**Universal Furniture**

**Outlet**

GROUP PROJECT

REPORT

Tuesday, December 14, 2021

UNDER GUIDENCE OF:

Dr. Radha Mahapatra

TA. Yashika Bansal

.

Team 7: Tasnim Munir: 1001781536 (INSY-3304-003)

Shubham Prakash Rathi: 1001960844 (INSY-5335-001)

Amruta Ganesh Shetty: 1002004175 (INSY-5335-001

Junaid Naik: 1001947997 (INSY-5335-001)

Manideep Bavirishetty: 1001952081 (INSY-5335-001)

Class of 2021/Section 001

## **Table of Content**

|  |  |  |
| --- | --- | --- |
| 1 | [ENTITES AND DEFINITIONS](#_ENTITIES_AND_DEFINITIONS) | 3 |
| 2 | [RELATIONSHIP MATRIX](#_RELATIONSHIP_MATRIX) | 3 |
| 3 | [BUSINESS RULES](#_BUSINESS_RULES) | 4 |
| 4 | [SUPERTYPE-SUBTYPE RELATIONSHIPS](#_SUPERTYPE-SUBTYPES_RELATIONSHIPS) | 4 |
| 5 | [E-R DIAGRAMS](#_E-R_Diagrams) | 5 |
| 6 | [RELATIONS SCHEMA(NORMALIZATION)](#_Relational_schema_(Normalization)) | 6 |
| 7 | [DATA DICTIONARY](#_Data_Dictionary) | 7 |
| 8 | [TABLES](#_Tables) | 8 |
|  | * [TABLES STRUCTURE](#_Tables_Structure) | 8 |
|  | * [TABLES WITH DATA](#_Tables_with_Data) | 10 |
| 9 | [SQL QUERIES](#_SQL_Queries) | 18 |

Tasnim Munir: [txm1536@mavs.uta.edu](mailto:txm1536@mavs.uta.edu) (7183161779)

Shubham Rathi: [spr0844@mavs.uta.edu](mailto:spr0844@mavs.uta.edu) (6825544201)

## **ENTITIES AND DEFINITIONS**

1. ***Customer:***Customer has separate and distinct existence of things, such as unique account number, and billing address.
2. ***Order:***Order is said to be an entity as all the data is collected for each order that is placed.
3. ***Furniture:*** Furniture is a single unique object having furniture Type, Quantity, and Price as attribute.
4. ***Truck:***Trucks is an entity because it stores the information about the truck’s attributes such as Vehicle Number, License Plate Number etc.
5. ***Driver:*** Driver is an entity because it stores information about driver’s license plate number, license expiration date and all the employees who are drivers.
6. ***Employee:*** Employee keeps the data related to all type of Employee, their SSN, Name, Phone number and address.
7. ***Sale Representative: S***ales representative is an entity, who takes orders, also are a type of employee and earn commission.
8. ***Shipment:*** Shipment is an entity, composed of one or more orders and vice versa, having a Delivery address, Truck Id, etc.

## **RELATIONSHIP MATRIX**

## 

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***Customer*** | ***Order*** | ***Furniture*** | ***Truck*** | ***Drivers*** | ***Employee*** | ***Sales Representative*** | ***Shipment*** |
| Customer |  | Places an |  |  |  |  |  |  |
| Order | Placed by |  | contains |  |  |  | Is taken by | Composed of |
| Furniture |  | appears |  |  |  |  |  |  |
| Truck |  |  |  |  | Is driven by |  |  | Contains |
| Driver |  |  |  | drives |  | Is kind of |  |  |
| Employee |  |  |  |  | Can be a |  | Can be a |  |
| Sales Representative |  | Takes |  |  |  | Is kind of |  |  |
| Shipment |  | Is a part of |  | Contained by |  |  |  |  |

## **BUSINESS RULES**

* Each Customer sometimes places one or more Orders

Each Order is always placed by one Customer

* Each Order always contains one or more Furniture

Each Furniture sometimes appear in one or more Orders

* Each Truck is always driven by one Driver

Each Driver always drives one Truck

* Each Truck always contains one or more Shipments

Each Shipment is always contained by one Truck

* Each Sales representative always takes one or more orders

Each order is always taken by one sales representative

* Each shipment is always a part of one order

Each order sometimes composed of one or more shipments

## **SUPERTYPE-SUBTYPES RELATIONSHIPS**

* Sales Representative is a kind of Employee.

An Employee can be sales representatives.

* Driver is a kind of Employee.

An Employee can be a Driver.

## **E-R Diagrams**

* Diagram having all entities and relationships including many-to-many relationships.

Diagram

Description automatically generated



* Diagram includes all the entities in the first diagram. In addition, having bridge entities that replace many-to-many relationships.

