

NATIONAL INSTITUTE OF TECHNOLOGY,WARANGAL

DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING

DBMS PROJECT

E-COMMERCE SITE DATABASE DESIGN

Submitted by:

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PROBLEM STATEMENT:

The database design of E-commerce site.

In this project, we have designed a database, where we can manage orders of customers and transactions, made through this website, which is normalised to maximum extent.

Here, we will have a store house from which, products will be supplied and they are processed into order, which will be delivered, with the help of delivery services.

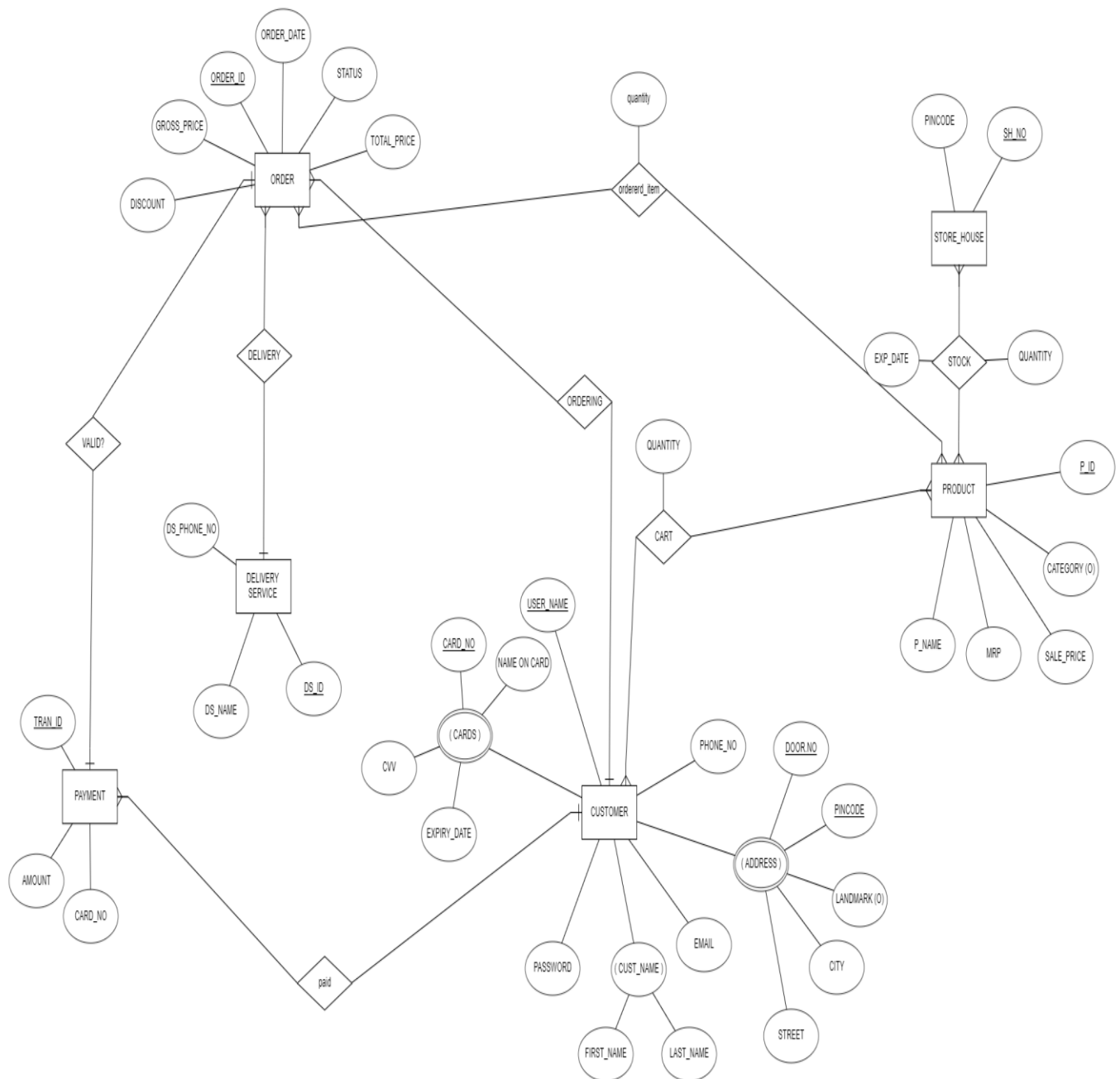
We can always check, available products from each storehouse and order them. Where, every product has a unique product id. Here, there is a stock table, which shows us, available stock of each product, from store houses.

