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1. SYSTEM OVERVIEW

1.1.Current System

Currently, there are many shops which have their business up to limited area only. Customers have to visit their shop and shopkeeper have to show many products and their details again and again. It is quite time taking so they hire worker to show products. Many customers have to wait outside because the size of shop is small and due to limited workers. For personal work, shopkeeper have to close shop for a day.

Few problems for shopkeeper:
- Single shop covers business in a specific area
- Expenditures on shop like electricity bills, rent and salary of workers
- Storing of data are on papers
- Bills are manually created on papers
- Presence of shopkeeper at shop is required
- There is certain time limit to have shop open
- For increasing business, he has to open shop in another area which would have above mentioned all problems.

Few problems for Customers:
- Customer has to manage their timings with shop and has to personally visit shop for the details of product.
- Have to wait for shopkeeper to be free from other customers.
- Customer can trust pre-users of same product rather than shopkeeper, here reviews unavailable.
- On the spot selection and comparison of product is quite difficult.

1.2.Objectives of the Proposed System

Proposed system is more beneficial then the current one. As every customer can see the product details and compare two products on their mobile itself. Customer are assured about product by reading reviews from others who used that product. Shopkeeper have not to explain again and again. Shopkeeper can manage his personal work along with his business. Shopkeeper can expand his business in large scale without invest in making of different shops.

Benefits of New System for both:
- Expands business on large scale
- Efficient way to select and compare products on customer's free time
- No unauthorised user can access the data
- Maintain detail of products and all record of money transaction and orders
- Less Capital needed on workers, electricity or rent etc
- Handling of many customers is very easy here
- No limits on opening of shop
- Shopkeeper can do other personal work along with business
- Prices of product are somewhat less than shops as there no extra expenditures on shops

1.3.Definition

This project is basically a huge global platform of E-commerce business, where a seller can sell his product globally. No matters if he has shop in one city only. He can put various products details like image, price, features, descriptions etc. on webpage. And the product price, quantity available will be handled by seller i.e. admin. Buyer will able to see the product detail which the seller set on webpage and buyer will select appropriate product and its quantity and then he can buy it by giving address and money to seller. Payment can be done by many ways, net banking, UPI, credit/debit card or cash on delivery.

1.4. Purpose

There are many sellers who wants to expand his business globally but due to unavailability capital they can't do it. Many of them have one or two shops and a range of customers within those and neighbour cities only. By this project, those people will get a global platform to sell their product to a vast customer range. Moreover, it's a motivation for small scale seller to expand business.

1.5.Scope & Objective

Nowadays, Every person is having personal smartphone. This project is giving a chance to think and decide patiently, which product will be best for them. E-commerce draws on such technologies as electronic funds transfer, supply chain management, Internet marketing, online transaction processing. In retailer shopping system, customer will not get the actual truth about product as the details will be given by shopkeeper itself. But here, Customer can compare products, check reviews of the customer who really bought and used that product.

1.6.User Roles & Role Wise Requirement Listing

There are mainly two roles: Supplier and Customers.

- **Supplier** (manufacturer) is itself Admin who will have access to add product details, edit all details and see every orders details.
- **Customer** have to do signup by entering his details and then he can search product, see the product details and buy it.

1. **Supplier**
   - Have to sign up for the first time by entering personal info.
   - After creating account, mobile no and password will be required of login.
   - Now, he can add products and their details like image, price, quantities, discount etc.
   - After getting order, he will edit the quantities accordingly.

2. **Customers**
   - Have to sign up for the first time by entering personal info.
   - After creating account, mobile no and password will be required of login.
   - Now, he can search product directly or by categories.
   - He can see the details of products like price, image, discount, quantities etc.
   - He can check reviews and also compare two products from same category.
   - He can add product to cart in order to save it for buying it in future.
   - After selection, he can make payment and place the order of that product.
   - Once order successfully completed, then he also can write review on that product.

1.7. Entities

- User
- Supplier
- Customer
- Product
- Category
- Sub-category
- Cart
- Cart-item
- Order
- Payment
- Shipper
- Review

1.8. Entity Recognition

A. Supplier

Supplier manages the product

Supplier manages the quantity of product

Supplier manages the category and sub-category

Supplier manages the order details

Supplier can see the total product sold

Supplier can see the order details of his product

B. Customer

Customer signup with his details

Customer can buy product

Customer add the product to his cart

Customer make payment of his order

Customer can review the product which he/she had bought

Customer can see his past orders

Customer can see which supplier have sold the product

Customer can see who will be shipping his order

Customer can see estimate date of his/her order

1.9. Entity Roles

- Product: There are basically electronic products like mobile, laptops, computer, headphone etc. They all are classified in categories and sub-categories also.
- Category & Sub-category: Products are distributed in category & category is distributed in subcategory.
- Cart: Customer can save any product which he wishes to buy it in future. Many products can be saved in cart. If he login again then also his saved product will be there cart.
- Payment: For buying, customer have to pay the amount through Cash or Online modes.
- Order: Once payment is done, order will be placed. Supplier can see the order of all customers but the individual customer will be able to see his own orders.
- Review: Whoever customer bought the product can give rating and review of that product only.

