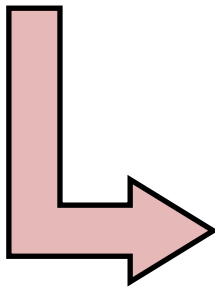


INDIA STEELS

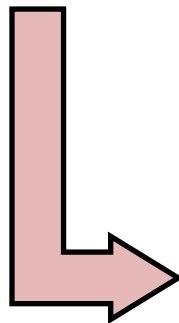
- A CASE STUDY ON INDIA STEELS ENTERPRISES WHICH IS A LEADING FIRM IN THE STEEL INDUSTRIES.
- INDIA STEELS MAINLY DEALS WITH STAINLESS STEEL PRODUCTS IN THE MARKET.
- SO HERE WE GOT A DATABASE OF THE FIRM THAT WE'LL BE LOOKING AT WITH 4 DIFFERENT TABLES WITH 20 RECORDS, 4 CORRELATED SUB-QUERIES , 4 JOINS AND 1 VIEW TABLE.
- NEXT IS THE ERD (ENTITY RELATIONSHIP DIAGRAM) FOR A BETTER VISUALISATION OF THE RELATED TABLES IN THE DATABASE WE'LL BE LOOKING AT.

ERD (ENTITY-RELATIONSHIP DIAGRAM)

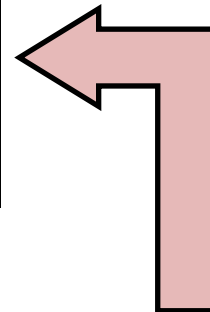
<u>SUPPLIERS</u>
Supplier_ID
Company_Name
Contact_Name
City
Phone_No



<u>INVENTORY</u>
Product_ID
Product_Name
Supplier_ID
Quantity_Kgs



<u>ORDERS</u>
Order_ID
Customer_ID
Product_ID
Order_Date
Quantity_Kgs
Price



<u>CUSTOMERS</u>
Customer_ID
First_Name
Last_Name
City
Phone_No

TABLE NAME	
PRIMARY KEY	
FOREIGN KEY	

DESCRIPTION OF TABLES

```
MariaDB [(none)]> use India_Steels;  
Database changed  
MariaDB [India_Steels]> show tables;
```

```
+-----+  
| Tables_in_india_steels |  
+-----+  
| customers              |  
| inventory              |  
| orders                 |  
| suppliers              |  
+-----+
```

```
4 rows in set (0.040 sec)
```

```
MariaDB [India_Steels]> desc customers;
```

Field	Type	Null	Key	Default	Extra
Customer_ID	int(11)	NO	PRI	NULL	
First_Name	varchar(20)	YES		NULL	
Last_Name	varchar(20)	YES		NULL	
City	varchar(20)	YES		NULL	
Phone_No	float	YES		NULL	

```
5 rows in set (0.016 sec)
```

```
MariaDB [India_Steels]> desc suppliers;
```

Field	Type	Null	Key	Default	Extra
Supplier_ID	int(11)	NO	PRI	NULL	
Company_Name	varchar(20)	YES		NULL	
Contact_Name	varchar(20)	YES		NULL	
City	varchar(20)	YES		NULL	
Phone_No	float	YES		NULL	

```
5 rows in set (0.023 sec)
```

```
MariaDB [India_Steels]> desc inventory;
```

Field	Type	Null	Key	Default	Extra
Product_ID	int(11)	NO	PRI	NULL	
Product_Name	varchar(40)	YES		NULL	
Supplier_ID	int(11)	YES	MUL	NULL	
Quantity_Kgs	float(4,2)	YES		NULL	

```
4 rows in set (0.006 sec)
```

```
MariaDB [India_Steels]> desc orders;
```

