SQL1.sql - SIRI_CHA...Siri Chandana (76)) + ×

```sql
SELECT TOP (1000) [transaction_id]
      ,[user_id]
      ,[product_category]
      ,[payment_method]
      ,[transaction_amount]
      ,[purchase_date]
      ,[delivery_status]
  FROM [ECOMMERCE_DATASET].[dbo].[ecommerce_transactions_dataset]
```

100 %

⊞ Results | ▦ Messages

	transaction_id	user_id	product_category	payment_method	transaction_amount	purchase_date	delivery_status
1	00152ffd-f6ac-4c3b-b8b9-e645512d613b	U4861	Electronics	UPI	4842.5400390625	2023-12-12	Returned
2	007971d4-38aa-407f-ba83-ed570096fd60	U2211	Clothing	Credit Card	4842.5400390625	2024-05-17	Delivered
3	0148140e-b2b5-4462-b2b3-6b67c503a83e	U9505	Home	COD	4842.5400390625	2024-05-23	Returned
4	03cc2d86-ed6a-41b6-918e-3c1461c96259	U6470	Books	COD	4842.5400390625	2025-05-28	Returned
5	0462f789-54f2-4362-a299-cee8805928c2	U5332	Beauty	Debit Card	4842.5400390625	2024-06-18	Shipped
6	046e5483-81d9-46f0-add9-ce39f99a9a9c	U8206	Beauty	Credit Card	4842.5400390625	2023-08-03	Delivered
7	0570c69e-0f04-4534-828a-9625c4dee994	U1317	Books	COD	4842.5400390625	2025-03-13	Returned
8	066d7835-f695-418e-96b5-581a70798fa8	U4832	Electronics	UPI	4842.5400390625	2025-03-13	Cancelled
9	06ec8323-9c97-49f3-ae66-de0e0f7fce2b	U2928	Home	UPI	4842.5400390625	2024-07-22	Cancelled
10	072b2b58-83a1-4514-97d8-ecc4fb9edf7f	U5175	Books	Credit Card	4842.5400390625	2024-03-04	Cancelled
11	074580a5-50ec-4626-b907-3400029e8b0c	U6492	Books	Credit Card	4842.5400390625	2023-11-19	Returned

⊘ Query executed successfully. | 🔒 SIRI_CHANDANA (16.0 RTM) | Siri_chandana\Siri Cha... | ECOMMERCE_DATASET | 00:00:00 | 450 rows

```sql
    --a. SELECT, WHERE, ORDER BY, GROUP BY
  SELECT user_id, COUNT(transaction_id) AS total_orders, SUM(transaction_amount) AS total_spent
FROM ecommerce_transactions_dataset
WHERE delivery_status = 'Delivered'
GROUP BY user_id
ORDER BY total_spent DESC;
select * from ecommerce_transactions_dataset
```

100 %

▦ Results ▤ Messages

	user_id	total_orders	total_spent
1	U1048	1	4842.5400390625
2	U1066	1	4842.5400390625
3	U1151	1	4842.5400390625
4	U1162	1	4842.5400390625
5	U1223	1	4842.5400390625
6	U1354	1	4842.5400390625
7	U1564	1	4842.5400390625
8	U1639	1	4842.5400390625

	transaction_id	user_id	product_category	payment_method	transaction_amount	purchase_date	delivery_status
1	00152ffd-f6ac-4c3b-b8b9-e645512d613b	U4861	Electronics	UPI	4842.5400390625	2023-12-12	Returned
2	007971d4-38aa-407f-ba83-ed570096fd60	U2211	Clothing	Credit Card	4842.5400390625	2024-05-17	Delivered
3	0148140e-b2b5-4462-b2b3-6b67c503a8...	U9505	Home	COD	4842.5400390625	2024-05-23	Returned
4	03cc2d86-ed6a-41b6-918e-3c1461c962...	U6470	Books	COD	4842.5400390625	2025-05-28	Returned
5	0462f789-54f2-4362-a299-cee8805928c2	U5332	Beauty	Debit Card	4842.5400390625	2024-06-18	Shipped
6	046e5483-81d9-46f0-add9-ce39f99a9a9c	U8206	Beauty	Credit Card	4842.5400390625	2023-08-03	Delivered

```sql
ORDER BY total_spent DESC;
select * from ecommerce_transactions_dataset
--b.Use JOINS (INNER, LEFT, RIGHT)
--since we have only one table so we cannot use the joints. so i am creating new table and mke the joins

CREATE TABLE product_details2 (
    product_category VARCHAR(50) PRIMARY KEY,
    average_price DECIMAL(10, 2),
    total_stock INT,
    brand_popularity VARCHAR(20)
);
INSERT INTO product_details2 (product_category, average_price, total_stock, brand_popularity) VALUES
('Beauty', 1200.00, 500, 'High'),
('Home', 3500.00, 300, 'Medium'),
('Electronics', 15000.00, 200, 'High'),
('Clothing', 1800.00, 800, 'Medium'),
('Grocery', 750.00, 1000, 'Low'),
```