2. E-R DIAGRAM
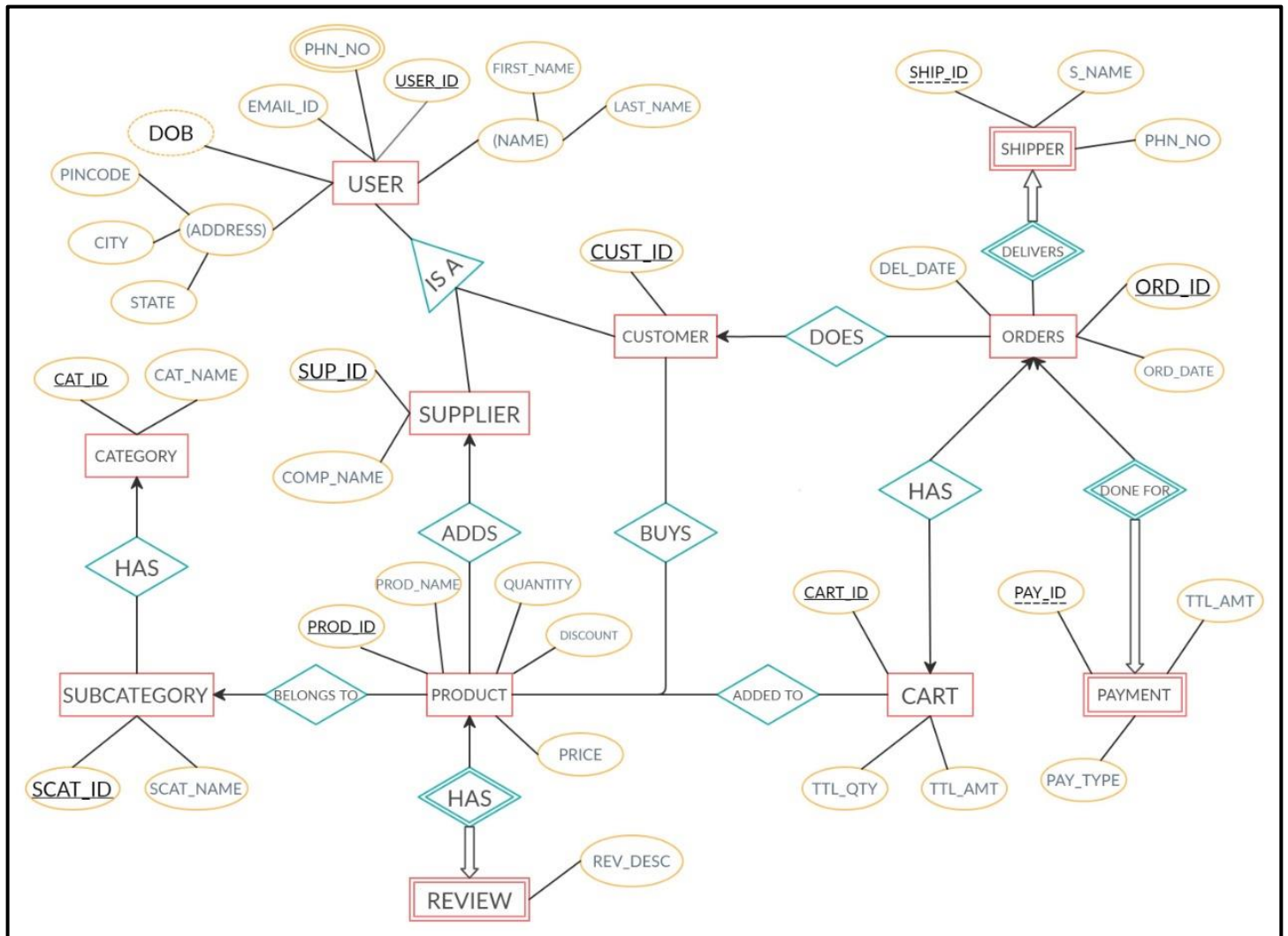
3. DATA DICTIONARY

1. USER_INFO

Field	Type	Null	Key	Default	Extra
USER_ID	int(11)	NO	PRI	NULL	auto_increment
FIRST_NAME	varchar(10)	NO		NULL	
LAST_NAME	varchar(10)	NO		NULL	
EMAIL_ID	varchar(30)	NO		NULL	
DOB	date	YES		NULL	
PHN_NO1	decimal(10,0)	NO		NULL	
PHN_NO2	decimal(10,0)	YES		NULL	
ADDRESS	varchar(100)	NO		NULL	
PINCODE	decimal(6,0)	NO		NULL	
CITY	varchar(30)	NO		NULL	
STATE	varchar(30)	NO		NULL	

2. CUSTOMER

Field	Type	Null	Key	Default	Extra
CUST_ID	int(11)	NO	PRI	NULL	auto_increment
USER_ID	int(11)	NO	MUL	NULL	

3. SUPPLIER

Field	Type	Null	Key	Default	Extra
SUP_ID	int(11)	NO	PRI	NULL	auto_increment
USER_ID	int(11)	NO	MUL	NULL	
COMP_NAME	varchar(50)	NO		NULL	

4. CATEGORY

Field	Type	Null	Key	Default	Extra
CAT_ID	int(11)	NO	PRI	NULL	auto_increment
CAT_NAME	varchar(15)	NO		NULL	

5. SUBCATEGORY

Field	Type	Null	Key	Default	Extra
SCAT_ID	int(11)	NO	PRI	NULL	auto_increment
CAT_ID	int(11)	NO	MUL	NULL	
SCAT_NAME	varchar(30)	NO		NULL	

6. PRODUCT

Field	Type	Null	Key	Default	Extra
PROD_ID	int(11)	NO	PRI	NULL	auto_increment
SUP_ID	int(11)	NO	MUL	NULL	
SCAT_ID	int(11)	NO	MUL	NULL	
PROD_NAME	varchar(30)	NO		NULL	
QUANTITY	decimal(6,0)	NO		NULL	
PRICE	decimal(10,2)	NO		NULL	
DISCOUNT	decimal(4,2)	YES		NULL	

7. CART

Field	Type	Null	Key	Default	Extra
CART_ID	int(11)	NO	PRI	NULL	auto_increment
TTL_AMT	decimal(11,2)	NO		NULL	
TTL_QTY	decimal(3,0)	NO		NULL	

8. CARTPRODUCT

Field	Type	Null	Key	Default	Extra
CART_ID	int(11)	NO	PRI	NULL	
PROD_ID	int(11)	NO	PRI	NULL	
QTY	decimal(2,0)	NO		NULL	

9. ORDERS

Field	Type	Null	Key	Default	Extra
ORD_ID	int(11)	NO	PRI	NULL	auto_increment
CUST_ID	int(11)	NO	MUL	NULL	
CART_ID	int(11)	NO	MUL	NULL	
ORD_DATE	date	NO		NULL	
DEL_DATE	date	NO		NULL	

10. PAYMENT

Field	Type	Null	Key	Default	Extra
PAY_ID	int(11)	NO	PRI	NULL	auto_increment
ORD_ID	int(11)	NO	PRI	NULL	
PAY_TYPE	varchar(15)	NO		NULL	
TTL_AMT	decimal(11,2)	NO		NULL	

11. SHIPPER

Field	Type	Null	Key	Default	Extra
SHIP_ID	int(11)	NO	PRI	NULL	auto_increment
ORD_ID	int(11)	NO	PRI	NULL	
PHN_NO	decimal(10,0)	NO		NULL	
S_NAME	varchar(20)	NO		NULL	

12. REVIEW

Field	Type	Null	Key	Default	Extra
PROD_ID	int(11)	NO	PRI	NULL	
CUST_ID	int(11)	NO	PRI	NULL	
REV_DESC	varchar(700)	NO		NULL	

4. <u>SCHEMA DIAGRAM</u>
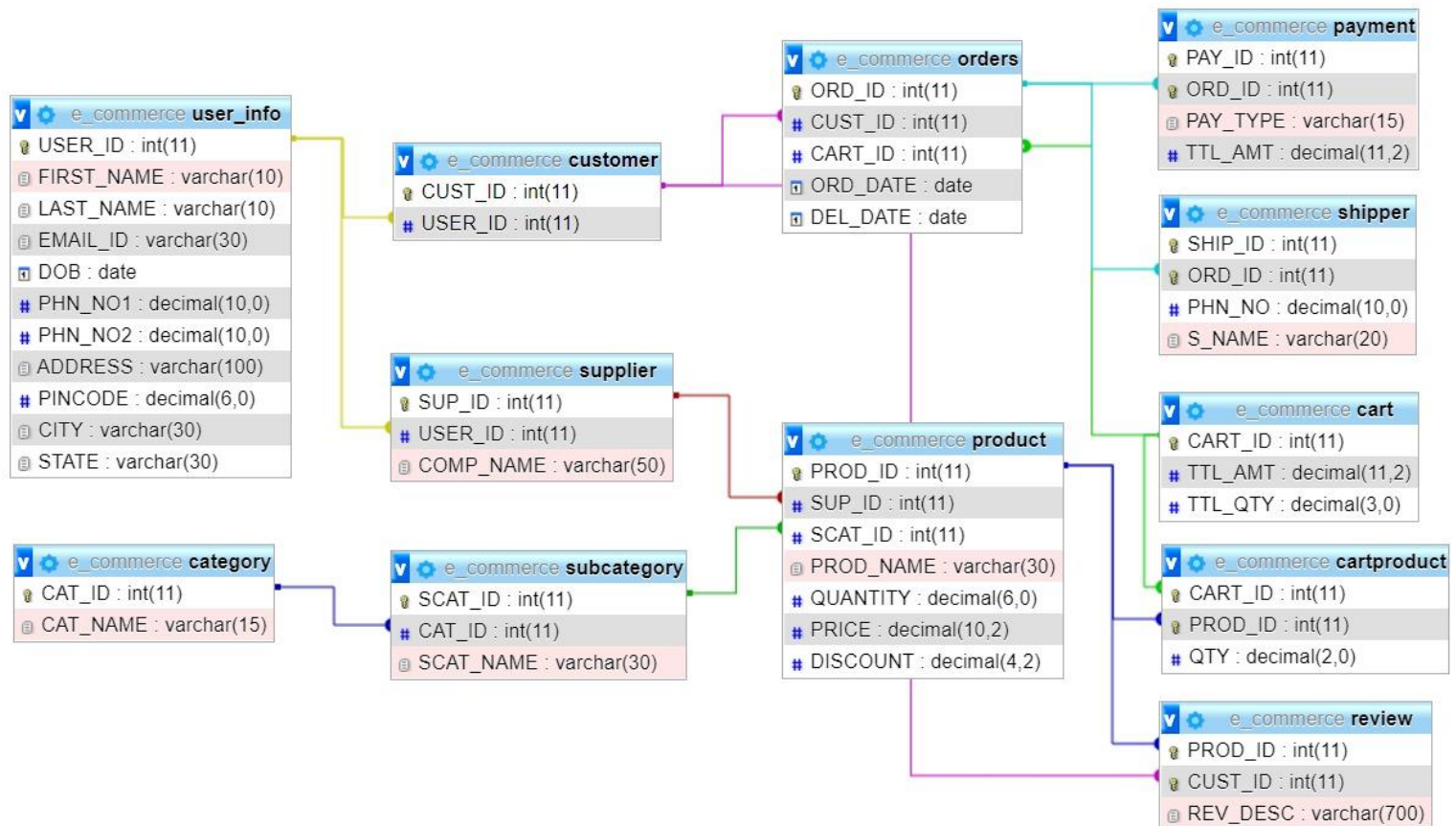
5. <u>DATABASE IMPLEMENTION</u>

