

CLASS ASSIGNMENT 1

Basic Table Creation, Data Insertion, and Simple Queries

Create Database:

create database SHOP;

Output:

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| my_db      |
| mysql      |
| performance_schema |
| rahultest  |
| sakila     |
| shop       |
| sys        |
| user       |
| world      |
+-----+
10 rows in set (0.02 sec)
```

Create Tables:

1. CLIENT_MASTER:

```
create table client_master (
    client_no VARCHAR(6) NOT NULL,
    name VARCHAR(20) NOT NULL,
    address1 VARCHAR(30),
    address2 VARCHAR(30),
    city VARCHAR(15),
    pincode INTEGER(8),
    state VARCHAR(15),
    bal_due DECIMAL(10,2),
    PRIMARY KEY(client_no)
);
```

OUTPUT:

```
mysql> desc client_master;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| client_no | varchar(6) | NO | PRI | NULL |  |
| name | varchar(20) | NO |  | NULL |  |
| address1 | varchar(30) | YES |  | NULL |  |
| address2 | varchar(30) | YES |  | NULL |  |
| city | varchar(15) | YES |  | NULL |  |
| pincode | int | YES |  | NULL |  |
| state | varchar(15) | YES |  | NULL |  |
| bal_due | decimal(10,2) | YES |  | NULL |  |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

2. PRODUCT_MASTER:

```
create table product_master(
```

```

product_no VARCHAR(6) NOT NULL,
description VARCHAR(15) NOT NULL,
profit_percentage 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,
cost_price DECIMAL(8,2) NOT NULL,
PRIMARY KEY(product_no)
);

```

OUTPUT:

```
mysql> desc product_master;
```

Field	Type	Null	Key	Default	Extra
product_no	varchar(6)	NO	PRI	NULL	
description	varchar(15)	NO		NULL	
profit_percentage	decimal(4,2)	NO		NULL	
unit_measure	varchar(10)	NO		NULL	
qty_on_hand	int	NO		NULL	
reorder_lvl	int	NO		NULL	
sell_price	decimal(8,2)	NO		NULL	
cost_price	decimal(8,2)	NO		NULL	

8 rows in set (0.00 sec)

3. SALESMAN_MASTER:

```

create table salesman_master(
salesman_no VARCHAR(6) NOT NULL,
salesman_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,
tgt_to_get DECIMAL(6,2) NOT NULL,
ytd_sales DECIMAL(6,2) NOT NULL,
remarks VARCHAR(60),
PRIMARY KEY(salesman_no)
);

```

OUTPUT:

```
mysql> desc salesman_master;
```

Field	Type	Null	Key	Default	Extra
salesman_no	varchar(6)	NO	PRI	NULL	
salesman_name	varchar(20)	NO		NULL	
address1	varchar(30)	NO		NULL	
address2	varchar(30)	YES		NULL	
city	varchar(20)	YES		NULL	
pincode	int	YES		NULL	
state	varchar(20)	YES		NULL	
sal_amt	decimal(8,2)	NO		NULL	
tgt_to_get	decimal(6,2)	NO		NULL	
ytd_sales	decimal(6,2)	NO		NULL	
remarks	varchar(60)	YES		NULL	

11 rows in set (0.00 sec)

4. SALES_ORDER:

```
create table sales_order(  
    order_no VARCHAR(6) NOT NULL,  
    client_no VARCHAR(20) NOT NULL,  
    order_date DATE NOT NULL,  
    dely_addr VARCHAR(30),  
    salesman_no VARCHAR(6) NOT NULL,  
    dely_type CHAR(1) DEFAULT 'F',  
    bill_yn CHAR(1),  
    dely_date DATE,  
    order_status VARCHAR(10),  
    PRIMARY KEY(order_no),  
    FOREIGN KEY(client_no) REFERENCES client_master(client_no),  
    FOREIGN KEY(salesman_no) REFERENCES salesman_master(salesman_no)  
);
```

OUTPUT:

```
mysql> desc sales_order;
```

Field	Type	Null	Key	Default	Extra
order_no	varchar(6)	NO	PRI	NULL	
client_no	varchar(20)	NO	MUL	NULL	
order_date	date	NO		NULL	
dely_addr	varchar(30)	YES		NULL	
salesman_no	varchar(6)	NO	MUL	NULL	
dely_type	char(1)	YES		F	
bill_yn	char(1)	YES		NULL	
dely_date	date	YES		NULL	
order_status	varchar(10)	YES		NULL	

9 rows in set (0.00 sec)

