

ANDILE DUBE

Practical 1: Basic SQL Syntax

Question 1:

The screenshot shows the SQLBolt interface. On the left, there's a sidebar with 'My Workspace' containing 'Untitled 1.sql' and 'Untitled.sql'. Below it is the 'Worksheets' section with a 'Scratchpad' tab selected, showing the date '2025-10-20 6:14pm'. The main area is titled 'Results' with a timestamp '2025-10-20 6:14pm'. It displays the following SQL code:

```
1 -- Q1. Display all columns for all transactions.
2 -- Expected output: All columns
3
4 SELECT*
5 FROM Retail.sales.retail_sales;
6
```

Below the code is a table titled 'Results (1 minute ago)'. The table has columns: # TRANSACTION_ID, DATE, CUSTOMER_ID, GENDER, AGE, PRODUCT_CATEGORY, and QUANTITY. The data is as follows:

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	1	2023-11-24	CUST001	Male	34	Beauty	100
2	2	2023-02-27	CUST002	Female	28	Clothing	150
3	3	2023-01-13	CUST003	Male	50	Electronics	200
4	4	2023-05-21	CUST004	Male	37	Clothing	120
5	5	2023-05-06	CUST005	Male	30	Beauty	180

Question 2:

The screenshot shows the SQLBolt interface. The sidebar and scratchpad are identical to the previous screenshot. The main results area shows the following SQL code:

```
0
1 -- Q2. Display only the Transaction ID, Date, and Customer ID for all records.
2 -- Expected output: Transaction ID, Date, Customer ID
3
4 SELECT transaction_id,
5     date,
6     customer_id
7 FROM Retail.sales.retail_sales;
8
```

Below the code is a table titled 'Results (just now)'. The table has columns: # TRANSACTION_ID, DATE, and CUSTOMER_ID. The data is as follows:

#	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

Question 3:

The screenshot shows the SQLBolt interface with a workspace titled "My Workspace". A query is being run:

```
--Q3. Display all the distinct product categoris in the dataset.  
--Expected output: Product Category  
SELECT DISTINCT product_category  
FROM Retail.sales.retail_sales;
```

The results table shows three rows of data:

PRODUCT_CATEGORY
Clothing
Beauty
Electronics

Question 4:

The screenshot shows the SQLBolt interface with a workspace titled "My Workspace". A query is being run:

```
--Q4. Display all the distinct gender values in the dataset.  
--Expected output: Gender  
SELECT DISTINCT gender  
FROM Retail.sales.retail_sales;
```

The results table shows two rows of data:

GENDER
Male
Female

Question 5:

The screenshot shows the SQLBolt interface. On the left, there's a sidebar with 'My Workspace' containing 'Untitled 1.sql' and 'Untitled.sql'. Below it is the 'Worksheets' section with a 'Scratchpad' tab selected, showing the date '2025-10-20 6:14pm'. The main area is titled 'Results' with the date '2025-10-20 6:14pm'. The query is:

```
--Q5. Display all transactions where the Age is greater than 40.  
--Expected output: ALL columns  
SELECT *  
FROM Retail.sales.retail_sales;  
WHERE Age > 40;
```

The results table has the following columns: TRANSACTION_ID, DATE, CUSTOMER_ID, GENDER, AGE, PRODUCT_CATEGORY, and QUANTITY. The data is:

	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
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	

Question 6:

The screenshot shows the SQLBolt interface. On the left, there's a sidebar with 'My Workspace' containing 'Untitled 1.sql' and 'Untitled.sql'. Below it is the 'Worksheets' section with a 'Scratchpad' tab selected, showing the date '2025-10-20 6:14pm'. The main area is titled 'Results' with the date '2025-10-20 6:14pm'. The query is:

```
--Q6. Display all transactions where the Price per Unit is between 100 and 500.  
--Expected output: ALL columns  
SELECT *  
FROM Retail.sales.retail_sales;  
WHERE "Price per Unit" BETWEEN 100 AND 500;
```

The results table has the following columns: TRANSACTION_ID, DATE, CUSTOMER_ID, GENDER, AGE, PRODUCT_CATEGORY, and QUANTITY. The data is:

	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
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	

Question 7:

The screenshot shows the SQLBolt interface with a query editor and results viewer. The query is:

```
--Q7. Display all transactions where the Product Category is either 'Beauty' or
--'Electronics'.
SELECT *
FROM Retail.sales.retail_sales;
WHERE "Product Category" IN ('Beauty', 'Electronics');
```

The results table shows 5 rows of data:

	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
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	

Question 8:

