**Professor and Chair**

**Information Systems and Operations Management**

**University of Texas, Arlington**

**2218-INSY-5335-001**

**APPLIED DATABASE MANAGEMENT**

**Project Part Two**

# Submitted To,

# Dr. Radha Mahapatra

**By Team 5,**

**Jaisimha, Sai Taran Patel**

**Kangutkar, Ameya**

**Sadineni, Naveen**

**Rahman, Nabila**

**Rao, Aishwarya**

**Part II:**

**ER-Diagram:**

1. Showing all entities andrelationships including many-to-many relationships.

**Diagram

Description automatically generated**

1. Showing all entities and relationships with bridge entities that replace many-to-many relationships.

Diagram

Description automatically generated

**Note:**

While creating SQL DB in our oracle database, we faced issue when we named our table as ‘Employee’ or ‘Customer’. Hence, we decided to go ahead to include ‘\_UFO’ after each entity name to specify it to our project. So, an entity named ‘Employee’ has been changed to ‘Employee\_UFO’ from now on and so is the case with other entities as well.

**Relational Schema:**

CUSTOMER\_UFO (CUS\_ID, Cus\_Acc , Cus\_Name, Cus\_Bil\_Add, Cus\_Del\_Add, Cus\_Del\_Serv, Cus\_Mb\_No )

TRUCK\_UFO (V\_NO, Truck\_Lno, Truck\_License\_Exp, Truck\_Insp\_Exp)

EMPLOYEE\_UFO (EMP\_ID, Emp\_Ssn, Emp\_Name, Emp\_Add, Emp\_Ph, Emp\_Salary, Type\_Of\_Employee)

DRIVER\_UFO (D\_EMP\_ID, Driver\_Lic, Driver\_Lic\_Exp, V\_No)

SALESREP\_UFO (S\_EMP\_ID, Commission)

ITEM\_UFO (ITEM\_CODE, Item\_Type, Item\_Qty, Item\_price)

ORDER\_UFO (ORDER\_ID, Cus\_Id, S\_Emp\_Id)

SHIPMENT\_UFO (SHIP\_ID, Order\_Id, V\_No)

ORDERITEM\_UFO (ORDER\_ID, ITEM\_CODE, Quantity\_of\_Items)

\*\* **Note:** in the above relational schema, the double underline ‘ ’ is used to define an attribute which is both the Foreign Key as well as the Primary Key.