5.1 CREATE SCHEMA AND INSERT THE DATA

1. USER_INFO

```
CREATE TABLE USER_INFO
(
        USER_ID INT AUTO_INCREMENT PRIMARY KEY,
        FIRST_NAME VARCHAR(10) NOT NULL,
        LAST_NAME VARCHAR(10) NOT NULL,
        EMAIL_ID VARCHAR(30) NOT NULL,
        DOB DATE,
        PHN_NO1 DECIMAL(10, 0) NOT NULL,
        PHN_NO2 DECIMAL(10, 0),
        ADDRESS VARCHAR(100),
        PINCODE DECIMAL(6, 0) NOT NULL,
        CITY VARCHAR(30) NOT NULL,
        STATE VARCHAR(30) NOT NULL
);

DESC USER_INFO;
```

Field	Type	Null	Key	Default	Extra
USER_ID	int(11)	NO	PRI	NULL	auto_increment
FIRST_NAME	varchar(10)	NO		NULL	
LAST_NAME	varchar(10)	NO		NULL	
EMAIL_ID	varchar(30)	NO		NULL	
DOB	date	YES		NULL	
PHN_NO1	decimal(10,0)	NO		NULL	
PHN_NO2	decimal(10,0)	YES		NULL	
ADDRESS	varchar(100)	NO		NULL	
PINCODE	decimal(6,0)	NO		NULL	
CITY	varchar(30)	NO		NULL	
STATE	varchar(30)	NO		NULL	

```
INSERT INTO `user_info` (`USER_ID`, `FIRST_NAME`, `LAST_NAME`, `EMAIL_ID`, `DOB`,    `PHN_NO1`,
`PHN_NO2`, `ADDRESS`, `PINCODE`, `CITY`, `STATE`) VALUES
('1', 'Mahesh', 'Vegada', 'mahesh@gmail.com', '1999-10-15', '9638650152', '9638650153',
'S/1,Kailash society', '362265', 'Gir-Somnath', 'Gujarat'),
```

('2', 'Shyam', 'Makwana', 'shyam@gmail.com', '2000-05-27', '9638300760', NULL, 'S/2,Amrut society', '320008', 'Ahmedabad', 'Gujarat'),

('3', 'Mihir', 'Gediya', 'mihir@gmail.com', NULL, '9998300760', '9998300761', 'H/9,Geeta nagar', '335009', 'Surat', 'Gujarat'),

('4', 'Pragti', 'Barad', 'pragti@gmail.com', '2000-10-30', '6598300760', '6598300761', 'H/16,M S   marg', '300018', 'Baroda', 'Gujarat'),

('5', 'Dhruvil', 'Chodvadiya', 'dhruvil@gmail.com', '1999-01-07', '9756300760', NULL, 'S/4,M G   road', '335009', 'Surat', 'Gujarat'),

('6', 'Pranay', 'Makwana', 'pranay@gmail.com', '1999-05-27', '9638312340', '9638312341', 'S/22,Blue Apartment', '320008', 'Ahmedabad', 'Gujarat'),

('7', 'Akash', 'Mistry', 'akash@gmail.com', NULL, '8228300760', '8228300761', 'A/1,Lal nagar', '335009', 'Surat', 'Gujarat'),

('8', 'Ronak', 'Agnani', 'ronak@gmail.com', '2000-01-21', '7383300760', '7383300761',   'B/12,Blue Apartment', '300018', 'Baroda', 'Gujarat'),

('9', 'Twinkle', 'Arora', 'twinkle@gmail.com', '1999-09-13', '6126300760', NULL, 'S/6,M G road', '335009', 'Surat', 'Gujarat'),

('10', 'Kavish', 'Khatri', 'khatri@gmail.com', '1998-05-29', '9878312340', '9878312341', 'S/1,S G Highway', '320008', 'Ahmedabad', 'Gujarat'),

('11', 'Dhruv', 'Kumar', 'dhruv@gmail.com', NULL, '9787300760', NULL, 'S/45,J G road',   '335009', 'Surat', 'Gujarat'),

('12', 'Raj', 'Makwana', 'raj@gmail.com', '1999-05-27', '9638312340', NULL, 'A/2,A Apartment', '320008', 'Ahmedabad', 'Gujarat'),

('13', 'Ajay', 'Mistry', 'ajay@gmail.com', '2001-01-01', '6928300760', '6928300761', NULL, '335009', 'Surat', 'Gujarat'),

('14', 'Ronak', 'Patel', 'ronakp@gmail.com', '2000-11-30', '7383478760', '7383478761',   'H/12,Red Apartment', '300018', 'Baroda', 'Gujarat'),

('15', 'Jinal', 'Parmar', 'jinal@gmail.com', NULL, '9996300760', NULL, NULL, '335009', 'Surat', 'Gujarat');

SELECT * FROM USER_INFO;

USER_ID	FIRST_NAME	LAST_NAME	EMAIL_ID	DOB	PHN_NO1	PHN_NO2	ADDRESS	PINCODE	CITY	STATE
1	Mahesh	Vegada	mahesh@gmail.com	1999-10-15	9638650152	9638650153	S/1,Kailash society	362265	Gir-Somnath	Gujarat
2	Shyam	Makwana	shyam@gmail.com	2000-05-27	9638300760	NULL	S/2,Amrut society	320008	Ahmedabad	Gujarat
3	Mihir	Gediya	mihir@gmail.com	NULL	9998300760	9998300761	H/9,Geeta nagar	335009	Surat	Gujarat
4	Pragti	Barad	pragti@gmail.com	2000-10-30	6598300760	6598300761	H/16,M S marg	300018	Baroda	Gujarat
5	Dhruvil	Chodvadiya	dhruvil@gmail.com	1999-01-07	9756300760	NULL	S/4,M G road	335009	Surat	Gujarat
6	Pranay	Makwana	pranay@gmail.com	1999-05-27	9638312340	9638312341	S/22,Blue Apartment	320008	Ahmedabad	Gujarat
7	Akash	Mistry	akash@gmail.com	NULL	8228300760	8228300761	A/1,Lal nagar	335009	Surat	Gujarat
8	Ronak	Agnani	ronak@gmail.com	2000-01-21	7383300760	7383300761	B/12,Blue Apartment	300018	Baroda	Gujarat
9	Twinkle	Arora	twinkle@gmail.com	1999-09-13	6126300760	NULL	S/6,M G road	335009	Surat	Gujarat
10	Kavish	Khatri	khatri@gmail.com	1998-05-29	9878312340	9878312341	S/1,S G Highway	320008	Ahmedabad	Gujarat
11	Dhruv	Kumar	dhruv@gmail.com	NULL	9787300760	NULL	S/45,J G road	335009	Surat	Gujarat
12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat

2. SUPPLIER

CREATE TABLE SUPPLIER
(
        SUP_ID INT AUTO_INCREMENT PRIMARY KEY,
        USER_ID INT NOT NULL,
        COMP_NAME VARCHAR(50) NOT NULL,
        FOREIGN KEY (USER_ID) REFERENCES USER_INFO(USER_ID) ON DELETE CASCADE ON
        UPDATE CASCADE
);

DESC SUPPLIER;

Field	Type	Null	Key	Default	Extra
SUP_ID	int(11)	NO	PRI	NULL	auto_increment
USER_ID	int(11)	NO	MUL	NULL	
COMP_NAME	varchar(50)	NO		NULL	

INSERT INTO `supplier` (`SUP_ID`, `USER_ID`, `COMP_NAME`) VALUES
('1', '1', 'Mahadev Enterprise'),
('2', '2', 'Flowkem Pvt Ltd'),
('3', '3', 'Mihir & sons'),
('4', '4', 'Pragti Sales'),
('5', '5', 'DC Brothers');

SELECT * FROM SUPPLIER;