Here, every order will have a unique order_id, and Customer has unique User name, through which we can track all the details of customers, like what products he ordered, what is last transaction of him etc.

There is also a cart relation, where a customer stores, the products he wants to order, along with its quantity, which will be further processed for order.

Every order placed, is further processed for delivery, using different delivery agents, which are present in delivery service relation, which have unique delivery service id.

ER DIAGRAM:er diagram for the database ,which depicts all the information,about how the database managed in this site.



NORMALISATION:

1.CUSTOMER

This,entity set is split into 3 relations→(Customer,Address,Cards)

So here,all 3 relations are in 1NF,as there are no multivalued attributes,and there is only one dependency in each relation,that is also only of the primary key.

Customer→(User_name,password,phone_no,first_name,last_name);

Address→(User_name,door_no,street,landmark,city,pincode);

Cards→(User_name,card_no,cvv,expiry_date);

So, it is assured that the table doesnot contain any partial or transitive dependencies which also implies that the table is obeying all 1NF, 2NF, 3NF and BCNF. Hence this tables are in BCNF.

2.PRODUCTS

→here ,it contains(product_id,product_name,mrp,sale_price,categoty)

So here,all attributes are atomic,so its in 1NF.The only functional dependency on table is also of primary_key,that ensures that it is in 2NF,3NF,BCNF.

Hence table is in BCNF.

3.CART

→here this relation is about relation between products and customer.Here is in n to m ,so we need extra table for relation.

CART→(product_id,user_name,quantity).

So here,all attributes are atomic,so its in 1NF.The only functional dependency on table is also of primary_key(user_name,product_id),that ensures that it is in 2NF,3NF,BCNF as there is no partial and transitive dependency here.

Hence table is in BCNF.

4.STORE HOUSE

→(sh_no,pincode);

Here the relation is directly in BCNF ,as all are atomic values,and only functional dependency is from primary key itself.

Thus it assures that ,there is no partial or transitive dependency,so it is in 2NF,3NF,BCNF.

Therefore,it is in BCNF.

5.STOCK

This is relation between product and store house,which is many to many,thus we are making separate table for relation between them.

Here →(product_id,sh_no,quantity)

Here,all attributes are atomic and only functional dependency in it,is from primary key,so it assures that there is no partial or transitive dependency thus ,it is in 2NF,3NF,BCNF.

So it is BCNF.

6.DELIVERY_SERVICE

Here this table is about delivery_Service agents available.

→(ds_id,ds_name,ds_phone_no)

Here all attributes are atomic,so it is in 1NF.

Here only functional dependency is also of the primary key,hence it assures that there is no partial or transitive dependencies,thus it ensures us ,it is in 2NF,3NF and BCNF.

Hence Table is in BCNF.

7.ORDER

This table is about all the details of orders,placed by customers.it has

(order_id,user_name,status,total_cost,gross_cost,discount,ds_id).

We can see that,here each attribute is atomic,and only dependency here is from,primary key.Thus there is no partial or transitive dependency,so it ensures 2NF,3NF and also BCNF.

Therefore the table is in BCNF.

8.ORDERED ITEM.

Here this is relation between ,order_ and products,here its has→(order_id,product_id,quantity).This is used to determine products and quantities of it,in a particular order.

Here all attributes are atomic thus it is in 1 NF,and only functional dependency is of primary key,thus there is no partial or transitive dependency,thus it is in 2NF,3NF and also ensures us that,it is in BCNF.

Therefore it is in BCNF.

9.Payment.

