**Assignment # 2**

**DBMS**

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**Instructions:**

**I. Assignment should be hand written.**

**II. You should create your own solution according to your logic. Any similarity with other student and internet will be consider as cheating and your assignment will be marked as ZERO.**

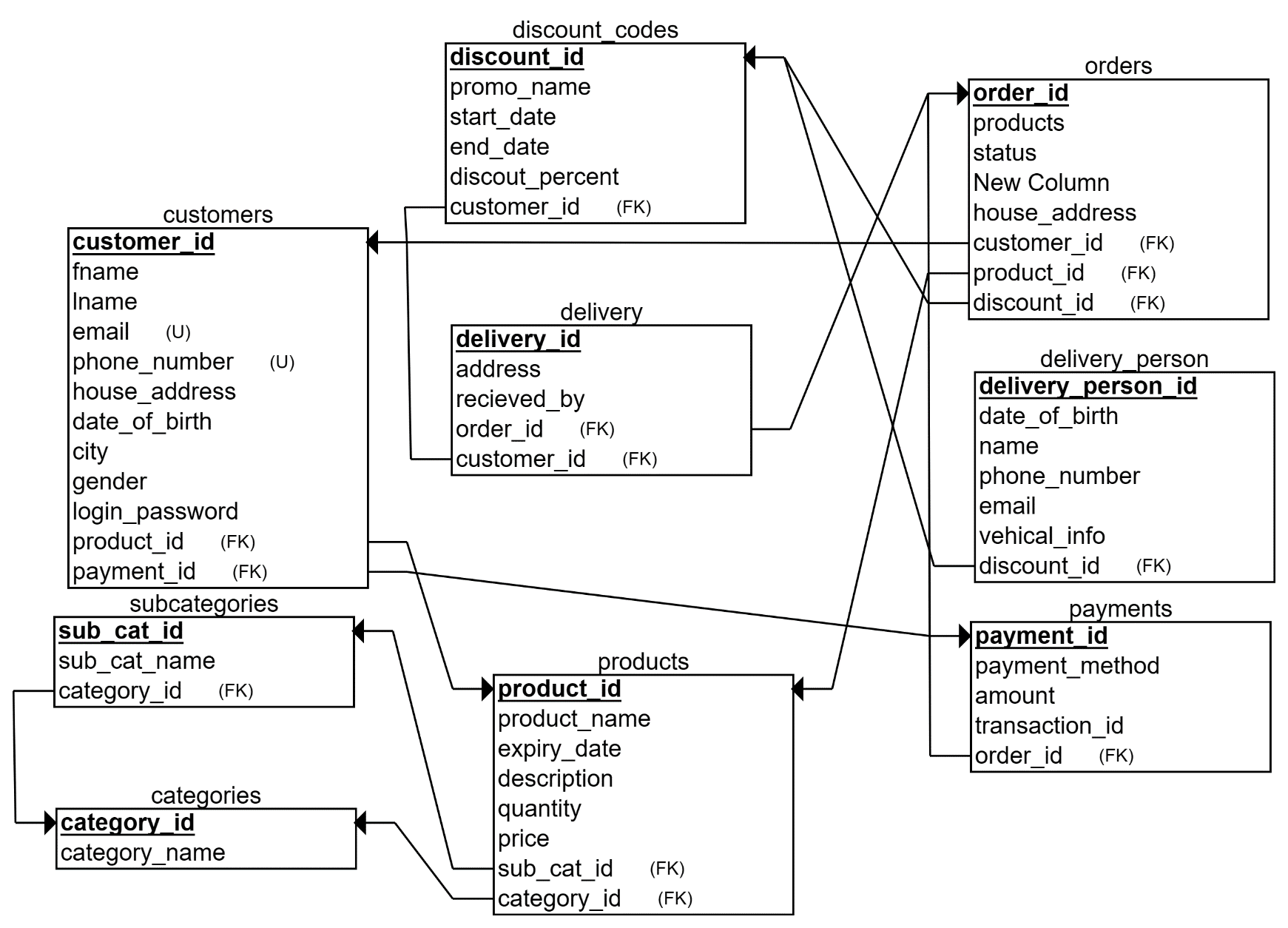
**III. Attach this page as front page of your assignment solution.**

**Question # 1: [20 Marks]**

Convert in to Online shopping center ER-Modal. You should also need to convert your logical schema into physical schema and also suggest a suitable name for the domain. Create database (DDL part) with all constraint and and insert data in it.

