

# Online Retail Application

Final Project for MySQL Project by Kishor Nangaliya

## 1. Description:

Following database schema is designed to function as a backend storage database for a web application built to manage online retail application.

By storing information in a relational database, Course project for Database Management System which is a project that manages footwear store database and customer personal detail Options and product details and track delivery status. all the tasks related to store functioning of the footwear can be performed easily and much more efficiently. Some of the benefits of using this system to store data over traditional paper registers are as follows:

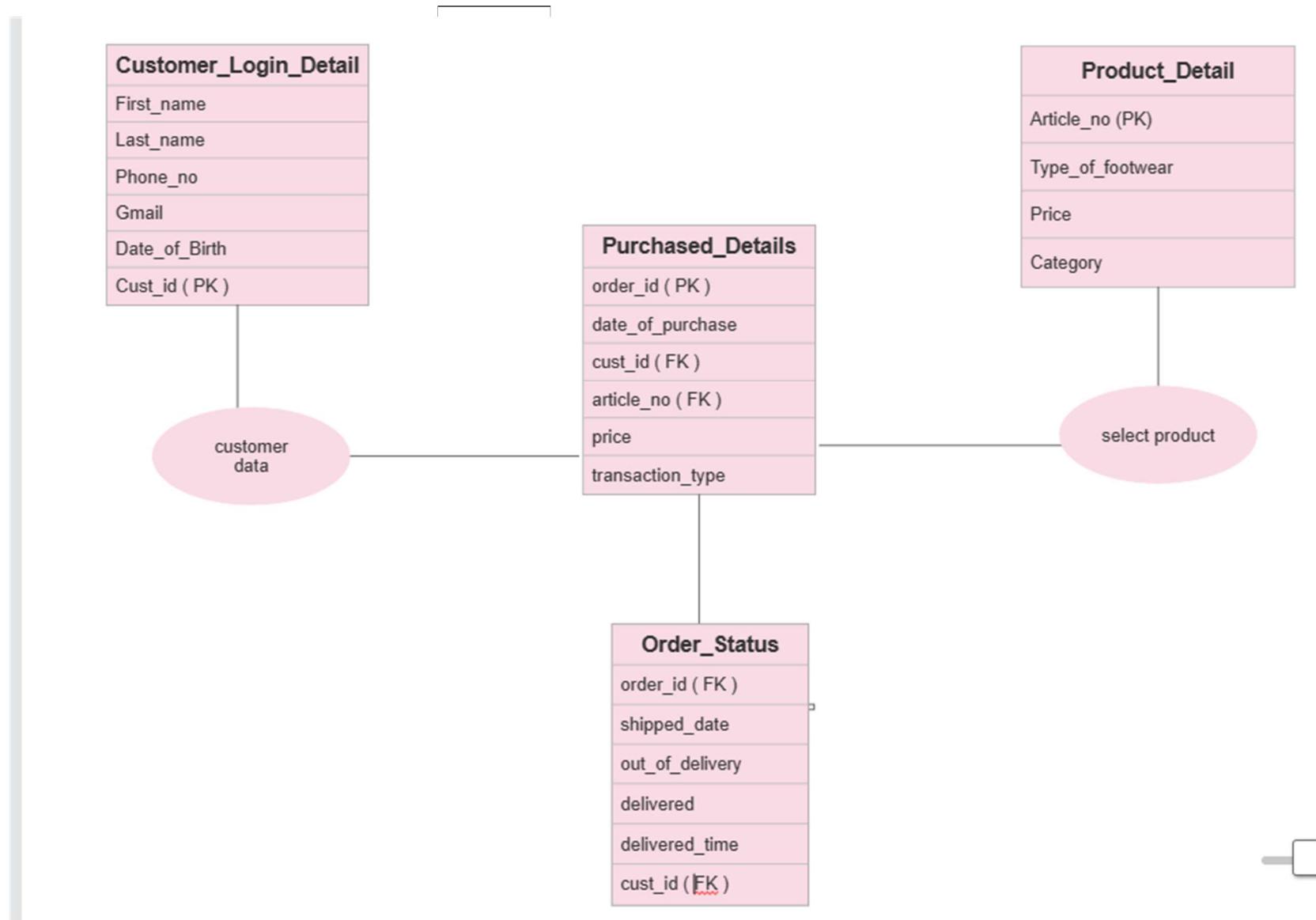
- Updating and modifying article no in the product details is much easier and efficient
- Maintaining customer personal details and their account is easy and efficient.
- We manage purchased detail, customer detail info and order status can be done automatically by DBMS, thus eliminating human error.
- RDBMS provides many ways to analyze available data, thus helping in making more informed decisions about inventory management and other aspects of online retail application management

