1. Create table with necessary columns:

CREATE TABLE online\_sales (

order\_id NUMBER PRIMARY KEY,

order\_date DATE NOT NULL,

amount NUMBER(10,2) NOT NULL,

product\_id NUMBER NOT NULL,

customer\_id NUMBER

);

2. Create sequence for order IDs:

CREATE SEQUENCE order\_id\_seq

START WITH 1

INCREMENT BY 1

NOCACHE

NOCYCLE;

3. Insert 10 sample records spanning 2022-2023:

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2022-03-15', 'YYYY-MM-DD'), 150.00, 101, 1001);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2022-03-22', 'YYYY-MM-DD'), 75.50, 102, 1002);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2022-04-05', 'YYYY-MM-DD'), 200.00, 103, 1003);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2022-04-18', 'YYYY-MM-DD'), 125.25, 101, 1004);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2022-05-10', 'YYYY-MM-DD'), 90.75, 104, 1005);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2023-01-12', 'YYYY-MM-DD'), 180.50, 102, 1006);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2023-01-25', 'YYYY-MM-DD'), 220.00, 105, 1007);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2023-02-08', 'YYYY-MM-DD'), 95.30, 101, 1008);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2023-03-15', 'YYYY-MM-DD'), 150.75, 103, 1009);

INSERT INTO online\_sales VALUES (order\_id\_seq.NEXTVAL, TO\_DATE('2023-03-28', 'YYYY-MM-DD'), 175.25, 104, 1010);

4. Sales Trend Analysis :

SELECT

EXTRACT(YEAR FROM order\_date) AS sales\_year,

EXTRACT(MONTH FROM order\_date) AS sales\_month,

TO\_CHAR(order\_date, 'MON') AS month\_name,

SUM(amount) AS total\_revenue,

COUNT(DISTINCT order\_id) AS order\_volume,

ROUND(SUM(amount) / NULLIF(COUNT(DISTINCT order\_id), 0), 2) AS avg\_order\_value

FROM

online\_sales

WHERE

order\_date BETWEEN TO\_DATE('2022-01-01', 'YYYY-MM-DD')

AND TO\_DATE('2023-03-31', 'YYYY-MM-DD')

GROUP BY

EXTRACT(YEAR FROM order\_date),

EXTRACT(MONTH FROM order\_date),

TO\_CHAR(order\_date, 'MON')

ORDER BY

sales\_year,

sales\_month;

**Outputs:**

**Sample Data Inserted:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Order Date** | **Amount** | **Product ID** | **Customer ID** |
| 2022-03-15 | 150.00 | 101 | 1001 |
| 2022-03-22 | 75.50 | 102 | 1002 |
| 2022-04-05 | 200.00 | 103 | 1003 |
| 2022-04-18 | 125.25 | 101 | 1004 |
| 2022-05-10 | 90.75 | 104 | 1005 |
| 2023-01-12 | 180.50 | 102 | 1006 |
| 2023-01-25 | 220.00 | 105 | 1007 |
| 2023-02-08 | 95.30 | 101 | 1008 |
| 2023-03-15 | 150.75 | 103 | 1009 |
| 2023-03-28 | 175.25 | 104 | 1010 |

**Expected Output:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sales Year** | **Sales Month** | **Month Name** | **Total Revenue** | **Order Volume** | **Avg Order Value** |
| 2022 | 3 | MAR | 225.50 | 2 | 112.75 |
| 2022 | 4 | APR | 325.25 | 2 | 162.63 |
| 2022 | 5 | MAY | 90.75 | 1 | 90.75 |
| 2023 | 1 | JAN | 400.50 | 2 | 200.25 |
| 2023 | 2 | FEB | 95.30 | 1 | 95.30 |
| 2023 | 3 | MAR | 326.00 | 2 | 163.00 |