

Group name: 6

Group Formation and Conceptual Data Model with the Relational Database RDB schema diagram

Group's Members Info:

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Conceptual EER Model

Date Modeling Tool:

-For Relational Database Schema we used Creatly

(https://creately.com/?gclid=CjwKCAiAqIKNBhAIEiwAu_ZLDjA6J0kXUXZCesWYMEcaSV6d4hr5yvgHbmOdphbTelVgTiQPBTMrXhoCRDEQAvD_BwE)

- For Conceptual Data Model we used Erdplus

(<https://erdplus.com/>)

Assumptions :

1. each client record **one or more** comment, each comment recorded by **one** client.
2. one auction opens **many** bids, each bid opened by **one** auction
3. each purchaser can make at least **one** bid or **more**, each bid made by **one** purchaser
4. each item is placed by **one** supplier, and each supplier can place **many** items
5. each item at least has **one** bid; each bid at least has **one** item or more

Bonus Assumptions:

1. the supplier ships the packages(the items he/she sold it) to the warehouses
2. the delivery man can pick up the packages from the warehouses
3. the delivery man will deliver the packages to the winners
4. each supplier will have a supervisor(Employee)

Description: ER Data Model component:

Entity type:

- 1: **Client** (ID, Email, Password, Phone Numbers, Clint Address, Name (First Name, Last Name))
- 2: **Supplier** (Account Number, ID, Email, Password, Phone Numbers, Clint Address, Name (First Name, Last Name))
- 3: **Purchaser** (Shipping Address, ID, Email, Password, Phone Numbers, Clint Address, Name (First Name, Last Name))
- 4: **Auctions** (Auction Id, Start Price, Description, Reserve, Increment, Expiration)
- 5: **Billing** (Quantity, Billing Id, Order Data)
- 6: **Winner** (ID, Email, Password, Phone Numbers, Clint Address, Name(First Name, Last Name, Shipping Address))
- 7: **Bid** (TimeStamp , Bid Id , Price)
- 8: **Item** (Item Id , Bid Price , Title , Description)
- 9: **Hardware** (Storage, Speed , Memory , Item Id , Bid Price , Title , Description)
- 10: **OperatingSystem** (Author, Cost , Version , Manufacturer , Is System software , Year of Manufacturing, Item Id , Bid Price , Title , Description)
- 11: **Comment** (Comment Description , Rating))
- 12: **Employee**(Name(Fname ,Lname),ID ,Salary)
- 13: **Warehouse**(ID ,location)
- 14: **deliveryman**(Name(Fname ,Lname), PhoneNumber, WorkingHoures)

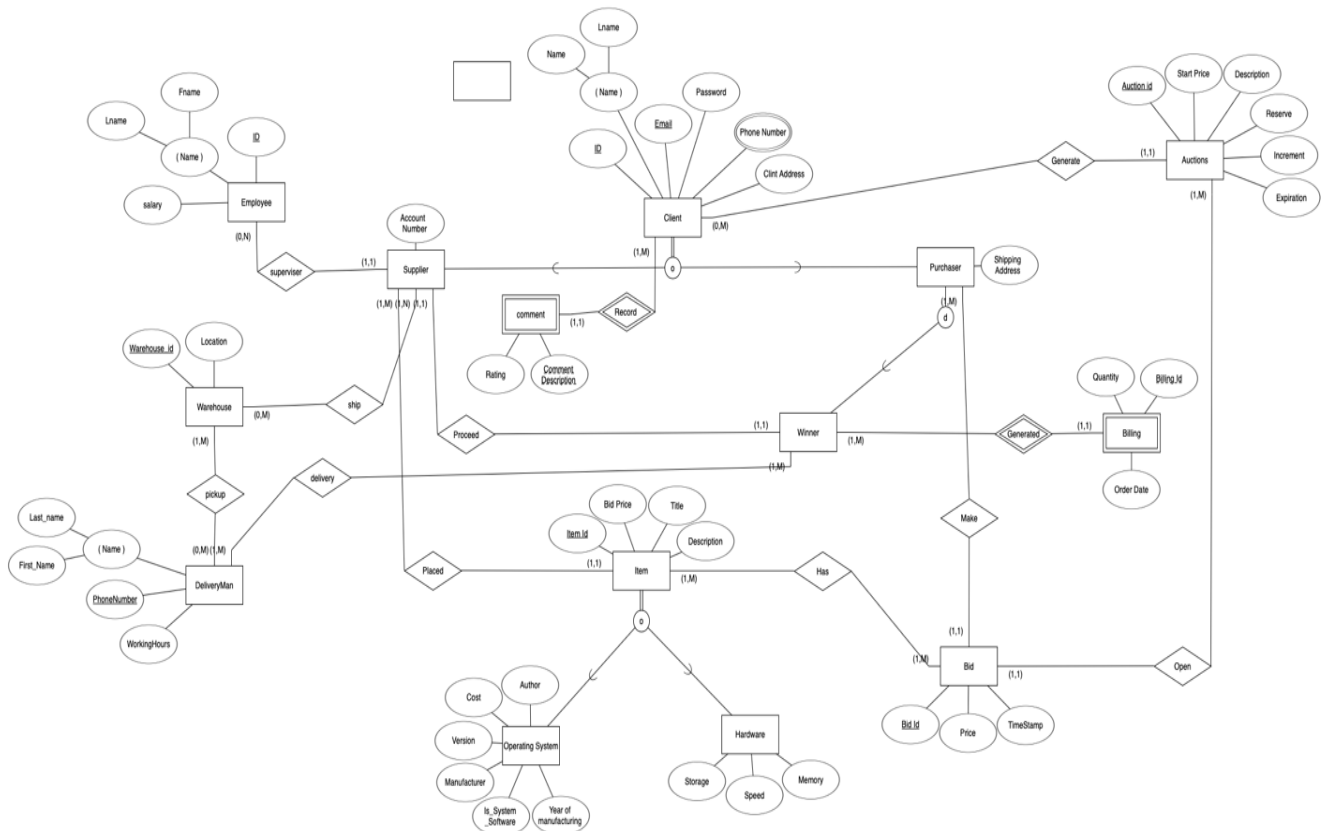
Relationships:

- 1: client(0,1) **Generate** auctions(0,M)
- 2: client (1,M) **Record** comment(1,1) (week Entity)
- 3: winner(1,M) **Generated** billing(1,1) (week Entity)
- 4: auctions(1,M) **Open** bid(1,1)
- 5: purchaser(1,M) **Make** bid(1,1)
- 6: supplier(1,1) **Proceed** winner(1,1)
- 7: supplier(1,M) **Placed** item(1,1)
- 8: bid(1,M) **Has** item(1,M)
- 9: Employee(0,N) **supervisor** Supplier(1,1)
- 10: Supplier(1,N) **ship** Warehouse(0,M)
- 11: DeliveryMan(0,M) **pickup** Warehouse(1,M)
- 12: DeliveryMan(1,M) **Delivery** Winner(1,M)

Inheritance:

- 1: Winner **IS-AN** Purchaser
- 2: Purchaser **IS-AN** Client
- 3: Supplier **IS-AN** Client
- 4: Hardwar **IS-AN** Item
- 5: OperatingSystem **IS-AN** Item

Conceptual Data Model



Relational Database Schema

