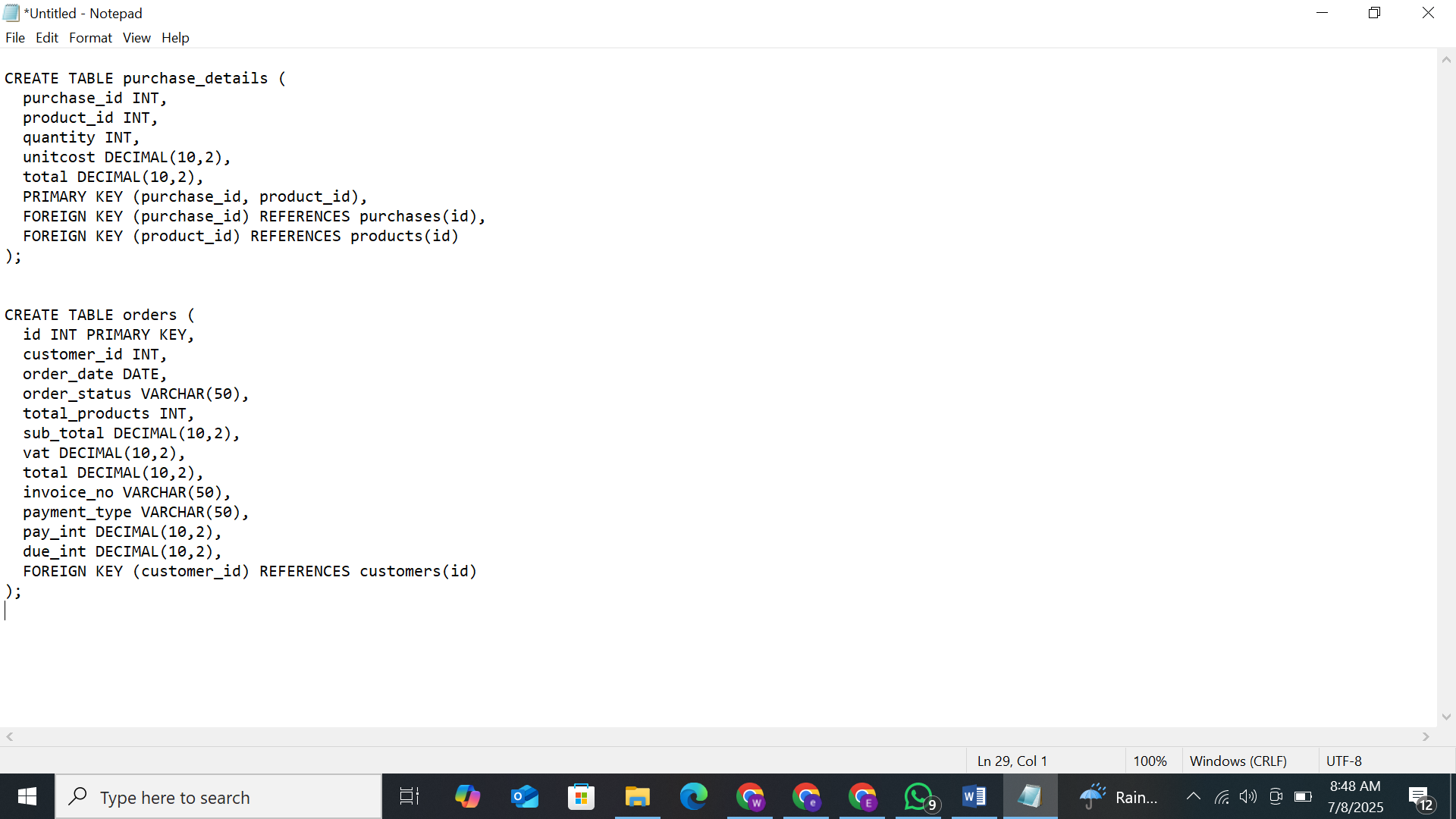
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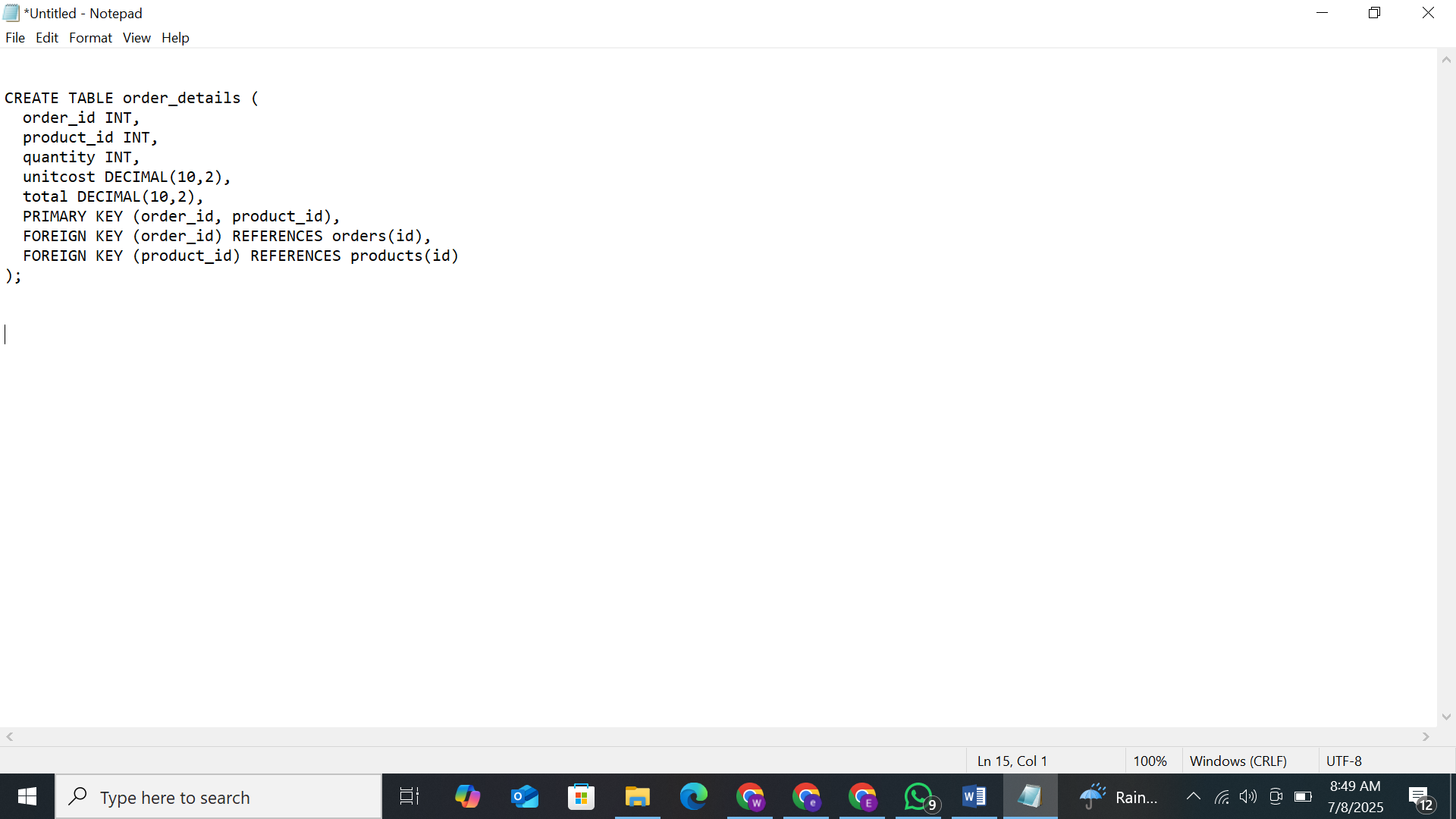