Here this relation contains transaction id and order id,for which it is done,along with cardnumber.

Here all attributes are atomic thus it is in 1 NF,and only functional dependency is of primary key,thus there is no partial or transitive dependency,thus it is in 2NF,3NF and also ensures us that,it is in BCNF.

Therefore it is in BCNF.

RELATIONAL SCHEMA:

1.1customer

TABLE CUSTOMER

Column	Null?	Type
USER_NAME	NOT NULL	VARCHAR2(20)
PSWD	NOT NULL	VARCHAR2(20)
PHONE_NO	NOT NULL	NUMBER(10,0)
FIRST_NAME	NOT NULL	VARCHAR2(20)
LAST_NAME	-	VARCHAR2(20)

1.2address

TABLE ADDRESS

Column	Null?	Type
DOOR_NO	NOT NULL	VARCHAR2(20)
STREET	NOT NULL	VARCHAR2(20)
LANDMARK	-	VARCHAR2(50)
CITY	NOT NULL	VARCHAR2(20)
PINCODE	NOT NULL	NUMBER

1.3cards

TABLE CARDS

Column	Null?	Type
CARD_NO	NOT NULL	NUMBER(16,0)
NAME_ON_CARD	NOT NULL	VARCHAR2(20)
CVV	NOT NULL	NUMBER(3,0)
EXPIRY_DATE	NOT NULL	VARCHAR2(10)
USER_NAME	NOT NULL	VARCHAR2(20)

2.Product

TABLE PRODUCT

Column	Null?	Type
PRODUCT_ID	NOT NULL	NUMBER
PRODUCT_NAME	NOT NULL	VARCHAR2(20)
MRP	NOT NULL	NUMBER
SALE_PRICE	NOT NULL	NUMBER
CATEGORY_	-	VARCHAR2(20)

3.Cart

TABLE CART

Column	Null?	Type
PRODUCT_ID	NOT NULL	NUMBER
USER_NAME	NOT NULL	VARCHAR2(20)
QUANTITY	NOT NULL	NUMBER

PRODUCT_ID

4.Store House

TABLE STORE_HOUSE

Column	Null?	Type
SH_NO	NOT NULL	NUMBER
PINCODE	-	NUMBER

5.Stock

TABLE STOCK

Column	Null?	Type
PRODUCT_ID	NOT NULL	NUMBER
SH_NO	NOT NULL	NUMBER
EXP_DATE	NOT NULL	VARCHAR2(10)
QUANTITY	-	NUMBER

6.Delivery_service

TABLE DELIVERY_SERVICE

Column	Null?	Type
DS_ID	NOT NULL	NUMBER
DS_NAME	NOT NULL	VARCHAR2(20)
DS_PHONE_NO	NOT NULL	NUMBER

[Download CSV](#)

7.Order

TABLE ORDER_

Column	Null?	Type
ORDER_ID	NOT NULL	NUMBER
STATUS	NOT NULL	VARCHAR2(10)
TOTAL_PRICE	NOT NULL	NUMBER
GROSS_PRICE	NOT NULL	NUMBER
DISCOUNT	NOT NULL	NUMBER
DS_ID	NOT NULL	NUMBER
USER_NAME	NOT NULL	VARCHAR2(20)

8.Ordered_item

TABLE ORDERED_ITEM

Column	Null?	Type
ORDER_ID	NOT NULL	NUMBER
PRODUCT_ID	NOT NULL	NUMBER
QUANTITY	NOT NULL	NUMBER

9.Payment

TABLE PAYMENT

Column	Null?	Type
TRAN_ID	NOT NULL	NUMBER
AMOUNT	NOT NULL	NUMBER
CARD_NO	NOT NULL	NUMBER(16,0)
ORDER_ID	-	NUMBER

CREATION OF TABLES:

→customer

```
create table customer(  
user_name varchar2(20) primary key,  
pswd varchar2(20) not null,  
phone_no number(10) not null,  
first_name varchar2(20) not null,  
last_name varchar2(20));
```