SUP_ID	USER_ID	COMP_NAME
1	1	Mahadev Enterprise
2	2	Flowkem Pvt Ltd
3	3	Mihir & sons
4	4	Pragti Sales
5	5	DC Brothers

3. CUSTOMER

CREATE TABLE CUSTOMER
(
       CUST_ID INT AUTO_INCREMENT PRIMARY KEY,
       USER_ID INT NOT NULL,
       FOREIGN KEY (USER_ID) REFERENCES USER_INFO(USER_ID) ON DELETE CASCADE ON
       UPDATE CASCADE
);

DESC CUSTOMER;

Field	Type	Null	Key	Default	Extra
CUST_ID	int(11)	NO	PRI	*NULL*	auto_increment
USER_ID	int(11)	NO	MUL	*NULL*	

INSERT INTO `customer` (`CUST_ID`, `USER_ID`) VALUES
('1', '6'),
('2', '7'),
('3', '8'),
('4', '9'),
('5', '10'),
('6', '11'),
('7', '12'),
('8', '13'),
('9', '14'),
('10', '15');

SELECT * FROM CUSTOMER;

CUST_ID	USER_ID
1	6
2	7
3	8
4	9
5	10
6	11
7	12
8	13
9	14
10	15

4. CATEGORY

```
CREATE TABLE CATEGORY
(
        CAT_ID INT AUTO_INCREMENT PRIMARY KEY,
        CAT_NAME VARCHAR(15) NOT NULL
);
```

```
DESC CATEGORY;
```

Field	Type	Null	Key	Default	Extra
CAT_ID	int(11)	NO	PRI	*NULL*	auto_increment
CAT_NAME	varchar(15)	NO		*NULL*	

```
INSERT INTO `category` (`CAT_ID`, `CAT_NAME`) VALUES
('1', 'Computer'),
('2', 'Earphone'),
('3', 'Mobile Phone'),
('4', 'Accessories');
```

```
SELECT * FROM CATEGORY;
```

CAT_ID	CAT_NAME
1	Computer
2	Earphone
3	Mobile Phone
4	Accessories

5. SUBCATEGORY

```
CREATE TABLE SUBCATEGORY
(
   SCAT_ID INT AUTO_INCREMENT PRIMARY KEY,
   CAT_ID INT NOT NULL,
   SCAT_NAME VARCHAR(30) NOT NULL,
   FOREIGN KEY (CAT_ID) REFERENCES CATEGORY(CAT_ID)
   ON DELETE CASCADE ON UPDATE CASCADE
);
```

DESC SUBCATEGORY;

Field	Type	Null	Key	Default	Extra
SCAT_ID	int(11)	NO	PRI	*NULL*	auto_increment
CAT_ID	int(11)	NO	MUL	*NULL*	
SCAT_NAME	varchar(30)	NO		*NULL*	

INSERT INTO `subcategory` (`SCAT_ID`, `CAT_ID`, `SCAT_NAME`) VALUES
('1', '1', 'Laptops'),
('2', '1', 'Desktop'),
('3', '1', 'Mini Laptop'),
('4', '2', 'Boat'),
('5', '2', 'JBL'),
('6', '2', 'Sony'),
('7', '3', 'Oppo'),
('8', '3', 'Vivo'),
('9', '3', 'Samsung'),
('10', '3', 'Apple'),
('11', '4', 'Memory Card'),
('12', '4', 'Power Bank');

SELECT * FROM SUBCATEGORY;

SCAT_ID	CAT_ID	SCAT_NAME
1	1	Laptops
2	1	Desktop
3	1	Mini Laptop
4	2	Boat
5	2	JBL
6	2	Sony
7	3	Oppo
8	3	Vivo
9	3	Samsung
10	3	Apple
11	4	Memory Card
12	4	Power Bank

6. PRODUCT

CREATE TABLE PRODUCT
(
       PROD_ID INT AUTO_INCREMENT PRIMARY KEY,
       SUP_ID INT NOT NULL,
       SCAT_ID INT NOT NULL,
       PROD_NAME VARCHAR(30) NOT NULL,
       QUANTITY DECIMAL(6,0) NOT NULL,
       PRICE DECIMAL(10, 2) NOT NULL,
       DISCOUNT DECIMAL(4,2),
       FOREIGN KEY (SUP_ID) REFERENCES SUPPLIER(SUP_ID)
       ON DELETE CASCADE ON UPDATE CASCADE,
       FOREIGN KEY (SCAT_ID) REFERENCES SUBCATEGORY(SCAT_ID)
       ON DELETE CASCADE ON UPDATE CASCADE
);

DESC PRODUCT;

Field	Type	Null	Key	Default	Extra
PROD_ID	int(11)	NO	PRI	NULL	auto_increment
SUP_ID	int(11)	NO	MUL	NULL	
SCAT_ID	int(11)	NO	MUL	NULL	
PROD_NAME	varchar(30)	NO		NULL	
QUANTITY	decimal(6,0)	NO		NULL	
PRICE	decimal(10,2)	NO		NULL	
DISCOUNT	decimal(4,2)	YES		NULL	

INSERT INTO `product` (`PROD_ID`, `SUP_ID`, `SCAT_ID`, `PROD_NAME`, `QUANTITY`, `PRICE`, `DISCOUNT`) VALUES

('1', '1', '1', 'Dell G3', '5', '67000', '0'),
('2', '1', '1', 'Dell G5', '3', '80000', '10'),
('3', '1', '1', 'Dell G7', '6', '111000', '12'),
('4', '4', '1', 'MacBook Air', '6', '60000', '0'),
('5', '4', '1', 'MacBook Pro', '9', '90000', '15'),
('6', '1', '1', 'HP Pavillion', '10', '62000', '0'),
('7', '1', '2', 'Acer Home', '4', '40000', '5'),
('8', '4', '2', 'Lenovo PC', '2', '45000', '0'),
('9', '4', '3', 'HP Mini', '3', '50000', '10'),
('10', '2', '4', 'Nirvana', '20', '1500', '10'),
('11', '3', '4', 'Nirvana', '30', '1499', '0'),
('12', '2', '5', 'Airbuds', '8', '2000', '10'),
('13', '2', '6', 'Basshead', '30', '2500', '10'),
('14', '3', '6', 'Earbuds', '10', '3000', '20'),

('15', '1', '7', 'Reno', '9', '30000', '5'),

('16', '4', '7', 'A23', '3', '20000', '0'),
('17', '2', '7', 'Narzo', '21', '23999', '20'),
('18', '2', '8', 'V5', '12', '19999', '0'),
('19', '2', '8', 'V9', '4', '26000', '25'),
('20', '4', '9', 'Note 9', '12', '60000', '12'),
('21', '1', '10', 'iphone XE', '2', '88200', '12'),
('22', '2', '10', 'iphone XR', '1', '87000', '5'),
('23', '1', '10', 'iphone XR', '5', '86500', '0'),
('24', '5', '11', 'Sandisk-64GB', '32', '649', '0'),
('25', '1', '11', 'Samsung 128GB', '12', '1130', '5'),
('26', '1', '12', 'MI 20000mah', '5', '1699', '10'),
('27', '5', '12', 'Syska 20000mah', '2', '1800', '5'),
('28', '5', '12', 'Ambrame 1000mah', '6', '799', '11');

SELECT * FROM PRODUCT;

PROD_ID	SUP_ID	SCAT_ID	PROD_NAME	QUANTITY	PRICE	DISCOUNT
1	1	1	Dell G3	5	67000.00	0.00
2	1	1	Dell G5	3	80000.00	10.00
3	1	1	Dell G7	6	111000.00	12.00
4	4	1	MacBook Air	6	60000.00	0.00
5	4	1	MacBook Pro	9	90000.00	15.00
6	1	1	HP Pavillion	10	62000.00	0.00
7	1	2	Acer Home	4	40000.00	5.00
8	4	2	Lenovo PC	2	45000.00	0.00
9	4	3	HP Mini	3	50000.00	10.00
10	2	4	Nirvana	20	1500.00	10.00
11	3	4	Nirvana	30	1499.00	0.00
12	2	5	Airbuds	8	2000.00	10.00
13	2	6	Basshead	30	2500.00	10.00
14	3	6	Earbuds	10	3000.00	20.00
15	1	7	Reno	9	30000.00	5.00
16	4	7	A23	3	20000.00	0.00
17	2	7	Narzo	21	23999.00	20.00
18	2	8	V5	12	19999.00	0.00
19	2	8	V9	4	26000.00	25.00
20	4	9	Note 9	12	60000.00	12.00
21	1	10	iphone XE	2	88200.00	12.00
22	2	10	iphone XR	1	87000.00	5.00
23	1	10	iphone XR	5	86500.00	0.00
24	5	11	Sandisk-64GB	32	649.00	0.00
25	1	11	Samsung 128GB	12	1130.00	5.00
26	1	12	MI 20000mah	5	1699.00	10.00
27	5	12	Syska 20000mah	2	1800.00	5.00
28	5	12	Ambrame 1000mah	6	799.00	11.00