The screenshot shows the SQLBolt interface with a query editor and results viewer. The query is:

```
--Q8. Display all transactions where the Product Category is not 'Clothing'.
--Expected output: ALL columns
SELECT *
FROM Retail.sales.retail_sales;
WHERE "Product Category" != 'Clothing';
```

The results table shows 5 rows of data:

	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
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	

Question 9:

The screenshot shows the SQLBolt interface. In the top navigation bar, the URL is `app.snowflake.com/af-south-1.aws/be46832/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24`. The main area displays a query results table. The query is:

```
--Q9. Display all transactions where the Quantity is greater than or equal to 3.  
--Expected output: All columns  
42  
43  
44     SELECT *  
45     FROM Retail.sales.retail_sales;  
46  
47  
48
```

The results table has the following columns: TRANSACTION_ID, DATE, CUSTOMER_ID, GENDER, AGE, PRODUCT_CATEGORY, and QUANTITY. The data is as follows:

	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	1	2023-11-24	CUST001	Male	34	Beauty	3
2	2	2023-02-27	CUST002	Female	28	Clothing	3
3	3	2023-01-13	CUST003	Male	50	Electronics	3
4	4	2023-05-21	CUST004	Male	37	Clothing	3
5	5	2023-05-06	CUST005	Male	30	Beauty	3

Question 10:

The screenshot shows the SQLBolt interface. In the top navigation bar, the URL is `app.snowflake.com/af-south-1.aws/be46832/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24`. The main area displays a query results table. The query is:

```
45     WHERE quantity >= 3;  
46  
47     --Q10. Count the total number of transactions.  
48     --Expected output: Total_Transactions  
49     SELECT COUNT(*) AS Total_Transactions  
50     FROM Retail.sales.retail_sales;  
51
```

The results table has one column: TOTAL_TRANSACTIONS. The data is as follows:

TOTAL_TRANSACTIONS
1000

Question 11:

The screenshot shows the SQLBolt interface. On the left, there's a sidebar with 'My Workspace' containing files like 'Untitled 1.sql' and 'Untitled.sql'. Below it is the 'Worksheets' section with a 'Scratchpad' entry. The main area is titled 'Results' with a timestamp '2025-10-20 6:14pm'. It contains a SQL query to find the average age of customers from the 'Retail.sales.retail_sales' table. The results table shows one row with the value '41.392000'.

```
--Q11. Find the average Age of customers.  
--Expected output: Average_Age  
SELECT AVG(Age) AS Average_Age  
FROM Retail.sales.retail_sales;
```

Table	Chart
# AVERAGE_AGE	41.392000

Question 12:

The screenshot shows the SQLBolt interface. The sidebar is similar to the previous one. The main results area has a timestamp '2025-10-20 6:14pm'. It contains a SQL query to find the total quantity of products sold from the same table. The results table shows one row with the value '41.392000'.

```
--Q12. Find the total quantity of products sold.  
--Expected output: Total_Quantity  
SELECT SUM(Quantity) AS Total_Quantity  
FROM Retail.sales.retail_sales;
```

Table	Chart
# AVERAGE_AGE	41.392000

Question 13:

SQLBolt - Learn SQL...

My Workspace

- + Add new
- Untitled 1.sql
- Untitled.sql

Worksheets

- + Search for files
- > Owned
- > Shared with you
- Scratchpad

Results (2025-10-20 6:14pm)

```
--Q13. Find the maximum Total Amount spent in a single transaction.  
--Expected output: Max_Total_Amount  
60  
61  
62 SELECT MAX(Total_Amount) AS Max_Total_Amount  
FROM Retail.sales.retail_sales;  
63  
64  
65  
66
```

Results (just now)

Table	Chart
# MAX_TOTAL_AMOUNT	
1	2000

Question 14:

SQLBolt - Learn SQL...

My Workspace

- + Add new
- Untitled 1.sql
- Untitled.sql

Worksheets

- + Search for files
- > Owned
- > Shared with you
- Scratchpad

Results (2025-10-20 6:14pm)

```
--Q14. Find the minimum Price per Unit in the dataset.  
--Expected output: Min_Price_per_Unit  
63  
64 FROM Retail.sales.retail_sales;  
65  
66  
67 SELECT MIN(price_per_unit) AS Min_Price_per_Unit  
68 FROM Retail.sales.retail_sales;  
69
```

Results (just now)

Table	Chart
# MIN_PRICE_PER_UNIT	
1	25

Question 15:

SQLBolt - Learn SQL...