Field	Type	Null	Key	Default	Extra
Order_ID	int(11)	NO	PRI	NULL	
Customer_ID	int(11)	YES	MUL	NULL	
Product_ID	int(11)	YES	MUL	NULL	
Order_Date	date	YES		NULL	
Quantity_Kgs	float(4,2)	YES		NULL	
Price	float(4,2)	YES		NULL	

```
6 rows in set (0.075 sec)
```

TABLE RECORDS

```
MariaDB [India_Steels]> select * from customers;
```

Customer_ID	First_Name	Last_Name	City	Phone_No
1	Bagga	Dosanjh	Mumbai	9519250000
2	Trippy	Singh	Delhi	9319240000
3	Harry	Gund	Patna	9219250000
4	Shardul	Soni	Madhya Pradesh	9019750000
5	Ifteqar	Hussain	Goa	9619250000
6	Binny	Sharma	Chennai	9817250000
7	Omkar	Deshpande	Mumbai	9819950000
8	Shreyash	Kumar	Bihar	9819200000
9	Yash	Baruah	Assam	9819220000
10	Sharath	Iyer	Kerela	9817260000
11	Pratik	Patel	Daman	9818250000
12	Sajan	Verma	Thane	9819250000
13	Sanjay	Bhoir	Kalayan	9819750000
14	Ashu	Sawant	Andheri	9816050000
15	Ricky	Monty	Panjim	9812240000
16	Jethalal	Gada	Mumbai	9810550000
17	Sunny	Jha	Bihar	9819260000
18	Peter	Batliwala	Delhi	9813350000
19	Dinesh	Maru	Gujarat	9939250000
20	Danny	Adams	Goa	9819550000

```
20 rows in set (0.089 sec)
```

MariaDB [India_Steels]> select * from suppliers;

Supplier_ID	Company_Name	Contact_Name	City	Phone_No
1001	ABS Steels	Ramesh Maru	Gujarat	9819250000
1002	DMR Steels	Mahesh Bangdu	Delhi	9819240000
1003	NPA Steels	Dinesh Patel	Patna	9819250000
1004	LMO Steels	Rohit Sharma	Sikkim	9819750000
1005	AZI Steels	Qadar Pathan	Goa	9719250000
1006	KOM Steels	Atif Khan	Chennai	9819250000
1007	NOL Steels	Paresh Kuamar	Mumbai	9819650000
1008	WHO Steels	Honey Nilgiri	Bihar	9819200000
1009	BOM Steels	Rahul Bohra	Assam	9819220000
1010	SOS Steels	Pranav Iyer	Kerela	9817250000
1011	WES Steels	Anand Srivasatv	Daman	9818250000
1012	QPR Steels	Kunal Joshi	Thane	9819250000
1013	DHO Steels	Inder Lokhande	Kalayan	9819850000
1014	PIL Steels	Nilesh Dhoble	Andheri	9819050000
1015	XOX Steels	Jayesh Costa	Panjim	9812250000
1016	JIM Steels	Abhishek Singh	Mumbai	9810250000
1017	KIM Steels	Aditya Jha	Bihar	9819260000
1018	HSO Steels	Anirudh Singh	Delhi	9813250000
1019	DOM Steels	Pradeep Panchal	Gujarat	9839250000
1020	ERP Steels	Sairaj Bensi	Goa	9819250000

20 rows in set (0.001 sec)

MariaDB [India_Steels]> select * from inventory;

Product_ID	Product_Name	Supplier_ID	Quantity_Kgs
101	301 Stainless Steel	1004	800.00
102	302HQ Stainless Steel	1013	500.00
103	303 Stainless Steel	1002	1000.00
104	304 Stainless Steel	1006	1200.00
105	304L Stainless Steel	1001	900.00
106	304H Stainless Steel	1003	400.00
107	309S Stainless Steel	1005	450.00
108	310 Stainless Steel	1008	500.00
109	316 Stainless Steel	1015	1400.00
110	316L Stainless Steel	1018	1250.00
111	317 Stainless Steel	1012	500.00
112	317L Stainless Steel	1014	750.00
113	321 Stainless Steel	1007	1100.00
114	410 Stainless Steel	1016	800.00
115	414 Stainless Steel	1009	600.00
116	414NiMo Stainless Steel	1010	900.00
117	416 Stainless Steel	1011	1200.00
118	420 Stainless Steel	1017	800.00
119	430 Stainless Steel	1019	1000.00
120	430F Stainless Steel	1020	1200.00