7. CART

```
CREATE TABLE CART
(
        CART_ID INT AUTO_INCREMENT PRIMARY KEY,
        TTL_AMT DECIMAL(11,2) NOT NULL,
        TTL_QTY DECIMAL(3,0) NOT NULL
);
```

DESC CART;

Field	Type	Null	Key	Default	Extra
CART_ID	int(11)	NO	PRI	*NULL*	auto_increment
TTL_AMT	decimal(11,2)	NO		*NULL*	
TTL_QTY	decimal(3,0)	NO		*NULL*	

```
INSERT INTO `cart` (`CART_ID`, `TTL_AMT`, `TTL_QTY`) VALUES
('1', '193000', '5'),
('2', '180000', '4'),
('3', '67000', '1'),
('4', '90000', '3'),
('5', '1699', '1');
```

SELECT * FROM CART;

CART_ID	TTL_AMT	TTL_QTY
1	193000.00	5
2	180000.00	4
3	67000.00	1
4	90000.00	3
5	1699.00	1

8. CARTPRODUCT

```
CREATE TABLE CARTPRODUCT
(
        CART_ID INT,
        PROD_ID INT,
        QTY DECIMAL(2,0),
        FOREIGN KEY (CART_ID) REFERENCES CART(CART_ID)
```

```
                ON DELETE CASCADE ON UPDATE CASCADE,
                FOREIGN KEY (PROD_ID) REFERENCES PRODUCT(PROD_ID)
                ON DELETE CASCADE ON UPDATE CASCADE,
                PRIMARY KEY(CART_ID,PROD_ID)
);
```

DESC CARTPRODUCT;

Field	Type	Null	Key	Default	Extra
CART_ID	int(11)	NO	PRI	NULL	
PROD_ID	int(11)	NO	PRI	NULL	
QTY	decimal(2,0)	NO		NULL	

```
INSERT INTO `cartproduct` (`CART_ID`, `PROD_ID`, `QTY`) VALUES
('1', '2', '1'),
('1', '9', '1'),
('1', '14', '1'),
('1', '15', '2'),
('2', '22', '1'),
('2', '10', '2'),
('2', '5', '1'),
('3', '1', '1'),
('4', '9', '1'),
('4', '16', '2'),
('5', '26', '1');
```

SELECT * FROM CARTPRODUCT;

CART_ID	PROD_ID	QTY
1	2	1
1	9	1
1	14	1
1	15	2
2	5	1
2	10	2
2	22	1
3	1	1
4	9	1
4	16	2
5	26	1

9. ORDERS

CREATE TABLE ORDERS
(
   ORD_ID INT AUTO_INCREMENT PRIMARY KEY,
   CUST_ID INT NOT NULL,
   CART_ID INT NOT NULL,
   ORD_DATE DATE NOT NULL,
   DEL_DATE DATE NOT NULL,
   FOREIGN KEY (CUST_ID) REFERENCES CUSTOMER(CUST_ID)
   ON DELETE CASCADE ON UPDATE CASCADE,
   FOREIGN KEY (CART_ID) REFERENCES CART(CART_ID)
   ON DELETE CASCADE ON UPDATE CASCADE
);

DESC ORDERS;

Field	Type	Null	Key	Default	Extra
ORD_ID	int(11)	NO	PRI	NULL	auto_increment
CUST_ID	int(11)	NO	MUL	NULL	
CART_ID	int(11)	NO	MUL	NULL	
ORD_DATE	date	NO		NULL	
DEL_DATE	date	NO		NULL	

INSERT INTO `orders` (`ORD_ID`, `CUST_ID`, `CART_ID`, `ORD_DATE`, `DEL_DATE`) VALUES

('1', '2', '1', '2020-10-01', '2020-10-10'),
('2', '9', '2', '2020-10-04', '2020-10-13'),
('3', '5', '3', '2020-09-02', '2020-09-11'),
('4', '6', '4', '2020-10-06', '2020-10-15'),
('5', '3', '5', '2020-09-01', '2020-09-10');

SELECT * FROM ORDER;

ORD_ID	CUST_ID	CART_ID	ORD_DATE	DEL_DATE
1	2	1	2020-10-01	2020-10-10
2	9	2	2020-10-04	2020-10-13
3	5	3	2020-09-02	2020-09-11
4	6	4	2020-10-06	2020-10-15
5	3	5	2020-09-01	2020-09-10

10. PAYMENT

CREATE TABLE PAYMENT
(
        PAY_ID INT AUTO_INCREMENT,
        ORD_ID INT,
        PAY_TYPE VARCHAR(15) NOT NULL,
        TTL_AMT DECIMAL(11, 2) NOT NULL,
        FOREIGN KEY (ORD_ID) REFERENCES ORDERS(ORD_ID)
        ON DELETE CASCADE ON UPDATE CASCADE,
        PRIMARY KEY(PAY_ID,ORD_ID)
);

DESC PAYMENT;

Field	Type	Null	Key	Default	Extra
PAY_ID	int(11)	NO	PRI	NULL	auto_increment
ORD_ID	int(11)	NO	PRI	NULL	
PAY_TYPE	varchar(15)	NO		NULL	
TTL_AMT	decimal(11,2)	NO		NULL	

INSERT INTO `payment` (`PAY_ID`, `ORD_ID`, `PAY_TYPE`, `TTL_AMT`) VALUES
('1', '1', 'UPI', '193000'),
('2', '2', 'Net Banking', '180000'),
('3', '3', 'Credit Card', '67000'),
('4', '4', 'Debit Card', '90000'),
('5', '5', 'COD', '1699');

SELECT * FROM PAYMENT;

PAY_ID	ORD_ID	PAY_TYPE	TTL_AMT
1	1	UPI	193000.00
2	2	Net Banking	180000.00
3	3	Credit Card	67000.00
4	4	Debit Card	90000.00
5	5	COD	1699.00

11. SHIPPER

CREATE TABLE SHIPPER
(
        SHIP_ID INT AUTO_INCREMENT,
        ORD_ID INT,
        PHN_NO DECIMAL(10, 0) NOT NULL,
        S_NAME VARCHAR(20) NOT NULL,
        FOREIGN KEY (ORD_ID) REFERENCES ORDERS(ORD_ID)
        ON DELETE CASCADE ON UPDATE CASCADE,
        PRIMARY KEY(SHIP_ID,ORD_ID)
);

DESC SHIPPER;

Field	Type	Null	Key	Default	Extra
SHIP_ID	int(11)	NO	PRI	NULL	auto_increment
ORD_ID	int(11)	NO	PRI	NULL	
PHN_NO	decimal(10,0)	NO		NULL	
S_NAME	varchar(20)	NO		NULL	

INSERT INTO `shipper` (`SHIP_ID`, `ORD_ID`, `PHN_NO`, `S_NAME`) VALUES
('1', '1', '9876549876', 'Dixit Patel'),
('2', '2', '9873219873', 'Ajay Verma'),
('3', '3', '9877899878', 'Harsh Patel'),
('4', '4', '9876543210', 'Pritesh Vaja'),
('5', '5', '7894561230', 'Mitesh Parmar');

SELECT * FROM SHIPPER;

SHIP_ID	ORD_ID	PHN_NO	S_NAME
1	1	9876549876	Dixit Patel
2	2	9873219873	Ajay Verma
3	3	9877899878	Harsh Patel
4	4	9876543210	Pritesh Vaja
5	5	7894561230	Mitesh Parmar