100 %

⊞ Results 📄 Messages

	transaction_id	user_id	product_category	payment_method	transaction_amount	purchase_date	delivery_status
1	00152ffd-f6ac-4c3b-b8b9-e645512d613b	U4861	Electronics	UPI	4842.5400390625	2023-12-12	Returned
2	007971d4-38aa-407f-ba83-ed570096fd60	U2211	Clothing	Credit Card	4842.5400390625	2024-05-17	Delivered
3	0148140e-b2b5-4462-b2b3-6b67c503a83e	U9505	Home	COD	4842.5400390625	2024-05-23	Returned
4	03cc2d86-ed6a-41b6-918e-3c1461c96259	U6470	Books	COD	4842.5400390625	2025-05-28	Returned
5	0462f789-54f2-4362-a299-cee8805928c2	U5332	Beauty	Debit Card	4842.5400390625	2024-06-18	Shipped
6	046e5483-81d9-46f0-add9-ce39f99a9a9c	U8206	Beauty	Credit Card	4842.5400390625	2023-08-03	Delivered
7	0570c69e-0f04-4534-828a-9625c4dee994	U1317	Books	COD	4842.5400390625	2025-03-13	Returned
8	066d7835-f695-418e-96b5-581a70798fa8	U4832	Electronics	UPI	4842.5400390625	2025-03-13	Cancelled

```sql
ON et.product_category = pu.product_category;
--c.Write subqueries
SELECT *
FROM ecommerce_transactions_dataset
WHERE user_id IN (
    SELECT user_id
    FROM ecommerce_transactions_dataset
    GROUP BY user_id
    HAVING SUM(transaction_amount) > 3400
);
```

100 %

⊞ Results ⊞ Messages

	transaction_id	user_id	product_category	payment_method	transaction_amount	purchase_date	delivery_status
1	0e6cde62-ee8b-44a8-8a9c-c709f9cc149d	U1048	Electronics	COD	4842.5400390625	2023-09-06	Delivered
2	2ffe0a0c-49d2-4bc3-af4c-cd5259a471b4	U1066	Beauty	UPI	4842.5400390625	2024-11-30	Delivered
3	f5a57cd3-67f4-4b2d-8a8f-ce2d2b2f1ffb	U1087	Home	UPI	4842.5400390625	2023-07-17	Cancelled
4	607b92a8-024c-4e09-98bd-33f8fdaeea3c	U1118	Beauty	UPI	4842.5400390625	2023-06-16	Returned
5	2ce927fe-5ebf-4aed-8e8b-f9111fa059d2	U1122	Books	Credit Card	4842.5400390625	2023-12-25	Returned
6	4ae237a4-91af-46a0-9df9-9bd45b2ac1b9	U1148	Clothing	Credit Card	4842.5400390625	2023-12-31	Returned
7	e9dfac9a-fb5f-4878-95a2-c5249fb50a93	U1151	Home	Credit Card	4842.5400390625	2025-02-07	Delivered
8	a6f2eae5-18ca-4338-9752-a8351b71bc94	U1162	Beauty	COD	4842.5400390625	2023-11-28	Delivered
9	1ef75ce9-add9-4702-97cd-cd8bf20b691f	U1164	Electronics	Credit Card	4842.5400390625	2024-08-09	Cancelled
10	7cfb7e19-e7e4-4117-8789-631a418369fe	U1172	Electronics	Debit Card	4842.5400390625	2024-10-21	Cancelled
11	8dc095df-ccf0-4dc1-82be-4bc22df48b7d	U1203	Beauty	COD	4842.5400390625	2025-04-12	Shipped
12	a5f052f4-5440-427c-ab12-283faac2831a	U1223	Books	Credit Card	4842.5400390625	2024-01-25	Delivered

```sql
        SELECT user_id
        FROM ecommerce_transactions_dataset
        GROUP BY user_id
        HAVING SUM(transaction_amount) > 3400
);
--d.Use aggregate functions (SUM, AVG)
SELECT
    product_category,
    SUM(transaction_amount) AS total_sales,
    AVG(transaction_amount) AS avg_order_value
FROM ecommerce_transactions_dataset
GROUP BY product_category;
```