This database contains 4 tables:

1. Customer\_personal\_detail
2. Product\_Detail
3. Purchased\_Details
4. Order\_Status

How these tables/entities are related to each other is shown pictorially on next page through ER diagram, i.e., Entity Relationship Diagram.

## 2. ER-Diagram for Online Retail Application:



### 3. Table Descriptions:

#### 1. Customer\_personal\_detail:

Field	Type	Null	Key	Default	Extra
first_name	varchar(30)	NO		NULL	
last_name	varchar(30)	NO		NULL	
phone_no	varchar(30)	NO	UNI	NULL	
gmail	varchar(50)	YES		NULL	
date_of_birth	date	YES		NULL	
cust_id	int	NO	PRI	NULL	

#### 2. Product\_detail :

Field	Type	Null	Key	Default	Extra
article_no	varchar(20)	NO	PRI	NULL	
type_of_footwear	varchar(30)	YES		NULL	
price	float	NO		NULL	
category	varchar(10)	YES		NULL	

#### 3. Purchased\_details :

Field	Type	Null	Key	Default	Extra
order_id	varchar(20)	NO	PRI	NULL	
date_of_purchase	date	NO		NULL	
cust_id	int	NO	MUL	NULL	
article_no	varchar(20)	NO	MUL	NULL	
price	float	YES		NULL	
transaction_type	varchar(20)	NO		NULL	

#### 4. Order\_Status:

Field	Type	Null	Key	Default	Extra
order_id	varchar(20)	YES	MUL	NULL	
shipped_date	date	YES		NULL	
out_of_delivery	date	YES		NULL	
delivered	date	YES		NULL	
delivered_time	time	YES		NULL	
cust_id	int	YES	MUL	NULL	

#### 4. Commands:

- **Create Database:**

```
CREATE DATABASE Online_Retail_Application;
```

- **Select Database:**

```
USE Online_retail_application;
```

- Populate “Customer\_personal\_detail”:

```
insert into customer_personal_detail values  
('Kishor','Nangaliya','9167389541','k@gmail.com','1997-03-19',1001),  
('deepika','khorwal','9167389542','d@gmail.com','1996-04-16',1002),  
('zain','bamne','9167389543','z@gmail.com','1996-05-13',1003),  
('karan','kurdiya','9234123456','kk@gmail.com','1998-07-15',1004),  
insert into customer_personal_detail values('abhijit','kavde','9167385543',null,null,1005);
```

- Populate “Product\_Detail”:

```
insert into product_detail values  
('kd101','fancy chappal',499,"female")  
('kd102','fancy chappal',599,"female")  
('kd103','sandal',899,"female")  
('kd104','sandal',1099,"female")  
('kd105','mens shoes',1599,"male");
```

- Populate “Purchased\_details”:

```
insert into purchased_details values  
('pk102','2023-01-01',1007,'kd104',1007)  
('pk103','2023-01-02',1012,'kd109',1012)  
('pk104','2023-01-02',1015,'kd144',1015)  
('pk105','2023-01-03',1016,'kd111',1016)  
('pk106','2023-01-04',1009,'kd133',1009)
```

- Populate “Order\_Status”:

```
insert into order_status values  
('pk101','2023-01-02','2023-01-02','2023-01-03', '12:45:09')  
('pk102','2023-01-02','2023-01-03','2023-01-04', '16:50:10')  
('pk103','2023-01-03','2023-01-05','2023-01-08', '19:50:10')  
('pk104','2023-01-04','2023-01-06','2023-01-10', '12:45:09')  
('pk105','2023-01-08','2023-01-10','2023-01-11', '12:45:09');
```

