**1. Primary Key Constraints**

These uniquely identify each record in their respective tables

Table Primary Key(s)

customers customerid

employees employeeid

shippers shipperid

orders orderid

categories categoryid

products productid

order\_details orderid, productid → Composite PK

Composite Primary Key: order\_details uses a composite PK on (orderid, productid) — this ensures each product in an order is uniquely identified.

**2. Foreign Key Constraints**

These define relationships between tables:

Child Table Foreign Key Column References

orders customerid customers(customerid)

orders employeeid employees(employeeid)

orders shipperid shippers(shipperid)

products categoryid categories(categoryid)

order\_details orderid orders(orderid)

order\_details productid products(productid)

These foreign keys enforce referential integrity — e.g., an order must belong to a valid customer, and a product must belong to a valid category.

**Other Implicit Constraints**

While not explicitly shown, PostgreSQL typically enforces:

NOT NULL on all primary keys.

Data types (e.g., numeric(10,2) for prices) restrict formatting and precision.

**Relationships Summary:**

1:N (One-to-Many):

One customer → many orders

One employee → many orders

One shipper → many orders

One product → many order\_details

One order → many order\_details

One category → many products