For idea you can visit <https://www.mycart.pk/> website.

**Domain Name:** mobilitymerchant.com – online store for fulfillment of daily needs

**Logical Schema For Database:**

**Queries for implementation of Database tables and relations:**

show databases;

create database online\_shoping\_store;

use online\_shoping\_store;

create table customers (

customer\_id int primary key auto\_increment,

fname varchar(100) not null,

lname varchar(100) not null,

email varchar(200) not null unique,

phone\_number varchar(20) not null unique,

house\_address varchar(1000) not null,

date\_of\_birth date not null,

city varchar(50) not null,

gender varchar(5) not null,

login\_password varchar(100) not null

);

desc online\_shoping\_store.customers;

use online\_shoping\_store;

create table categories (

category\_id int primary key auto\_increment,

name varchar(200) unique not null

);

desc online\_shoping\_store.categories;

use online\_shoping\_store;

create table subcategories (

sub\_cat\_id int primary key auto\_increment,

sub\_cat\_name varchar(200) not null unique,

category\_id int

);

alter table online\_shoping\_store.subcategories add constraint cat\_id\_fkey foreign key (category\_id) references online\_shoping\_store.categories(category\_id);

desc online\_shoping\_store.subcategories;

use online\_shoping\_store;

create table products (

product\_id int primary key auto\_increment,

name varchar(150) not null,

expiry\_date date default null,

description varchar(1000) not null,

category\_id int,

sub\_cat\_id int,

quantity int not null,

price float not null,

constraint cat\_id\_fkey\_prod foreign key (category\_id) references categories(category\_id),

constraint sub\_cat\_id\_fkey\_prod foreign key (sub\_cat\_id) references subcategories(sub\_cat\_id)

);

desc products;

use online\_shoping\_store;

create table discount\_codes (

discount\_id int primary key auto\_increment,

promo\_name varchar(50) not null unique,

start\_date date not null,

end\_date date not null,

discount\_percent float not null

);

desc discount\_codes;

use online\_shoping\_store;

create table orders(

order\_id int primary key auto\_increment,

products varchar(1000) not null,

status varchar(50) not null default 'Not Delivered!',

customer\_id int,

discount\_id int,

house\_address varchar(1000) not null,

payment\_mode varchar(100) not null default 'Cash on delivery',

order\_date timestamp default current\_timestamp,

total\_price float not null,

constraint cst\_order\_rel foreign key (customer\_id) references customers(customer\_id),

constraint discount\_fkey foreign key (discount\_id) references discount\_codes(discount\_id)

);

desc orders;

use online\_shoping\_store;

create table delivery\_person (

delivery\_person\_id int primary key auto\_increment,

date\_of\_birth date not null,

name varchar(250) not null,

phone\_number varchar(20) not null unique,

email varchar(150) not null unique,

vehical\_info varchar(500) not null,

shift varchar(10) not null,

city varchar(50) not null

);

desc delivery\_person;

create table delivery (

delivery\_id int primary key auto\_increment,

order\_id int,

customer\_id int,

address varchar(1000),

recieved\_by varchar(200),

delivery\_person\_id int,

constraint order\_delivery\_rel foreign key (order\_id) references orders(order\_id),

constraint customer\_delivery\_rel foreign key (customer\_id) references customers(customer\_id),

constraint delivery\_person\_rel foreign key (delivery\_person\_id) references delivery\_person(delivery\_person\_id)

);

desc delivery;

use online\_shoping\_store;

create table payments (

payment\_id int primary key,

order\_id int,

customer\_id int,

payment\_method varchar (50) default 'Cash on delivery',

amount float not null,

transaction\_date date not null,

constraint cst\_pay\_rel foreign key (customer\_id) references customers(customer\_id),

constraint order\_pay\_rel foreign key (order\_id) references orders(order\_id)

);

desc payments;

use online\_shoping\_store;

insert into customers (fname, lname, email, phone\_number, house\_address, date\_of\_birth, city, gender, login\_password)

value

('John', 'Doe', 'john@example.com', '1234567890', '123 Main St', '1990-01-01', 'New York', 'M', 'password123'),