→address

```
create table address(  
door_no varchar2(20),  
street varchar2(20) not null,  
landmark varchar2(50),  
city varchar2(20) not null,  
pincode number,  
user_name varchar2(20),  
primary key (door_no,pincode,user_name),  
foreign key (user_name) references customer(user_name));
```

→cards

```
create table cards(  
card_no number(16),  
name_on_card varchar2(20) not null,  
cvv number(3) not null,  
expiry_date varchar2(10) not null,
```

```
user_name varchar2(20),  
primary key (user_name,card_no),  
foreign key (user_name) references customer(user_name));
```

→product

```
create table product(  
product_id number primary key,  
product_name varchar2(20) not null,  
mrp number not null,  
sale_price number not null,  
category_ varchar2(20));
```

→cart

```
create table cart(  
product_id number,  
user_name varchar2(20),  
quantity number not null,  
primary key (product_id,user_name),  
foreign key (product_id) references product(product_id),  
foreign key (user_name) references customer(user_name));
```

→store_house

```
create table store_house(  
sh_no number primary key,  
pincode number);
```

→stock

```
create table stock(  
product_id number,  
sh_no number,  
exp_date varchar2(10) not null,  
quantity number,  
primary key (product_id,sh_no),  
foreign key (product_id) references product,  
foreign key (sh_no) references store_house(sh_no));
```

→delivery_service

```
create table delivery_service(  
ds_id number primary key,  
ds_name varchar2(20) not null,  
ds_phone_no number not null);
```

→order

```
create table order_(  
order_id number primary key,  
status varchar2(10) not null,  
total_price number not null,  
gross_price number not null,  
discount number not null,  
ds_id number not null,  
user_name varchar2(20) not null,  
foreign key (ds_id) references delivery_service(ds_id),
```

foreign key (user_name) references customer(user_name));

→ordered_item

```
create table ordered_item(  
  order_id number,  
  product_id number,  
  quantity number not null,  
  primary key (order_id,product_id),  
  foreign key (order_id) references order_(order_id),  
  foreign key (product_id) references product(product_id));
```

→payment

```
create table payment(  
  tran_id number primary key,  
  amount number not null,  
  card_no number(16) not null,  
  order_id number,  
  foreign key (order_id) references order_(order_id));
```

