DBMS Project

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Scope of Project :
Our project aims at providing an E2E database application based on an online retail store system with a primary focus on the design of backend databases.
Salient points include :

- Enables the retail manager to access, modify and update any inventory related data ● Enables customers to add products into a wishlist.
- The database stores information regarding recent search history which could help in analyzing interests of the customer.

Stakeholders :

- Owners & Employees
- Customers

Entities with their attributes :
Primary keys are **bold and underlined** and foreign keys are underlined

Customer(**Customer_ID**, Age, Mobile_No, Pincode, Email_ID, Card_ID, First_Name, Last_Name, Address, City)
Product(**Product_ID**, Product_Name, Price, Stock, Brand_ID, Catalog_ID)
Brand(**Brand_ID**, Brand_Name)
Product_Catalog(**Catalog_ID**, Catalog_Name)
Cart(**Cart_ID**, Cart_Cost)
Payment(**Payment_ID**, Status, Customer_ID, Cart_ID)
Search_History(Product_ID, Customer_ID, Searched_At)
Reviews(Product_ID, Customer_ID, Rating, Feedback)
Wishlist(Product_ID, Customer_ID)
Cart_Items(Product_ID, Cart_ID, Cost, Quantity)

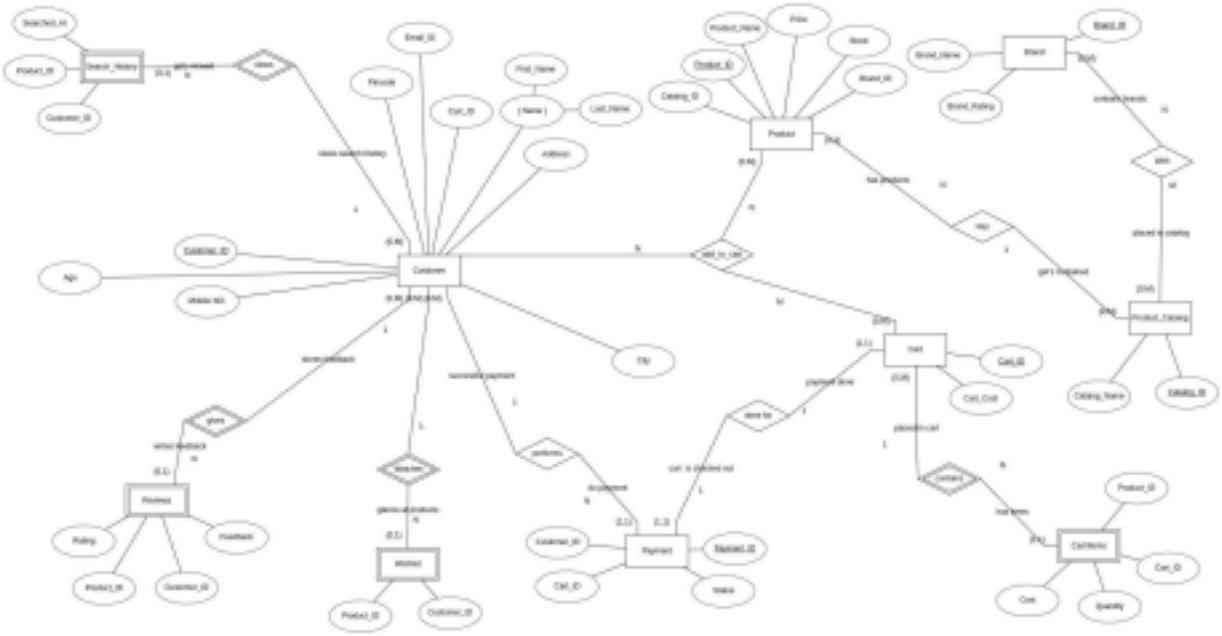
Relationships :
Add_To_Cart(**Customer_ID**, **Product_ID**, **Cart_ID**)
Filter(**Catalog_ID**, **Brand_ID**)

Ternary Relationships :
Add_To_Cart(**Customer_ID**, **Product_ID**, **Cart_ID**)

Weak Entities :
Search_History(Product_ID, Customer_ID, Searched_At) : Search History is totally dependent

on the Customer and the products she has looked at. Thus Search History is a weak entity.
Reviews(Product_ID, Customer_ID, Rating, Feedback) : In our DB we've allowed for multiple reviews by a customer for a product and hence reviews are dependent on the product bought by a customer.
Wishlist(Product_ID, Customer_ID) : Wishlist is only dependent on the product chosen by the customer and a primary key wouldn't be required in this case.
Cart_Items(Product_ID, Cart_ID, Cost, Quantity) : Cart is a strong entity and Cart_Items would be dependent on it and so it is a weak entity.

ER Diagram :
(ER Diagram.png)



Relational Schema :
Primary keys are **bold and underlined** and foreign keys are underlined

Customer(**Customer_ID**, Age, Mobile_No, Pincode, Email_ID, Card_ID, First_Name, Last_Name, Address, City)
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Brand(**Brand_ID**, Brand_Name)
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Add_To_Cart(**Customer_ID**, **Product_ID**, **Cart_ID**)
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SQL Data Dump :
In file `dump.sql`

SQL Queries :
In file `queries.sql`
Submitted as ‘MySQL stored procedures’ for reusability

DDL :
In file `ddl.sql`