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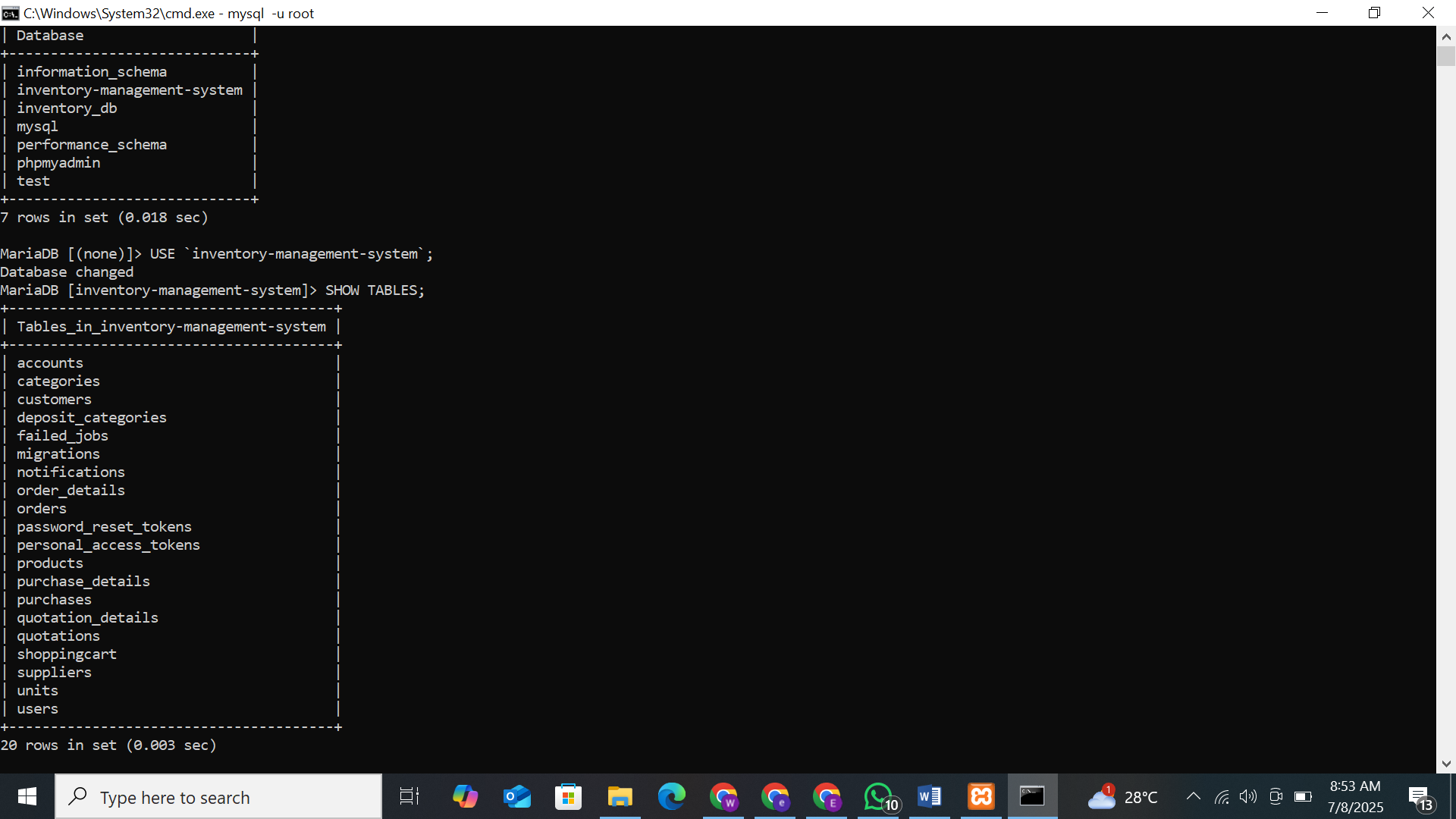
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**Refrence:**

https://chatgpt.com/c/686caf0d-040c-8003-a9fc-7925c299c3fc

https://github.com/fajarghifar/inventory-management-system