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INSY 3304 DATABASE MANAGEMENT SYSTEMS

Frisco art gallery PART TWO

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**a) Graded & Revised Part I**

## Entity Identification

**CUSTOMER** (CUSTOMER\_ID), First\_Name, Last\_Name, Email, Phone\_Number

**BILLING\_ADDRESS** (BILLING\_ADDRESS\_ID), customer\_id, Street, City, State, Zip\_Code,

**DELIVERY\_ADDRESS** (DELIVERY\_ADDRESS\_ID), Street, City, State, Zip\_Code

**ORDER\_TABLE** (ORDER\_ID), consultant\_id, customer\_id, delivery\_address\_id, Order\_Date, Total\_Amount

**ORDER\_LINE** (ORDER\_ID, ARTWORK\_ID), order\_id, artwork\_id, Quantity, Price\_Each

**ARTWORK** (ARTWORK\_ID), order\_id*,* Title, Medium, Dimensions, Price

**SHIPMENT** (SHIPMENT\_ID),order\_id, vehicle\_id*,* driver\_id*,* Ship\_Date, Delivery\_Status

**VEHICLE** (VEHICLE\_ID), driver\_id, Make, Model, License\_Plate, Capacity

**EMPLOYEE** (EMPLOYEE\_ID), First\_Name, Last\_Name, Hire\_Date, Role, Phone\_Number

* **CONSULTANT** (CONSULTANT\_ID), employee\_id, Specialty
* **OPERATIONS\_MANAGER** (MANAGER\_ID), employee\_id, Department
* **DRIVER** (DRIVER\_ID), employee\_id, License\_Number, Years\_Experience

## 2. Entity Definitions

Customer: A person or organization who purchases artwork from TFAG. Each customer has a unique account number.

Billing Address: The permanent address used for customer account records and billing.

Delivery Address: The destination where the order will be shipped, provided by the customer when delivery is requested.

Order: A formal request placed by a customer, through a consultant, containing one or more artwork items.

Shipment: A unit of delivery that may include all or part of an order, assigned to a vehicle for transport.

Vehicle: A company-owned transport unit with a unique identifier, used for making deliveries.

Driver: A TFAG employee assigned to a vehicle, possessing a valid driver’s license and inspection clearance.

Consultant: A TFAG employee responsible for assisting customers and placing orders; earns both salary and commission.

Employee: Any person employed by TFAG, including Consultants, Drivers, and Managers. Has SSN, name, address, and phone.

Artwork: A product offered for sale by TFAG, identified by a unique item code and tracked by price and quantity.

Operations Manager: An employee responsible for organizing weekly deliveries, assigning shipments to vehicles.

## 3. Relationship Matrix

|  |  |  |  |
| --- | --- | --- | --- |
| Entity A | Entity B | Relationship Description | Type |
| Customer | Order | One customer places one or many orders | 1:M |
| Order | Customer | Each Order is associated with one Customer | M:1 |
| Customer | Billing Address | Each customer has exactly one billing address | 1:1 |
| Billing Address | Customer | Each Billing Address is related to one Customer | 1:1 |
| Order | Delivery Address | One order may have one delivery address | 1:1 |
| Delivery Address | Order | Each Delivery Address is related to one Order | 1:1 |
| Order | Consultant | Each order is placed by one consultant | M:1 |
| Consultant | Order | Each Consultant is related to many Order | 1:M |
| Order | Artwork | An order contains one or more artworks | M:N |
| Artwork | Order | Each Artwork is related to one Order | M:N |
| Order | Shipment | One order may be split into multiple shipments | 1:M |
| Shipment | Order | Each Shipment is related to one Order | 1:1 |
| Shipment | Vehicle | Each shipment is assigned to one vehicle | M:1 |
| Vehicle | Shipment | Each Vehicle is related to many Shipment | 1:M |
| Vehicle | Driver | Each vehicle is assigned to one driver | 1:1 |
| Driver | Vehicle | Each Driver is related to one Vehicle | 1:1 |
| Driver | Employee | A driver is a type of employee | 1:1 |
| Employee | Driver | A Employee is associated with a Driver | 1:1 |
| Consultant | Employee | A consultant is a type of employee | 1:1 |
| Employee | Consultant | A Employee is associated with a Consultant | 1:1 |
| Operations Manager | Employee | The operations manager is a type of employee | 1:1 |
| Employee | Operations Manager | A Employee is associated with a Operations Manager | 1:1 |

Note: M:N relationships like Order-Artwork should be resolved with a bridge entity in the logical model.