('Alice', 'Smith', 'alice@example.com', '9876543210', '456 Elm St', '1985-05-15', 'Los Angeles', 'F', 'abc123'),

('Michael', 'Johnson', 'michael@example.com', '5678901234', '789 Oak St', '1982-11-30', 'Chicago', 'M', 'passpass'),

('Emily', 'Brown', 'emily@example.com', '3456789012', '101 Pine St', '1995-03-20', 'Houston', 'F', 'hello123'),

('David', 'Wilson', 'david@example.com', '7890123456', '555 Cedar St', '1988-07-10', 'Miami', 'M', 'qwerty'),

('Emma', 'Jones', 'emma@example.com', '2345678901', '222 Maple St', '1992-09-25', 'San Francisco', 'F', 'password'),

('James', 'Taylor', 'james@example.com', '8901234567', '777 Walnut St', '1983-04-18', 'Seattle', 'M', 'abc123'),

('Sophia', 'Martinez', 'sophia@example.com', '4567890123', '888 Pine St', '1998-06-12', 'Boston', 'F', 'passpass'),

('William', 'Garcia', 'william@example.com', '6789012345', '999 Oak St', '1980-12-05', 'Austin', 'M', 'hello123'),

('Olivia', 'Lopez', 'olivia@example.com', '9012345678', '333 Elm St', '1993-08-30', 'Dallas', 'F', 'qwerty');

insert into categories (name)

value

('Electronics'),

('Clothing'),

('Books'),

('Home & Kitchen'),

('Sports'),

('Beauty'),

('Toys'),

('Food & Grocery'),

('Furniture'),

('Health & Fitness');

insert into subcategories (sub\_cat\_name, category\_id)

value

('Smartphones', 1),

('Laptops', 1),

('T-Shirts', 2),

('Jeans', 2),

('Fiction', 3),

('Cookware', 4),

('Fitness Equipment', 10),

('Skincare', 6),

('Action Figures', 7),

('Cereals', 8);

insert into products (name, expiry\_date, description, category\_id, sub\_cat\_id, quantity, price)

value

('iPhone 12', '2025-12-31', 'Latest iPhone model', 1, 1, 100, 999.99),

('Samsung Galaxy Book', '2025-12-31', 'High-performance laptop', 1, 2, 50, 1499.99),

('Plain White T-Shirt', NULL, 'Basic cotton t-shirt', 2, 3, 200, 19.99),

('Slim Fit Jeans', NULL, 'Stylish denim jeans', 2, 4, 150, 39.99),

('To Kill a Mockingbird', NULL, 'Classic novel by Harper Lee', 3, 5, 100, 9.99),

('Non-Stick Cookware Set', NULL, 'Essential cookware for the kitchen', 4, 6, 80, 149.99),

('Treadmill', NULL, 'Home fitness equipment', 10, 7, 30, 999.99),

('Anti-Aging Cream', '2024-12-31', 'Reduce wrinkles and fine lines', 6, 8, 120, 29.99),

('Superhero Action Figure', NULL, 'Collectible toy for kids', 7, 9, 50, 14.99),

('Corn Flakes', '2025-12-31', 'Breakfast cereal', 8, 10, 300, 4.99);

insert into discount\_codes (promo\_name, start\_date, end\_date, discount\_percent)

value

('NEWYEAR2024', '2024-01-01', '2024-01-31', 10),

('FREESHIP', '2024-02-01', '2024-02-28', 5),

('SALE2024', '2024-03-01', '2024-03-31', 15),

('SPRING20', '2024-04-01', '2024-04-30', 20),

('MEMORIALDAY', '2024-05-01', '2024-05-31', 10),

('FATHERSDAY', '2024-06-01', '2024-06-30', 25),

('BACKTOSCHOOL', '2024-07-01', '2024-07-31', 15),

('LABORDAY', '2024-08-01', '2024-08-31', 20),

('WINTERFEST', '2024-09-01', '2024-09-30', 30),

('BLESSEDFRIDAY', '2024-10-01', '2024-10-31', 40);

insert into orders (products, customer\_id, discount\_id, house\_address, total\_price)

