

SQL FUNDAMENTALS

✚ SELECT Statement

1.

The screenshot shows a SQL IDE interface. On the left, a sidebar displays a database schema with the following structure:

- EXERCISES
- RETAIL_SALES_DATABASE
 - INFORMATION_SCHEMA
 - PUBLIC
 - Tables
 - SHOPPING_TRENDS
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

The main editor displays the following SQL query:

```
1 SELECT *  
2 FROM SHOPPING_TRENDS;  
3  
4  
5  
6  
7
```

Below the editor, the 'Results' tab is active, showing a table with 7 rows and 7 columns:

	#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT
1		1	2023-11-24	CUST001	Male	34	Beauty
2		2	2023-02-27	CUST002	Female	26	Clothing
3		3	2023-01-13	CUST003	Male	50	Electronics
4		4	2023-05-21	CUST004	Male	37	Clothing
5		5	2023-05-06	CUST005	Male	30	Beauty
6		6	2023-04-25	CUST006	Female	45	Beauty
7		7	2023-03-13	CUST007	Male	46	Clothing

On the right, the 'Query Details' panel shows:

- Query duration: 507ms
- Rows: 1K
- Query ID: 01bbc633-0000-f3f2-0...
- Show more

Below the query details, there is a section for 'TRANSACTION_ID' with a bar chart visualization.

2.

The screenshot shows the same SQL IDE interface. The SQL query in the editor is:

```
1 SELECT TRANSACTION_ID, DATE, CUSTOMER_ID  
2 FROM SHOPPING_TRENDS;  
3  
4  
5  
6  
7
```

The 'Results' tab shows a table with 8 rows and 4 columns:

	#	TRANSACTION_ID	DATE	CUSTOMER_ID
1		1	2023-11-24	CUST001
2		2	2023-02-27	CUST002
3		3	2023-01-13	CUST003
4		4	2023-05-21	CUST004
5		5	2023-05-06	CUST005
6		6	2023-04-25	CUST006
7		7	2023-03-13	CUST007
8		8	2023-02-22	CUST008

The 'Query Details' panel on the right shows:

- Query duration: 525ms
- Rows: 1K
- Query ID: 01bbc629-0000-f24e-0...
- Show more

Below the query details, there is a section for 'TRANSACTION_ID' with a bar chart visualization.

✚ SELECT DISTINCT Statement

3.

Exercise 3 2025-04-18 5:24pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
 - INFORMATION_SCHEMA
 - PUBLIC
 - Tables
 - SHOPPING_TRENDS
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT DISTINCT PRODUCT_CATEGORY
2 FROM SHOPPING_TRENDS
3
4
5
6
7
```

Results Chart

	PRODUCT_CATEGORY
1	Beauty
2	Clothing
3	Electronics

Query Details

Query duration 58ms

Rows 3

Query ID 01bbc636-0000-efae-0...

Show more

PRODUCT_CATEGORY

100% filled

4.

Exercise 3 2025-04-18 5:24pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

Databases Worksheets

Search objects

- EXERCISES
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 - INFORMATION_SCHEMA
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 - Tables
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- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT DISTINCT GENDER
2 FROM SHOPPING_TRENDS
3
4
5
6
7
```

Results Chart

	GENDER
1	Male
2	Female

Query Details

Query duration 320ms

Rows 2

Query ID 01bbc638-0000-efae-0...

Show more

GENDER

100% filled

WHERE Clause

5.

6.

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT *
2 FROM SHOPPING_TRENDS
3 WHERE AGE > 40
4
5
6
7
```

Results Chart

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	# QUAN
1	3	2023-01-13	CUST003	Male	50	Electronics	
2	6	2023-04-25	CUST006	Female	45	Beauty	
3	7	2023-03-13	CUST007	Male	46	Clothing	
4	9	2023-12-13	CUST009	Male	63	Electronics	
5	10	2023-10-07	CUST010	Female	52	Clothing	
6	14	2023-01-17	CUST014	Male	64	Clothing	
7	15	2023-01-16	CUST015	Female	42	Electronics	
8	18	2023-04-30	CUST018	Female	47	Electronics	
9	19	2023-09-16	CUST019	Female	62	Clothing	
10	21	2023-01-14	CUST021	Female	50	Beauty	

Query Details

Query duration 95ms

Rows 534

Query ID 01bbc8b9-0000-1404-0...

Show more

TRANSACTION_ID #

3 1000

DATE

7.

Exercise 3 2025-04-18 5:24pm

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT *
2 FROM SHOPPING_TRENDS
3 WHERE PRICE_PER_UNIT BETWEEN 100 AND 500;
4
5
6
7
```

