

Acropolis Institute of Technology & Research, Indore

ASSIGNMENT NO.1

Q1. Create the following tables:

i) Client_master (CM)

Columnname	Datatype	Size	Attributes
cno	varchar2	6	Primary key / first letter must startswith 'c'
Name	varchar2	20	
address1	varchar2	30	
address2	varchar2	30	
City	varchar2	15	
State	varchar2	15	
Pincode	Number	6	
bal_due	Number	10,2	

ii) Product_master (PM)

Columnname	Datatype	Size	Attributes
pno	varchar2	6	Primary key / first letter must startswith 'p'
Description	varchar2	15	Not NULL
Profit_percent	Number	4,2	Not NULL
Unit_measure	varchar2	10	Not NULL
Qty_on_hand	Number	8	Not NULL
Reorder_lvl	Number	8	Not NULL
Sell_price	Number	8,2	Not NULL, Cannot be 0
Cost_price	Number	8,2	Not NULL, Cannot be 0

iii) Salesman_master (SM)

Columnname	Datatype	Size	Attributes
Sno	varchar2	6	
S_name	varchar2	20	Not null
Address1	varchar2	30	Not null
Address2	varchar2	30	
City	varchar2	20	
Pincode	Number	8	
State	varchar2	20	
Sal_amt	Number	8,2	Not null, cannot be 0
Tgt_to_get	Number	6,2	Not null, cannot be 0
Ytd_sales	Number	6,2	Not null
Remarks	Varchar2	60	

iv) Sales_order (SO)

Columnname	Datatype	Size	Attributes
sono	varchar2	6	Primary key / first letter must be 'o'
Cno	Varchar2	6	Foreign key reference clien_no of client_master table
S_order_date	Date		Not Null
Dely_add	Varchar2	25	
Sno	Varchar2	6	Foreign key references salesman_no of salesman_master table
Dely_type	Char	1	Delivery: part(p)/full(f)
Billed_yn	Char	1	
Dely_date	Date		Can not be less than s_order_date
Order_status	Varchar2	10	Values ('in process','fulfilled','backorder','canceled')

v) Sales_order_details (SOD)

Description: used to store client's orders with details of each product ordered.

Columnname	Datatype	Size	Attributes
Sono	Varchar2	6	Foreign key references s_order_no of sales_order table.
Pno	Varchar2	6	Foreign key references product_no of product_master table.
Qty_order	Number	8	
Qty_disp	Number	8	
Product_rate	Number	10,2	

i) Client_master (CM)

```
mysql> CREATE TABLE Client_master (
    ->     cno VARCHAR(6) NOT NULL PRIMARY KEY,
    ->     name VARCHAR(20),
    ->     address1 VARCHAR(30),
    ->     address2 VARCHAR(30),
    ->     city VARCHAR(15),
    ->     state VARCHAR(15),
    ->     pincode INT,
    ->     bal_due DECIMAL(10,2),
    ->     CHECK (cno LIKE 'c%')
    -> ) ENGINE=InnoDB;
Query OK, 0 rows affected (0.01 sec)
```

ii) Product_master (PM)

```
mysql> CREATE TABLE Product_master (
    ->     pno VARCHAR(6) NOT NULL PRIMARY KEY,
    ->     description VARCHAR(15) NOT NULL,
    ->     profit_percent DECIMAL(4,2) NOT NULL,
    ->     unit_measure VARCHAR(10) NOT NULL,
    ->     qty_on_hand INT(8) NOT NULL,
    ->     reorder_lvl INT(8) NOT NULL,
    ->     sell_price DECIMAL(8,2) NOT NULL CHECK (sell_price > 0),
    ->     cost_price DECIMAL(8,2) NOT NULL CHECK (cost_price > 0),
    ->     CHECK (pno LIKE 'p%')
    -> );
Query OK, 0 rows affected, 2 warnings (0.01 sec)
```

iii) Salesman_master (SM)

```
mysql> CREATE TABLE Salesman_master (
->     sno VARCHAR(6) NOT NULL PRIMARY KEY,
->     s_name VARCHAR(20) NOT NULL,
->     address1 VARCHAR(30) NOT NULL,
->     address2 VARCHAR(30),
->     city VARCHAR(20),
->     pincode INT(8),
->     state VARCHAR(20),
->     sal_amt DECIMAL(8,2) NOT NULL CHECK (sal_amt > 0),
->     tgt_to_get DECIMAL(6,2) NOT NULL CHECK (tgt_to_get > 0),
->     ytd_sales DECIMAL(6,2) NOT NULL,
->     remarks VARCHAR(60)
[ -> );
Query OK, 0 rows affected, 1 warning (0.01 sec)
```

