SQL_Task_6

```
-- Create the orders table
CREATE TABLE orders (
   order_id INT PRIMARY KEY,
   order_date DATE NOT NULL,
   amount DECIMAL(10, 2) NOT NULL,
   product_id INT NOT NULL
);

-- Insert 30 sample records
INSERT INTO orders (order_id,order_date, amount, product_id) VALUES
(1,'2023-01-05', 49.99, 101),
(2,'2023-01-12', 29.95, 102),
(3,'2023-01-18', 99.50, 103),
(4,'2023-01-22', 15.75, 101),
(5,'2023-02-03', 199.00, 104),
(6,'2023-02-10', 24.99, 105),
(7,'2023-02-15', 79.99, 102),
(8,'2023-02-20', 59.50, 103),
(9,'2023-03-01', 149.95, 106),
(10,'2023-03-08', 39.99, 101),
(11,'2023-03-14', 89.00, 104),
(12,'2023-03-21', 19.99, 105),
(13,'2023-04-02', 129.00, 107),
(14,'2023-04-09', 34.50, 102),
(15,'2023-04-16', 69.95, 103),
(16,'2023-04-23', 14.99, 101),
```

(17,'2023-05-05', 179.00, 108),

(18,'2023-05-12', 44.95, 102),

(19,'2023-05-18', 94.50, 104),

(20,'2023-05-25', 29.99, 105),

(21,'2023-06-03', 159.95, 109),

(22,'2023-06-10', 54.00, 103),

(23,'2023-06-17', 119.00, 107),

(24,'2023-06-24', 24.50, 101),

(25,'2023-07-02', 199.95, 110),

(26,'2023-07-09', 49.99, 102),

(27,'2023-07-16', 109.50, 104),

(28,'2023-07-23', 39.95, 105),

(29,'2023-08-01', 89.99, 108),

(30,'2023-08-08', 19.50, 101);

select * from orders;

#output

1	"2023-01-05"	49.99	101
2	"2023-01-12"	29.95	102
3	"2023-01-18"	99.50	103
4	"2023-01-22"	15.75	101
5	"2023-02-03"	199.00	104
6	"2023-02-10"	24.99	105
7	"2023-02-15"	79.99	102
8	"2023-02-20"	59.50	103
9	"2023-03-01"	149.95	106
10	"2023-03-08"	39.99	101

11	"2023-03-14"	89.00	104
12	"2023-03-21"	19.99	105
13	"2023-04-02"	129.00	107
14	"2023-04-09"	34.50	102
15	"2023-04-16"	69.95	103
16	"2023-04-23"	14.99	101
17	"2023-05-05"	179.00	108
18	"2023-05-12"	44.95	102
19	"2023-05-18"	94.50	104
20	"2023-05-25"	29.99	105
21	"2023-06-03"	159.95	109
22	"2023-06-10"	54.00	103
23	"2023-06-17"	119.00	107
24	"2023-06-24"	24.50	101
25	"2023-07-02"	199.95	110
26	"2023-07-09"	49.99	102
27	"2023-07-16"	109.50	104
28	"2023-07-23"	39.95	105
29	"2023-08-01"	89.99	108
30	"2023-08-08"	19.50	101

```
-- Example query using EXTRACT(MONTH FROM order_date)
SELECT
    order_id,
    order_date,
    EXTRACT(MONTH FROM order_date) AS order_month,
    amount,
    product_id
FROM
    orders
ORDER BY
    order_date;
#output
1       "2023-01-05"    1       49.99   101
2       "2023-01-12"    1       29.95   102
3       "2023-01-18"    1       99.50   103
4       "2023-01-22"    1       15.75   101
5       "2023-02-03"    2       199.00  104
6       "2023-02-10"    2       24.99   105
7       "2023-02-15"    2       79.99   102
8       "2023-02-20"    2       59.50   103
9       "2023-03-01"    3       149.95  106
10      "2023-03-08"    3       39.99   101
11      "2023-03-14"    3       89.00   104
12      "2023-03-21"    3       19.99   105
13      "2023-04-02"    4       129.00  107
14      "2023-04-09"    4       34.50   102
15      "2023-04-16"    4       69.95   103
```

