INDIAN DATA CLUB

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indiandataclub.com

21 DAYS
SQL CHALLENGE

CHALLENGE STARTS FROM

3RD NOVEMBER 2025

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#SQLWithIDC

Day 3 (05/11): Sorting Data with ORDER BY

🎯 **_Objective_**
To understand how to **sort data** in ascending or descending order using the ORDER BY clause in SQL, including sorting based on **multiple columns** for more structured and meaningful results.

🔍 **_Topics Covered_**
➢ **ORDER BY Clause**
Used to sort query results based on one or more columns.

➢ **Sorting in Ascending Order (ASC)**
Default sorting method.
Returns results from _smallest to largest_ or A → Z.

➢ **Sorting in Descending Order (DESC)**
Reverse sorting.
Returns results from _largest to smallest_ or Z → A.

ORDER BY Clause

The ORDER BY clause is used to **sort the result** of a query **in ascending or descending order** based on one or more columns.
By default, sorting is in **ascending (ASC)** order.

Syntax :-

```
SELECT column1, column2, ...
FROM table_name
ORDER BY column_name ASC;



SELECT column1, column2, ...
FROM table_name
ORDER BY column_name DESC;
```

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SQL Beginner to Advanced For Data...

⭐ 4.9 (1308) 👥 9032 Enrolled

Beginners to Advanced SQL

55 lessons

SQL Bootcamp Playlist (2025) - Zero to Hero
View full course

▶ w3schools.com **SQL - ORDER BY Keyword - W3Schools.com**

▶ Amigoscode **PostgreSQL: Order By | Course | 2019**

Practice Questions:

```
1    -- List all patients sorted by age in descending order.
2 •  SELECT *
3    FROM patients
4    ORDER BY age DESC ;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: | Fetch rows:

patient_id	name	age	arrival_date	departure_date	service	satisfaction
PAT-112d537f	Kevin Oconnor	89	2025-08-08	2025-08-10	surgery	65
PAT-1b2fe77a	Janet Kane DVM	89	2025-07-03	2025-07-15	emergency	93
PAT-2d4ae2a6	Jerry Peters	89	2025-01-17	2025-01-19	surgery	88
PAT-41173daa	Carmen Preston	89	2025-10-26	2025-10-30	emergency	72
PAT-434171f6	Kenneth Sharp	89	2025-05-26	2025-06-09	general_medicine	91
PAT-623cbc11	Sharon Boyd	89	2025-02-11	2025-02-18	surgery	95
PAT-65dd44b9	Clayton Steele	89	2025-06-06	2025-06-16	surgery	76
PAT-796351fa	Cynthia Moore	89	2025-05-02	2025-05-04	surgery	74
PAT-87fa07bd	Martha Smith	89	2025-11-18	2025-11-30	emergency	99
PAT-92f8e4bd	Louis Martin	89	2025-12-07	2025-12-12	general_medicine	68
PAT-a8b5abcb	Amanda Hill	89	2025-05-25	2025-05-31	emergency	76
PAT-044a304c	George Harper	88	2025-10-05	2025-10-09	surgery	89
PAT-19b54c42	Jenna Gamble	88	2025-09-29	2025-10-06	emergency	61
PAT-27b993e3	Douglas Vasquez	88	2025-01-26	2025-01-31	surgery	85
PAT-281c31d6	Pamela Gutierrez	88	2025-02-14	2025-02-20	ICU	63
PAT-3e4685e0	Sara Fuller	88	2025-10-16	2025-10-17	surgery	78
PAT-67f7e3c0	Nathan Freeman	88	2025-03-09	2025-03-23	emergency	96
PAT-90e7a0e1	Ryan Murphy	88	2025-07-06	2025-07-14	ICU	99
PAT-b3a107ff	Jennifer Jones	88	2025-01-19	2025-01-26	surgery	97
PAT-b96272b5	Jose Ramirez	88	2025-10-11	2025-10-12	general_medicine	96

- *SELECT ** → selects **all columns** from the table (patient_id, name, age, service, etc.).
- *FROM patients* → tells SQL to get the data from the **patients** table.
- *ORDER BY age DESC* → sorts the result based on the **age** column in **descending order** (from highest age to lowest age).

Practice Questions:

