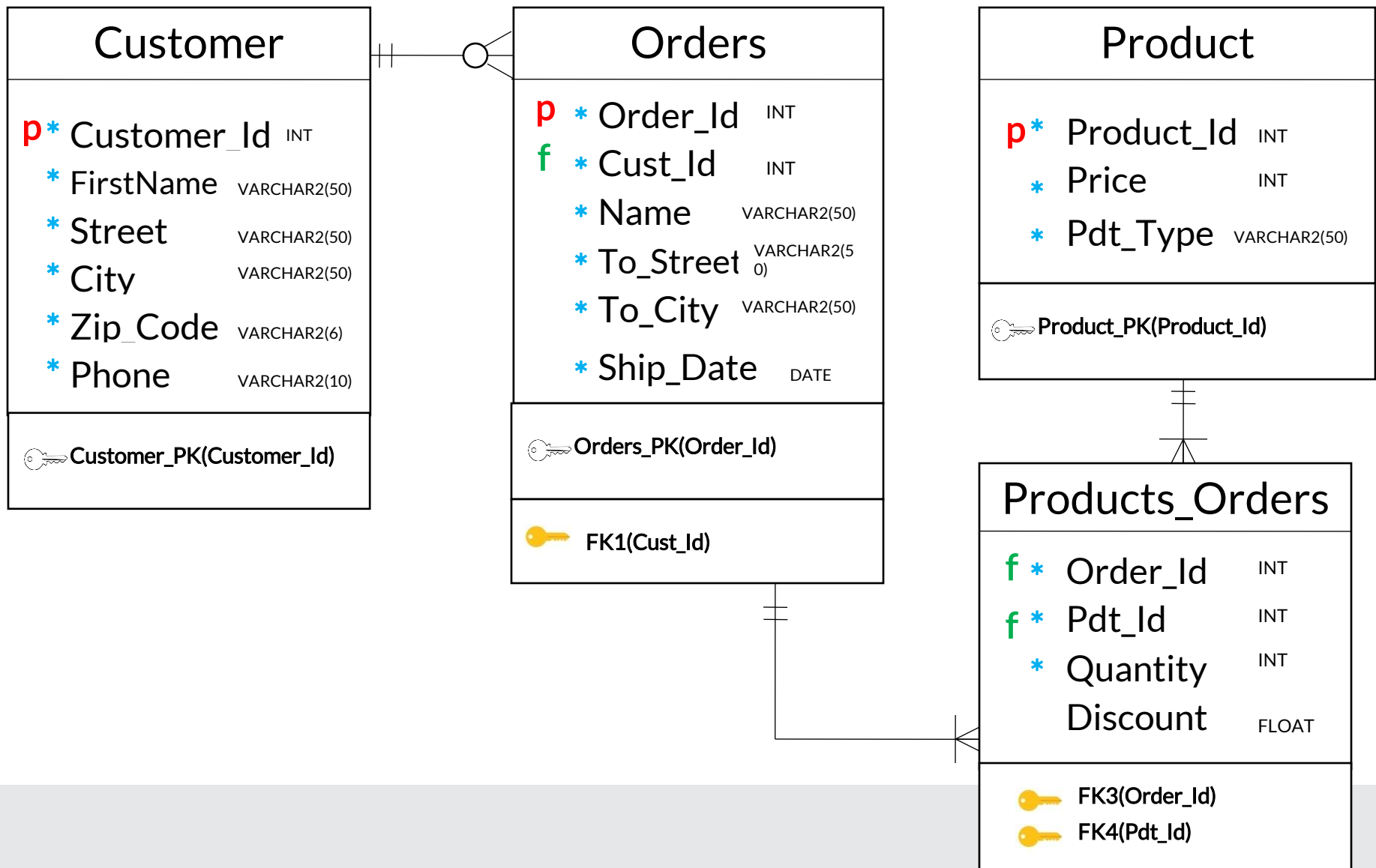# Views

In this session, you will learn:

- Introduction to Database View
- How Oracle implements Views
- How to create a View
- How to update a view
- How to manage views

Customer

- p * Customer_Id INT
- * FirstName VARCHAR2(50)
- * Street VARCHAR2(50)
- * City VARCHAR2(50)
- * Zip_Code VARCHAR2(6)
- * Phone VARCHAR2(10)