16	"2023-04-23"	4	14.99	101
17	"2023-05-05"	5	179.00	108
18	"2023-05-12"	5	44.95	102
19	"2023-05-18"	5	94.50	104
20	"2023-05-25"	5	29.99	105
21	"2023-06-03"	6	159.95	109
22	"2023-06-10"	6	54.00	103
23	"2023-06-17"	6	119.00	107
24	"2023-06-24"	6	24.50	101
25	"2023-07-02"	7	199.95	110
26	"2023-07-09"	7	49.99	102
27	"2023-07-16"	7	109.50	104
28	"2023-07-23"	7	39.95	105
29	"2023-08-01"	8	89.99	108
30	"2023-08-08"	8	19.50	101

```
-- Group by year-month in YYYY-MM format
SELECT
    TO_CHAR(order_date, 'YYYY-MM') AS year_month,
    COUNT(*) AS order_count,
    SUM(amount) AS total_amount
FROM orders
GROUP BY
    TO_CHAR(order_date, 'YYYY-MM')
ORDER BY
    year_month;
#output
"2023-01"       4       195.19
"2023-02"       4       363.48
"2023-03"       4       298.93
"2023-04"       4       248.44
"2023-05"       4       348.44
"2023-06"       4       357.45
"2023-07"       4       399.39
"2023-08"       2       109.49
```

```
--Query Using SUM() for Revenue by Product
SELECT
   product_id,
   SUM(amount) AS total_revenue
FROM
   orders
GROUP BY
   product_id
ORDER BY
   total_revenue DESC;
#output
104	492.00
103	282.95
108	268.99
107	248.00
102	239.38
110	199.95
101	164.72
109	159.95
106	149.95
105	114.92
```

```
-- Get total order volume (count of distinct order_ids)
SELECT
    COUNT(DISTINCT order_id) AS total_order_volume
FROM
    orders;
#output
-- Get total order volume (count of distinct order_ids)
30
```

```
SELECT
   order_id,
   order_date,
   EXTRACT(MONTH FROM order_date) AS order_month,
   amount,
   product_id
FROM
   orders
ORDER BY
   EXTRACT(MONTH FROM order_date) DESC,
   order_date DESC;
#output
30      "2023-08-08"    8       19.50   101
29      "2023-08-01"    8       89.99   108
28      "2023-07-23"    7       39.95   105
27      "2023-07-16"    7       109.50  104
26      "2023-07-09"    7       49.99   102
25      "2023-07-02"    7       199.95  110
24      "2023-06-24"    6       24.50   101
23      "2023-06-17"    6       119.00  107
22      "2023-06-10"    6       54.00   103
21      "2023-06-03"    6       159.95  109
20      "2023-05-25"    5       29.99   105
19      "2023-05-18"    5       94.50   104
18      "2023-05-12"    5       44.95   102
17      "2023-05-05"    5       179.00  108
16      "2023-04-23"    4       14.99   101
```

15	"2023-04-16"	4	69.95	103
14	"2023-04-09"	4	34.50	102
13	"2023-04-02"	4	129.00	107
12	"2023-03-21"	3	19.99	105
11	"2023-03-14"	3	89.00	104
10	"2023-03-08"	3	39.99	101
9	"2023-03-01"	3	149.95	106
8	"2023-02-20"	2	59.50	103
7	"2023-02-15"	2	79.99	102
6	"2023-02-10"	2	24.99	105
5	"2023-02-03"	2	199.00	104
4	"2023-01-22"	1	15.75	101
3	"2023-01-18"	1	99.50	103
2	"2023-01-12"	1	29.95	102
1	"2023-01-05"	1	49.99	101

```
--Limiting results for specific time periods

SELECT *

FROM orders

WHERE order_date BETWEEN '2023-01-01' AND '2023-03-31'

ORDER BY order_date;

#output

1       "2023-01-05"    49.99   101

2       "2023-01-12"    29.95   102

3       "2023-01-18"    99.50   103

4       "2023-01-22"    15.75   101

5       "2023-02-03"    199.00  104

6       "2023-02-10"    24.99   105

7       "2023-02-15"    79.99   102

8       "2023-02-20"    59.50   103

9       "2023-03-01"    149.95  106

10      "2023-03-08"    39.99   101

11      "2023-03-14"    89.00   104

12      "2023-03-21"    19.99   105
```