## 5. Tables:

- customer\_personal\_detail:

```
select * from customer_product_detail;
```

first_name	last_name	phone_no	gmail	date_of_birth	cust_id
Kishor	Nangaliya	9167389541	k@gmail.com	1997-03-19	1001
deepika	khorwal	9167389542	d@gmail.com	1996-04-16	1002
zain	bamne	9167389543	z@gmail.com	1996-05-13	1003
karan	kurdiya	9234123456	kk@gmail.com	1998-07-15	1004
abhijit	kavde	9167385543	NULL	NULL	1005
pooja	surve	9167389674	NULL	NULL	1006
komal	kurdiya	9234198765	kkk@gmail.com	1998-02-20	1007
suraj	dulke	9467985543	sd@gmail.com	1998-09-19	1008
raj	jatoliya	9167389774	rj@gmail.com	2000-02-12	1009
ram	suryavanshi	9234198965	rs@gmail.com	1993-06-20	1010
karan	devkar	9567985543	kd1@gmail.com	1998-10-11	1011
paras	jatoliya	9167389767	pj@gmail.com	2000-04-13	1012
ramkumar	yadav	9234348965	ry@gmail.com	NULL	1013
kushal	nangaliya	9567985657	kn1@gmail.com	2003-10-11	1014
ankit	lokhande	9167389457	al@gmail.com	1988-04-15	1015
rajesh	vishwakarma	9967985657	rv@gmail.com	1987-12-11	1016
aish	mourya	9867389457	am@gmail.com	1997-09-18	1017

- product\_detail :

```
select * from product_detail;
```

article_no	type_of_footwear	price	category
kd101	fancy chappal	499	female
kd102	fancy chappal	599	female
kd103	sandal	899	female
kd104	sandal	1099	female
kd105	mens shoes	1599	male
kd106	mens shoes	1899	male
kd107	mens shoes	2100	male
kd108	mens loffer	600	male
kd109	mens loffer	800	male
kd110	mens sneaker	1800	male
kd111	mens sneaker	2800	male
kd112	ballet flat	200	female
kd113	ballet flat	260	female
kd114	ballet flat	360	female
kd115	ballet flat	460	female
kd116	flip flop	150	male
kd117	flip flop	250	male
kd118	flip flop	280	female
kd119	flip flop	380	female
kd120	flip flop	460	unisex
kd121	boots	4460	male
kd122	boots	3260	male
kd123	boots	2260	female
kd124	boots	2860	female
kd125	slipper	150	female
kd126	slipper	150	female
kd127	slipper	160	female
kd128	slipper	160	female
kd129	slipper	170	female
kd130	slipper	170	female
kd131	slipper	150	male
kd132	slipper	150	male
kd133	slipper	160	male
kd134	slipper	160	male
kd135	slipper	170	male
kd136	sports shoes	1170	female
kd137	sports shoes	1970	female
kd138	sports shoes	2370	female
kd139	sports shoes	2570	female
kd140	sports shoes	2670	female
kd141	sports shoes	2170	male
kd142	sports shoes	1500	male
kd143	sports shoes	1600	male
kd144	sports shoes	1700	male
kd145	sports shoes	1800	male
kd146	high heel	1800	female
kd147	high heel	1850	female
kd148	high heel	1450	female
kd149	high heel	1350	female
kd150	high heel	1250	female

- purchased\_details :

```
select * from purchased_details;
```

order_id	date_of_purchase	cust_id	article_no	price	transaction_type
pk101	2023-01-01	1002	kd149	1350	upi payment
pk102	2023-01-01	1007	kd104	1099	net banking payment
pk103	2023-01-02	1012	kd109	800	COD
pk104	2023-01-02	1015	kd144	1700	upi payment
pk105	2023-01-03	1016	kd111	2800	credit card payment
pk106	2023-01-04	1009	kd133	160	debit card payment
pk107	2023-01-05	1010	kd145	1800	COD
pk108	2023-01-06	1017	kd149	1350	Paytm Wallet
pk109	2023-01-06	1013	kd141	2170	credit card payment
pk110	2023-01-07	1008	kd131	150	debit card payment