## 4. Business Rules

1. A Customer must have one and only one Billing Address. Each Billing address is related to one customer.

2. A Customer may place one or many Orders, but each Order must be placed by only one Customer.

3. An Order may have one Delivery Address, and each delivery is associated with one order.

4. Each Order is consisted of one or many Artworks, and each Artwork may be included in one Order.

6. Each Order is assigned to one Consultant, and one consultant may place many orders.

7. A large Order may be split into multiple Shipments; a Order is related to only one shipment.

8. A Shipment is assigned to one Vehicle; each Vehicle may carry one or many Shipments.

16. Each Order is placed by one Customer, and a customer can place one or many orders.

17. Each Delivery Address is tied to a specific Order, and each order can only be tied to one order.

18. Each Artwork may be included in many Orders, and each Order may contain multiple Artworks (M:N).

20. Each Consultant may place multiple Orders. But an order can only be placed by one consultant.

21. Each Shipment is part of one Order, but an Order may result in multiple Shipments.

22. Each Vehicle can transport multiple Shipments; however, a Shipment is linked to only one Vehicle.

23. Each Driver is responsible for exactly one Vehicle, and a vehicle is assigned to only one driver.

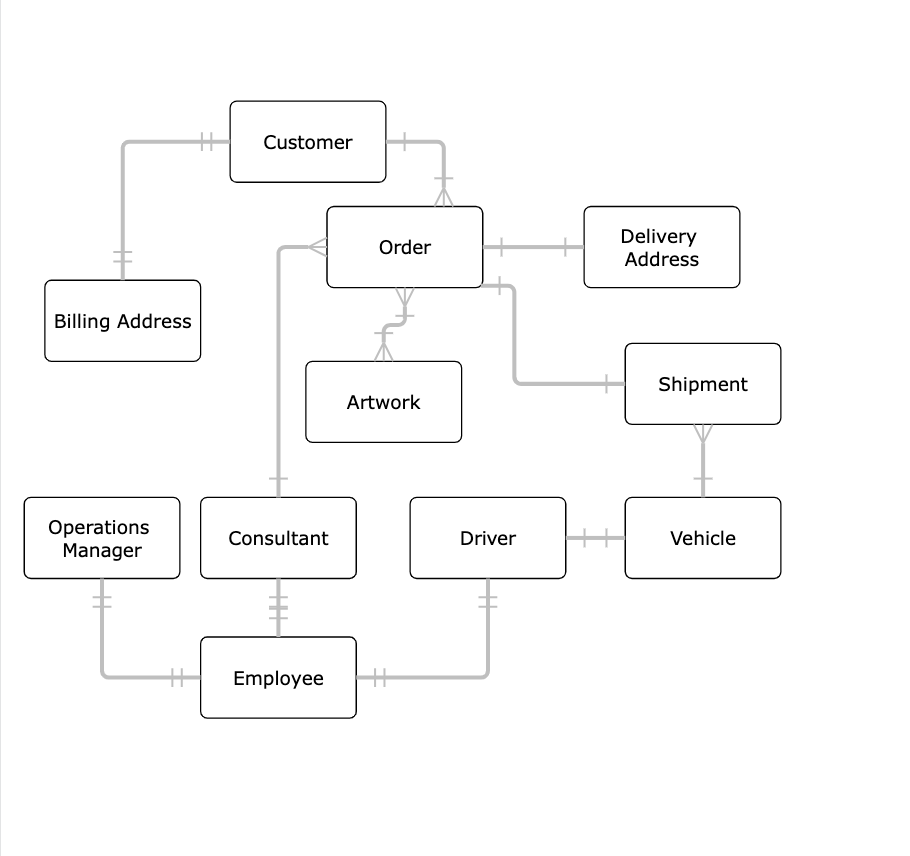
24. Each subtype—Driver, Consultant, and Operations Manager—belongs to the Employee entity and shares its attributes.