```
6    -- Show all services_weekly data sorted by week number ascending &
7    -- patients_request descending.
8 •  SELECT *
9    FROM services_weekly
10   ORDER BY week ASC , patients_request DESC ;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

week	month	service	available_beds	patients_request	patients_admitted	patients_refused	patient_satisfaction	staff_mor
1	1	general_medicine	37	201	37	164	97	43
1	1	surgery	45	130	45	85	83	78
1	1	emergency	32	76	32	44	67	70
1	1	ICU	22	31	22	9	84	91
2	1	general_medicine	43	183	43	140	73	93
2	1	emergency	28	169	28	141	75	64
2	1	surgery	40	26	26	0	96	56
2	1	ICU	16	7	7	0	79	85
3	1	emergency	32	177	32	145	73	58
3	1	surgery	27	66	27	39	63	72
3	1	general_medicine	37	58	37	21	95	63
3	1	ICU	20	21	20	1	82	89

This shows all data from services_weekly,
sorted by week in ascending order, and if weeks are the same, it sorts by
patients_request from highest to lowest.

Practice Questions:

```
12     -- Display staff members sorted alphabetically by their names.
13 •   SELECT *
14     FROM staff
15     ORDER BY staff_name ASC ;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: IA
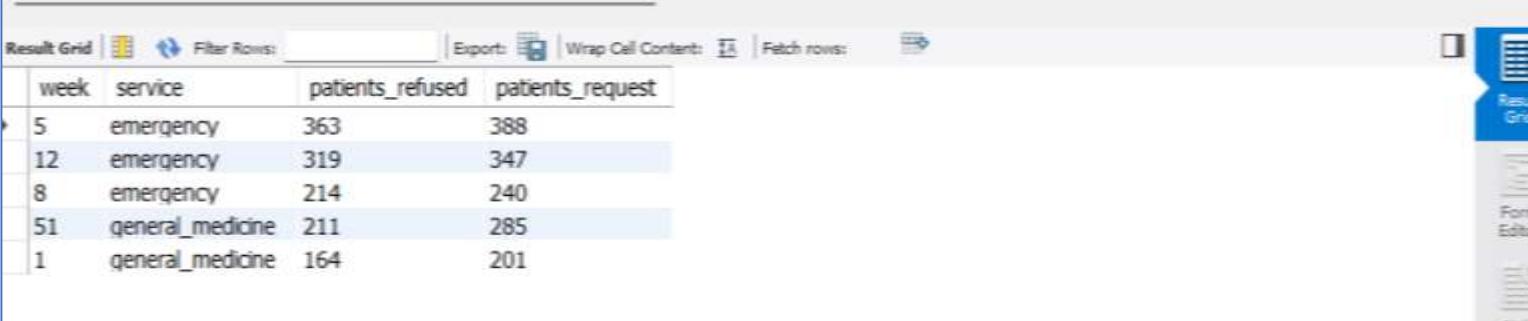
staff_id	staff_name	role	service
STF-1881ede3	Aaron Wise	nurse	ICU
STF-39082289	Abigail Shaffer	nurse	emergency
STF-3c9039fc	Aimee Montoya	nurse	ICU
STF-5ca26577	Allison Hill	doctor	emergency
STF-48fc5275	Amber Kidd	nurse	general_medicine
STF-b5fcdde5	Amy Silva	nursing_assistant	general_medicine
STF-9a4c0716	Angela Lopez	nursing_assistant	general_medicine
STF-177e5df8	Angelica Tucker	nurse	surgery
STF-d8006e7c	Angie Henderson	doctor	emergency
STF-e328da72	Anna Henderson	nurse	ICU
STF-36b3e876	Anthony Hump...	nurse	surgery
STF-15c07995	Anthony Rodrig...	doctor	surgery
STF-6a7114cb	April Frost	nursing_assistant	ICU
STF-4740993e	Ashley Waller	nursing_assistant	ICU
STF-bcb3f4fe	Brent Jordan	nurse	general_medicine

This query shows **all staff members** and sorts them **alphabetically by their names** in **ascending order (A → Z).**

Daily Challenge:

```sql
1   -- Retrieve the top 5 weeks with the highest patient refusals across all services,
2   -- showing week, service, patients_refused, and patients_request.
3   -- Sort by patients_refused in descending order.
4 • SELECT
5       week,
6       service,
7       patients_refused,
8       patients_request
9   FROM services_weekly
10  ORDER BY patients_refused DESC
11  LIMIT 5 ;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

week	service	patients_refused	patients_request
5	emergency	363	388
12	emergency	319	347
8	emergency	214	240
51	general_medicine	211	285
1	general_medicine	164	201

This query displays the **top 5 weeks** with the **highest number of patient refusals**, showing the week, service, patients_refused, and patients_request — sorted from **highest to lowest refusals**.