20 rows in set (0.002 sec)

MariaDB [India_Steels]> select * from orders;

Order_ID	Customer_ID	Product_ID	Order_Date	Quantity_Kgs	Price
9001	8	104	2022-01-07	600.00	50000.00
9002	12	107	2022-01-23	850.00	70000.00
9003	3	113	2022-02-03	500.00	45000.00
9004	10	120	2022-02-19	650.00	65000.00
9005	1	102	2022-03-04	700.00	70000.00
9006	9	101	2022-03-20	300.00	35000.00
9007	5	109	2022-03-29	450.00	50000.00
9008	13	107	2022-04-10	400.00	50000.00
9009	15	113	2022-04-18	250.00	40000.00
9010	20	109	2022-04-24	500.00	55000.00
9011	9	107	2022-05-07	450.00	45000.00
9012	8	104	2022-05-19	350.00	30000.00
9013	7	105	2022-06-11	550.00	60000.00
9014	4	116	2022-07-25	700.00	75000.00
9015	2	118	2022-08-16	450.00	40000.00
9016	15	119	2022-09-27	1000.00	90000.00
9017	19	108	2022-10-01	300.00	45000.00
9018	11	108	2022-10-09	550.00	55000.00
9019	11	111	2022-10-17	750.00	75000.00
9020	11	110	2022-10-22	650.00	60000.00

20 rows in set (0.001 sec)

CORRELATED SUB-QUERIES

Subqueries - A subquery is a SELECT statement that is embedded in a clause of another SELECT statement.

1. Give all the information of the customers who placed orders of price for more than 50000.

```
MariaDB [India_Steels]> select * from customers where exists (select customer_id
from orders where customers.customer_id = orders.customer_id having sum(price)>
50000);
```

Customer_ID	First_Name	Last_Name	City	Phone_No
1	Bagga	Dosanjh	Mumbai	9519250000
4	Shardul	Soni	Madhya Pradesh	9019750000
7	Omkar	Deshpande	Mumbai	9819950000
8	Shreyash	Kumar	Bihar	9819200000
9	Yash	Baruah	Assam	9819220000
10	Sharath	Iyer	Kerela	9817260000
11	Pratik	Patel	Daman	9818250000
12	Sajan	Verma	Thane	9819250000
15	Ricky	Monty	Panjim	9812240000
20	Danny	Adams	Goa	9819550000

10 rows in set (0.055 sec)

2. Give all the information of the supplier who is providing us 316L Stainless Steel product.

```
MariaDB [India_Steels]> select * from suppliers where exists (select supplier_id
from inventory where suppliers.supplier_id = inventory.supplier_id and product_
name = '316L Stainless Steel');
```

Supplier_ID	Company_Name	Contact_Name	City	Phone_No
1018	HSO Steels	Anirudh Singh	Delhi	9813250000

1 row in set (0.003 sec)

3. Give the information about the product name which was ordered the most no of times.


```
MariaDB [India_Steels]> select * from inventory where exists (select product_id
from orders where inventory.product_id = orders.product_id having count(product_
id)>2);
```

Product_ID	Product_Name	Supplier_ID	Quantity_Kgs
107	309S Stainless Steel	1005	450.00

```
1 row in set (0.002 sec)
```

4. Give the name of the product which is coming from the suppliers who are in Mumbai.

```
MariaDB [India_Steels]> select * from inventory where exists (select supplier_id
from suppliers where suppliers.supplier_id = inventory.supplier_id and city = '
mumbai');
```

Product_ID	Product_Name	Supplier_ID	Quantity_Kgs
113	321 Stainless Steel	1007	1100.00
114	410 Stainless Steel	1016	800.00

```
2 rows in set (0.003 sec)
```

JOINS

A join is a query that combines rows from two or more tables.