Results Chart

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	# QUAN
1	2	2023-02-27	CUST002	Female	26	Clothing	
2	4	2023-05-21	CUST004	Male	37	Clothing	
3	9	2023-12-13	CUST009	Male	63	Electronics	
4	13	2023-08-05	CUST013	Male	22	Electronics	
5	15	2023-01-16	CUST015	Female	42	Electronics	
6	16	2023-02-17	CUST016	Male	19	Clothing	
7	20	2023-11-05	CUST020	Male	22	Clothing	
8	21	2023-01-14	CUST021	Female	50	Beauty	
9	24	2023-11-29	CUST024	Female	49	Clothing	
10	26	2023-10-07	CUST026	Female	28	Electronics	

Query Details

Query duration 81ms

Rows 396

Query ID 01bbc8be-0000-f3f2-0...

Show more

TRANSACTION_ID #

2 994

DATE

Exercise 3 2025-04-18 5:24pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

Search objects

EXERCISES

RETAIL_SALES_DATABASE

INFORMATION_SCHEMA

PUBLIC

Tables

SHOPPING_TRENDS

SNOWFLAKE

SNOWFLAKE_LEARNING_DB

SNOWFLAKE_SAMPLE_DATA

```
1 SELECT *
2 FROM SHOPPING_TRENDS
3 WHERE PRODUCT_CATEGORY= 'Beauty' OR PRODUCT_CATEGORY= 'Electronics';
4
5
6
7
```

Results Chart

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	1	2023-11-24	CUST001	Male	34	Beauty	
2	3	2023-01-13	CUST003	Male	50	Electronics	
3	5	2023-05-06	CUST005	Male	30	Beauty	
4	6	2023-04-25	CUST006	Female	45	Beauty	
5	8	2023-02-22	CUST008	Male	30	Electronics	
6	9	2023-12-13	CUST009	Male	63	Electronics	
7	12	2023-10-30	CUST012	Male	35	Beauty	
8	13	2023-08-05	CUST013	Male	22	Electronics	
9	15	2023-01-16	CUST015	Female	42	Electronics	
10	18	2023-04-30	CUST018	Female	47	Electronics	

Query Details

Query duration 37ms

Rows 649

Query ID 01bbc8c5-0000-f24e-0...

Show more

TRANSACTION_ID #

DATE

8.

Exercise 3 2025-04-18 5:24pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

Search objects

EXERCISES

RETAIL_SALES_DATABASE

INFORMATION_SCHEMA

PUBLIC

Tables

SHOPPING_TRENDS

SNOWFLAKE

SNOWFLAKE_LEARNING_DB

SNOWFLAKE_SAMPLE_DATA

```
1 SELECT *
2 FROM SHOPPING_TRENDS
3 WHERE PRODUCT_CATEGORY= 'Clothing';
4
5
6
7
```

Results Chart

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	2	2023-02-27	CUST002	Female	26	Clothing	
2	4	2023-05-21	CUST004	Male	37	Clothing	
3	7	2023-03-13	CUST007	Male	46	Clothing	
4	10	2023-10-07	CUST010	Female	52	Clothing	
5	11	2023-02-14	CUST011	Male	23	Clothing	
6	14	2023-01-17	CUST014	Male	64	Clothing	
7	16	2023-02-17	CUST016	Male	19	Clothing	
8	17	2023-04-22	CUST017	Female	27	Clothing	
9	19	2023-09-16	CUST019	Female	62	Clothing	
10	20	2023-11-05	CUST020	Male	22	Clothing	

Query Details

Query duration 61ms

Rows 351

Query ID 01bbc8c8-0000-f405-0...

Show more

TRANSACTION_ID #

DATE

9.