5. SALES_ORDER_DETAILS:

```
create table sales_order_details(  
    order_no VARCHAR(6),  
    product_no VARCHAR(6),  
    qty_ordered INT(8),  
    qty_disp INT(8),  
    product_rate DECIMAL(10,2),  
    FOREIGN KEY(order_no) REFERENCES sales_order(order_no),  
    FOREIGN KEY(product_no) REFERENCES product_master(product_no)  
);
```

OUTPUT:

```
mysql> desc sales_order_details;
```

Field	Type	Null	Key	Default	Extra
order_no	varchar(6)	YES	MUL	NULL	
product_no	varchar(6)	YES	MUL	NULL	
qty_ordered	int	YES		NULL	
qty_disp	int	YES		NULL	
product_rate	decimal(10,2)	YES		NULL	

5 rows in set (0.00 sec)

Insert Data Into Table:

1. Insert into client_master:

```
INSERT INTO client_master (client_no, name, address1, address2, city, pincode, state, bal_due) VALUES ('C00001','Ivan Bayross','F-111',NULL,'Bombay','400054','Maharashtra',15000), ('C00002','Vandana','F-112',NULL,'Madras','780001','Tamil Nadu',0), ('C00003','Praveen','F-113',NULL,'Bombay','400057','Maharashtra',5000), ('C00004','Basu','F-114',NULL,'Bangalore','560001','Karnataka',0), ('C00005','Ravi','F-115',NULL,'Delhi','110005','Delhi',2000), ('C00006','Rukhmani','F-116',NULL,'Bombay','400060','Maharashtra',0);
```

OUTPUT:

```
mysql> select * from client_master;
+-----+-----+-----+-----+-----+-----+-----+-----+
| client_no | name      | address1 | address2 | city      | pincode | state      | bal_due |
+-----+-----+-----+-----+-----+-----+-----+-----+
| C00001    | Ivan Bayross | F-111    | NULL     | Bombay    | 400054  | Maharashtra | 15000.00 |
| C00002    | Vandana     | F-112    | NULL     | Madras    | 780001  | Tamil Nadu  | 0.00     |
| C00003    | Praveen     | F-113    | NULL     | Bombay    | 400057  | Maharashtra | 5000.00  |
| C00004    | Basu        | F-114    | NULL     | Bangalore | 560001  | Karnataka   | 0.00     |
| C00005    | Ravi        | F-115    | NULL     | Delhi     | 110005  | Delhi       | 2000.00  |
| C00006    | Rukhmani    | F-116    | NULL     | Bombay    | 400060  | Maharashtra | 0.00     |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

2. Insert into product_master:

```
INSERT INTO product_master (product_no, description, profit_percentage, unit_measure, qty_on_hand, reorder_lvl, sell_price, cost_price) VALUES ('P00001','1.44 Floppies',5,'Price',100,20,525,500), ('P00002','Monitors',6,'Price',10,3,12000,11280), ('P00003','Mouse',5,'Price',20,5,1050,1000), ('P00004','1.22 Floppies',5,'Price',100,20,525,500), ('P00005','Keyboard',2,'Price',10,3,3150,3050), ('P00006','540 HDD',2.5,'Price',10,3,5250,5100);
```

OUTPUT:

```
mysql> select * from product_master;
+-----+-----+-----+-----+-----+-----+-----+-----+
| product_no | description | profit_percentage | unit_measure | qty_on_hand | reorder_lvl | sell_price | cost_price |
+-----+-----+-----+-----+-----+-----+-----+-----+
| P00001     | 1.44 Floppies | 5.00             | Price       | 100         | 20          | 525.00    | 500.00    |
| P00002     | Monitors      | 6.00             | Price       | 10          | 3           | 12000.00  | 11280.00  |
| P00003     | Mouse         | 5.00             | Price       | 20          | 5           | 1050.00   | 1000.00   |
| P00004     | 1.22 Floppies | 5.00             | Price       | 100         | 20          | 525.00    | 500.00    |
| P00005     | Keyboard      | 2.00             | Price       | 10          | 3           | 3150.00   | 3050.00   |
| P00006     | 540 HDD       | 2.50             | Price       | 10          | 3           | 5250.00   | 5100.00   |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

3. Insert into salesman_master:

```
INSERT INTO salesman_master (salesman_no, salesman_name, address1, address2, city,
pincode, state, sal_amt, tgt_to_get, ytd_sales, remarks) VALUES
('S00001','Aman','A/14','Worli','Mumbai',400002,'Maharashtra',3000,100,50,'Good')
('S00002','Omkar','65','Nariman','Mumbai',400001,'Maharashtra',3000,200,100,'Good'),
('S00003','Raj','P-7','Bandra','Mumbai',400032,'Maharashtra',3000,200,100,'Good'),
('S00004','Ashish','A/5','Juhu','Mumbai',400044,'Maharashtra',3500,200,150,'Good');
```