1. List all orders with customer information.

```
MariaDB [India_Steels]> select orders.order_id, orders.price, customers.first_name, customers.last_name, customers.city, customers.phone_no from orders join customers on orders.customer_id = customers.customer_id;
```

order_id	price	first_name	last_name	city	phone_no
9001	50000.00	Shreyash	Kumar	Bihar	9819200000
9002	70000.00	Sajan	Verma	Thane	9819250000
9003	45000.00	Harry	Gund	Patna	9219250000
9004	65000.00	Sharath	Iyer	Kerela	9817260000
9005	70000.00	Bagga	Dosanjh	Mumbai	9519250000
9006	35000.00	Yash	Baruah	Assam	9819220000
9007	50000.00	Ifteqar	Hussain	Goa	9619250000
9008	50000.00	Sanjay	Bhoir	Kalayan	9819750000
9009	40000.00	Ricky	Monty	Panjim	9812240000
9010	55000.00	Danny	Adams	Goa	9819550000
9011	45000.00	Yash	Baruah	Assam	9819220000
9012	30000.00	Shreyash	Kumar	Bihar	9819200000
9013	60000.00	Omkar	Deshpande	Mumbai	9819950000
9014	75000.00	Shardul	Soni	Madhya Pradesh	9019750000
9015	40000.00	Trippy	Singh	Delhi	9319240000
9016	90000.00	Ricky	Monty	Panjim	9812240000
9017	45000.00	Dinesh	Maru	Gujarat	9939250000
9018	55000.00	Pratik	Patel	Daman	9818250000
9019	75000.00	Pratik	Patel	Daman	9818250000
9020	60000.00	Pratik	Patel	Daman	9818250000

20 rows in set (0.004 sec)

2. List customers that have not placed any orders.

```
MariaDB [india_steels]> select customers.first_name, customers.last_name, customers.city, orders.price from orders right join customers on orders.customer_id = customers.customer_id where price is null;
```

first_name	last_name	city	price
Binny	Sharma	Chennai	NULL
Ashu	Sawant	Andheri	NULL
Jethalal	Gada	Mumbai	NULL
Sunny	Jha	Bihar	NULL
Peter	Batliwala	Delhi	NULL

5 rows in set (0.036 sec)

3. List all products and their total sales including those that did not sell.

```
MariaDB [india_steels]> select inventory.product_id, inventory.product_name, sum
(orders.price) as total_sales from orders right join inventory on inventory.prod
uct_id = orders.product_id group by product_name order by sum(orders.price);
```

product_id	product_name	total_sales
103	303 Stainless Steel	NULL
115	414 Stainless Steel	NULL
106	304H Stainless Steel	NULL
114	410 Stainless Steel	NULL
117	416 Stainless Steel	NULL
112	317L Stainless Steel	NULL
101	301 Stainless Steel	35000.00
118	420 Stainless Steel	40000.00
110	316L Stainless Steel	60000.00
105	304L Stainless Steel	60000.00
120	430F Stainless Steel	65000.00
102	302HQ Stainless Steel	70000.00
111	317 Stainless Steel	75000.00
116	414NiMo Stainless Steel	75000.00
104	304 Stainless Steel	80000.00
113	321 Stainless Steel	85000.00
119	430 Stainless Steel	90000.00
108	310 Stainless Steel	100000.00
109	316 Stainless Steel	105000.00
107	309S Stainless Steel	165000.00

20 rows in set (0.370 sec)

