

## Program 6: Order Database

Consider the following schema for Order Database:

**SALESMAN** (Salesman\_id, Name, City, Commission)

**CUSTOMER** (Customer\_id, Cust\_Name, City, Grade, Salesman\_id)

**ORDERS** (Ord\_No, Purchase\_Amt, Ord\_Date, Customer\_id, Salesman\_id)

```
CREATE DATABASE ORDER;
```

```
CREATE TABLE SALESMAN
(SALESMAN_ID int,
NAME VARCHAR (20),
CITY VARCHAR (20),
COMMISSION VARCHAR (20),
PRIMARY KEY (SALESMAN_ID));
```

Your SQL query has been executed successfully.

DESC SALESMAN

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

+ Options

Field	Type	Null	Key	Default	Extra
SALESMAN_ID	int(11)	NO	PRI	NULL	
NAME	varchar(20)	YES		NULL	
CITY	varchar(20)	YES		NULL	
COMMISSION	varchar(20)	YES		NULL	

```
CREATE TABLE CUSTOMER
(CUSTOMER_ID INT,
CUST_NAME VARCHAR (20),
CITY VARCHAR (20),
GRADE INT (3),
SALESMAN_ID int,
PRIMARY KEY (CUSTOMER_ID),
FOREIGN KEY (SALESMAN_ID) REFERENCES SALESMAN (SALESMAN_ID) ON DELETE SET NULL);
```

Your SQL query has been executed successfully.

DESC CUSTOMER

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

+ Options

Field	Type	Null	Key	Default	Extra
CUSTOMER_ID	int(11)	NO	PRI	NULL	
CUST_NAME	varchar(20)	YES		NULL	
CITY	varchar(20)	YES		NULL	
GRADE	int(3)	YES		NULL	
SALESMAN_ID	int(11)	YES	MUL	NULL	

```
CREATE TABLE ORDERS
(ORD_NO INT,
PURCHASE_AMT INT,
ORD_DATE DATE,
CUSTOMER_ID INT,
SALESMAN_ID INT,
PRIMARY KEY (ORD_NO),
FOREIGN KEY (CUSTOMER_ID) REFERENCES CUSTOMER (CUSTOMER_ID) ON DELETE CASCADE,
FOREIGN KEY (SALESMAN_ID) REFERENCES SALESMAN (SALESMAN_ID) ON DELETE CASCADE);
```

Your SQL query has been executed successfully.

DESC ORDERS

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

+ Options

Field	Type	Null	Key	Default	Extra
ORD_NO	int(11)	NO	PRI	NULL	
PURCHASE_AMT	int(11)	YES		NULL	
ORD_DATE	date	YES		NULL	
CUSTOMER_ID	int(11)	YES	MUL	NULL	
SALESMAN_ID	int(11)	YES	MUL	NULL	

```
INSERT INTO SALESMAN VALUES (1000, 'JOHN', 'BANGALORE', '25 %'),
(2000, 'RAVI', 'BANGALORE', '20 %'),
(3000, 'KUMAR', 'MYSORE', '15 %'),
(4000, 'SMITH', 'DELHI', '30 %'),
(5000, 'HARSHA', 'HYDRABAD', '15%');
```

Showing rows 0 - 4 (5 total, Query took 0.0016 seconds.)

SELECT \* FROM SALESMAN

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

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

				SALESMAN_ID	NAME	CITY	COMMISSION
<input type="checkbox"/>	Edit	Copy	Delete	1000	JOHN	BANGALORE	25 %
<input type="checkbox"/>	Edit	Copy	Delete	2000	RAVI	BANGALORE	20 %
<input type="checkbox"/>	Edit	Copy	Delete	3000	KUMAR	MYSORE	15 %
<input type="checkbox"/>	Edit	Copy	Delete	4000	SMITH	DELHI	30 %
<input type="checkbox"/>	Edit	Copy	Delete	5000	HARSHA	HYDRABAD	15 %

```
INSERT INTO CUSTOMER VALUES (10, 'PREETHI', 'BANGALORE', 100, 1000),
(11, 'VIVEK', 'MANGALORE', 300, 1000),
(12, 'BHASKAR', 'CHENNAI', 400, 2000),
(13, 'CHETHAN', 'BANGALORE', 200, 2000),
(14, 'MAMATHA', 'BANGALORE', 400, 3000);
```

Showing rows 0 - 4 (5 total, Query took 0.0021 seconds.)

SELECT \* FROM CUSTOMER

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

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

				CUSTOMER_ID	CUST_NAME	CITY	GRADE	SALESMAN_ID
<input type="checkbox"/>	Edit	Copy	Delete	10	PREETHI	BANGALORE	100	1000
<input type="checkbox"/>	Edit	Copy	Delete	11	VIVEK	MANGALORE	300	1000
<input type="checkbox"/>	Edit	Copy	Delete	12	BHASKAR	CHENNAI	400	2000
<input type="checkbox"/>	Edit	Copy	Delete	13	CHETHAN	BANGALORE	200	2000
<input type="checkbox"/>	Edit	Copy	Delete	14	MAMATHA	BANGALORE	400	3000

```
INSERT INTO ORDERS VALUES (50, 5000, '2017-04-04', 10, 1000),
(51, 450, '20-JAN-17', 10, 2000),
(52, 1000, '24-FEB-17', 13, 2000),
(53, 3500, '13-APR-17', 14, 3000),
(54, 550, '09-MAR-17', 12, 2000);
```

Showing rows 0 - 4 (5 total, Query took 0.0025 seconds.)