- order\_status :

```
select * from order_status;
```

order_id	shipped_date	out_of_delivery	delivered	delivered_time	cust_id
pk101	2023-01-02	2023-01-02	2023-01-03	12:45:09	1002
pk102	2023-01-02	2023-01-03	2023-01-04	16:50:10	1007
pk103	2023-01-03	2023-01-05	2023-01-08	19:50:10	1012
pk104	2023-01-04	2023-01-06	2023-01-10	15:30:06	1015
pk105	2023-01-08	2023-01-10	2023-01-11	12:30:56	1016
pk106	2023-01-05	2023-01-06	NULL	NULL	1009
pk107	2023-01-06	2023-01-09	2023-01-11	19:09:50	1010
pk108	2023-01-07	2023-01-08	2023-01-09	17:09:40	1017
pk109	2023-01-08	2023-01-08	2023-01-10	17:25:40	1013
pk110	2023-01-10	2023-01-11	NULL	NULL	1008

## 6.Basic Queries:

1. Select **cust\_id , full\_name ,phone no between 1005 to 1012 from customer\_personal detail**

```
select concat(first_name,' ',last_name) as Full_Name,phone_no,cust_id from customer_personal_detail where cust_id between 1005 and 1010;
```

Full_Name	phone_no	cust_id
abhijit kavde	9167385543	1005
pooja surve	9167389674	1006
komal kurdiya	9234198765	1007
suraj dulke	9467985543	1008
raj jatoliya	9167389774	1009
ram suryavanshi	9234198965	1010

2. Select **first\_name start with letter K from customer\_personal\_detail table**

```
select first_name from customer_personal_detail where first_name like "k%";
```

first_name
Kishor
karan
komal
karan
kushal

3. **find maximum price of article\_no from product\_detail table.**

```
select max(price) from product_detail;
```

max(price)
4460

- 4. Select article\_no ,type\_of\_footwear whose price is greater than 1500 from product\_detail table**

```
select article_no,type_of_footwear from product_detail where price > 1500;
```

article_no	type_of_footwear
kd105	mens shoes
kd106	mens shoes
kd107	mens shoes
kd110	mens sneaker
kd111	mens sneaker
kd121	boots
kd122	boots
kd123	boots
kd124	boots
kd137	sports shoes
kd138	sports shoes
kd139	sports shoes
kd140	sports shoes
kd141	sports shoes
kd143	sports shoes
kd144	sports shoes
kd145	sports shoes
kd146	high heel
kd147	high heel

- 5. find maximum price according to group of type\_of\_footwear from product\_detail table**

```
select max(price),type_of_footwear from product_detail group by type_of_footwear;
```

max(price)	type_of_footwear
599	fancy chappal
1099	sandal
2100	mens shoes
800	mens loffer
2800	mens sneaker
460	ballet flat
460	flip flop
4460	boots
170	slipper
2670	sports shoes
1850	high heel

6. Give 15 records of article\_no or price after the 20 records from product\_detail table

```
select article_no,price from product_detail limit 15 offset 20;
```

article_no	price
kd121	4460
kd122	3260
kd123	2260
kd124	2860
kd125	150
kd126	150
kd127	160
kd128	160
kd129	170
kd130	170
kd131	150
kd132	150
kd133	160
kd134	160
kd135	170

7. find the cust\_id or date\_of\_purchased of product whose transaction type is credit card payment method.

```
select cust_id,date_of_purchase from purchased_details where transaction_type = "credit card payment";
```

cust_id	date_of_purchase
1016	2023-01-03
1013	2023-01-06

8. find the count of transaction type of each payment method from purchased\_details

```
select count(transaction_type),transaction_type from purchased_details group by transaction_type;
```

count(transaction_type)	transaction_type
2	upi payment
1	net banking payment
2	COD
2	credit card payment
2	debit card payment
1	Paytm Wallet