iv) Sales_order (SO)

```
mysql> CREATE TABLE Sales_order (
->     sono VARCHAR(6) NOT NULL PRIMARY KEY,
->     cno VARCHAR(6) NOT NULL,
->     s_order_date DATE NOT NULL,
->     delay_add VARCHAR(25),
->     sno VARCHAR(6) NOT NULL,
->     delay_type CHAR(1) CHECK (delay_type IN ('p','f')),
->     billed_yn CHAR(1) CHECK (billed_yn IN ('Y','N')),
->     delay_date DATE,
->     order_status VARCHAR(10) CHECK (order_status IN ('in process','fulfilled','back order','canceled')),
->
->     -- Constraints
->     CHECK (sono LIKE 'o%'),
->     CHECK (delay_date IS NULL OR delay_date >= s_order_date),
->
->     FOREIGN KEY (cno) REFERENCES Client_master(cno),
->     FOREIGN KEY (sno) REFERENCES Salesman_master(sno)
[ -> );
Query OK, 0 rows affected (0.02 sec)
```

v) Sales_order_details (SOD)

```
database changed
mysql> CREATE TABLE Sales_order_details (
->     sono VARCHAR(6) NOT NULL,
->     pno VARCHAR(6) NOT NULL,
->     qty_order INT(8) NOT NULL CHECK (qty_order > 0),
->     qty_disp INT(8) DEFAULT 0 CHECK (qty_disp >= 0),
->     product_rate DECIMAL(10,2) NOT NULL CHECK (product_rate > 0),
->     PRIMARY KEY (sono, pno),
->     FOREIGN KEY (sono) REFERENCES Sales_order(sono),
->     FOREIGN KEY (pno) REFERENCES Product_master(pno)
-> ) ENGINE=InnoDB;
Query OK, 0 rows affected, 2 warnings (0.01 sec)
```

Exercise on altering the table structure.

- a. Add a column called _tel of datatype Number and size=10 to the client_master table.

```
mysql> ALTER TABLE Client_master
[   -> ADD COLUMN _tel BIGINT(10);
Query OK, 0 rows affected, 1 warning (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 1
```

- b. Change the size of sell_prize column in product_master to 10, 2.

```
mysql> ALTER TABLE Product_master
      -> MODIFY COLUMN sell_price DECIMAL(10,2) NOT NULL CHECK (sell_price > 0);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Exercise on deleting the table structure along with the data.

- a. Destroy the table client_master along with its data.

```
mysql> ALTER TABLE Sales_order
[   -> DROP FOREIGN KEY sales_order_ibfk_1;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

[mysql> drop table Client_master;
Query OK, 0 rows affected (0.00 sec)
```

Exercise on renaming the table.

- a. Change the name of salesman_master to sman_mast.

```
mysql> RENAME TABLE salesman_master TO sman_mast;
Query OK, 0 rows affected (0.02 sec)
```

Exercise on adding & removing of constraints on existing table.

- a. In the salesman_master table make salesman_no. as primary key and its first letter should be started with's'.

```
mysql> ALTER TABLE sman_mast
      -> MODIFY COLUMN sno VARCHAR(6) NOT NULL,
      -> ADD PRIMARY KEY (sno),
      -> ADD CONSTRAINT chk_sno_first_letter CHECK (sno LIKE 's%');
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

- b. Add a constraint names as chk_cons to the table client_master that will check that the name should not be null.

```
mysql> ALTER TABLE Client_master
      -> ADD CONSTRAINT chk_cons CHECK (name IS NOT NULL);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

- c. Drop the foreign key product_no. from sales_order_details.