Exercise 3 2025-04-18 5:24pm

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
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- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT *
2 FROM SHOPPING_TRENDS
3 WHERE QUANTITY >=3;
4
5
6
7
```

Results Chart

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	1	2023-11-24	CUST001	Male	34	Beauty	
2	8	2023-02-22	CUST008	Male	30	Electronics	
3	10	2023-10-07	CUST010	Female	52	Clothing	
4	12	2023-10-30	CUST012	Male	35	Beauty	
5	13	2023-08-05	CUST013	Male	22	Electronics	
6	14	2023-01-17	CUST014	Male	64	Clothing	
7	15	2023-01-16	CUST015	Female	42	Electronics	
8	16	2023-02-17	CUST016	Male	19	Clothing	
9	17	2023-04-22	CUST017	Female	27	Clothing	
10	20	2023-11-05	CUST020	Male	22	Clothing	

Query Details

Query duration 195ms

Rows 504

Query ID 01bbc6cc-0000-f404-0...

Show more

TRANSACTION_ID #

1 1000

DATE

Aggregate Functions

10.

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
 - INFORMATION_SCHEMA
 - PUBLIC
 - Tables
 - SHOPPING_TRENDS
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT COUNT (TRANSACTION_ID) AS TOTAL_TRANSACTION
2 FROM SHOPPING_TRENDS;
3
4
5
6
7
```

Results Chart

#	TOTAL_TRANSACTION
1	1000

Query Details

Query duration 56ms

Rows 1

Query ID 01bbc6db-0000-f404-0...

Show more

TOTAL_TRANSACTION #

100% filled

11.

2025-04-18 5:24pm

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT AVG(AGE) AS AVERAGE_AGE
2 FROM SHOPPING_TRENDS;
3
4
5
6
7
```

Results Chart

#	AVERAGE_AGE
1	41.392000

Query Details

Query duration 421ms

Rows 1

Query ID 01bbc6fb-0000-f24e-0...

Show more

AVERAGE_AGE #

100% filled

12.

2025-04-18 5:24pm

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT SUM (QUANTITY) AS TOTAL_QUANTITY
2 FROM SHOPPING_TRENDS;
3
4
5
6
7
```

Results Chart

#	TOTAL_QUANTITY
1	2514

Query Details

Query duration 74ms

Rows 1

Query ID 01bbc6fe-0000-f24e-0...

Show more

TOTAL_QUANTITY #

100% filled

13.

2025-04-18 5:24pm

Databases Worksheets

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT MAX (TOTAL_AMOUNT) AS MAX_TOTAL_AMOUNT
2 FROM SHOPPING_TRENDS;
3
4
5
6
7
```

Results Chart

#	MAX_TOTAL_AMOUNT
1	2000

Query Details

Query duration 73ms

Rows 1

Query ID 01bbc704-0000-efae-0...

Show more

MAX_TOTAL_AMOUNT #

100% filled

14.

2025-04-18 5:24pm

Databases Worksheets

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT MIN (PRICE_PER_UNIT) AS MIN_PRICE_PER_UNIT
2 FROM SHOPPING_TRENDS;
3
4
5
6
7
```

Results Chart

#	MIN_PRICE_PER_UNIT
1	25

Query Details

Query duration 27ms

Rows 1

Query ID 01bbc707-0000-f3f2-0...

Show more

MIN_PRICE_PER_UNIT #

100% filled

GROUP BY Statement

15.

2025-04-18 5:24pm

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT PRODUCT_CATEGORY,  
2       COUNT (TRANSACTION_ID) AS TRANSACTION_COUNT  
3 FROM SHOPPING_TRENDS  
4 GROUP BY PRODUCT_CATEGORY;
```

Results Chart

	PRODUCT_CATEGORY	# TRANSACTION_COUNT
1	Beauty	307
2	Clothing	351
3	Electronics	342

Query Details

Query duration 447ms

Rows 3

Query ID 01bbc70d-0000-f24e-0...

Show more

PRODUCT_CATEGORY A

100% filled

TRANSACTION_COUNT #

16.

2025-04-18 5:24pm

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT GENDER,  
2       SUM (TOTAL_AMOUNT) AS TOTAL_REVENUE  
3 FROM SHOPPING_TRENDS  
4 GROUP BY GENDER;
```

Results Chart

	GENDER	# TOTAL_REVENUE
1	Male	223160
2	Female	232840

Query Details

Query duration 220ms

Rows 2

Query ID 01bbc711-0000-f404-0...

Show more

GENDER A

100% filled

TOTAL_REVENUE #

17.