12. REVIEW

```
CREATE TABLE REVIEW(
        PROD_ID INT NOT NULL,
        CUST_ID INT NOT NULL,
        REV_DESC VARCHAR(700) NOT NULL,
        FOREIGN KEY (CUST_ID) REFERENCES CUSTOMER(CUST_ID)
        ON DELETE CASCADE ON UPDATE CASCADE,
        FOREIGN KEY (PROD_ID) REFERENCES PRODUCT(PROD_ID)
        ON DELETE CASCADE ON UPDATE CASCADE,
        PRIMARY KEY(CUST_ID , PROD_ID)
);
```

DESC REVIEW;

Field	Type	Null	Key	Default	Extra
PROD_ID	int(11)	NO	PRI	NULL	
CUST_ID	int(11)	NO	PRI	NULL	
REV_DESC	varchar(700)	NO		NULL	

INSERT INTO `review` (`PROD_ID`, `CUST_ID`, `REV_DESC`) VALUES
('2', '2', 'Good Laptop. Value for money.'),
('15', '2', 'Fabulous Phone'),
('9', '2', 'Portable, good battery'),
('5', '9', 'Great Speed'),
('10', '9', 'Loud Voice, extra basss'),
('20', '9', 'good battery, camera'),
('9', '6', 'Worst Product');

SELECT * FROM REVIEW;

PROD_ID	CUST_ID	REV_DESC
2	2	Good Laptop. Value for money.
9	2	Portable, good battery
15	2	Fabulous Phone
9	6	Worst Product
5	9	Great Speed
10	9	Loud Voice, extra basss
20	9	good battery, camera

5.2 QUERIES

1. FIND THE PRODUCT NAME, QUANTITY, PRICE AND DISCOUNT WHICH ARE SUPPLIED BY "Flowkem Pvt Ltd".

SELECT P.PROD_NAME,P.QUANTITY,P.PRICE,P.DISCOUNT FROM PRODUCT P
WHERE P.SUP_ID IN
(SELECT S.SUP_ID FROM SUPPLIER S WHERE S.COMP_NAME='Flowkem Pvt Ltd')
ORDER BY P.PROD_NAME;

PROD_NAME ▲ 1	QUANTITY	PRICE	DISCOUNT
Airbuds	8	2000.00	10.00
Basshead	30	2500.00	10.00
iphone XR	1	87000.00	5.00
Narzo	21	23999.00	20.00
Nirvana	20	1500.00	10.00
V5	12	19999.00	0.00
V9	4	26000.00	25.00

2. FIND THE CUSTOMER NAME & CITY WHOSE ORDER IS SHIPPED BY Ship_Id=4.

SELECT U.FIRST_NAME,U.LAST_NAME,U.CITY
FROM USER_INFO U
INNER JOIN CUSTOMER C USING(USER_ID)
INNER JOIN ORDERS O USING(CUST_ID)
INNER JOIN SHIPPER S USING(ORD_ID)
WHERE S.SHIP_ID = 4;

FIRST_NAME	LAST_NAME	CITY
Dhruv	Kumar	Surat

3. FIND HOW MANY PRODUCTS BELONGS TO EACH CATEGORY.

SELECT C.CAT_ID,C.CAT_NAME,COUNT(P.PROD_ID) AS TOTAL_PRODUCTS
FROM CATEGORY C , SUBCATEGORY S , PRODUCT P
WHERE S.SCAT_ID=P.SCAT_ID AND C.CAT_ID=S.CAT_ID
GROUP BY CAT_ID
ORDER BY TOTAL_PRODUCTS DESC;

CAT_ID	CAT_NAME	TOTAL_PRODUCTS ▼ 1
3	Mobile Phone	9
1	Computer	9
2	Earphone	5
4	Accessories	5

4. FIND THE SHIPPER NAME AND PHONE NO. OF CUSTOMER WHOSE DOB IS "NULL" IN ORDER.

SELECT S.S_NAME AS SHIPPER_NAME , S.PHN_NO
FROM USER_INFO U , CUSTOMER C , ORDERS O , SHIPPER S
WHERE U.DOB IS NULL AND U.USER_ID = C.USER_ID
AND C.CUST_ID = O.CUST_ID AND S.ORD_ID = O.ORD_ID;

SHIPPER_NAME	PHN_NO
Dixit Patel	9876549876
Pritesh Vaja	9876543210

5. FIND THE CUSTOMER NAME, PAYMENT TYPE, SHIPPER NAME AND ORDER DATE WHO HAS PLACED ORDER FROM '2020-10-01' TO '2020-10-05'.

SELECT U.FIRST_NAME AS CUST_NAME, P.PAY_TYPE, S.S_NAME AS SHIPPER_NAME, O.ORD_DATE
FROM USER_INFO U, CUSTOMER C, ORDERS O, PAYMENT P, SHIPPER S
WHERE ORD_DATE BETWEEN '2020-10-01' AND '2020-10-05'
AND U.USER_ID = C.USER_ID AND C.CUST_ID = O.CUST_ID
AND O.ORD_ID = P.ORD_ID AND S.ORD_ID = O.ORD_ID;

CUST_NAME	PAY_TYPE	SHIPPER_NAME	ORD_DATE
Akash	UPI	Dixit Patel	2020-10-01
Ronak	Net Banking	Ajay Verma	2020-10-04

6. FIND THE COMPANY NAME AND THE NUMBER OF PRODUCTS SUPPLIED BY EACH SUPPLIER AND NUMBER OF PRODUCTS > 5.

SELECT S.COMP_NAME , COUNT(P.PROD_ID) AS TOTAL_PRODUCTS
FROM SUPPLIER S INNER JOIN PRODUCT P USING (SUP_ID)
GROUP BY S.COMP_NAME
HAVING TOTAL_PRODUCTS > 5
ORDER BY TOTAL_PRODUCTS;

COMP_NAME	TOTAL_PRODUCTS ▲ 1
Pragti Sales	6
Flowkem Pvt Ltd	7
Mahadev Enterprise	10

7. FIND THE CUSTOMER NAME , PHONE_NO AND MAIL_ID WHO HAS ORDERED "LAPTOPS".

SELECT U.FIRST_NAME,U.LAST_NAME,U.PHN_NO1,U.EMAIL_ID FROM
USER_INFO U WHERE U.USER_ID IN
(SELECT C.USER_ID FROM CUSTOMER C WHERE C.CUST_ID IN
(SELECT O.CUST_ID FROM ORDERS O WHERE O.CART_ID IN
(SELECT CP.CART_ID FROM CARTPRODUCT CP WHERE CP.PROD_ID IN
(SELECT P.PROD_ID FROM PRODUCT P WHERE P.SCAT_ID IN
(SELECT SC.SCAT_ID FROM SUBCATEGORY SC WHERE SC.SCAT_NAME = 'Laptops')))));

FIRST_NAME	LAST_NAME	PHN_NO1	EMAIL_ID
Akash	Mistry	8228300760	akash@gmail.com
Kavish	Khatri	9878312340	khatri@gmail.com
Ronak	Patel	7383478760	ronakp@gmail.com

8. FIND THE CUSTOMER NAME, ADDRESS, PINOCDE AND CITY WHOSE ORDER IS SHIPPED BY SHIPPER NAME LIKE 'H%'.

SELECT U.FIRST_NAME,U.LAST_NAME,U.ADDRESS,U.PINCODE,U.CITY
FROM USER_INFO U, CUSTOMER C, ORDERS O, SHIPPER S
WHERE U.USER_ID=C.USER_ID
AND C.CUST_ID=O.CUST_ID
AND S.ORD_ID=O.ORD_ID
AND S.S_NAME LIKE 'H%';

FIRST_NAME	LAST_NAME	ADDRESS	PINCODE	CITY
Kavish	Khatri	S/1,S G Highway	320008	Ahmedabad

9. FIND THE CUSTOMER NAME , PAYMENT TYPE AND TOTAL AMOUNT WHOSE TOTAL AMOUNT IS GREATER THAN OR EQUAL TO AVERAGE AMOUNT OF ALL ORDERS.

```
SELECT U.FIRST_NAME,U.LAST_NAME,P.PAY_TYPE,P.TTL_AMT
FROM USER_INFO U, CUSTOMER C, ORDERS O, PAYMENT P
WHERE U.USER_ID = C.USER_ID
AND C.CUST_ID = O.CUST_ID
AND O.ORD_ID = P.ORD_ID
AND O.ORD_ID IN
(SELECT ORD_ID FROM PAYMENT WHERE TTL_AMT >= (SELECT AVG(TTL_AMT) FROM PAYMENT));
```