My Workspace

- + Add new
- Untitled 1.sql
- Untitled.sql

Worksheets

- + Search for files
- > Owned
- > Shared with you
- Scratchpad

Results (2025-10-20 6:14pm)

```
--Q15. Find the number of transactions per Product Category.  
--Expected output: Product_Category, Transaction_Count  
69  
70  
71  
72  
73 SELECT Product_Category, COUNT(*) AS Transaction_Count  
FROM Retail.sales.retail_sales  
GROUP BY Product_Category;  
74  
75
```

Results (just now)

Table	Chart
PRODUCT_CATEGORY	TRANSACTION_COUNT
1 Clothing	351
2 Beauty	307
3 Electronics	342

Question 16:

Paste It - Learn SQL...

My Workspace Untitled 1.sql Untitled.sol

Search for files + Add new

Untitled 1.sql Untitled.sol

Results 2025-10-20 6:14pm +

76 --Q16. Find the total revenue (Total_Amount) per gender.

77 --Expected output: Gender, Total_Revenue

78 SELECT Gender,SUM(Total_Amount) AS Total_Revenue

79 FROM Retail_sales.retail_sales

80 GROUP BY Gender;

81

Results (just now)

Table Chart

GENDER TOTAL_REVENUE

1 Male 223160

2 Female 232840

Worksheets Search for files... Owned Shared with you Scratchpad 2025-10-20 6:14pm

Question 17:

← → ⌂ app.snowflake.com/af-south-1.aws/be46832/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24

Paste It - Learn SQL...

My Workspace Untitled 1.sql Untitled.sql

Search for files + Add new

Untitled 1.sql Untitled.sql

Results 2025-10-20 6:14pm +

81 ---Q17. Find the average Price per Unit per product category.

82 --Expected output: Product Category, Average_Price

83

84 SELECT Product_Category,AVG (Price_Per_Unit) AS Average_price

85 FROM Retail_sales.retail_sales

86 GROUP BY Product_Category;

87

Results (just now)

Table Chart

PRODUCT_CATEGORY AVERAGE_PRICE

1 Beauty 184.055375

2 Clothing 174.287749

3 Electronics 181.900585

Worksheets Search for files... Owned Shared with you Scratchpad 2025-10-20 6:14pm

Question 18:

The screenshot shows the Snowflake interface with a query editor and results viewer. The query is:

```
88 --> 10,000.
89 -- Expected output: Product_Catagory, Total_Revenue
90
91 SELECT Product_Catagory, SUM(Total_Amount) AS Total_Revenue
92 FROM Retail_sales.retail_sales
93 GROUP BY Product_Catagory
94 HAVING SUM(Total_Amount) > 10000;
```

The results table shows:

PRODUCT_CATEGORY	TOTAL_REVENUE
Beauty	143515
Clothing	155580
Electronics	156905

Question 19:

The screenshot shows the Snowflake interface with a query editor and results viewer. The query is:

```
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
```

The results table shows:

PRODUCT_CATEGORY	AVERAGE_QUANTITY
Beauty	2.511401
Clothing	2.547009
Electronics	2.482456

Question 20:

The screenshot shows the Snowflake SQL interface. On the left, there's a sidebar with 'My Workspace' containing files like 'Untitled 1.sql' and 'Untitled.sql'. Below it is the 'Worksheets' section with a selected worksheet named '2025-10-20 6:14pm'. The main area is titled 'Results' and shows a query execution log from '2025-10-20 6:14pm'. The query itself is:

```
107 transaction_id ,  
108 total_amount ,  
109  
110 CASE  
111 WHEN Total_Amount > 1000 THEN 'High'  
112 ELSE 'Low'  
113 END AS Spending_Level  
114 FROM Retail.sales.retail_sales;
```

The results table has three columns: '# TRANSACTION_ID', '# TOTAL_AMOUNT', and 'SPENDING_LEVEL'. It contains 8 rows of data:

# TRANSACTION_ID	# TOTAL_AMOUNT	SPENDING_LEVEL
1	150	Low
2	1000	Low
3	30	Low
4	500	Low
5	100	Low
6	30	Low

Question 21:

This screenshot shows the same Snowflake interface as the previous one, but with a different query. The 'Untitled 1.sql' file is selected in the workspace. The results show a query with a CASE statement:

```
117 --- 'Senior' If Age >= 60  
118 --Expected output: Customer ID, Age, Age_Group  
119  
120 SELECT  
121 Customer_Id,  
122 Age,  
123 CASE  
124 WHEN Age < 30 THEN 'Youth'
```

The results table has three columns: '# CUSTOMER_ID', '# AGE', and 'AGE_GROUP'. It contains 6 rows of data:

# CUSTOMER_ID	# AGE	AGE_GROUP
CUST001	34	Adult
CUST002	26	Youth
CUST003	50	Adult
CUST004	37	Adult
CUST005	30	Adult
CUST006	45	Adult