`SELECT * FROM ORDERS`

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

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

				ORD_NO	PURCHASE_AMT	ORD_DATE	CUSTOMER_ID	SALESMAN_ID
<input type="checkbox"/>	Edit	Copy	Delete	50	5000	2017-05-04	10	1000
<input type="checkbox"/>	Edit	Copy	Delete	51	450	2017-01-20	10	2000
<input type="checkbox"/>	Edit	Copy	Delete	52	1000	2017-02-24	13	2000
<input type="checkbox"/>	Edit	Copy	Delete	53	3500	2017-04-13	14	3000
<input type="checkbox"/>	Edit	Copy	Delete	54	550	2017-03-09	12	2000

## Write SQL queries to

### 1. Count the customers with grades above Bangalore's average.

```
SELECT GRADE, COUNT (DISTINCT CUSTOMER_ID)
FROM CUSTOMER
GROUP BY GRADE
HAVING GRADE > (SELECT AVG(GRADE)
FROM CUSTOMER
WHERE CITY='BANGALORE');
```

Showing rows 0 - 1 (2 total, Query took 0.0162 seconds.)

`SELECT GRADE, COUNT(DISTINCT CUSTOMER_ID) FROM CUSTOMER GROUP BY GRADE HAVING GRADE > (SELECT AVG(GRADE) FROM CUSTOMER WHERE CITY='BANGALORE')`

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

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

+ Options

GRADE	COUNT(DISTINCT CUSTOMER_ID)
300	1
400	2

### 2. Find the name and numbers of all salesmen who had more than one customer.

```
SELECT SALESMAN_ID, NAME
FROM SALESMAN S
WHERE (SELECT COUNT (*)
FROM CUSTOMER C
WHERE C.SALESMAN_ID=S.SALESMAN_ID) > 1;
```







✓ Showing rows 0 - 1 (2 total, Query took 0.0044 seconds.)

```
SELECT SALESMAN_ID, NAME FROM SALESMAN S WHERE (SELECT COUNT(*) FROM CUSTOMER C WHERE C.SALESMAN_ID=S.SALESMAN_ID) > 1
```

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

☐ Show all | Number of rows: 25 ▾ Filter rows:  Sort by key: None ▾

+ Options

				SALESMAN_ID	NAME
<input type="checkbox"/>				1000	JOHN
<input type="checkbox"/>				2000	RAVI

**3. List all salesmen and indicate those who have and don't have customers in their cities (Use UNION operation.)**

```
SELECT S.SALESMAN_ID, S.NAME, C.CUST_NAME, S.COMMISSION
FROM SALESMAN S, CUSTOMER C
WHERE S.CITY=C.CITY
UNION
SELECT S.SALESMAN_ID,S.NAME,'NO MATCH',S.COMMISSION
FROM SALESMAN S
WHERE CITY NOT IN
(SELECT CITY
FROM CUSTOMER)
ORDER BY 1 ASC;
```

✓ Showing rows 0 - 8 (9 total, Query took 0.0230 seconds.)

```
SELECT S.SALESMAN_ID, S.NAME, C.CUST_NAME, S.COMMISSION FROM SALESMAN S, CUSTOMER C WHERE S.CITY=C.CITY UNION SELECT S.SALESMAN_ID,S.NAME,'NO MATCH',S.COMMISSION FROM SALESMAN S WHERE CITY NOT IN (SELECT CITY FROM CUSTOMER) ORDER BY 1 ASC
```

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

☐ Show all | Number of rows: 25 ▾ Filter rows:

+ Options

SALESMAN_ID	NAME	CUST_NAME	COMMISSION
1000	JOHN	PREETHI	25 %
1000	JOHN	CHETHAN	25 %
1000	JOHN	MAMATHA	25 %
2000	RAVI	PREETHI	20 %
2000	RAVI	CHETHAN	20 %
2000	RAVI	MAMATHA	20 %
3000	KUMAR	NO MATCH	15 %
4000	SMITH	NO MATCH	30 %
5000	HARSHA	NO MATCH	15 %

**4. Create a view that finds the salesman who has the customer with the highest order of a day.**

```
CREATE VIEW V_SALESMAN AS
SELECT O.ORDER_DATE, S.SALESMAN_ID, S.NAME
FROM SALESMAN S,ORDERS O
WHERE S.SALESMAN_ID = O.SALESMAN_ID
AND O.PURCHASE_AMOUNT=(SELECT MAX(PURCHASE_AMOUNT)
FROM ORDERS C
WHERE C.ORDER_DATE=O.ORDER_DATE);
```

				ORD_DATE	SALESMAN_ID	NAME
<input type="checkbox"/>	 Edit	 Copy	 Delete	2017-05-04	1000	JOHN
<input type="checkbox"/>	 Edit	 Copy	 Delete	2017-01-20	2000	RAVI
<input type="checkbox"/>	 Edit	 Copy	 Delete	2017-02-24	2000	RAVI
<input type="checkbox"/>	 Edit	 Copy	 Delete	2017-04-13	3000	KUMAR
<input type="checkbox"/>	 Edit	 Copy	 Delete	2017-03-09	2000	RAVI

**5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.**

```
DELETE FROM SALESMAN
WHERE SALESMAN_ID=1000;
```

✓ 1 row affected. (Query took 0.0207 seconds.)

```
DELETE FROM SALESMAN WHERE SALESMAN_ID=1000
```

[\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Create PHP code \]](#)