FIRST_NAME	LAST_NAME	PAY_TYPE	TTL_AMT
Akash	Mistry	UPI	193000.00
Ronak	Patel	Net Banking	180000.00

10. FIND THE PAYMENT DETAILS WHOSE TOTAL AMOUNT IS EQUAL TO MAX AMOUNT OF ALL ORDERS.

```
SELECT * FROM PAYMENT WHERE TTL_AMT = (SELECT MAX(TTL_AMT) FROM PAYMENT);
```

PAY_ID	ORD_ID	PAY_TYPE	TTL_AMT
1	1	UPI	193000.00

11. FIND ALL REVIEW DESCRIPTION WITH CUSTOMER NAME AND PRODUCT NAME.

```
SELECT U.FIRST_NAME,P.PROD_NAME,R.REV_DESC AS REVIEW
FROM USER_INFO U,CUSTOMER C,PRODUCT P,REVIEW R
WHERE U.USER_ID=C.USER_ID
AND C.CUST_ID=R.CUST_ID
AND R.PROD_ID=P.PROD_ID;
```

FIRST_NAME	PROD_NAME	REVIEW
Akash	Dell G5	Good Laptop. Value for money.
Akash	HP Mini	Portable, good battery
Akash	Reno	Fabulous Phone
Dhruv	HP Mini	Worst Product
Ronak	MacBook Pro	Great Speed
Ronak	Nirvana	Loud Voice, extra basss
Ronak	Note 9	good battery, camera

5.3 PL\SQL BLOCKS

1.1. TRIGGERS

This "INS_CP" Trigger will be called after New Data is inserted into "CARTPRODUCT" table and update the value of "QUANTITY" in "PRODUCT" table and value of "TTL_AMT" and "TTL_QTY" in "CART" table.

```
CREATE TRIGGER INS_CP AFTER INSERT ON CARTPRODUCT FOR EACH ROW
BEGIN
        DECLARE SELL INT;

        SELECT QUANTITY INTO SELL FROM PRODUCT WHERE PROD_ID=NEW.PROD_ID;
        SET SELL = SELL - NEW.QTY;

        UPDATE PRODUCT SET QUANTITY = SELL WHERE PROD_ID=NEW.PROD_ID;

        UPDATE CART SET TTL_AMT = TTL_AMT+(NEW.QTY*(SELECT PRICE FROM PRODUCT
        WHERE PROD_ID=NEW.PROD_ID)) WHERE CART_ID=NEW.CART_ID;

        UPDATE CART SET TTL_QTY=TTL_QTY+NEW.QTY WHERE CART_ID=NEW.CART_ID;
END
```

BEFORE :

CART_ID	PROD_ID	QTY
1	2	1
1	9	1
1	14	1
1	15	2
2	5	1
2	10	2

CART_ID	TTL_AMT	TTL_QTY
1	193000.00	5
2	180000.00	4
3	67000.00	1
4	90000.00	3
5	1699.00	1

14	3	6	Earbuds	10	3000.00	20.00
15	1	7	Reno	9	30000.00	5.00
16	4	7	A23	3	20000.00	0.00
17	2	7	Narzo	21	23999.00	20.00
18	2	8	V5	12	19999.00	0.00
19	2	8	V9	4	26000.00	25.00

AFTER :

INSERT INTO CARTPRODUCT VALUES (1,17,2);

CART_ID	PROD_ID	QTY
1	2	1
1	9	1
1	14	1
1	15	2
1	17	2
2	5	1
2	10	2

CART_ID	TTL_AMT	TTL_QTY
1	240998.00	7
2	180000.00	4
3	67000.00	1
4	90000.00	3
5	1699.00	1

14	3	6	Earbuds	10	3000.00	20.00
15	1	7	Reno	9	30000.00	5.00
16	4	7	A23	3	20000.00	0.00
17	2	7	Narzo	19	23999.00	20.00
18	2	8	V5	12	19999.00	0.00
19	2	8	V9	4	26000.00	25.00

1.2 For "INSERT" , "DELETE" and "UPDATE" action performed in "USER_INFO" table for that we require one "LOG" table to store the information that which action is performed on which "USER_ID" , "DATE" and "TIME".

```
CREATE TABLE LOG (
        LOG_ID INT AUTO_INCREMENT PRIMARY KEY ,
        USER_ID INT NOT NULL ,
        ACTION VARCHAR(10) NOT NULL ,
        CUR_DATE DATETIME NOT NULL
);
```

1.2.1 THIS "INS_LOG" TRIGGER WILL BE CALLED WHEN NEW DATA IS INSERTED INTO "USER_INFO" TABLE AND GET THE "DATE" AND "TIME" IN "LOG" TABLE.

```
CREATE TRIGGER INS_LOG AFTER INSERT ON USER_INFO FOR EACH ROW
BEGIN
        INSERT INTO LOG VALUES(NULL,NEW.USER_ID,'Inserted',NOW());
END
```

BEFORE :

12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat

AFTER :

CALL NEW_USER_INFO(16,'Hemal','Makwana','hemal006@gmail.com',
'2001-08-20',7600080522,NULL,'S/5,Shrusti-5',380008,'Ahmedabad','Gujarat');

12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat
16	Hemal	Makwana	hemal006@gmail.com	2001-08-20	7600080522	NULL	S/5,Shrusti-5	380008	Ahmedabad	Gujarat

LOG_ID	USER_ID	ACTION	CUR_DATE
1	16	Inserted	2020-10-31 12:09:29

1.2.2 THIS "UPD_LOG" TRIGGER WILL BE CALLED WHEN DATA IS UPDATED FROM "USER_INFO" TABLE AND GET THE "DATE" AND "TIME" IN "LOG" TABLE.

CREATE TRIGGER UPD_LOG AFTER UPDATE ON USER_INFO FOR EACH ROW
BEGIN
       INSERT INTO LOG VALUES(NULL,NEW.USER_ID,'Updated',NOW());
END

BEFORE :

12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat
16	Hemal	Makwana	hemal006@gmail.com	2001-08-20	7600080522	NULL	S/5,Shrusti-5	380008	Ahmedabad	Gujarat

AFTER :

UPDATE USER_INFO SET PHN_NO1 = 7600080411 WHERE USER_INFO.USER_ID = 16;

12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat
16	Hemal	Makwana	hemal006@gmail.com	2001-08-20	7600080411	NULL	S/5,Shrusti-5	380008	Ahmedabad	Gujarat

LOG_ID	USER_ID	ACTION	CUR_DATE
1	16	Inserted	2020-10-31 12:09:29
2	16	Updated	2020-10-31 12:11:42

1.2.3 THIS "DEL_LOG" TRIGGER WILL BE CALLED WHEN DATA IS DELETED FROM "USER_INFO" TABLE AND GET THE "DATE" AND "TIME" IN "LOG" TABLE.