## 

## **PART II**

## **b) ER Diagrams (Crow’s Foot notation)**

### **Diagram 1: Many to Many relationships seen between order and artwork**



* **Supertype**: EMPLOYEE → {DRIVER, CONSULTANT, OPERATIONS MANAGER}
* **M: N** relationship **Order – Artwork**
* All other relationships are 1: M or M: 1 as shown.

### **Diagram 2: Many to Many relationships have been resolved with a Bridge Entity(Order Line).**

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### **C) Relational Schema**

**CUSTOMER** (CUSTOMER\_ID), First\_Name, Last\_Name, Email, Phone\_Number

**BILLING\_ADDRESS** (BILLING\_ADDRESS\_ID), customer\_id, Street, City, State, Zip\_Code,

**DELIVERY\_ADDRESS** (DELIVERY\_ADDRESS\_ID), Street, City, State, Zip\_Code

**ORDER\_TABLE** (ORDER\_ID), consultant\_id, customer\_id, delivery\_address\_id, Order\_Date, Total\_Amount

**ORDER\_LINE** (ORDER\_ID, ARTWORK\_ID), order\_id, artwork\_id, Quantity, Price\_Each

**ARTWORK** (ARTWORK\_ID), order\_id*,* Title, Medium, Dimensions, Price

**SHIPMENT** (SHIPMENT\_ID),order\_id, vehicle\_id*,* driver\_id*,* Ship\_Date, Delivery\_Status

**VEHICLE** (VEHICLE\_ID), driver\_id, Make, Model, License\_Plate, Capacity

**EMPLOYEE** (EMPLOYEE\_ID), First\_Name, Last\_Name, Hire\_Date, Role, Phone\_Number

**CONSULTANT** (CONSULTANT\_ID), employee\_id, Specialty

**OPERATIONS\_MANAGER** (MANAGER\_ID), employee\_id, Department

**DRIVER** (DRIVER\_ID), employee\_id, License\_Number, Years\_Experience

### 

### **D) Data Dictionary**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TABLE NAME | ATTRIBUTE NAME | CONTENTS | TYPE | FORMAT | RANGE | REQUIRED | PK OR FK | PK OR FK | FK REFERENCED TABLE |
| CUSTOMER | CUSTOMER\_ID | Customer unique ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| CUSTOMER | First\_Name | Customer first name | VARCHAR(20) |  |  | Y |  |  |  |
| CUSTOMER | Last\_Name | Customer last name | VARCHAR(20) |  |  | Y |  |  |  |
| CUSTOMER | Email | Customer email address | VARCHAR(50) |  |  |  |  |  |  |
| CUSTOMER | Phone\_Number | Customer phone number | CHAR(10) | 9999999999 |  |  |  |  |  |
| BILLING\_ADDRESS | BILLING\_ADDRESS\_ID | Unique billing address ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| BILLING\_ADDRESS | customer\_id | References CUSTOMER | CHAR(5) | 99999 |  | Y |  | FK | CUSTOMER |
| BILLING\_ADDRESS | Street | Street address | VARCHAR(50) |  |  | Y |  |  |  |
| BILLING\_ADDRESS | City | City | VARCHAR(20) |  |  | Y |  |  |  |
| BILLING\_ADDRESS | State | State abbreviation | CHAR(2) | XX |  | Y |  |  |  |
| BILLING\_ADDRESS | Zip\_Code | ZIP code | CHAR(5) | 99999 |  | Y |  |  |  |
| DELIVERY\_ADDRESS | DELIVERY\_ADDRESS\_ID | Unique delivery address ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| DELIVERY\_ADDRESS | Street | Street address | VARCHAR(50) |  |  | Y |  |  |  |
| DELIVERY\_ADDRESS | City | City | VARCHAR(20) |  |  | Y |  |  |  |
| DELIVERY\_ADDRESS | State | State abbreviation | CHAR(2) | XX |  | Y |  |  |  |
| DELIVERY\_ADDRESS | Zip\_Code | ZIP code | CHAR(5) | 99999 |  | Y |  |  |  |
| ORDER\_TABLE | ORDER\_ID | Unique order ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| ORDER\_TABLE | consultant\_id | References CONSULTANT | CHAR(5) | 99999 |  |  |  | FK | CONSULTANT |
| ORDER\_TABLE | customer\_id | References CUSTOMER | CHAR(5) | 99999 |  |  |  | FK | CUSTOMER |
| ORDER\_TABLE | delivery\_address\_id | References DELIVERY\_ADDRESS | CHAR(5) | 99999 |  |  |  | FK | DELIVERY\_ADDRESS |