INSERTION OF DATA INTO TABLES:

```
insert into customer values('venu123','1234@45',9894983923,'venu','gopal');
```

```
insert into customer  
values('trk234','7822A@45',9387388222,'tene','ramakrishnudu');
```

```
insert into customer values('kr189','723@4A5',6478240103,'kota','ramesh');
```

```
insert into customer  
values('pvsr1589','899&45',6304998763,'venkat','subbareddy');
```

```
insert into customer values('balu345','balu&45',7837832230,'raja','balu');
```

```
insert into customer values('vikas11','villu189',6984720334,'vikas','kumar');
```

```
insert into customer  
values('Sarath2193','dsc@2193',9392588083,'Sarath','Chandra');
```

```
insert into customer  
values('Priya6606','dvp@0606',8301603505,'Visnu','Priya');
```

```
insert into customer  
values('Venky1123','pvk@123',9989608441,'Venkatesh',null);
```

```
insert into customer  
values('Saketh1456','msd@666',7702774158,'Saketh','kumar');
```

```
insert into customer  
values('Reshma1234','resh@789',745896321,'Reshma','Lakshmi');
```

```
insert into address values('1/1189/17/4','ngo colony','near  
temple','kadiri',515591,'venu123');
```

```
insert into address values('112-783-9','rgo colony','near  
fs','hyderabad',513501,'trk234');
```

```
insert into address values('7673-847','revenue colony','above  
sbi','ongole',517876,'venu123');
```

```
insert into address values('159/12','raj nagar','near  
hdfc','ongole',517876,'vikas11');
```

```
insert into address values('27/45/111','ngo  
colony','plsqa','warangal',514442,'kr189');
```

```
insert into address values('18/189/15','tea nagar','auto-  
nagar','kazipet',537591,'kr189');
```

```
insert into address values('199/13/4','gandhi street','near  
temple','hyderabad',513501,'trk234');
```

```
insert into address values('19/17/22','nehru colony','cofee  
store','kazipet',537591,'balu345');
```

```
insert into address values('15/01/2003','chowk','street  
kart','warangal',514442,'pvsr1589');
```

```
insert into address values('6-102/A','Aravinda Nagar','near  
chaitanya','Rajahmundry',533107,'Sarath2193');
```

```
insert into address values('6-380','Sai Nagar','near  
sbi','kakinda',520143,'Priya6606');
```

```
insert into address values('3/11/180','kanchumurthi  
street',null,'Vizag',500108,'Venky1123');
```

```
insert into address values('8-150/B','Venkatesh Nagar','near  
hospital','Nellore',510269,'Saketh1456');
```

```
insert into address values('7-863-2','Ganesh Nagar','near  
police','Hyderabad',521486,'Reshma1234');
```

```
insert into address values('4-7-33','Priya  
Nagar',null,'Warangal',500107,'Sarath2193');
```

```
insert into address values('5-786/C','Mallesh Nagar','near  
cyclestand','Chennai',513602,'Priya6606');
```

```
insert into address values('2-98-36/B','Harsha  
Nagar',null,'Tirupathi',542148,'Venky1123');
```

```
insert into cards values(2389162526617634,'venu
gopal',745,'2/2025','venu123');

insert into cards values(1889162526617634,'rama
krishna',145,'7/2026','trk234');

insert into cards values(1789162526617634,'rama
krishna',785,'3/2025','trk234');

insert into cards values(1781625266176343,'vikas raj',749,'11/2024','vikas11');

insert into cards values(2429162526617634,'vikas raj',655,'4/2025','vikas11');

insert into cards values(2399912526617634,'pv
reddy',148,'2/2026','pvsr1589');

insert into cards values(9889162526617634,'bala
krishna',245,'2/2024','balu345');

insert into cards values(1589162526617634,'kota
ramesh',395,'11/2024','kr189');

insert into cards values(2569162526617634,'kota
ramesh',985,'2/2027','kr189');

insert into cards values(5596010065137004,'Sarath
Chandra',773,'4/2022','Sarath2193');

insert into cards values(7896412536894125,'Vishnu
Priya',758,'6/2023','Priya6606');

insert into cards
values(7456893214536982,'Venkatesh',123,'8/2024','Venky1123');

insert into cards
values(4568123698412536,'Saketh',769,'7/2026','Saketh1456');

insert into cards
values(1456236589457412,'Reshma',854,'4/2023','Reshma1234');

insert into cards values(4789564123459874,'Sarath
Chandra',456,'9/2024','Sarath2193');

insert into cards values(7896541236547892,'Vishnu
Priya',665,'4/2025','Priya6606');
```



```
insert into cards  
values(1456247898412365,'Reshma',123,'5/2026','Reshma1234');
```

```