CREATE TRIGGER DEL_LOG BEFORE DELETE ON USER_INFO FOR EACH ROW
BEGIN
      INSERT INTO LOG VALUES(NULL,OLD.USER_ID,'Deleted',NOW());
END

BEFORE :

12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat
16	Hemal	Makwana	hemal006@gmail.com	2001-08-20	7600080522	NULL	S/5,Shrusti-5	380008	Ahmedabad	Gujarat

AFTER :

DELETE FROM USER_INFO WHERE USER_INFO.USER_ID = 16

12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat

LOG_ID	USER_ID	ACTION	CUR_DATE
1	16	Inserted	2020-10-31 12:09:29
2	16	Updated	2020-10-31 12:11:42
3	16	Deleted	2020-10-31 12:14:23

2. PROCEDURE

This "NEW_USER_INFO" Procedure Insert The Values Into "USER_INFO" Table With Checking if "EMAIL_ID" Is Valid Or Not and also in "CUSTOMER" table.

```
CREATE PROCEDURE NEW_USER_INFO(
        IN USER_ID INT, IN FIRST_NAME VARCHAR(10), IN LAST_NAME VARCHAR(10),
        IN EMAIL_ID VARCHAR(30), IN DOB DATE, IN PHN_NO1 DECIMAL(10),
        IN PHN_NO2 DECIMAL(10), IN ADDRESS VARCHAR(100), IN PINCODE DECIMAL(6),
        IN CITY VARCHAR(30), IN STATE VARCHAR(30))
BEGIN
        DECLARE ID INT;
        IF EMAIL_ID LIKE '%@gmail.com' THEN
                INSERT INTO USER_INFO VALUES
                        (USER_ID, FIRST_NAME, LAST_NAME, EMAIL_ID, DOB,
                        PHN_NO1,PHN_NO2,ADDRESS,PINCODE,CITY,STATE);
                SELECT MAX(CUST_ID) INTO ID FROM CUSTOMER;
                SET ID=ID+1;
                INSERT INTO CUSTOMER VALUES(ID,USER_ID);
                SELECT 'YOUR DATA IS INSERTED' AS MESSAGE;
        ELSE
                SELECT 'YOUR EMAIL ID IS NOT VALID' AS ERROR;
        END IF;
END
```

BEFORE :

11	Dhruv	Kumar	dhruv@gmail.com	*NULL*	9787300760	*NULL*	S/45,J G road	335009	Surat	Gujarat
12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	*NULL*	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	*NULL*	9996300760	*NULL*	B/15,Dharmabhumi	335009	Surat	Gujarat

7	12
8	13
9	14
10	15

AFTER :

CALL NEW_USER_INFO(16,'Hemal','Makwana',**'hemal006@gmail.com'**,
'2001-08-20',7600080411,NULL,'S/5,Shrusti-5',380008,'Ahmedabad','Gujarat');

11	Dhruv	Kumar	dhruv@gmail.com	NULL	9787300760	NULL	S/45,J G road	335009	Surat	Gujarat
12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat
16	Hemal	Makwana	hemal006@gmail.com	2001-08-20	7600080411	NULL	S/5,Shrusti-5	380008	Ahmedabad	Gujarat

7	12
8	13
9	14
10	15
11	16

MESSAGE

YOUR DATA IS INSERTED

BEFORE :

11	Dhruv	Kumar	dhruv@gmail.com	NULL	9787300760	NULL	S/45,J G road	335009	Surat	Gujarat
12	Raj	Makwana	raj@gmail.com	1999-05-27	9638312340	NULL	A/2,A Apartment	320008	Ahmedabad	Gujarat
13	Ajay	Mistry	ajay@gmail.com	2001-01-01	6928300760	6928300761	C/3,Navratna nagar	335009	Surat	Gujarat
14	Ronak	Patel	ronakp@gmail.com	2000-11-30	7383478760	7383478761	H/12,Red Apartment	300018	Baroda	Gujarat
15	Jinal	Parmar	jinal@gmail.com	NULL	9996300760	NULL	B/15,Dharmabhumi	335009	Surat	Gujarat

AFTER :

CALL NEW_USER_INFO(17,'Parth','Prajapati',**'parth997@yahoo.com'**,
'1999-08-29',8758854412,8787454521,'C-3/3,Navratna app.',380026,'Ahmedabad','Gujarat');

ERROR

YOUR EMAIL ID IS NOT VALID

3. CURSORS

This "INFORMATION" Cursor gives the information about Customer "First Name", "Last name" and "Total Amount" of his Order.

```
CREATE PROCEDURE INFORMATION()
BEGIN
        DECLARE FIRST_NAME VARCHAR(10);
        DECLARE LAST_NAME VARCHAR(10);
        DECLARE TTL_AMT DECIMAL(11,2) ;
        DECLARE FINISHED INT(2);
```

```
DECLARE INFOR CURSOR FOR SELECT U.FIRST_NAME,U.LAST_NAME,P.TTL_AMT
FROM USER_INFO U, CUSTOMER C, ORDERS O, PAYMENT P
WHERE U.USER_ID=C.USER_ID
AND C.CUST_ID=O.CUST_ID
AND P.ORD_ID=O.ORD_ID;

DECLARE CONTINUE HANDLER FOR NOT FOUND SET FINISHED=1;

OPEN INFOR;

EXITS: LOOP
        FETCH INFOR INTO FIRST_NAME,LAST_NAME,TTL_AMT;

        IF FINISHED=1 THEN
                LEAVE EXITS;
        END IF;

        SELECT FIRST_NAME,LAST_NAME,TTL_AMT AS 'TOTAL_AMOUNT';
END LOOP EXITS;

        CLOSE INFOR;
END
```

OUTPUT :

FIRST_NAME	LAST_NAME	TOTAL_AMOUNT
Akash	Mistry	193000.00

FIRST_NAME	LAST_NAME	TOTAL_AMOUNT
Ronak	Patel	180000.00

FIRST_NAME	LAST_NAME	TOTAL_AMOUNT
Kavish	Khatri	67000.00

FIRST_NAME	LAST_NAME	TOTAL_AMOUNT
Dhruv	Kumar	90000.00

FIRST_NAME	LAST_NAME	TOTAL_AMOUNT
Ronak	Agnani	1699.00

4. FUNCTIONS

This "REMAINING" Function prints the subcategory name, product name, old quantity and new quantity of particular "PROD_ID" from "CartProduct" table .

```
CREATE FUNCTION REMAINING(PROD_ID INT) RETURNS INT
BEGIN
        DECLARE STOCK INT;
        DECLARE SELL INT;
        DECLARE REMAIN INT;

        SELECT P.QUANTITY INTO STOCK FROM PRODUCT P WHERE P.PROD_ID=PROD_ID;
        SELECT SUM(C.QTY) INTO SELL FROM CARTPRODUCT C WHERE C.PROD_ID=PROD_ID;

        SET REMAIN=STOCK-SELL;

        RETURN REMAIN;
END
```

INPUT :

FOR PROD_ID = 9;

```
SELECT DISTINCT S.SCAT_NAME,P.PROD_NAME,
P.QUANTITY AS 'OLD_QTY',REMAINING(9) AS 'NEW_QTY'
FROM PRODUCT P,CARTPRODUCT C,SUBCATEGORY S
WHERE P.PROD_ID=9 AND P.PROD_ID=C.PROD_ID AND P.SCAT_ID=S.SCAT_ID;
```

SCAT_NAME	PROD_NAME	OLD_QTY	NEW_QTY
Mini Laptop	HP Mini	3	1

FOR PROD_ID = 22;

```
SELECT DISTINCT S.SCAT_NAME,P.PROD_NAME,
P.QUANTITY AS 'OLD_QTY',REMAINING(22) AS 'NEW_QTY'
FROM PRODUCT P,CARTPRODUCT C,SUBCATEGORY S
WHERE P.PROD_ID=22 AND P.PROD_ID=C.PROD_ID AND P.SCAT_ID=S.SCAT_ID;
```

SCAT_NAME	PROD_NAME	OLD_QTY	NEW_QTY
Apple	iphone XR	1	0

6. CONCLUSION

- The development of this Project includes so many roles like customers and supplier. It is very important to identify the system requirements by properly collecting required data to interact with the system. Proper design builds upon this foundation give a blue print, which is actually implemented in real life. On realizing the importance of the systematic documentation all the processes are implemented using a software engineering approach.

- While doing this project we faced many real time problems and learned how to tackle it smoothly. We have gained a lot of practical knowledge from this project, which we think, shall make us stand in a good state in the future.

7. <u>BIBLIOGRAPHY</u>

- For the successful implementation of this project we referred to many websites and books.
- The schema was designed by taking ideas from website of "Amazon", "Flipkart" and many E-Commerce website.
- We created the ER Diagram and Schema Diagram on "Creatly.com".
- Mostly we referred the online material for syntax of Triggers, Procedures, Functions and Cursors.

Reference Book :
Database System Concepts
-Abraham Silberschatz, Henry F. Korth & S. Sudarshan 4th Ed. McGraw-Hill 1991

Reference Website :

- https://www.mysqltutorial.org/
- http://localhost/phpmyadmin/
- https://w3resource.com/
- https://www.w3schools.com/
- https://stackoverflow.com/
- https://www.tutorialspoint.com/