

Exercise

1. Write a query that shows the number of rows in SALES table.
2. Produce a list which shows total sales volume broken by sales date from SALES table.
3. Produce a list which shows maximum sales volume broken by sales date and order number from SALES table.
4. Produce a list which shows minimum sales volume broken by sales date from SALES table and minimum sales volume is less than 100. (Hint: use HAVING clause)

Copy and paste the below SQL's in SQL Developer and run them, You will get errors and try to correct those errors.

1. `SELECT SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT) FROM SALES
GROUP BY SALES_DATE`
2. `SELECT SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT) FROM SALES
GROUP BY SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT)`
3. `SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
WHERE MIN(TOTAL_AMOUNT) < 100`
4. `SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
ORDER BY SALES_DATE
HAVING MIN(TOTAL_AMOUNT) > 100`
5. `SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
WHERE SALES_DATE >= '01-JAN-2015'
HAVING MIN(TOTAL_AMOUNT) > 100
ORDER BY SALES_DATE`

Answers:

1. `SELECT count(*) FROM sales`
2. `SELECT sales_date, SUM(total_amount)
FROM sales
GROUP BY sales_date`
3. `SELECT sales_date, order_id, MAX(total_amount)
FROM sales
GROUP BY sales_date, order_id`
4. `SELECT sales_date, MIN(total_amount)
FROM sales
GROUP BY sales_date
HAVING MIN(total_amount) < 100`

Answers for errors:

- 1) You will get an error “ORA-00979: not a GROUP BY expression” when you run below SQL statement.

```
SELECT SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT) FROM SALES  
GROUP BY SALES_DATE
```

Correct the above SQL statement by adding ,PRODUCT_ID in GROUP BY clause.
(Remember the number of columns used in the SELECT should be the same as number of columns in GROUP BY, This excludes the aggregated column.)

```
SELECT SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT) FROM SALES  
GROUP BY SALES_DATE, PRODUCT_ID
```

- 2) You will get an error “ORA-00934: group function is not allowed here” when you run below SQL statement.

```
SELECT SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT) FROM SALES  
GROUP BY SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT)
```

Correct the above SQL statement by removing ,SUM(TOTAL_AMOUNT) in GROUP BY clause. (Remember the aggregated columns are not allowed in the GROUP BY clause.)

```
SELECT SALES_DATE, PRODUCT_ID, SUM(TOTAL_AMOUNT) FROM SALES
GROUP BY SALES_DATE, PRODUCT_ID
```

- 3) You will get an error “ORA-00933: SQL command not properly ended” when you run below SQL statement.

```
SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
WHERE MIN(TOTAL_AMOUNT) < 100
```

Correct the above SQL statement by replacing WHERE with HAVING (Remember when you are filtering on an aggregated column, you need to use HAVING.)

```
SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
HAVING MIN(TOTAL_AMOUNT) < 100
```

- 4) You will get an error “ORA-00933: SQL command not properly ended” when you run below SQL statement.

```
SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
ORDER BY SALES_DATE
HAVING MIN(TOTAL_AMOUNT) > 100
```

Correct the above SQL statement by moving ORDER BY SALES_DATE to the end of SQL statement (Remember ORDER BY should be at the end of the SQL statement)

```
SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
HAVING MIN(TOTAL_AMOUNT) > 100
ORDER BY SALES_DATE
```

- 5) You will get an error “ORA-00933: SQL command not properly ended” when you run below SQL statement.

```
SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
GROUP BY SALES_DATE
WHERE SALES_DATE >= '01-JAN-2015'
HAVING MIN(TOTAL_AMOUNT) > 100
ORDER BY SALES_DATE
```

Correct the above SQL statement by moving WHERE SALES_DATE >= '01-JAN-2015' after FROM clause (Remember WHERE should be immediately after FROM clause.)

```
SELECT SALES_DATE, MIN(TOTAL_AMOUNT)
FROM SALES
WHERE SALES_DATE >= '01-JAN-2015'
GROUP BY SALES_DATE
HAVING MIN(TOTAL_AMOUNT) > 100
ORDER BY SALES_DATE
```