**Data Dictionary:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table Name** | **Attribute Name** | **Type** | **Contents** | **Required** | **PK or FK** | **FK Ref Table** |
| **Customer\_UFO** | CUS\_ID | NUMBER(5) | Customer Identification number | yes | PK |  |
| Cus\_Acc | VARCHAR(5) | Customer acc number | yes |  |  |
| Cus\_Name | VARCHAR(20) | Name of customer | yes |  |  |
| Cus\_Bil\_Add | VARCHAR(35) | billing address of customer | yes |  |  |
| Cus\_Del\_Add | VARCHAR(35) | delivery address of customer |  |  |  |
| Cus\_Del\_Serv | CHAR(1) | delivery service if required by customer | yes |  |  |
| Cus\_Mb\_No | NUMBER(10) | Customer mobile number | yes |  |  |
| **Truck\_UFO** | V\_NO | VARCHAR(4) | Vehicle Identification Number | yes | PK |  |
| Truck\_Lno | VARCHAR(8) | license plate number of vehicle | yes |  |  |
| Truck\_License\_Exp | DATE | license expiration date | yes |  |  |
| Truck\_Insp\_Exp | DATE | inspection expiration date | yes |  |  |
| **Employee\_UFO** | EMP\_ID | NUMBER(4) | Employee ID | yes | PK |  |
| Emp\_Ssn | NUMBER(10) | Social Security Number | yes |  |  |
| Emp\_Name | VARCHAR(25) | name | yes |  |  |
| Emp\_Add | VARCHAR(35) | address | yes |  |  |
| Emp\_Ph | NUMBER(12) | phone | yes |  |  |
| Emp\_Salary | NUMBER(7) | salary | yes |  |  |
| Type\_Of\_Employee | VARCHAR(8) | What kind of work the employee does |  |  |  |
| **Driver\_UFO** | D\_EMP­\_ID | NUMBER(4) | Employee ID | yes | PK, FK |  |
| Driver\_Lic | NUMBER(8) | Drivers license number | yes |  |  |
| Driver\_Lic\_Exp | DATE | license expiration date | yes |  |  |
| V\_No | VARCHAR(4) | Vehicle number |  | FK | Truck\_UFO |
| **SalesRep\_UFO** | S\_EMP\_ID | NUMBER(4) | Employee ID | yes | PK, FK |  |
| Comission | NUMBER (5) | Comission by the sales rep | yes |  |  |
| **Item\_UFO** | ITEM\_CODE | VARCHAR(4) | Item code | yes | PK |  |
| Item\_Type | VARCHAR(15) | Item type | yes |  |  |
| Item\_Qty | NUMBER(3) | Quantity | yes |  |  |
| Item\_price | NUMBER(6,2) | The amount for which a single item is sold in $ | yes |  |  |
| **Order\_UFO** | ORDER\_ID | VARCHAR(4) | Order ID | yes | PK |  |
| Cus\_Id | NUMBER (5) | Customer ID | yes | FK | Customer\_UFO |
| S\_Emp\_Id | NUMBER(4) | Sales rep employee id | yes | FK | Employee\_UFO |
| **Shipment\_UFO** | SHIP\_ID | VARCHAR(7) | Shipment ID | yes | PK |  |
| Order\_Id | VARCHAR(4) | Order ID | yes | FK | Order\_UFO |
| V\_No | VARCHAR(4) | Vehicle Number | yes | FK | Truck\_UFO |
| **OrderItem\_UFO** | ORDER ID | VARCHAR(4) | Order ID | yes | CPK, FK | Order\_UFO |
| ITEM\_CODE | VARCHAR(4) | Item ID | yes | CPK,FK | Item\_UFO |
| Quantity\_of\_Item | NUMBER(3) | Number of items in the order | Yes |  |  |

**Describing the tables and showing the data:**

1. **CUSTOMER\_UFO**

**Table

Description automatically generated**

**Table

Description automatically generated**

**2.TRUCK\_UFO**

A picture containing text

Description automatically generated

**Text

Description automatically generated**

**3. EMPLOYEE\_UFO**Text

Description automatically generated with low confidence

**Table

Description automatically generated**

1. **DRIVER\_UFO**

Graphical user interface

Description automatically generated with medium confidence

**Text

Description automatically generated**

1. **SALESREP\_UFO**

A screenshot of a computer

Description automatically generated

**Table

Description automatically generated with medium confidence**

1. **ITEM\_UFO**

Graphical user interface

Description automatically generated with low confidence

**A screenshot of a computer

Description automatically generated with medium confidence**

1. **ORDER\_UFO**

Graphical user interface

Description automatically generated

**Table

Description automatically generated**

1. **SHIPMENT\_UFO**

Graphical user interface

Description automatically generated

**Text, table

Description automatically generated with medium confidence**

1. **ORDERITEM\_UFO**

Graphical user interface

Description automatically generated with low confidence

**Table

Description automatically generated**

**SQL QUERIES AND THEIR OUTPUT:**

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

**Table

Description automatically generated**

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.

Text

Description automatically generated with medium confidence

Table

Description automatically generated

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

   Description automatically generated
2. Pick a driver and list all customers whose orders have been delivered by him/her.

Here we have taken driver ID = 1003 to find the customer.

Text

Description automatically generated

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

Text

Description automatically generated with medium confidence

The below two are just reference codes, in case needed.

Text

Description automatically generatedText

Description automatically generated

Note:

The following are people to contact in case of this project :

|  |  |  |
| --- | --- | --- |
| **Name** | **PhNo** | **email** |
| Aishwarya | 7143331847 | amr6478@mavs.uta.edu |
| Naveen | 6822487892 | nxs7793@ mavs.uta.edu |
| Nabila | 8178187648 |  |
| Ameya | 6822838266 |  |
| Sai Taran | 6827163277 | sxj9035@mavs.uta.edu |