ONLINE RETAIL STORE

Group 50
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As Explained in deadline-2 (Link to ER model and Relational model), Our database has a total of 10 entities;

1. Customer
2. Distributor
3. Product
4. Category
5. Administration
6. Delivery Agent
7. Cart
8. Order
9. Product Feedback
10. Offers

SCHEMA CREATION:

In order to create a schema for our online retail store database, We first created a database on MySQL using the command:

CREATE DATABASE [database_name].

Then we inserted tables into the database for each of the above-stated entities; we did this using the syntax:

```
CREATE TABLE  [database_name].[table_name] (
        [col_name] [datatype]
        [col_name] [datatype]
        …
        …
);
```

We added all the attributes for each entity as defined in our ER model linked here, using suitable data types.

- **Primary Keys:**
  A primary key is an attribute that acts as a unique Identifier.
  We defined the primary keys using: **PRIMARY KEY** (col_name)

Primary keys use **AUTO_INCREMENT** and are **NOT NULL**

	ENTITY NAME	PRIMARY KEY
1.	Customer	Customer_ID
2.	Distributor	Distributor_ID
3.	Product	Product_ID
4.	Category	Category_ID
5.	Administration	Admin_ID
6.	Delivery Agent	Agent_ID
7.	Cart	Cart_ID
8.	Order	Order_ID
9.	Product Feedback	Review_ID U Customer_ID
10.	Offers	Offer_ID

- **Foreign Keys:** A foreign key is an attribute that links two tables together.

We defined foreign keys using: **FOREIGN KEY** (col_name) **REFERENCES** table**(**col_name**)**

	ENTITY NAME	FOREIGN KEY	REASON
1.	Customer	-	-
2.	Distributor	Admin_ID	To view which admin added distributor
3.	Product	Category_ID Distributor_ID	To group all products of each category To group all products by a single distributor
4.	Category	-	-
5.	Administration	-	-
6.	Delivery Agent	Admin_ID	To view which admin added agent
7.	Cart	-	-
8.	Order	Cart_ID	To view which cart placed order
9.	Product Feedback	Product_ID	To group all reviews of each product
10.	Offers	Admin_ID	To view which admin added offer

- **Integrity Constraints:**

1. **Auto_Increment**
2. **Not Null**
3. **Primary Key**
4. **Foreign Key**

- **Indexes:** Indexes are used to retrieve data from the database very fast.
- **Indexes** help to speed up queries.

We created Indices using:

CREATE INDEX idx_name **ON** table_name(col_name);

	ENTITY NAME	ATTRIBUTE INDEXED
1.	Customer	full_name
2.	Distributor	full_name
3.	Product	Product_name price
4.	Category	category_name
5.	Administration	Admin_ID
6.	Delivery Agent	Full_name Avg_rating
7.	Cart	Total_price num_items
8.	Order	Date Amount payment_mode
9.	Product Feedback	product_id
10.	Offers	Percentage_discount minimum order

DATA POPULATION:

In order to produce bulk data (as in the case of customers, distributors, offers, etc.), we have used an online bulk data generator.

For more sensitive data, like product, category, etc.
We have added data using the following syntax:

```
INSERT INTO database.tbl_name(col1,col2)
VALUES (col1_val, 'col2_val'),
       (col1_val, 'col2_val'),
       (col1_val, 'col2_val'),
            …
       (col1_val, 'col2_val');
```