insert into product values(123,'powder',250,230,'cosmetics');  
insert into product values(289,'oil',270,210,'cosmetics');  
insert into product values(323,'comb',60,60,'cosmetics');  
insert into product values(472,'brush',30,25,null);  
insert into product values(517,'soap',70,60,'detergents');  
insert into product values(571,'harpic',170,130,'detergents');  
insert into product values(593,'lizol',210,190,'detergent');  
insert into product values(621,'earphones',1250,1155,'electronics');  
insert into product values(712,'Trimmer',1400,1270,'electronics');  
insert into product values(836,'masks',500,470,null);  
insert into product values(850,'Watch',1500,1350,'Gadgets');  
insert into product values(942,'speaker',1780,1500,'electronics');
```

```
insert into cart values(289,'venu123',4);  
insert into cart values(712,'vikas11',3);  
insert into cart values(517,'trk234',4);  
insert into cart values(517,'kr189',6);  
insert into cart values(323,'pvsr1589',3);  
insert into cart values(472,'trk234',2);  
insert into cart values(621,'balu345',5);  
insert into cart values(289,'balu345',2);  
insert into cart values(123,'vikas11',6);
```

```
insert into cart values(850,'Sarath2193',1);
insert into cart values(517,'Priya6606',5);
insert into cart values(472,'Venky1123',2);
insert into cart values(123,'Saketh1456',3);
insert into cart values(621,'Reshma1234',2);
insert into cart values(571,'Venky1123',3);
insert into cart values(836,'Sarath2193',6);
insert into cart values(942,'Priya6606',2);
insert into cart values(593,'Saketh1456',3);
```

```
insert into store_house values(118,515562);
insert into store_house values(237,532893);
insert into store_house values(158,571881);
insert into store_house values(173,532893);
insert into store_house values(199,571881);
insert into store_house values(129,532893);
```

```
insert into stock values(123,118,'15/03/23',50);
insert into stock values(123,237,'17/03/24',65);
insert into stock values(472,199,'02/07/23',40);
insert into stock values(289,158,'15/03/23',70);
insert into stock values(323,129,'15/12/23',20);
insert into stock values(593,129,'18/04/25',120);
insert into stock values(517,118,'9/06/24',80);
insert into stock values(517,237,'11/07/24',70);
insert into stock values(593,199,'13/11/24',110);
```

```
insert into stock values(621,237,'24/04/2024',75);
insert into stock values(712,158,'28/06/2023',85);
insert into stock values(836,118,'21/09/2024',79);
insert into stock values(850,173,'07/09/2025',100);
insert into stock values(942,199,'23/07/2024',80);
insert into stock values(712,129,'17/05/2022',64);
insert into stock values(850,118,'15/06/2025',45);
```

```
insert into delivery_service values(665,'bluedart',97809824827);
insert into delivery_service values(765,'ekart',8976524321);
insert into delivery_service values(865,'electo_smart',87809824827);
insert into delivery_service values(965,'weeter',69909824827);
insert into delivery_service values(365,'rheels_kart',89309824827);
```

```
insert into order_ values(100,'paid',1700,1650,90,865,'venu123');
insert into order_ values(101,'paid',1100,1050,95,365,'trk234');
insert into order_ values(102,'paid',1900,1850,70,765,'balu345');
insert into order_ values(103,'paid',1470,1340,75,365,'Sarath2193');
insert into order_ values(104,'paid',1520,1300,120,765,'Priya6606');
insert into order_ values(105,'paid',1745,1625,150,865,'Venky1123');
```

```
insert into ordered_item values(100,289,4);
insert into ordered_item values(101,517,4);
insert into ordered_item values(101,472,2);
```

```
insert into ordered_item values(102,289,2);
insert into ordered_item values(102,621,5);
insert into ordered_item values(103,836,6);
insert into ordered_item values(104,517,5);
insert into ordered_item values(105,472,2);
insert into ordered_item values(103,850,1);
insert into ordered_item values(104,942,2);
insert into ordered_item values(105,571,3);
```

```
insert into payment values(12345,1700,2389162526617634,100);
insert into payment values(12346,1100,1789162526617634,101);
insert into payment values(12347,1900,9889162526617634,102);
insert into payment values(12348,1470,4789564123459874,103);
insert into payment values(12349,1520,7896541236547892,104);
insert into payment values(12350,1745,7456893214536982,105);
```