| ORDER\_TABLE | Order\_Date | Date of order | DATE | dd-mmm-yyyy |  | Y |  |  |  |
| ORDER\_TABLE | Total\_Amount | Total amount of the order | NUMBER(9,2) | 999999.99 |  |  |  |  |  |
| ORDER\_LINE | ORDER\_ID | References ORDER\_TABLE | CHAR(5) | 99999 |  | Y | Y | PK | ORDER\_TABLE |
| ORDER\_LINE | ARTWORK\_ID | References ARTWORK | CHAR(5) | 99999 |  | Y | Y | PK | ARTWORK |
| ORDER\_LINE | Quantity | Number of artwork items ordered | NUMBER(3) | 999 |  | Y |  |  |  |
| ORDER\_LINE | Price\_Each | Price per artwork in this order | NUMBER(9,2) | 999999.99 |  |  |  |  | None |
| ARTWORK | ARTWORK\_ID | Unique artwork ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| ARTWORK | order\_id | References ORDER\_TABLE | CHAR(5) | 99999 |  |  |  | FK | ORDER\_TABLE |
| ARTWORK | Title | Artwork title | VARCHAR(50) |  |  | Y |  |  |  |
| ARTWORK | Medium | Artwork medium | VARCHAR(30) |  |  |  |  |  |  |
| ARTWORK | Dimensions | Artwork dimensions | VARCHAR(20) |  |  |  |  |  |  |
| ARTWORK | Price | Artwork price | NUMBER(9,2) | 999999.99 |  |  |  |  |  |
| SHIPMENT | SHIPMENT\_ID | Unique shipment ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| SHIPMENT | order\_id | References ORDER\_TABLE | CHAR(5) | 99999 |  |  |  | FK | ORDER\_TABLE |
| SHIPMENT | vehicle\_id | References VEHICLE | CHAR(5) | 99999 |  |  |  | FK | VEHICLE |
| SHIPMENT | driver\_id | References DRIVER | CHAR(5) | 99999 |  |  |  | FK | DRIVER |
| SHIPMENT | Ship\_Date | Shipment date | DATE | dd-mmm-yyyy |  | Y |  |  |  |
| SHIPMENT | Delivery\_Status | Delivery status | VARCHAR(20) |  |  |  |  |  |  |
| VEHICLE | VEHICLE\_ID | Vehicle unique ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| VEHICLE | driver\_id | References DRIVER | CHAR(5) | 99999 |  |  |  | FK | DRIVER |
| VEHICLE | Make | Vehicle make | VARCHAR(20) |  |  | Y |  |  |  |
| VEHICLE | Model | Vehicle model | VARCHAR(20) |  |  | Y |  |  |  |
| VEHICLE | License\_Plate | Vehicle license plate | VARCHAR(10) |  |  | Y |  |  |  |
| VEHICLE | Capacity | Vehicle capacity | NUMBER(5) | 99999 |  |  |  |  |  |
| EMPLOYEE | EMPLOYEE\_ID | Unique employee ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| EMPLOYEE | First\_Name | Employee first name | VARCHAR(20) |  |  | Y |  |  |  |
| EMPLOYEE | Last\_Name | Employee last name | VARCHAR(20) |  |  | Y |  |  |  |
| EMPLOYEE | Hire\_Date | Date of hire | DATE | dd-mmm-yyyy |  | Y |  |  |  |
| EMPLOYEE | Role | Employee role | VARCHAR(20) |  |  |  |  |  |  |
| EMPLOYEE | Phone\_Number | Employee phone number | CHAR(10) | 9999999999 |  |  |  |  | None |
| CONSULTANT | CONSULTANT\_ID | Unique consultant ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| CONSULTANT | employee\_id | References EMPLOYEE | CHAR(5) | 99999 |  | Y |  | FK | EMPLOYEE |
| CONSULTANT | Specialty | Consultant specialty | VARCHAR(30) |  |  |  |  |  |  |
| OPERATIONS\_MANAGER | MANAGER\_ID | Unique manager ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| OPERATIONS\_MANAGER | employee\_id | References EMPLOYEE | CHAR(5) | 99999 |  | Y |  | FK | EMPLOYEE |
| OPERATIONS\_MANAGER | Department | Manager department | VARCHAR(30) |  |  |  |  |  |  |
| DRIVER | DRIVER\_ID | Unique driver ID | CHAR(5) | 99999 |  | Y | Y | PK |  |
| DRIVER | employee\_id | References EMPLOYEE | CHAR(5) | 99999 |  | Y |  | FK | EMPLOYEE |
| DRIVER | License\_Number | Driver license number | VARCHAR(15) |  |  | Y |  |  |  |
| DRIVER | Years\_Experience | Years of experience | NUMBER(2) | 99 |  |  |  |  |  |

