

PROGRAM 6: ORDER PROCESSING DATABASE

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 orderpro;
```

```
use orderpro;
```

```
CREATE TABLE CUSTOMERS(  
    CUSTNO INT,  
    CNAME VARCHAR2(50),  
    CITY VARCHAR2(50),  
    PRIMARY KEY(CUSTNO)  
);
```

```
CREATE TABLE ORDERS(  
    ORDERNO INT,  
    ODATE DATE,  
    CUSTNO INT,  
    ORD_AMT INT,  
    PRIMARY KEY(ORDERNO),  
    FOREIGN KEY(CUSTNO) REFERENCES CUSTOMERS(CUSTNO)  
);
```

```
CREATE TABLE ITEM(  
    ITEMNO INT,  
    UNIT_PRICE INT,  
    PRIMARY KEY(ITEMNO)  
);
```

```
CREATE TABLE ORDER_ITEM(  
    ORDERNO INT,  
    ITEMNO INT,  
    QTY INT,  
    PRIMARY KEY(ORDERNO, ITEMNO),  
    FOREIGN KEY(ORDERNO) REFERENCES ORDERS(ORDERNO),  
    FOREIGN KEY(ITEMNO) REFERENCES ITEM(ITEMNO)  
);
```


















```
CREATE TABLE WAREHOUSE(  
    WAREHOUSENO INT,  
    CITY VARCHAR2(50),  
    PRIMARY KEY(WAREHOUSENO)  
);
```

```
CREATE TABLE SHIPMENT(  
    ORDERNO INT,  
    WAREHOUSENO INT,  
    SHIP_DATE DATE,  
    PRIMARY KEY(ORDERNO, WAREHOUSENO),  
    FOREIGN KEY(ORDERNO) REFERENCES ORDERS(ORDERNO),  
    FOREIGN KEY(WAREHOUSENO) REFERENCES WAREHOUSE(WAREHOUSENO)  
);
```

```
INSERT INTO CUSTOMERS VALUES(CUSTNO, 'CNAME', 'CITY');  
INSERT INTO ORDERS VALUES(ORDERNO, 'ODATE', CUSTNO, ORD_AMT);  
INSERT INTO ITEM VALUES(ITEMNO, UNIT_PRICE);  
INSERT INTO ORDER_ITEM VALUES(ORDERNO, ITEMNO, QTY);  
INSERT INTO WAREHOUSE VALUES(WAREHOUSENO, 'CITY');  
INSERT INTO SHIPMENT VALUES(ORDERNO, WAREHOUSENO, 'SHIP_DATE');
```















```
SELECT * FROM CUSTOMERS;  
SELECT * FROM ORDERS;  
SELECT * FROM ITEM;  
SELECT * FROM ORDER_ITEM;  
SELECT * FROM WAREHOUSE;  
SELECT * FROM SHIPMENT;
```