**9. find the cust\_id whose not get delivery of product**

```
select order_id from order_status where delivered is null;
```

order_id
pk106
pk110

**10. find the date difference between delivered date product from shipped date whose get delivery of product from order\_status table**

```
select order_id,datediff(delivered,shipped_date) as difference from order_status where delivered is not null;
```

order_id	difference
pk101	1
pk102	2
pk103	5
pk104	6
pk105	3
pk107	5
pk108	2
pk109	2

**11. select the purchased table order by cust\_id with 6 record**

```
select * from purchased_details order by cust_id limit 6;
```

order_id	date_of_purchase	cust_id	article_no	price	transaction_type
pk101	2023-01-01	1002	kd149	1350	upi payment
pk102	2023-01-01	1007	kd104	1099	net banking payment
pk110	2023-01-07	1008	kd131	150	debit card payment
pk106	2023-01-04	1009	kd133	160	debit card payment
pk107	2023-01-05	1010	kd145	1800	COD
pk103	2023-01-02	1012	kd109	800	COD

## 7.Sub-queries:

### 1. Find the name or cust\_id whose not getting delivery of product

```
SELECT cust_ID, CONCAT(first_name, " ", last_name) AS name FROM
customer_personal_detail WHERE cust_id in (SELECT cust_ID FROM order_status
where delivered is null);
```

cust_ID	name
1009	raj jatoliya
1008	suraj dulke

### 2. Find the customer id or name who hasn't order any product

```
SELECT cust_ID, CONCAT(first_name, " ", last_name) AS name FROM
customer_personal_detail WHERE cust_id not in (SELECT cust_ID FROM
order_status);
```

cust_ID	name
1001	Kishor Nangaliya
1003	zain bamne
1004	karan kurdiya
1005	abhijit kavde
1006	pooja surve
1011	karan devkar
1014	kushal nangaliya

### 3. Find the customer id or date of purchase of product who has phone no is "9167389542"

```
select cust_id,date_of_purchase from purchased_details where cust_id = (select
cust_id from customer_personal_detail where phone_no = "9167389542");
```

cust_id	date_of_purchase
1002	2023-01-01

**4. Find the customer personal detail who order product**

```
select * from customer_personal_detail where cust_id in (select order_id from purchased_details where order_id is not null);
```

first_name	last_name	phone_no	gmail	date_of_birth	cust_id
deepika	khorwal	9167389542	d@gmail.com	1996-04-16	1002
komal	kurdiya	9234198765	kkk@gmail.com	1998-02-20	1007
suraj	dulke	9467985543	sd@gmail.com	1998-09-19	1008
raj	jatoliya	9167389774	rj@gmail.com	2000-02-12	1009
ram	suryavanshi	9234198965	rs@gmail.com	1993-06-20	1010
paras	jatoliya	9167389767	pj@gmail.com	2000-04-13	1012
ramkumar	yadav	9234348965	ry@gmail.com	NULL	1013
ankit	lokhande	9167389457	al@gmail.com	1988-04-15	1015
rajesh	vishwakarma	9967985657	rv@gmail.com	1987-12-11	1016
aish	mourya	9867389457	am@gmail.com	1997-09-18	1017

**5. Find the fullname customer and date of birth who did order more than 1500 price**

```
select concat(first_name,' ',last_name) as fullname,date_of_birth from customer_personal_detail where cust_id in (select cust_id from purchased_details where price >=1500);
```

fullname	date_of_birth
ankit lokhande	1988-04-15
rajesh vishwakarma	1987-12-11
ram suryavanshi	1993-06-20
ramkumar yadav	NULL

**6. Find out total sales of starting 5 days**

```
select sum(price) as sales from purchased_details where price in (select price from purchased_details where date_of_purchase between "2023-01-01" and "2023-01-05");
```

sales
11059

**7. Find customer id and full name who did use upi payment transaction type**

```
select cust_id,concat(first_name," ",last_name) as fullname from
customer_personal_detail where cust_id in (select cust_id from purchased_details
where transaction_type="upi payment");
```

cust_id	fullname
1002	deepika khorwal
1015	ankit lokhande

**8. Find minimum price or maximum price of product in between 1000 to 2000**

```
select max(price),min(price) from purchased_details where cust_id in (select cust_id
from purchased_details where price between 1000 and 2000 );
```

