

Oracle ROWNUM – Summary

What is ROWNUM?

ROWNUM is a **pseudo column** in Oracle Database. It represents the **order in which rows are returned** by a query.

Important points:

- ROWNUM is assigned **before ORDER BY** is applied.
- ROWNUM starts from **1**.
- You cannot control its value directly.

How ROWNUM Works

1. It fetches the first row → assigns ROWNUM = 1
2. Fetches the second row → assigns ROWNUM = 2
3. And so on...

ROWNUM is generated **row by row while fetching data**.

Why WHERE ROWNUM = 1 Works

```
SELECT * FROM employees WHERE ROWNUM = 1;
```

Oracle fetches the first row, assigns ROWNUM = 1, condition is satisfied → one row is returned.

Why WHERE ROWNUM = 2 Returns NO DATA

```
SELECT * FROM employees WHERE ROWNUM = 2;
```

The first row always gets ROWNUM = 1. The condition fails, so Oracle never fetches the second row.

Important Rule

```
WHERE ROWNUM = 2
```

```
WHERE ROWNUM > 1
```

This will NOT work.

```
WHERE ROWNUM <= 2
```

This WILL work.

Correct Way to Get Row Number 2

```
SELECT *  
FROM (  
    SELECT e.*, ROWNUM r  
    FROM employees e  
)  
WHERE r = 2;
```

ROWNUM with ORDER BY

```
SELECT * FROM employees
ORDER BY salary DESC
WHERE ROWNUM = 1;
```

■ Wrong

```
SELECT *
FROM (
    SELECT * FROM employees
    ORDER BY salary DESC
)
WHERE ROWNUM = 1;
```

■ Correct

Key Takeaway

ROWNUM is **not a stored value**. It is generated during query execution.