```
mysql> SELECT CONSTRAINT_NAME
      -> FROM information_schema.KEY_COLUMN_USAGE
      -> WHERE TABLE_NAME = 'Sales_order_details'
      ->   AND COLUMN_NAME = 'pno'
      ->   AND REFERENCED_TABLE_NAME IS NOT NULL;
+-----+
| CONSTRAINT_NAME      |
+-----+
| sales_order_details_ibfk_2 |
+-----+
1 row in set (0.00 sec)

[mysql>
mysql> ALTER TABLE Sales_order_details
      -> DROP FOREIGN KEY sales_order_details_ibfk_2;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Acropolis Institute of Technology & Research, Indore

ASSIGNMENT NO. 2

Q1- Insert the following data into their respective tables:

i) **client_master(CM)**

Cno	Name	city	Pincode	State	bal.due
C00001	Ivan Bayross	Mumbai	400054	Maharashtra	15000
C00002	Mamta Mazumdar	Madras	780001	Tamilnadu	0
C00003	Chhaya Bankar	Mumbai	400057	Maharashtra	5000
C00004	Ashwini Joshi	Banglore	560001	Karnataka	0
C00005	Hansel Colaco	Mumbai	400060	Maharashtra	2000
C00006	Deepak Sharma	Mangalore	560050	Karnataka	0

ii) **product_master(PM)**

PNo	Description	Profit % Percent	Unit	Qty measured	Reorder on hand	Sell price	Cost price
P00001	T-Shirts	5	piece	200	50	350	250
P0345	Shirts	6	piece	150	50	500	350
P06734	Cotton Jeans	5	piece	100	20	600	450
P07865	Jeans	5	piece	100	20	750	500
P07868	Trousers	2	piece	150	50	850	550
P07885	Pull Overs	2.5	piece	80	30	700	450
P07965	Denim	4	piece	100	40	350	250

	Shirts						
P07975	Lycra Tops	5	piece	70	30	300	175
P08865	Skirts	5	piece	75	30	450	300

iii) salesman_master (SM)

Sno	S_name	Add ress1	Address 1	City	Pin code	State	Sala m t	Tgt_ to_get	Ytd Sale s	Rem
S00001	Ama n	A/1 4	worli	Mumbai	40000 2	Mah	300 0	100	50	Good
S00002	Omk ar	65	Narima n	Mumb ai	40000 1	Mah	300 0	200	10 0	Good
S00003	Raj	P-7	Bandr a	Mumb ai	40003 2	Mah	300 0	200	10 0	Good
S00004	Ashis h	A/ 5	Juh u	Mumb ai	40004 4	Mah	350 0	200	15 0	Good

On the basis of client_master & product_master tables answer the following Questionnaires:

- a. Find out the names of all the clients.
- b. Retrieve the entire contents of client_master table.
- c. Retrieve the list of names, city and state of all the clients.
- d. List the various products available from the product_master table.
- e. List all the clients who are located in Mumbai.
- f. List the names of salesmen who have a salary equal to Rs. 3000

Exercise on updating records in a table.

- a. Change the city of client no. 'C00005' to 'Banglore'.
- b. Change the bal_due of client no. 'C00001' to Rs. 1000.
- c. Change the cost price of Trousers to Rs. 950.00.
- d. Change the city of salesmen to 'Pune'.

iv) sales_order table (SO):

Sono	Cno	S_orderdate	Sno	Dely type	Bill Y/N	Delay date	Orderstatus
O19001	C00001	12-June-04	S00001	F	N	20-July-02	In Process
O19002	C00002	25-June-04	S00002	P	N	27-June-02	Cancelled
046865	C00003	18-Feb-04	S00003	F	Y	20-Feb-02	Fulfilled
O19003	C00001	03-Apr-04	S00001	F	Y	07-Apr-02	Fulfilled
046866	C00004	20-May-04	S00002	P	N	22-May-02	Cancelled
O19008	C00005	24-May-04	S00004	F	N	26-July-02	In Process

v) sales_order_details table (SOD):

Sono	Pno	Qty ordered	Qty disp	Product_rate
O19001	P00001	4	4	525
O19001	P07965	2	1	8400
O19001	P07885	2	1	5250
O19002	P00001	10	0	525
O46865	P07868	3	3	3150
O46865	P07885	3	1	5250
O46865	P00001	10	10	525
O46865	P0345	4	4	1050
O19003	P03453	2	2	1050
O19003	P06734	1	1	12000
O46866	P07965	1	0	8400
O46866	P07975	1	0	1050
O19008	P00001	10	5	525
O19008	P07975	5	3	1050

Exercise on deleting records in a table

- a. Delete all salesmen from the salesman_master whose salaries are =3500.
- b. Delete all products from product_master where qty_on_hand =100.
- c. Delete from client_master where the column state holds the value ‘Tamilnadu’.