max(price)	min(price)
1800	1099

**9. Find who order in between "2023-01-03" and "2023-01-05"**

```
select cust_id,concat(first_name,' ',last_name) as name from
customer_personal_detail where cust_id in (select cust_id from purchased_details
where date_of_purchase between "2023-01-03" and "2023-01-05" );
```

cust_id	name
1016	rajesh vishwakarma
1009	raj jatoliya
1010	ram suryavanshi

**10. Find total male product in the product detail table**

```
select count(category),category from product_detail group by category having
category in (select category from product_detail where category = "male");
```

count(category)	category
21	male

**11. Find total payment methods in credit or debit card method**

```
select count(transaction_type),transaction_type from purchased_details group by
transaction_type having transaction_type in (select transaction_type from
purchased_details where transaction_type in ("credit card payment","debit card
payment"));
```

count(transaction_type)	transaction_type
2	credit card payment
2	debit card payment

**12. Find count each type of footwear from product detail table**

```
select count(type_of_footwear),type_of_footwear from product_detail group by
type_of_footwear having type_of_footwear in (select type_of_footwear from
product_detail);
```

count(type_of_footwear)	type_of_footwear
2	fancy chappal
2	sandal
3	mens shoes
2	mens loffer
2	mens sneaker
4	ballet flat
5	flip flop
4	boots
11	slipper
10	sports shoes
5	high heel

**13. Find max(price) of article\_no whose category is male from product\_detail table.**

```
select max(price),category from product_detail group by category having category in  
(select category from product_detail where category = "male");
```

max(price)	category
4460	male

**14. Find cust\_id and price whose price is (minimum of product), date of purchased between “2023-01-01” to “2023-01-06” from purchased\_details table.**

```
select price,cust_id from purchased_details where price in (select min(price) from  
purchased_details where date_of_purchase between "2023-01-01" and "2023-01-  
06");
```

price	cust_id
160	1009

**15. Find minimum price or maximum price of product from purchased\_details table**

```
select max(price),min(price) from purchased_details where cust_id in (select cust_id  
from purchased_details);
```

max(price)	min(price)
2800	150

## 8. JOINS:

### 1. Display full name of customer, order\_id and article\_no who purchased product.

```
select concat(first_name, ' ', last_name) as fullname, order_id, article_no from
purchased_details inner join customer_personal_detail on
purchased_details.cust_id=customer_personal_detail.cust_id;
```

fullname	order_id	article_no
deepika khorwal	pk101	kd149
komal kurdiya	pk102	kd104
paras jatoliya	pk103	kd109
ankit lokhande	pk104	kd144
rajesh vishwakarma	pk105	kd111
raj jatoliya	pk106	kd133
ram suryavanshi	pk107	kd145
aish mourya	pk108	kd149
ramkumar yadav	pk109	kd141
suraj dulke	pk110	kd131

### 2. Display phone\_no with cust\_id ,article\_no and date\_of\_purchase

```
select
customer_personal_detail.phone_no,customer_personal_detail.cust_id,purchased_d
etails.article_no,purchased_details.date_of_purchase from
customer_personal_detail inner join purchased_details on
purchased_details.cust_id=customer_personal_detail.cust_id;
```

phone_no	cust_id	article_no	date_of_purchase
9167389542	1002	kd149	2023-01-01
9234198765	1007	kd104	2023-01-01
9167389767	1012	kd109	2023-01-02
9167389457	1015	kd144	2023-01-02
9967985657	1016	kd111	2023-01-03
9167389774	1009	kd133	2023-01-04
9234198965	1010	kd145	2023-01-05
9867389457	1017	kd149	2023-01-06
9234348965	1013	kd141	2023-01-06
9467985543	1008	kd131	2023-01-07

