

Connected.

```
SQL> CREATE TABLE customers (  
 2     customer_id INT PRIMARY KEY,  
 3     customer_name VARCHAR(50),  
 4     country VARCHAR(30)  
 5 );
```

Table created.

```
SQL> CREATE TABLE products (  
 2     product_id INT PRIMARY KEY,  
 3     product_name VARCHAR(50),  
 4     category VARCHAR(30),  
 5     price DECIMAL(10,2)  
 6 );
```

Table created.

```
SQL>  
SQL> CREATE TABLE orders (  
 2     order_id INT PRIMARY KEY,  
 3     customer_id INT,  
 4     product_id INT,  
 5     quantity INT,  
 6     order_date DATE,  
 7     FOREIGN KEY (customer_id) REFERENCES customers(customer_id),  
 8     FOREIGN KEY (product_id) REFERENCES products(product_id)  
 9 );
```

Table created.

Table created.

```
SQL> INSERT INTO customers VALUES (1,'Alice','USA');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (2,'Bob','USA');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (3,'Charlie','UK');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (4,'David','Canada');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (5,'Eva','India');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (6,'Frank','Germany');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (7,'Grace','India');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (8,'Henry','UK');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (9,'Isabel','USA');
```

1 row created.

```
SQL> INSERT INTO customers VALUES (10,'John','Germany');
```

1 row created.

```
SQL> INSERT INTO products VALUES (101,'Laptop','Electronics',800.00);
1 row created.

SQL> INSERT INTO products VALUES (102,'Phone','Electronics',500.00);
1 row created.

SQL> INSERT INTO products VALUES (103,'Tablet','Electronics',300.00);
1 row created.

SQL> INSERT INTO products VALUES (104,'Headphones','Accessories',100.00);
1 row created.

SQL> INSERT INTO products VALUES (105,'Keyboard','Accessories',40.00);
1 row created.

SQL> INSERT INTO products VALUES (106,'Chair','Furniture',120.00);
1 row created.

SQL> INSERT INTO products VALUES (107,'Desk','Furniture',250.00);
1 row created.

SQL> INSERT INTO products VALUES (108,'Monitor','Electronics',200.00);
1 row created.

SQL> INSERT INTO products VALUES (109,'Printer','Electronics',150.00);
1 row created.

SQL> INSERT INTO products VALUES (110,'Mouse','Accessories',25.00);
1 row created.
```

```
SQL> INSERT INTO orders VALUES (1001,1,101,1,TO_DATE('2025-01-10','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1002,2,102,2,TO_DATE('2025-01-11','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1003,3,103,1,TO_DATE('2025-01-15','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1004,4,104,3,TO_DATE('2025-01-16','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1005,5,105,2,TO_DATE('2025-02-01','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1006,6,106,1,TO_DATE('2025-02-03','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1007,7,107,1,TO_DATE('2025-02-05','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1008,8,108,2,TO_DATE('2025-02-07','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1009,9,109,1,TO_DATE('2025-02-10','YYYY-MM-DD'));
1 row created.

SQL> INSERT INTO orders VALUES (1010,10,110,4,TO_DATE('2025-02-12','YYYY-MM-DD'));
1 row created.
```

```
SQL> SELECT o.order_id, c.customer_name, p.product_name, o.quantity, o.order_date  
2 FROM orders o  
3 JOIN customers c ON o.customer_id = c.customer_id  
4 JOIN products p ON o.product_id = p.product_id  
5 WHERE c.country = 'USA'  
6 ORDER BY o.order_date;
```

ORDER_ID	CUSTOMER_NAME		
PRODUCT_NAME		QUANTITY	ORDER_DAT
1001 Alice	Laptop	1	10-JAN-25
1002 Bob	Phone	2	11-JAN-25
1009 Isabel	Printer	1	10-FEB-25

ORDER_ID	CUSTOMER_NAME		
PRODUCT_NAME		QUANTITY	ORDER_DAT
1011 Alice	Phone	1	15-FEB-25
1012 Bob	Tablet	2	17-FEB-25
1019 Isabel	Phone	1	07-MAR-25

ORDER_ID	CUSTOMER_NAME		
PRODUCT_NAME		QUANTITY	ORDER_DAT
1021 Alice	Mouse	1	12-MAR-25
1022 Bob	Laptop	1	15-MAR-25
1029 Isabel	Headphones	1	29-MAR-25

9 rows selected.

```
SQL> SELECT p.product_name, SUM(o.quantity * p.price) AS total_sales
2  FROM orders o
3  JOIN products p ON o.product_id = p.product_id
4  GROUP BY p.product_name
5  ORDER BY total_sales DESC;
```

PRODUCT_NAME	TOTAL_SALES
Laptop	3200
Phone	3000
Tablet	1200
Desk	1000
Monitor	1000
Headphones	600
Chair	480
Printer	450
Keyboard	240
Mouse	125

10 rows selected.

```
SQL> SELECT c.customer_name, COUNT(o.order_id) AS total_orders
2  FROM customers c
3  LEFT JOIN orders o ON c.customer_id = o.customer_id
4  GROUP BY c.customer_name
5  ORDER BY total_orders DESC;
```

CUSTOMER_NAME	TOTAL_ORDERS
Alice	3
Frank	3
John	3
Bob	3
Grace	3
Henry	3
Charlie	3
David	3
Eva	3
Isabel	3

10 rows selected.


```

SQL> SELECT customer_name
  2  FROM customers
  3  WHERE customer_id IN (
  4      SELECT o.customer_id
  5      FROM orders o
  6      JOIN products p ON o.product_id = p.product_id
  7      GROUP BY o.customer_id
  8      HAVING SUM(o.quantity * p.price) > (
  9          SELECT AVG(total)
 10          FROM (
 11              SELECT SUM(o2.quantity * p2.price) AS total
 12              FROM orders o2
 13              JOIN products p2 ON o2.product_id = p2.product_id
 14              GROUP BY o2.customer_id
 15          )
 16      )
 17 );

```

CUSTOMER_NAME

Alice
 Bob
 Charlie
 Grace
 Henry

```
SQL> CREATE OR REPLACE VIEW monthly_sales AS
  2  SELECT TO_CHAR(order_date, 'YYYY-MM') AS month,
  3          SUM(o.quantity * p.price) AS total_sales
  4  FROM orders o
  5  JOIN products p ON o.product_id = p.product_id
  6  GROUP BY TO_CHAR(order_date, 'YYYY-MM');
```

View created.

```
SQL> SELECT * FROM monthly_sales;
```

MONTH	TOTAL_SALES
-----	-----
2025-03	5695
2025-02	3200
2025-01	2400