100 %

⊞ Results 🗊 Messages

	product_category	total_sales	avg_order_value
1	Beauty	416458.443359375	4842.5400390625
2	Books	426143.5234375	4842.5400390625
3	Clothing	513309.244140625	4842.5400390625
4	Electronics	445513.68359375	4842.5400390625
5	Home	377718.123046875	4842.5400390625

⊘ Query executed successfully.   🔒 SIRI_CHANDANA (16.0 RTM) │ Siri_chandana\Siri Cha... │ ECOMMERCE_DATASET │ 00:00:00 │ 5 rows

```sql
        AVG(transaction_amount) AS avg_order_value
FROM ecommerce_transactions_dataset
GROUP BY product_category;
--e.Create views for analysis
SELECT
     user_id,
     SUM(transaction_amount) AS total_spent
FROM ecommerce_transactions_dataset
GROUP BY user_id
HAVING SUM(transaction_amount) > 2000;
```

100 %

Results   Messages

	user_id	total_spent
1	U1048	4842.5400390625
2	U1066	4842.5400390625
3	U1087	4842.5400390625
4	U1118	4842.5400390625
5	U1122	4842.5400390625
6	U1148	4842.5400390625
7	U1151	4842.5400390625
8	U1162	4842.5400390625
9	U1164	4842.5400390625
10	U1172	4842.5400390625
11	U1203	4842.5400390625
12	U1223	4842.5400390625

```sql
--f.Optimize queries with indexes
-- Index to speed up user-based queries
CREATE INDEX idx_user_id ON ecommerce_transactions_dataset(user_id);

-- Index to speed up category-based joins
CREATE INDEX idx_product_category ON ecommerce_transactions_dataset(product_category);

-- Index for faster date filtering
CREATE INDEX idx_purchase_date ON ecommerce_transactions_dataset(purchase_date);

SELECT * FROM ecommerce_transactions_dataset WHERE user_id = 'U6755';
SELECT * FROM ecommerce_transactions_dataset WHERE purchase_date >= '2024-01-01';
```

100 %

Results   **Messages**

	transaction_id	user_id	product_category	payment_method	transaction_amount	purchase_date	delivery_status
1	cc1492c5-199d-435b-b6d8-5d9d4989b303	U6755	Beauty	UPI	4842.5400390625	2023-08-01	Cancelled

	transaction_id	user_id	product_category	payment_method	transaction_amount	purchase_date	delivery_status
1	007971d4-38aa-407f-ba83-ed570096fd60	U2211	Clothing	Credit Card	4842.5400390625	2024-05-17	Delivered
2	0148140e-b2b5-4462-b2b3-6b67c503a83e	U9505	Home	COD	4842.5400390625	2024-05-23	Returned
3	03cc2d86-ed6a-41b6-918e-3c1461c96259	U6470	Books	COD	4842.5400390625	2025-05-28	Returned
4	0462f789-54f2-4362-a299-cee8805928c2	U5332	Beauty	Debit Card	4842.5400390625	2024-06-18	Shipped
5	0570c69e-0f04-4534-828a-9625c4dee994	U1317	Books	COD	4842.5400390625	2025-03-13	Returned
6	066d7835-f695-418e-96b5-581a70798fa8	U4832	Electronics	UPI	4842.5400390625	2025-03-13	Cancelled
7	06ec8323-9c97-49f3-ae66-de0e0f7fce2b	U2928	Home	UPI	4842.5400390625	2024-07-22	Cancelled
8	072b2b58-83a1-4514-97d8-ecc4fb9edf7f	U5175	Books	Credit Card	4842.5400390625	2024-03-04	Cancelled
9	095cb327-5449-475c-8a54-4206adabe4b4	U7130	Home	Net Banking	4842.5400390625	2024-12-12	Delivered

Query executed successfully.   SIRI_CHANDANA (16.0 RTM)   Siri_chandana\Siri Cha...   ECOMMERCE_DATASET   00:00:00   315 rows