🔑 Customer_PK(Customer_Id)

Orders

- p * Order_Id INT
- f * Cust_Id INT
- * Name VARCHAR2(50)
- * To_Street VARCHAR2(50)
- * To_City VARCHAR2(50)
- * Ship_Date DATE

🔑 Orders_PK(Order_Id)

🔑 FK1(Cust_Id)

Product

- p * Product_Id INT
- * Price INT
- * Pdt_Type VARCHAR2(50)

🔑 Product_PK(Product_Id)

Products_Orders

- f * Order_Id INT
- f * Pdt_Id INT
- * Quantity INT
- Discount FLOAT

🔑 FK3(Order_Id)
🔑 FK4(Pdt_Id)

Introduction to Database View

- A database view is a virtual table or logical table which is defined as a SQL Select query.

Why to use Views?

  ✓ allows you to simplify complex queries

  ✓ helps limit data access to specific users

  ✓ provides extra security layer

  ✓ enables computed columns

  ✓ enables backward compatibility

How Oracle implements Views?

- Creates a virtual table based on the view definition statement and executes the incoming query on this virtual table.

Creating a View - Example

Syntax

CREATE VIEW [view_name]

AS

[SELECT statement]

Customer

Customer_Id	FirstName	Street	City	Zip_Code	Phone
100	ABC	Central	Chennai	641088	9852754812
101	XYZ	Velacherry	Chennai	641088	5872526262
103	FEG	Lakeview	Ooty	465424	4541565596
104	ABC	Lakeview	Ooty	465424	8482927482

Select * from CustomersInChennai

Customer_Id	FirstName	Phone
100	ABC	9852754812
101	XYZ	5872526262

Example

CREATE VIEW CustomersInChennai

AS

SELECT Customer_Id,FirstName,Phone

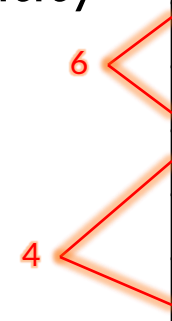FROM Customer WHERE City = 'Chennai';

⟶ View Created

Creating a View with GROUP BY and ORDER BY

Example

```
CREATE VIEW salesperorder
AS
SELECT Order_Id, SUM(Quantity) total_quantity
FROM Product_Orders
GROUP by Order_Id
ORDER BY total_quantity DESC;
```

Product_Orders

Order_Id	Pdt_Id	Quantity	Discount
200	300	1	0
200	301	5	0.1
201	300	1	0.2
202	302	7	0
201	301	3	0.3

6

4

Select * from salesperorder

Order_Id	Total_quantity
202	7
200	6
201	4

Creating a View using Joins

Product

Product_Id	Pdt_Name	Price	Pdt_Type
300	Fan	5000	Electronics
301	Rhymes	1000	Books
302	Shirt	2000	Men Apparel

Product_Orders

Order_Id	Pdt_Id	Quantity	Discount
200	300	1	0
200	301	5	0.1
201	301	2	0.2

Example

CREATE VIEW Product_Info
AS
SELECT Product_Id, Pdt_Name, Sum(Quantity) Total_Quantity
FROM Product
INNER JOIN Product_Orders
ON Product_Id = Pdt_Id
GROUP BY Product_Id

➡ **View Created**

Select * from Product_Info ➡

Product_Id	Pdt_Name	Total_Quantity
300	Fan	1
301	Rhymes	7

Syntax

CREATE OR REPLACE [view_name]
AS
[SELECT statement]

Select * from CustomersInChennai ➡

Customer_Id	FirstName	Phone
100	ABC	9997821919
101	XYZ	5872526262

Example

CREATE OR REPLACE VIEW CustomersInChennai
AS
SELECT Customer_Id,FirstName,Street,Phone FROM Customer
WHERE City = 'Chennai';

Select * from CustomersInChennai ➡

Customer_Id	FirstName	Street	Phone
100	ABC	Central	9997821919
101	XYZ	Velacherry	5872526262

Dropping a View

Syntax

DROP VIEW view_name

Example

DROP VIEW CustomersInChennai

THANKS

eBOX BY AMPHISOFT