value

('iPhone 12, Slim Fit Jeans', 1, 1, '123 Main St', 1039.98),

('Plain White T-Shirt, Non-Stick Cookware Set', 2, 2, '456 Elm St', 169.98),

('To Kill a Mockingbird', 3, 3, '789 Oak St', 9.99),

('Superhero Action Figure', 4, NULL, '101 Pine St', 14.99),

('Corn Flakes', 5, 5, '555 Cedar St', 4.99),

('Samsung Galaxy Book, Anti-Aging Cream', 6, 6, '222 Maple St', 1529.98),

('Slim Fit Jeans, Fitness Equipment', 7, NULL, '777 Walnut St', 1039.98),

('Plain White T-Shirt, Treadmill', 8, 8, '888 Pine St', 1019.98),

('To Kill a Mockingbird, iPhone 12', 9, 9, '999 Oak St', 1009.98),

('Corn Flakes, Superhero Action Figure', 10, NULL, '333 Elm St', 19.98);

insert into delivery\_person (date\_of\_birth, name, phone\_number, email, vehical\_info, shift, city)

value

('1985-01-15', 'Mark Johnson', '1234567890', 'mark@example.com', 'Van', 'Morning', 'New York'),

('1988-05-20', 'Sarah Smith', '9876543210', 'sarah@example.com', 'Car', 'Afternoon', 'Los Angeles'),

('1990-09-10', 'Chris Brown', '5678901234', 'chris@example.com', 'Truck', 'Evening', 'Chicago'),

('1983-12-25', 'Jessica Wilson', '3456789012', 'jessica@example.com', 'Bike', 'Night', 'Houston'),

('1995-03-30', 'Alex Martinez', '7890123456', 'alex@example.com', 'Scooter', 'Morning', 'Miami'),

('1980-07-05', 'Sophia Taylor', '2345678901', 'sophia@example.com', 'Bicycle', 'Afternoon', 'San Francisco'),

('1992-11-15', 'Kevin Garcia', '8901234567', 'kevin@example.com', 'Van', 'Evening', 'Seattle'),

('1986-04-20', 'Emma Jones', '4567890123', 'emma@example.com', 'Car', 'Night', 'Boston'),

('1998-08-10', 'Michael Lopez', '9012345678', 'michael@example.com', 'Truck', 'Morning', 'Austin'),

('1982-02-28', 'Olivia Brown', '6789012345', 'olivia@example.com', 'Bike', 'Afternoon', 'Dallas');

insert into delivery (order\_id, customer\_id, address, recieved\_by, delivery\_person\_id)

value

(1, 1, '123 Main St', 'John Doe', 1),

(2, 2, '456 Elm St', 'Alice Smith', 2),

(3, 3, '789 Oak St', 'Michael Johnson', 3),

(4, 4, '101 Pine St', 'Emily Brown', 4),

(5, 5, '555 Cedar St', 'David Wilson', 5),

(6, 6, '222 Maple St', 'Emma Jones', 6),

(7, 7, '777 Walnut St', 'James Taylor', 7),

(8, 8, '888 Pine St', 'Sophia Martinez', 8),

(9, 9, '999 Oak St', 'William Garcia', 9),

(10, 10, '333 Elm St', 'Olivia Lopez', 10);

insert into payments (payment\_id, order\_id, customer\_id, amount, transaction\_date)

value

(1, 1, 1, 1039.98, '2024-01-15'),

(2, 2, 2, 169.98, '2024-02-20'),

(3, 3, 3, 9.99, '2024-03-10'),

(4, 4, 4, 14.99, '2024-04-05'),

(5, 5, 5, 4.99, '2024-05-01'),

(6, 6, 6, 1529.98, '2024-06-15'),

(7, 7, 7, 1039.98, '2024-07-20'),

(8, 8, 8, 1019.98, '2024-08-10'),

(9, 9, 9, 1009.98, '2024-09-05'),

(10, 10, 10, 19.98, '2024-10-01');

use online\_shoping\_store;

select \* from customers;

select \* from categories;

select \* from subcategories;

select \* from products;

select \* from discount\_codes;

select \* from orders;

select \* from delivery\_person;

select \* from delivery;

select \* from payments;

DESC categories;

DESC customers;

DESC delivery;

DESC delivery\_person;

DESC discount\_codes;

DESC orders;

DESC payments;

DESC products;

DESC subcategories;