

DBMS LAB 3

Consider the following relations for an Order Processing database application in a company.

- CUSTOMER (CUST #: int, cname: String, city: String)
- ORDER (order #: int, odate: date, cust #: int, ord-Amt: int)
- ITEM (item #: int, unit-price: int)
- ORDER-ITEM (order #: int, item #: int, qty: int)
- WAREHOUSE (warehouse #: int, city: String)
- SHIPMENT (order #: int, warehouse #: int, ship-date: date)

i) Create the above tables by properly specifying the primary keys and the foreign keys and the Foreign keys.

ii) Enter at least five tuples for each relation.

iii) Produce a listing: CUSTNAME, #oforders, AVG_ORDER_AMT, where the middle column is the total numbers of orders by the customer and the last column is the average order amount for that customer.

iv) List the order# for orders that were shipped from all warehouses that the company has in a specific city.

v) Demonstrate how you delete item# 10 from the ITEM table and make that field null in the ORDER_ITEM table.

```
CREATE DATABASE Order_processing_database;
```

```
USE Order_processing_database;
```

```
CREATE TABLE Customer(
```

```
    cust_id int,
```

```
    cname varchar(30),
```

```
    city varchar(30),
```

```
    PRIMARY KEY(cust_id)
```

```
);
```

```
DESC Customer;
```

```
CREATE TABLE Orders(
```

```
    order_id int,
```

```
    odate date,
```

```
    cust_id int,
```

```
    ord_amt int,
```

```
    PRIMARY KEY(order_id),
```

```
    FOREIGN KEY(cust_id) REFERENCES Customer(cust_id) ON DELETE CASCADE
```

```
);  
DESC Orders;
```

```
CREATE TABLE Item(  
    item_id int,  
    unit_price int,  
    PRIMARY KEY(item_id)  
);  
DESC Item;
```

```
CREATE TABLE Order_item(  
    order_id int,  
    item_id int,  
    qty int,  
    FOREIGN KEY(item_id) REFERENCES Item(item_id) ON DELETE CASCADE,  
    FOREIGN KEY(order_id) REFERENCES Orders(order_id) ON DELETE CASCADE  
);  
DESC Order_item;
```

```
CREATE TABLE Warehouse(  
    warehouse_id int,  
    city varchar(30),  
    PRIMARY KEY(warehouse_id)  
);  
DESC Warehouse;
```

```
CREATE TABLE Shipment(  
    order_id int,  
    warehouse_id int,  
    shipdate date,  
    FOREIGN KEY(order_id) REFERENCES ORDERS(order_id) ON DELETE  
CASCADE,  
    FOREIGN KEY(warehouse_id) REFERENCES Warehouse(warehouse_id) ON  
DELETE CASCADE  
);  
DESC Shipment;
```

```
INSERT INTO Customer values(771, 'PUSHPA K' , 'BANGALORE');  
INSERT INTO Customer values(772, 'SUMAN', 'MUMBAI');  
INSERT INTO Customer values(773, 'SOURAV', 'CALICUT');
```

```
INSERT INTO Customer values(774, 'LAILA', 'HYDERABAD');
INSERT INTO Customer values(775, 'FAIZAL', 'BANGALORE');
SELECT* FROM Customer;
```

```
INSERT INTO Orders values(11, '2002-01-22', 771, 18000);
INSERT INTO Orders values(12, '2002-07-30', 774, 6000);
INSERT INTO Orders values(13, '2003-04-03', 775, 9000);
INSERT INTO Orders values(14, '2003-11-03', 775, 29000);
INSERT INTO Orders values(15, '2003-12-10', 773, 29000);
INSERT INTO Orders values(16, '2004-08-04', 772, 56000);
INSERT INTO Orders values(17, '2004-09-10', 771, 20000);
INSERT INTO Orders values(18, '2004-11-20', 775, 29000);
INSERT INTO Orders values(19, '2005-02-13', 774, 29000);
INSERT INTO Orders values(20, '2005-10-13', 775, 29000);
SELECT * FROM Orders;
```

```
INSERT INTO Item VALUES('5001','503');
INSERT INTO Item VALUES('5002','750');
INSERT INTO Item VALUES('5003','150');
INSERT INTO Item VALUES('5004','600');
INSERT INTO Item VALUES('5005','890');
SELECT * FROM Item;
```

```
INSERT INTO Order_item VALUES('11','5001','50');
INSERT INTO Order_item VALUES('12','5003','20');
INSERT INTO Order_item VALUES('13','5002','50');
INSERT INTO Order_item VALUES('14','5005','60');
INSERT INTO Order_item VALUES('15','5004','90');
INSERT INTO Order_item VALUES('16','5001','10');
INSERT INTO Order_item VALUES('17','5003','80');
INSERT INTO Order_item VALUES('18','5005','50');
INSERT INTO Order_item VALUES('19','5002','10');
INSERT INTO Order_item VALUES('20','5004','45');
SELECT * FROM Order_item;
```

```
INSERT INTO Warehouse VALUES('1','DELHI');
INSERT INTO Warehouse VALUES('2','BOMBAY');
INSERT INTO Warehouse VALUES('3','CHENNAI');
INSERT INTO Warehouse VALUES('4','BANGALORE');
```

```
INSERT INTO Warehouse VALUES('5','BANGALORE');
SELECT * FROM warehouse;
```

```
INSERT INTO Shipment VALUES('11','1','2002-02-10');
INSERT INTO Shipment VALUES('12','5','2002-09-10');
INSERT INTO Shipment VALUES('13','2','2003-02-10');
INSERT INTO Shipment VALUES('14','3','2003-12-10');
INSERT INTO Shipment VALUES('15','4','2004-01-19');
SELECT * FROM Shipment;
```

```
/*                      *****QUERY1*****
Produce a listing: CUSTNAME, #oforders, AVG_ORDER_AMT, where the middle
column is the total numbers of orders by the customer and the last column is the
average order amount for that
customer.
*/
```

```
SELECT cname , count(*), avg(ord_amt) FROM Customer right join Orders on
Customer.cust_id = Orders.cust_id GROUP BY Customer.cname;
```

```
/*                      *****QUERY2*****
List the order# for orders that were shipped from all warehouses that the company has
in a specific city. */
```

```
SELECT order_id FROM warehouse AS wh, shipment as sh where
wh.warehouse_id=sh.warehouse_id and city="Bombay";
```

```
/*                      *****QUERY2*****
Demonstrate how you delete item# 10 from the ITEM table and make that field null in
the ORDER_ITEM table */
```



```
SELECT * FROM item;
delete from item where item_no = 5005;
SELECT * FROM item;
```

Query 1---








	cname	count(*)	avg(ord_amt)
▶	PUSHPA K	2	19000.0000
	LAILA	2	17500.0000
	FAIZAL	4	24000.0000
	SOURAV	1	29000.0000
	SUMAN	1	56000.0000

Result 1 × Result 2 item 3

Query 2---

Result Grid   Filter Rows: <input type="text"/>	
	order_id
▶	13

Query 3---

< <input type="text"/>		
Result Grid   Filter Rows: <input type="text"/> Edit:    Export/Import:   Wra		
	item_id	unit_price
▶	5001	503
	5002	750
	5003	150
	5004	600
	5005	890
*	NULL	NULL

Result 1 Result 2 item 3 ×