### **E) Creating the tables in sqlplus along with screenshots of work.**

CREATE TABLE CUSTOMER (

CUSTOMER\_ID CHAR(5) PRIMARY KEY,

First\_Name VARCHAR2(20) NOT NULL,

Last\_Name VARCHAR2(20) NOT NULL,

Email VARCHAR2(50),

Phone\_Number CHAR(10)

);

-- Insert data into CUSTOMER

INSERT INTO CUSTOMER VALUES ('10001', 'Emily', 'Davis', 'emily.davis@example.com', '2145551234');

INSERT INTO CUSTOMER VALUES ('10002', 'Michael', 'Nguyen', 'michael.nguyen@example.com', '9725559876');

INSERT INTO CUSTOMER VALUES ('10003', 'Sophia', 'Brown', 'sophia.brown@example.com', '4695554321');

INSERT INTO CUSTOMER VALUES ('10004', 'David', 'Lee', 'david.lee@example.com', '6825556789');

INSERT INTO CUSTOMER VALUES ('10005', 'Isabella', 'Martinez', 'isabella.martinez@example.com', '8175552468');

DESC CUSTOMER;

SELECT \* FROM CUSTOMER;

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CREATE TABLE BILLING\_ADDRESS (

BILLING\_ADDRESS\_ID CHAR(5) PRIMARY KEY,

Street VARCHAR2(50) NOT NULL,

City VARCHAR2(20) NOT NULL,

State CHAR(2) NOT NULL,

Zip\_Code CHAR(5) NOT NULL,

customer\_id CHAR(5) REFERENCES CUSTOMER(CUSTOMER\_ID)

);

-- Insert data into BILLING\_ADDRESS

INSERT INTO BILLING\_ADDRESS VALUES ('20001', '123 Elm St', 'Dallas', 'TX', '75201', '10001');

INSERT INTO BILLING\_ADDRESS VALUES ('20002', '456 Oak Ave', 'Plano', 'TX', '75074', '10002');

INSERT INTO BILLING\_ADDRESS VALUES ('20003', '789 Pine Ln', 'Frisco', 'TX', '75034', '10003');

INSERT INTO BILLING\_ADDRESS VALUES ('20004', '321 Maple Dr', 'Arlington', 'TX', '76010', '10004');

INSERT INTO BILLING\_ADDRESS VALUES ('20005', '654 Cedar Rd', 'Irving', 'TX', '75038', '10005');

DESC BILLING\_ADDRESS;

SELECT \* FROM BILLING\_ADDRESS;

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-- Create DELIVERY\_ADDRESS table

CREATE TABLE DELIVERY\_ADDRESS (

DELIVERY\_ADDRESS\_ID CHAR(5) PRIMARY KEY,

Street VARCHAR2(50) NOT NULL,

City VARCHAR2(20) NOT NULL,

State CHAR(2) NOT NULL,

Zip\_Code CHAR(5) NOT NULL

);

-- Insert data into DELIVERY\_ADDRESS

INSERT INTO DELIVERY\_ADDRESS VALUES ('30001', '100 Art Blvd', 'Dallas', 'TX', '75204');

INSERT INTO DELIVERY\_ADDRESS VALUES ('30002', '202 Gallery Way', 'Plano', 'TX', '75075');

INSERT INTO DELIVERY\_ADDRESS VALUES ('30003', '303 Canvas Ct', 'Frisco', 'TX', '75036');

INSERT INTO DELIVERY\_ADDRESS VALUES ('30004', '404 Sculpture St', 'Arlington', 'TX', '76011');