Diagram

Description automatically generated



## 

## **Relational schema (Normalization)**

1. **CUSTOMER** (CUST\_ID, cust\_fname, cust\_lname, cust\_phone, cust\_billing\_add\_1, cust\_billing\_add\_2, cust\_city, cust\_state, cust\_zip\_code)

1. **ORDERS** (ORDER\_ID, Cust\_id, order\_delivery\_add\_1, order\_delivery\_add\_2, order\_delivery\_city, order\_delivery\_state, order\_delivery\_zip\_code, order\_delivery\_charge, order\_amt, delivery\_required, Emp\_id)

1. **TRUCK**(TRUCK\_ID, truck\_vehicle\_no, truck\_license\_no, truck\_license\_exp\_date, truck\_inspection\_exp\_date, Emp\_id)

1. **EMPLOYEE** (EMP\_ID, emp\_ssn, emp\_fname, emp\_lname, emp\_add\_1, emp\_add\_2, emp\_city, emp\_state, emp\_zip\_code, emp\_phone, emp\_salary, emp\_type)

1. **DRIVER** (EMP\_ID, driver\_license\_no, driver\_license\_exp\_date)

EMP\_ID in Driver Table is both PK and FK.

1. **SALESREPRESENTATIVE** (EMP\_ID, sales\_rep\_commission)

EMP\_ID in SalesRepresentable Table is both PK and FK.

1. **SHIPMENT**(SHIPMENT\_ID, Order\_id, Truck\_id, delivery\_date)

1. **ORDERDETAILS**(ORDER\_ID, FURN\_ID)

       ORDER\_ID, FURN\_ID in OrderDetails Table is a Composite PK. ORDER\_ID is a FK from

Orders table and FURN\_ID is a FK from Furniture table.

1. **FURNITURE**(FURN\_ID, furn\_type, furn\_price, furn\_qty)

## 

## **Data Dictionary**

Table

Description automatically generated

## Table Description automatically generated

## **Tables**

### **Tables Structure**

A close-up of a document

Description automatically generated with medium confidence

A screenshot of a computer

Description automatically generated with medium confidence

### 

### **Tables with Data**

All tables are created under account.no: **txm1536.** Tables can be accessed by using txm1536.customer, txm1536.orders, txm1536.employee, txm1536.truck, txm1536.driver, txm1536.salesrepresentative, txm1536.shipment, txm1536.furniture, txm1536.orderdetails

1. **Employee**

Table

Description automatically generated

Table

Description automatically generatedTable

Description automatically generated

1. **Furniture**

Table

Description automatically generated

## **Customer**

Table

Description automatically generated

Table

Description automatically generated

1. **Orders:**

**Graphical user interface, text, application, email

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

1. **OrderDetails**

**Table

Description automatically generated**

1. **Shipment:**

**Table

Description automatically generated**

1. **Truck**

**Table

Description automatically generated**

1. **Driver**

**Table

Description automatically generated with medium confidence**

1. **Sales Representative**

**A picture containing text

Description automatically generated**

## **SQL Queries**

1. **List all customer names, addresses, and phone numbers.**

A screenshot of a computer

Description automatically generated with medium confidence

1. **Pick an order and get all information about that order included in the order form. You don’t need to compute the totals and the delivery fee. This may be split into two queries, one for the header and the other for the order lines.**

**Part 1:**Graphical user interface, text

Description automatically generated

**Part 2:**

Table

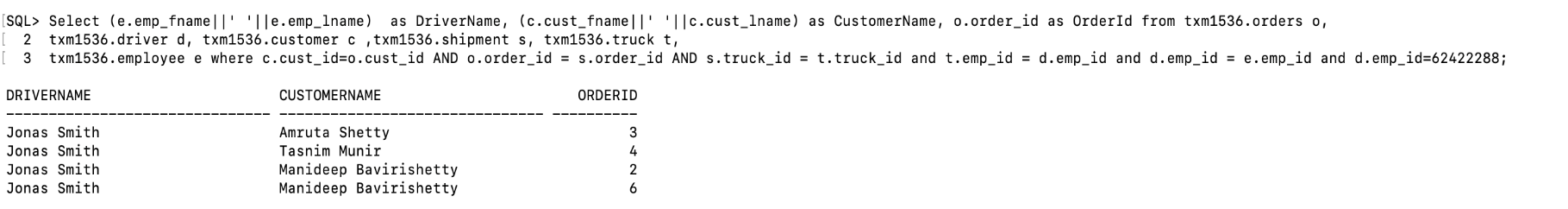
Description automatically generated

1. **What is the phone number of the salesrep who took order in the query above?**

Graphical user interface, text, application

Description automatically generated

**4. Pick a driver and list all customers whose orders have been delivered by him/her.**



**5. What is the total value (quantity time unit price) of all items in stock that have unit prices exceeding $25?**

Table

Description automatically generated