Exercise 3 2025-04-18 5:24pm

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
 - INFORMATION_SCHEMA
 - PUBLIC
 - Tables
 - SHOPPING_TRENDS
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT DISTINCT PRODUCT_CATEGORY,
2                 AVG (PRICE_PER_UNIT) AS AVERAGE_PRICE
3 FROM SHOPPING_TRENDS
4 GROUP BY PRODUCT_CATEGORY;
```

Results Chart

	PRODUCT_CATEGORY	# AVERAGE_PRICE
1	Beauty	184.055375
2	Clothing	174.287749
3	Electronics	181.900585

Query Details

- Query duration: 242ms
- Rows: 3
- Query ID: 01bbc6b2-0000-f404-0...

Calculating stats...

✚ HAVING Clause

18.

2025-04-18 5:24pm

Databases Worksheets

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```
1 SELECT PRODUCT_CATEGORY,
2        SUM (TOTAL_AMOUNT) AS TOTAL_REVENUE
3 FROM SHOPPING_TRENDS
4 GROUP BY PRODUCT_CATEGORY
5 HAVING TOTAL_REVENUE > 100000;
```

Results Chart

	PRODUCT_CATEGORY	# TOTAL_REVENUE
1	Beauty	143515
2	Clothing	155580
3	Electronics	156905

Query Details

- Query duration: 53ms
- Rows: 3
- Query ID: 01bbc719-0000-f24e-0...

PRODUCT_CATEGORY 100% filled

TOTAL_REVENUE

19.

2025-04-18 5:24pm

ACCOUNTADMIN • COMPUTE_WH (X-Small) Share

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```

1 SELECT PRODUCT_CATEGORY,
2       AVG (QUANTITY) AS AVERAGE_QUANTITY
3 FROM SHOPPING_TRENDS
4 GROUP BY PRODUCT_CATEGORY
5 HAVING AVERAGE_QUANTITY > 2;
6
7

```

Results Chart

PRODUCT_CATEGORY	AVERAGE_QUANTITY
Beauty	2.511401
Clothing	2.547009
Electronics	2.482456

Query Details

- Query duration: 83ms
- Rows: 3
- Query ID: 01bbc71f-0000-f404-00...

Show more

PRODUCT_CATEGORY 100% filled

AVERAGE_QUANTITY

CASE Statement

20.

2025-04-18 5:24pm

ACCOUNTADMIN • COMPUTE_WH (X-Small) Share

Search objects

- EXERCISES
- RETAIL_SALES_DATABASE
- SNOWFLAKE
- SNOWFLAKE_LEARNING_DB
- SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC Settings

```

1 SELECT TRANSACTION_ID,
2       CASE
3       WHEN TOTAL_AMOUNT > 1000 THEN 'HIGH'
4       ELSE 'LOW'
5       END AS SPENDING_LEVEL
6 FROM SHOPPING_TRENDS
7

```

Results Chart

TRANSACTION_ID	SPENDING_LEVEL
1	LOW
2	LOW
3	LOW
4	LOW
5	LOW
6	LOW
7	LOW
8	LOW
9	LOW
10	LOW

Query Details

- Query duration: 64ms
- Rows: 1K
- Query ID: 01bbc727-0000-f24e-0...

Show more

TRANSACTION_ID

SPENDING_LEVEL

21.

2025-04-18 5:24pm

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Databases

Worksheets

Search objects

EXERCISES

RETAIL_SALES_DATABASE

SNOWFLAKE

SNOWFLAKE_LEARNING_DB

SNOWFLAKE_SAMPLE_DATA

RETAIL_SALES_DATABASE.PUBLIC

Settings

ACCOUNTADMIN

COMPUTE_WH (X-Small)

Share

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Code Versions

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1

2

3

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5

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7

8

9

SELECT CUSTOMER_ID,

AGE,

CASE

WHEN AGE <30 THEN 'YOUTH'

WHEN AGE BETWEEN 30 AND 59 THEN 'ADULT'

WHEN AGE >=60 THEN 'SENIOR'

END AS AGE_GROUP

FROM SHOPPING_TRENDS

Results

Chart

Q

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	CUSTOMER_ID	AGE	AGE_GROUP
1	CUST001	34	ADULT
2	CUST002	26	YOUTH
3	CUST003	50	ADULT
4	CUST004	37	ADULT
5	CUST005	30	ADULT
6	CUST006	45	ADULT
7	CUST007	46	ADULT
8	CUST008	30	ADULT
9	CUST009	63	SENIOR

Query Details

...

Query duration

70ms

Rows

1K

Query ID

01bbc731-0000-f404-0...

Show more

CUSTOMER_ID

100% filled