INSERT INTO DELIVERY\_ADDRESS VALUES ('30005', '505 Mural Ave', 'Irving', 'TX', '75039');

DESC DELIVERY\_ADDRESS;

SELECT \* FROM DELIVERY\_ADDRESS;

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CREATE TABLE ORDER\_TABLE (

ORDER\_ID CHAR(5) PRIMARY KEY,

Order\_Date DATE NOT NULL,

Total\_Amount NUMBER(9,2),

customer\_id CHAR(5) REFERENCES CUSTOMER(CUSTOMER\_ID),

delivery\_address\_id CHAR(5) REFERENCES DELIVERY\_ADDRESS(DELIVERY\_ADDRESS\_ID)

);

ALTER TABLE ORDER\_TABLE ADD consultant\_id CHAR(5);

ALTER TABLE ORDER\_TABLE

ADD CONSTRAINT fk\_order\_consultant

FOREIGN KEY (consultant\_id)

REFERENCES CONSULTANT(CONSULTANT\_ID);

-- Insert data into ORDER\_TABLE

INSERT INTO ORDER\_TABLE VALUES ('40001', TO\_DATE('2024-03-15', 'YYYY-MM-DD'), 1200.00, '10001', '30001');

INSERT INTO ORDER\_TABLE VALUES ('40002', TO\_DATE('2024-03-17', 'YYYY-MM-DD'), 850.50, '10002', '30002');

INSERT INTO ORDER\_TABLE VALUES ('40003', TO\_DATE('2024-03-20', 'YYYY-MM-DD'), 600.00, '10003', '30003');

INSERT INTO ORDER\_TABLE VALUES ('40004', TO\_DATE('2024-03-22', 'YYYY-MM-DD'), 2200.00, '10004', '30004');

INSERT INTO ORDER\_TABLE VALUES ('40005', TO\_DATE('2024-03-25', 'YYYY-MM-DD'), 975.25, '10005', '30005');

DESC ORDER\_TABLE;

SELECT \* FROM ORDER\_TABLE;

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-- Create ARTWORK table

CREATE TABLE ARTWORK (

ARTWORK\_ID CHAR(5) PRIMARY KEY,

Title VARCHAR2(50) NOT NULL,

Medium VARCHAR2(30),

Dimensions VARCHAR2(20),

Price NUMBER(9,2)

);

-- Insert data into ARTWORK

INSERT INTO ARTWORK VALUES ('50001', 'Sunset Boulevard', 'Oil on Canvas', '24x36', 400.00);

INSERT INTO ARTWORK VALUES ('50002', 'City Lights', 'Acrylic', '18x24', 300.50);

INSERT INTO ARTWORK VALUES ('50003', 'Abstract Dreams', 'Mixed Media', '30x30', 500.00);

INSERT INTO ARTWORK VALUES ('50004', 'Texas Skies', 'Watercolor', '20x28', 275.75);

INSERT INTO ARTWORK VALUES ('50005', 'Silent Fields', 'Charcoal', '16x20', 195.00);

DESC ARTWORK;

SELECT \* FROM ARTWORK;

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-- Create ORDER\_LINE (bridge entity)

CREATE TABLE ORDER\_LINE (

ORDER\_ID CHAR(5),

ARTWORK\_ID CHAR(5),

Quantity NUMBER(3) NOT NULL,

Price\_Each NUMBER(9,2),

PRIMARY KEY (ORDER\_ID, ARTWORK\_ID),

FOREIGN KEY (ORDER\_ID) REFERENCES ORDER\_TABLE(ORDER\_ID),

FOREIGN KEY (ARTWORK\_ID) REFERENCES ARTWORK(ARTWORK\_ID)

);

-- Insert data into ORDER\_LINE

INSERT INTO ORDER\_LINE VALUES ('40001', '50001', 2, 400.00);

INSERT INTO ORDER\_LINE VALUES ('40001', '50002', 1, 300.50);

INSERT INTO ORDER\_LINE VALUES ('40002', '50003', 1, 500.00);

INSERT INTO ORDER\_LINE VALUES ('40003', '50004', 3, 275.75);

INSERT INTO ORDER\_LINE VALUES ('40005', '50005', 2, 195.00);

DESC ORDER\_LINE;

SELECT \* FROM ORDER\_LINE;

