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{ CSPC – 202 *DBMS*}

TOPIC : Order Management System

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ASSIGNMENT NO.: 1 [ER Modelling]

Make an ER diagram of the corresponding project with maximum use of all the concepts studied in ER and EER Modelling.

- ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

- This ER (Entity Relationship) Diagram represents the model of Order Management System Entity. The entity-relationship diagram of Order Management System shows all the visual instrument of database tables and the relations between Order_Info, Order_Dtls , Product_Info, Client. It used structure data and to define the relationships between structured data groups of Order Management System functionalities.

- The main entities of the Order Management System are Order_Info, Order_Dtls , Product_Info, Client.

Order Management System entities and their attributes:

1) **Product_Info :-** It stores the details of the Product available in the store.
   - Attributes of Product_Info are:
     - **ProductID**
     - Desc
     - ModelNo
     - CP
     - Remarks

2) **Order_Info :-** It is linked to Client with foreign key.
   - Attributes of Order_Info are:
     - **OrderID**
     - Status
     - Total_Price(**derived attribute**)
     - OrderDate
   - It is further divided into two parts based on the status of order:
     - **Fulfilled** - Dely_Date, Pay_Method
     - **In Progress** - Exp_DelyDate

3) **Order_Dtls (Weak Entity) :-** It is linked to Order_Info and Product _Info with foreign keys.
   - Attributes of Order_Dtls are:
     - ItemNo (**Partial Key**)
     - Price Per Item
     - Discount
     - Qty

4) **Client :-** It stores information of its clients.

- Attributes of Client are:
  - **ClientID**
  - Login_ID

- A Client,category (UNION type), represents union of firm and individual.
  - **Firm:**
    - Name {Fname, Mname, Lname}
    - **Reg No**
    - Email_id (**Multivalued**)
    - Address {Srt_No, City, State, Pincode}

  - **Individual:**
    - Name{Fname, Mname, Lname}
    - **AddharNo**
    - MobileNo (**Multivalued**)
    - Bdate
    - Age (**Derived)**
    - Address{Srt_No, City, State, Pincode}

Fname
Mname
Lname
Name
Srt_No
AddharNo
City
State
Address
Pincode
Bday
Age
Individual
MobileNo
Fname
Mname
Lname
Name
City
State
Srt_No
Address
Pincode
Reg No
Firm
Email_ID
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ClientID
Client
Login_ID
1
orders
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Total_Price
OrderID
Status
OrderDate
Order_Info
Status
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Fulfilled
Pay_Method
Dely_Date
In Progress
Exp_DelyDate
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ProductID
Desc
CP
Product_Info
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Discount
Qty
Order_Dlts
ItemNo
Price Per Item