1.customer table

USER_NAME	PSWD	PHONE_NO	FIRST_NAME	LAST_NAME
venu123	1234@45	9894983923	venu	gopal
trk234	7822A@45	9387388222	tene	ramakrishnudu
kr189	723@4A5	6478240103	kota	ramesh
pvsr1589	899&45	6304998763	venkat	subbareddy
balu345	balu&45	7837832230	raja	balu
vikas11	villu189	6984720334	vikas	kumar
Sarath2193	dsc@2193	9392588083	Sarath	Chandra
Priya6606	dvp@0606	8301603505	Visnu	Priya
Venky1123	pvk@123	9989608441	Venkatesh	-
Saketh1456	msd@666	7702774158	Saketh	kumar
Reshma1234	resh@789	745896321	Reshma	Lakshmi

2.address

DOOR_NO	STREET	LANDMARK	CITY	PINCODE	USER_NAME
1/1189/17/4	ngo colony	near temple	kadiri	515591	venu123
112-783-9	rgo colony	near fs	hyderabad	513501	trk234
7673-847	revenue colony	above sbi	ongole	517876	venu123
159/12	raj nagar	near hdfc	ongole	517876	vikas11
27/45/111	ngo colony	plsql	warangal	514442	kr189
18/189/15	tea nagar	auto-nagar	kazipet	537591	kr189
199/13/4	gandhi street	near temple	hyderabad	513501	trk234
19/17/22	nehru colony	cofee store	kazipet	537591	balu345
15/01/2003	chowk	street kart	warangal	514442	pvsr1589
6-102/A	Aravinda Nagar	near chaitanya	Rajahmundry	533107	Sarath2193
6-380	Sai Nagar	near sbi	kakinda	520143	Priya6606
3/11/180	kanchumurthi street	-	Vizag	500108	Venky1123
8-150/B	Venkatesh Nagar	near hospital	Nellore	510269	Saketh1456
7-863-2	Ganesh Nagar	near police	Hyderabad	521486	Reshma1234
4-7-33	Priya Nagar	-	Warangal	500107	Sarath2193
5-786/C	Mallesh Nagar	near cyclestand	Chennai	513602	Priya6606
2-98-36/B	Harsha Nagar	-	Tirupathi	542148	Venky1123

3.cards

CARD_NO	NAME_ON_CARD	CVV	EXPIRY_DATE	USER_NAME
2389162526617634	venu gopal	745	2/2025	venu123
1889162526617634	rama krishna	145	7/2026	trk234
1789162526617634	rama krishna	785	3/2025	trk234
1781625266176343	vikas raj	749	11/2024	vikas11
2429162526617634	vikas raj	655	4/2025	vikas11
2399912526617634	pv reddy	148	2/2026	pvsr1589
9889162526617634	bala krishna	245	2/2024	balu345
1589162526617634	kota ramesh	395	11/2024	kr189
2569162526617634	kota ramesh	985	2/2027	kr189
5596010065137004	Sarath Chandra	773	4/2022	Sarath2193
7896412536894125	Vishnu Priya	758	6/2023	Priya6606
7456893214536982	Venkatesh	123	8/2024	Venky1123
4568123698412536	Saketh	769	7/2026	Saketh1456
1456236589457412	Reshma	854	4/2023	Reshma1234
4789564123459874	Sarath Chandra	456	9/2024	Sarath2193
7896541236547892	Vishnu Priya	665	4/2025	Priya6606
1456247898412365	Reshma	123	5/2026	Reshma1234

4.product

PRODUCT_ID	PRODUCT_NAME	MRP	SALE_PRICE	CATEGORY_
123	powder	250	230	cosmetics
289	oil	270	210	cosmetics
323	comb	60	60	cosmetics
472	brush	30	25	-
517	soap	70	60	detergents
571	harpic	170	130	detergents
593	lizol	210	190	detergent
621	earphones	1250	1155	electronics
712	Trimmer	1400	1270	electronics
836	masks	500	470	-
850	Watch	1500	1350	Gadgets
942	speaker	1780	1500	electronics

5.cart

PRODUCT_ID	USER_NAME	QUANTITY
289	venu123	4
712	vikas11	3
517	trk234	4
517	kr189	6
323	pvsr1589	3
472	trk234	2
621	balu345	5
289	balu345	2
123	vikas11	6
850	Sarath2193	1
517	Priya6606	5
472	Venky1123	2
123	Saketh1456	3
621	Reshma1234	2
571	Venky1123	3
836	Sarath2193	6
942	Priya6606	2
593	Saketh1456	3