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-- Create VEHICLE table

CREATE TABLE VEHICLE (

VEHICLE\_ID CHAR(5) PRIMARY KEY,

Make VARCHAR2(20) NOT NULL,

Model VARCHAR2(20) NOT NULL,

License\_Plate VARCHAR2(10) NOT NULL,

Capacity NUMBER(5)

);

-- Insert data into VEHICLE

INSERT INTO VEHICLE VALUES ('60001', 'Ford', 'Transit', 'TX1234', 1000);

INSERT INTO VEHICLE VALUES ('60002', 'Chevrolet', 'Express', 'TX5678', 1200);

INSERT INTO VEHICLE VALUES ('60003', 'Ram', 'ProMaster', 'TX9012', 1100);

INSERT INTO VEHICLE VALUES ('60004', 'Mercedes', 'Sprinter', 'TX3456', 1300);

INSERT INTO VEHICLE VALUES ('60005', 'Nissan', 'NV3500', 'TX7890', 1250);

DESC VEHICLE;

SELECT \* FROM VEHICLE;

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AI-generated content may be incorrect.

-- Create SHIPMENT table

CREATE TABLE SHIPMENT (

SHIPMENT\_ID CHAR(5) PRIMARY KEY,

Ship\_Date DATE NOT NULL,

Delivery\_Status VARCHAR2(20),

order\_id CHAR(5) REFERENCES ORDER\_TABLE(ORDER\_ID),

vehicle\_id CHAR(5) REFERENCES VEHICLE(VEHICLE\_ID)

);

ALTER TABLE SHIPMENT ADD driver\_id CHAR(5);

ALTER TABLE SHIPMENT

ADD CONSTRAINT fk\_shipment\_driver

FOREIGN KEY (driver\_id) REFERENCES DRIVER(DRIVER\_ID);

-- Insert data into SHIPMENT

INSERT INTO SHIPMENT VALUES ('70001', TO\_DATE('2024-03-18', 'YYYY-MM-DD'), 'Delivered', '40001', '60001');

INSERT INTO SHIPMENT VALUES ('70002', TO\_DATE('2024-03-19', 'YYYY-MM-DD'), 'In Transit', '40002', '60002');

INSERT INTO SHIPMENT VALUES ('70003', TO\_DATE('2024-03-21', 'YYYY-MM-DD'), 'Delivered', '40003', '60003');

INSERT INTO SHIPMENT VALUES ('70004', TO\_DATE('2024-03-23', 'YYYY-MM-DD'), 'Processing', '40004', '60004');

INSERT INTO SHIPMENT VALUES ('70005', TO\_DATE('2024-03-26', 'YYYY-MM-DD'), 'Delivered', '40005', '60005');

UPDATE SHIPMENT SET driver\_id = '98001' WHERE SHIPMENT\_ID = '70001';

UPDATE SHIPMENT SET driver\_id = '98002' WHERE SHIPMENT\_ID = '70002';

-- etc.

DESC SHIPMENT;

SELECT \* FROM SHIPMENT;

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AI-generated content may be incorrect.

-- Create EMPLOYEE table

CREATE TABLE EMPLOYEE (

EMPLOYEE\_ID CHAR(5) PRIMARY KEY,

First\_Name VARCHAR2(20) NOT NULL,

Last\_Name VARCHAR2(20) NOT NULL,

Hire\_Date DATE NOT NULL,

Role VARCHAR2(20)

);

ALTER TABLE EMPLOYEE ADD Phone\_Number CHAR(10);

-- Insert data into EMPLOYEE

INSERT INTO EMPLOYEE VALUES ('80001', 'Laura', 'King', TO\_DATE('2020-06-01', 'YYYY-MM-DD'), 'Consultant');

INSERT INTO EMPLOYEE VALUES ('80002', 'Brian', 'Hall', TO\_DATE('2019-04-15', 'YYYY-MM-DD'), 'Driver');

INSERT INTO EMPLOYEE VALUES ('80003', 'Erica', 'Wright', TO\_DATE('2021-01-10', 'YYYY-MM-DD'), 'Operations Manager');

INSERT INTO EMPLOYEE VALUES ('80004', 'Jason', 'Moore', TO\_DATE('2022-11-03', 'YYYY-MM-DD'), 'Consultant');