4. List all customers and suppliers with their with their respective information.

```
MariaDB [India_Steels]> select 'customers' as type, first_name, city, phone_no from customers union select 'suppliers', contact_name, city, phone_no from suppliers;
```

type	first_name	city	phone_no
customers	Bagga	Mumbai	9519250000
customers	Trippy	Delhi	9319240000
customers	Harry	Patna	9219250000
customers	Shardul	Madhya Pradesh	9019750000
customers	Iftaqar	Goa	9619250000
customers	Binny	Chennai	9817250000
customers	Omkar	Mumbai	9819950000
customers	Shreyash	Bihar	9819200000
customers	Yash	Assam	9819220000
customers	Sharath	Kerala	9817260000
customers	Pratik	Daman	9818250000
customers	Sajan	Thane	9819250000
customers	Sanjay	Kalyan	9819750000
customers	Ashu	Andheri	9816050000
customers	Ricky	Panjim	9812240000
customers	Jethalal	Mumbai	9810550000
customers	Sunny	Bihar	9819260000
customers	Peter	Delhi	9813350000
customers	Dinesh	Gujarat	9939250000
customers	Danny	Goa	9819550000
suppliers	Ramesh Maru	Gujarat	9819250000
suppliers	Mahesh Bangdu	Delhi	9819240000
suppliers	Dinesh Patel	Patna	9819250000
suppliers	Rohit Sharma	Sikkim	9819750000
suppliers	Qadar Pathan	Goa	9719250000
suppliers	Atif Khan	Chennai	9819250000
suppliers	Pareesh Kumar	Mumbai	9819650000
suppliers	Honey Nilgiri	Bihar	9819200000
suppliers	Rahul Bohra	Assam	9819220000
suppliers	Pranav Iyer	Kerala	9817250000
suppliers	Anand Srivasatv	Daman	9818250000
suppliers	Kunal Joshi	Thane	9819250000
suppliers	Inder Lokhande	Kalyan	9819850000
suppliers	Nilesh Dhoble	Andheri	9819050000
suppliers	Jayesh Costa	Panjim	9812250000
suppliers	Abhishek Singh	Mumbai	9810250000
suppliers	Aditya Jha	Bihar	9819260000
suppliers	Anirudh Singh	Delhi	9813250000
suppliers	Pradeep Panchal	Gujarat	9839250000
suppliers	Sairaj Bensi	Goa	9819250000

40 rows in set (0.001 sec)

VIEWS

Views in SQL are kind of virtual tables.

1. Create a view named customer_view where customers are sorted with their order_date.

```
MariaDB [India_Steels]> create view customer_view as select customers.customer_id, customers.first_name, customers.city, orders.order_id, orders.order_date from customers, orders where customers.customer_id = orders.customer_id order by orders.order_date;
Query OK, 0 rows affected (0.097 sec)

MariaDB [India_Steels]> select * from customer_view;
```

customer_id	first_name	city	order_id	order_date
8	Shreyash	Bihar	9001	2022-01-07
12	Sajan	Thane	9002	2022-01-23
20	Harry	Patna	9003	2022-02-03
10	Sharath	Kerela	9004	2022-02-19
1	Bagga	Mumbai	9005	2022-03-04
9	Yash	Assam	9006	2022-03-20
5	Ifteqar	Goa	9007	2022-03-29
13	Sanjay	Kalayan	9008	2022-04-10
15	Ricky	Panjim	9009	2022-04-18
20	Danny	Goa	9010	2022-04-24
9	Yash	Assam	9011	2022-05-07
8	Shreyash	Bihar	9012	2022-05-19
7	Omkar	Mumbai	9013	2022-06-11
4	Shardul	Madhya Pradesh	9014	2022-07-25
2	Trippy	Delhi	9015	2022-08-16
15	Ricky	Panjim	9016	2022-09-27
19	Dinesh	Gujarat	9017	2022-10-01
11	Pratik	Daman	9018	2022-10-09
11	Pratik	Daman	9019	2022-10-17
11	Pratik	Daman	9020	2022-10-22

```
20 rows in set (0.002 sec)
```

DONE THANK YOU!