```
INSERT INTO customers (custno, `cname`, `city`) VALUES  
(111, 'hari', 'bangalore'),(112, 'siddu', 'bangalore'),(113, 'praveen', 'bangalore'),(114, 'yash',  
'bangalore'),(115, 'anil', 'bangalore'),(116, 'piyush', 'bangalore');
```

		CUSTNO	CNAME	CITY
<input type="checkbox"/>	 Edit  Copy  Delete	0	CNAME	CITY
<input type="checkbox"/>	 Edit  Copy  Delete	111	hari	bangalore
<input type="checkbox"/>	 Edit  Copy  Delete	112	siddu	bangalore
<input type="checkbox"/>	 Edit  Copy  Delete	113	praveen	bangalore
<input type="checkbox"/>	 Edit  Copy  Delete	114	yash	bangalore
<input type="checkbox"/>	 Edit  Copy  Delete	115	anil	bangalore
<input type="checkbox"/>	 Edit  Copy  Delete	116	piyush	bangalore

INSERT INTO item (itemno, unit_price) VALUES

(11, 500),(12, 600),(14, 300),(15, 200),(16, 1000);

		ITEMNO	UNIT_PRICE
<input type="checkbox"/>	 Edit  Copy  Delete	0	NULL
<input type="checkbox"/>	 Edit  Copy  Delete	11	500
<input type="checkbox"/>	 Edit  Copy  Delete	12	600
<input type="checkbox"/>	 Edit  Copy  Delete	14	300
<input type="checkbox"/>	 Edit  Copy  Delete	15	200
<input type="checkbox"/>	 Edit  Copy  Delete	16	1000

INSERT INTO orders (orderno, `odate`, custno, ord_amt) VALUES

(2001, '2020-06-11', 111, 1200),(2002, '2020-05-12', 112, 1300),
 (2003, '2020-08-13', 113, 1100),(2004, '2020-11-14', 114, 1400),
 (2005, '2020-06-15', 115, 1500),(2006, '2020-12-16', 116, 1100);

		ORDERNO	ODATE	CUSTNO	ORD_AMT
<input type="checkbox"/>	 Edit  Copy  Delete	0	0000-00-00	NULL	NULL
<input type="checkbox"/>	 Edit  Copy  Delete	2001	2020-06-11	111	1200
<input type="checkbox"/>	 Edit  Copy  Delete	2002	2020-05-12	112	1300
<input type="checkbox"/>	 Edit  Copy  Delete	2003	2020-08-13	113	1100
<input type="checkbox"/>	 Edit  Copy  Delete	2004	2020-11-14	114	1400
<input type="checkbox"/>	 Edit  Copy  Delete	2005	2020-06-15	115	1500
<input type="checkbox"/>	 Edit  Copy  Delete	2006	2020-12-16	116	1100

INSERT INTO order_item (orderno, itemno, qty) VALUES

(2001, 11, 2),(2002, 16, 1),(2003, 15, 5),(2004, 14, 3),(2006, 12, 1);

		ORDERNO	ITEMNO	QTY
<input type="checkbox"/>	Edit Copy Delete	0	0	NULL
<input type="checkbox"/>	Edit Copy Delete	2001	11	2
<input type="checkbox"/>	Edit Copy Delete	2002	16	1
<input type="checkbox"/>	Edit Copy Delete	2003	15	5
<input type="checkbox"/>	Edit Copy Delete	2004	14	3
<input type="checkbox"/>	Edit Copy Delete	2006	12	1

INSERT INTO shipment (orderno, warehouseno, `ship_date`) VALUES

(2001, 31, '2020-06-11'),(2002, 32, '2020-05-12'),

(2003, 33, '2020-08-13'),(2004, 34, '2020-11-14'),

(2005, 35, '2020-06-15');

		ORDERNO	WAREHOUSENO	SHIP_DATE
<input type="checkbox"/>	Edit Copy Delete	0	0	0000-00-00
<input type="checkbox"/>	Edit Copy Delete	2001	31	2020-06-11
<input type="checkbox"/>	Edit Copy Delete	2002	32	2020-05-12
<input type="checkbox"/>	Edit Copy Delete	2003	33	2020-08-13
<input type="checkbox"/>	Edit Copy Delete	2004	34	2020-11-14
<input type="checkbox"/>	Edit Copy Delete	2005	35	2020-06-15

INSERT INTO warehouse (warehouseno, `city`) VALUES

(31, 'ranchi'),(32, 'bangalore'),(33, 'mumbai'),(34, 'delhi'),(35, 'punjab');

		WAREHOUSENO	CITY
<input type="checkbox"/>	Edit Copy Delete	0	CITY
<input type="checkbox"/>	Edit Copy Delete	31	ranchi
<input type="checkbox"/>	Edit Copy Delete	32	bangalore
<input type="checkbox"/>	Edit Copy Delete	33	mumbai
<input type="checkbox"/>	Edit Copy Delete	34	delhi
<input type="checkbox"/>	Edit Copy Delete	35	punjab

select c.custno,count(*) as No_of_orders,Avg_order_amt from customers c,orders o where o.custno=c.custno group by c.custno; #1

✓ Showing rows 0 - 5 (6 total, Query took 0.1154 seconds.)

```
select c.custno,count(*) as No_of_orders, ord_amt from customers c,orders o where o.custno=c.custno group by c.custno
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

custno	No_of_orders	ord_amt
111	1	1200
112	1	1300
113	1	1100
114	1	1400
115	1	1500
116	1	1100

select s.orderno from shipment s,warehouse w where s.warehouseno=w.warehouseno and w.city='banglore' group by orderno having count(*)=(select count(*) from warehouse where city='banglore') and not(count(*)=0); #2

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0013 seconds.)

```
select s.orderno from shipment s,warehouse w where s.warehouseno=w.warehouseno and w.city='banglore' group by orderno having count(*)=(select count(*) from warehouse where city='banglore') and not(count(*)=0)
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

orderno

delete from item where itemno=15; #3

✓ 1 row affected. (Query took 0.0992 seconds.)

```
delete from order_item where itemno=15
```

[Edit inline] [Edit] [Create PHP code]