INSERT INTO EMPLOYEE VALUES ('80005', 'Angela', 'Green', TO\_DATE('2023-07-21', 'YYYY-MM-DD'), 'Driver');

UPDATE EMPLOYEE SET Phone\_Number = '2145551001' WHERE EMPLOYEE\_ID = '80001';

UPDATE EMPLOYEE SET Phone\_Number = '2145551002' WHERE EMPLOYEE\_ID = '80002';

UPDATE EMPLOYEE SET Phone\_Number = '2145551003' WHERE EMPLOYEE\_ID = '80003';

UPDATE EMPLOYEE SET Phone\_Number = '2145551004' WHERE EMPLOYEE\_ID = '80004';

UPDATE EMPLOYEE SET Phone\_Number = '2145551005' WHERE EMPLOYEE\_ID = '80005';

DESC EMPLOYEE;

SELECT \* FROM EMPLOYEE;

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AI-generated content may be incorrect.

-- Create CONSULTANT table

CREATE TABLE CONSULTANT (

CONSULTANT\_ID CHAR(5) PRIMARY KEY,

Specialty VARCHAR2(30),

employee\_id CHAR(5) REFERENCES EMPLOYEE(EMPLOYEE\_ID)

);

-- Insert data into CONSULTANT

INSERT INTO CONSULTANT VALUES ('90001', 'Interior Display', '80001');

INSERT INTO CONSULTANT VALUES ('90002', 'Lighting & Design', '80004');

INSERT INTO CONSULTANT VALUES ('90003', 'Community Outreach', '80001');

INSERT INTO CONSULTANT VALUES ('90004', 'Art Procurement', '80004');

INSERT INTO CONSULTANT VALUES ('90005', 'Gallery Curation', '80001');

DESC CONSULTANT;

SELECT \* FROM CONSULTANT;

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AI-generated content may be incorrect.

-- Create OPERATIONS\_MANAGER table

CREATE TABLE OPERATIONS\_MANAGER (

MANAGER\_ID CHAR(5) PRIMARY KEY,

Department VARCHAR2(30),

employee\_id CHAR(5) REFERENCES EMPLOYEE(EMPLOYEE\_ID)

);

-- Insert data into OPERATIONS\_MANAGER

INSERT INTO OPERATIONS\_MANAGER VALUES ('95001', 'Logistics', '80003');

INSERT INTO OPERATIONS\_MANAGER VALUES ('95002', 'Inventory', '80003');

INSERT INTO OPERATIONS\_MANAGER VALUES ('95003', 'Delivery Oversight', '80003');

INSERT INTO OPERATIONS\_MANAGER VALUES ('95004', 'Vendor Coordination', '80003');

INSERT INTO OPERATIONS\_MANAGER VALUES ('95005', 'Facilities', '80003');

DESC OPERATIONS\_MANAGER;

SELECT \* FROM OPERATIONS\_MANAGER;

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AI-generated content may be incorrect.

-- Create DRIVER table

CREATE TABLE DRIVER (

DRIVER\_ID CHAR(5) PRIMARY KEY,

License\_Number VARCHAR2(15) NOT NULL,

Years\_Experience NUMBER(2),

employee\_id CHAR(5) REFERENCES EMPLOYEE(EMPLOYEE\_ID)

);

-- Insert data into DRIVER

INSERT INTO DRIVER VALUES ('98001', 'TXD00123', 5, '80002');

INSERT INTO DRIVER VALUES ('98002', 'TXD00456', 3, '80005');

INSERT INTO DRIVER VALUES ('98003', 'TXD00789', 7, '80002');

INSERT INTO DRIVER VALUES ('98004', 'TXD00912', 2, '80005');

INSERT INTO DRIVER VALUES ('98005', 'TXD00567', 6, '80002');

INSERT INTO DRIVER VALUES ('98001', 'TXD00123', 5, '80002');

INSERT INTO DRIVER VALUES ('98002', 'TXD00456', 3, '80005');

DESC DRIVER;

SELECT \* FROM DRIVER;

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**F) All required sql queries.**

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

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1. Pick an order and get all information about that order

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1. What is the phone number of the Consultant who took the order in query #2?

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1. Pick a driver and list all customers whose orders have been delivered by him.

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**5) What is the total value of all items in stock that have unit prices exceeding $450?**

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