**3. Display delivered status with first\_name, article\_no, article\_no and phone\_no**

```
select
customer_personal_detail.cust_id, customer_personal_detail.first_name, purchased_
details.article_no, purchased_details.price, order_status.delivered from
customer_personal_detail inner join purchased_details on
customer_personal_detail.cust_id = purchased_details.cust_id inner join
order_status on customer_personal_detail.cust_id=order_status.cust_id;
```

cust_id	first_name	article_no	price	delivered
1002	deepika	kd149	1350	2023-01-03
1007	komal	kd104	1099	2023-01-04
1012	paras	kd109	800	2023-01-08
1015	ankit	kd144	1700	2023-01-10
1016	rajesh	kd111	2800	2023-01-11
1009	raj	kd133	160	NULL
1010	ram	kd145	1800	2023-01-11
1017	aish	kd149	1350	2023-01-09
1013	ramkumar	kd141	2170	2023-01-10
1008	suraj	kd131	150	NULL

**4. Display first\_name, phone\_no with price and transaction\_type only 4 records**

```
select
customer_personal_detail.cust_id, customer_personal_detail.first_name, purchased_
details.article_no, purchased_details.price, order_status.delivered from
customer_personal_detail inner join purchased_details on
customer_personal_detail.cust_id = purchased_details.cust_id inner join
order_status on customer_personal_detail.cust_id=order_status.cust_id limit 4;
```

cust_id	first_name	article_no	price	delivered
1002	deepika	kd149	1350	2023-01-03
1007	komal	kd104	1099	2023-01-04
1012	paras	kd109	800	2023-01-08
1015	ankit	kd144	1700	2023-01-10

**5.Display first\_name,phone\_no with price and transaction\_type**

```
select
customer_personal_detail.first_name,customer_personal_detail.phone_no,purchase
d_details.price,purchased_details.transaction_type from customer_personal_detail
inner join purchased_details on
purchased_details.cust_id=customer_personal_detail.cust_id;
```

first_name	phone_no	price	transaction_type
deepika	9167389542	1350	upi payment
komal	9234198765	1099	net banking payment
paras	9167389767	800	COD
ankit	9167389457	1700	upi payment
rajesh	9967985657	2800	credit card payment
raj	9167389774	160	debit card payment
ram	9234198965	1800	COD
aish	9867389457	1350	Paytm Wallet
ramkumar	9234348965	2170	credit card payment
suraj	9467985543	150	debit card payment

**6.Display first\_name,phone\_no with price and transaction\_type where transaction type method is credit card payment**

```
select
customer_personal_detail.first_name,customer_personal_detail.phone_no,purchase
d_details.price,purchased_details.transaction_type from customer_personal_detail
inner join purchased_details on
purchased_details.cust_id=customer_personal_detail.cust_id where
transaction_type in (select transaction_type from purchased_details where
transaction_type="credit card payment");
```

# using subquery with join

first_name	phone_no	price	transaction_type
rajesh	9967985657	2800	credit card payment
ramkumar	9234348965	2170	credit card payment

## 9. Views:

### 1.Create view from purchased\_details or order\_status tables.

```
create view customer_order_info as select
purchased_details.cust_id,purchased_details.order_id,purchased_details.article_no,p
urchased_details.price,purchased_details.date_of_purchase,order_status.delivered
from purchased_details,order_status where
purchased_details.order_id=order_status.order_id;
```

cust_id	order_id	article_no	price	date_of_purchase	delivered
1002	pk101	kd149	1350	2023-01-01	2023-01-03
1007	pk102	kd104	1099	2023-01-01	2023-01-04
1012	pk103	kd109	800	2023-01-02	2023-01-08
1015	pk104	kd144	1700	2023-01-02	2023-01-10
1016	pk105	kd111	2800	2023-01-03	2023-01-11
1009	pk106	kd133	160	2023-01-04	NULL
1010	pk107	kd145	1800	2023-01-05	2023-01-11
1017	pk108	kd149	1350	2023-01-06	2023-01-09
1013	pk109	kd141	2170	2023-01-06	2023-01-10
1008	pk110	kd131	150	2023-01-07	NULL

### 2.Select all detail from customer\_order\_info(view) whose price is max.

```
select * from customer_order_info where price in (select max(price) from
customer_order_info);
```

cust_id	order_id	article_no	price	date_of_purchase	delivered
1016	pk105	kd111	2800	2023-01-03	2023-01-11