

## Original Table

order_id	customer_id	customer_name	order_status
1	1	Alice Khan	Dispatched
2	2	Bob Ahmed	In Progress

---

## 1NF (First Normal Form)

- ✓ All values are **atomic**, no repeating groups or multivalued fields.
  - ✓ **1NF is satisfied.**
- 

## 2NF (Second Normal Form)

- ✓ The **primary key** is order\_id.
- ✓ All non-key attributes must be **fully dependent** on the primary key.
- ✓ customer\_name depends on customer\_id, **not** directly on order\_id.

Partial dependency exists.

- ✓ **adminorder**

order_id	customer_id	order_status
1	1	Dispatched
2	2	In Progress

- ✓ Now in 2NF.
- 

## 3NF (Third Normal Form)

- ✓ Check for **transitive dependencies**.
  - ✓ No attribute is dependent on another non-key attribute.
  - ✓ **Now in 3NF.**
- 

## BCNF (Boyce-Codd Normal Form)

- ✓ Every determinant must be a candidate key.
  - ✓ No violations — order\_id is the primary key.
  - ✓ **BCNF is satisfied.**
- 

## 4NF (Fourth Normal Form)

- ✓ No multivalued dependencies.
  - ✓ Each row represents one fact about one order.
  - ✓ **4NF is satisfied.**
- 

## 5NF (Fifth Normal Form)

- ✓ No join dependencies.
- ✓ Nothing to decompose further.
- ✓ **5NF is satisfied.**