6.store_house

SH_NO	PINCODE
118	515562
237	532893
158	571881
173	532893
199	571881
129	532893

7.stock

PRODUCT_ID	SH_NO	EXP_DATE	QUANTITY
123	118	15/03/23	50
123	237	17/03/24	65
472	199	02/07/23	40
289	158	15/03/23	70
323	129	15/12/23	20
593	129	18/04/25	120
517	118	9/06/24	80
517	237	11/07/24	70
593	199	13/11/24	110
621	237	24/04/2024	75
712	158	28/06/2023	85
836	118	21/09/2024	79
850	173	07/09/2025	100
942	199	23/07/2024	80
712	129	17/05/2022	64
850	118	15/06/2025	45

8.delivery_Service

DS_ID	DS_NAME	DS_PHONE_NO
665	bluedart	97809824827
765	ekart	8976524321
865	electo_smart	87809824827
965	weeter	69909824827
365	rheels_kart	89309824827

9.order

ORDER_ID	STATUS	TOTAL_PRICE	GROSS_PRICE	DISCOUNT	DS_ID	USER_NAME
100	paid	1700	1650	90	865	venu123
101	paid	1100	1050	95	365	trk234
102	paid	1900	1850	70	765	balu345
103	paid	1470	1340	75	365	Sarath2193
104	paid	1520	1300	120	765	Priya6606
105	paid	1745	1625	150	865	Venky1123

10.ordered item.

ORDER_ID	PRODUCT_ID	QUANTITY
103	836	6
104	517	5
105	472	2
103	850	1
104	942	2
105	571	3
100	289	4
101	517	4
101	472	2
102	289	2
102	621	5

11.payment.

TRAN_ID	AMOUNT	CARD_NO	ORDER_ID
12345	1700	2389162526617634	100
12346	1100	1789162526617634	101
12347	1900	9889162526617634	102
12348	1470	4789564123459874	103
12349	1520	7896541236547892	104
12350	1745	7456893214536982	105

QUERYS

1.Get details of customer,who has placed costliest order,among all orders.

Select user_name,first_name,last_name,phone_no from customer natural join order_ where total_price=(select max(total_price) from customer natural join order_);

USER_NAME	FIRST_NAME	LAST_NAME	PHONE_NO
balu345	raja	balu	7837832230

2.what are the products,that is ordered by most of the customers.

Select product_name from product where product_id in (select product_id from (select product_id,count(*) as total_count from ordered_item group by product_id) where total_count =(select max(total_count) from (select product_id,count(*) as total_count from ordered_item group by product_id)));

PRODUCT_NAME
oil
brush
soap

3. which product has the most stock, in store house?

```
select product_id, product_name from product where  
product_id in (select product_id from (select  
product_id, sum(quantity) as total_stock from product  
natural join stock group by product_id) where  
total_stock = (select max(total_stock) from (select  
product_id, sum(quantity) as total_stock from stock group by  
product_id))) ;
```

PRODUCT_ID	PRODUCT_NAME
593	lizol

4. Name the delivery_Service ids, which is handling maximum number of orders, along with number of orders they are handling.

```
select ds_id, count(*) as max_del from order_ natural join  
delivery_service group by ds_id where max_del = (select  
max(max_del) from (select ds_id, count(*) as max_del from  
order_ natural join delivery_service group by ds_id))
```

DS_ID	MAX_DEL
865	2
365	2
765	2

5. Get the details of customers along with door_no, who has added address without landmark.

Select user_name, door_no from customer natural join address where landmark is null;

USER_NAME	DOOR_NO
Venky1123	3/11/180
Sarath2193	4-7-33
Venky1123	2-98-36/B

6. Get the order details, of the orders, where payment is not done

Select order_id from order_ where status <> 'paid';

no data found

7. Get the details of the customers, who have received maximum discount.

Select user_name, discount from customer natural join order_ where discount = (select max(discount) from order_);

USER_NAME	DISCOUNT
Venky1123	150

8.print all transaction id,order id ,customer username of all orders.

Select user_name,tran_id,order_id from payment natural join order_ natural join customer;

USER_NAME	TRAN_ID	ORDER_ID
venu123	12345	100
trk234	12346	101
balu345	12347	102
Sarath2193	12348	103
Priya6606	12349	104
Venky1123	12350	105