OUTPUT:

```
mysql> select * from salesman_master;
```

salesman_no	salesman_name	address1	address2	city	pincode	state	sal_amt	tgt_to_get	ytd_sales	remarks
S00001	Aman	A/14	Worli	Mumbai	400002	Maharashtra	3000.00	100.00	50.00	Good
S00002	Omkar	65	Nariman	Mumbai	400001	Maharashtra	3000.00	200.00	100.00	Good
S00003	Raj	P-7	Bandra	Mumbai	400032	Maharashtra	3000.00	200.00	100.00	Good
S00004	Ashish	A/5	Juhu	Mumbai	400044	Maharashtra	3500.00	200.00	150.00	Good

```
4 rows in set (0.00 sec)
```

4. Insert into sales_order:

```
INSERT INTO shop. sales_order (order_no, client_no, order_date, dely_addr, salesman_no,
bill_yn, dely_date, order_status) VALUES
('O19001','C00001',STR_TO_DATE('12-JUN-02', '%d-%b-%y'), NULL, 'S00001', 'N',
STR_TO_DATE('20-JUL-02', '%d-%b-%y'), 'In Process'),
('O19003','C00003',STR_TO_DATE('18-FEB-02', '%d-%b-%y'), NULL, 'S00003', 'Y',
STR_TO_DATE('20-FEB-02', '%d-%b-%y'), 'Fulfilled'),
('O19004','C00004',STR_TO_DATE('03-APR-02', '%d-%b-%y'), NULL, 'S00001', 'Y',
STR_TO_DATE('07-APR-02', '%d-%b-%y'), 'Fulfilled'),
('O19006','C00006',STR_TO_DATE('24-MAY-02', '%d-%b-%y'), NULL, 'S00004', 'N',
STR_TO_DATE('26-JUL-02', '%d-%b-%y'), 'In Process');
```

```
INSERT INTO shop. sales_order (order_no, client_no, order_date, dely_addr, salesman_no,
dely_type, bill_yn, dely_date, order_status) VALUES
('O19002','C00002',STR_TO_DATE('02-JUN-02', '%d-%b-%y'), NULL, 'S00002', 'P', 'N',
STR_TO_DATE('27-JUN-02', '%d-%b-%y'), 'Cancelled'),
('O19005','C00005',STR_TO_DATE('20-MAY-02', '%d-%b-%y'), NULL, 'S00002', 'P', 'N',
STR_TO_DATE('22-MAY-02', '%d-%b-%y'), 'Cancelled');
```

OUTPUT:

```
mysql> select * from sales_order;
```

order_no	client_no	order_date	dely_addr	salesman_no	dely_type	bill_yn	dely_date	order_status
O19001	C00001	2002-06-12	NULL	S00001	F	N	2002-07-20	In Process
O19002	C00002	2002-06-02	NULL	S00002	P	N	2002-06-27	Cancelled
O19003	C00003	2002-02-18	NULL	S00003	F	Y	2002-02-20	Fulfilled
O19004	C00004	2002-04-03	NULL	S00001	F	Y	2002-04-07	Fulfilled
O19005	C00005	2002-05-20	NULL	S00002	P	N	2002-05-22	Cancelled
O19006	C00006	2002-05-24	NULL	S00004	F	N	2002-07-26	In Process

```
6 rows in set (0.00 sec)
```

5. Insert into sales_order_details:

```
INSERT INTO shop.sales_order_details (order_no, product_no, qty_ordered, qty_disp,
product_rate) VALUES
('O19001','P00001',4,4,525),
('O19001','P00006',2,1,5250),
('O19002','P00001',10,0,525),
('O19003','P00005',3,3,3150),
('O19003','P00006',3,1,5250),
('O19003','P00001',10,10,525),
('O19003','P00002',4,4,1050),
('O19004','P00002',2,2,1050),
('O19004','P00003',1,1,12000),
('O19006','P00001',10,5,525);
```

OUTPUT:

```
mysql> select * from sales_order_details;
+-----+-----+-----+-----+-----+
| order_no | product_no | qty_ordered | qty_disp | product_rate |
+-----+-----+-----+-----+-----+
| O19001   | P00001     | 4           | 4         | 525.00       |
| O19001   | P00006     | 2           | 1         | 5250.00      |
| O19002   | P00001     | 10          | 0         | 525.00       |
| O19003   | P00005     | 3           | 3         | 3150.00      |
| O19003   | P00006     | 3           | 1         | 5250.00      |
| O19003   | P00001     | 10          | 10        | 525.00       |
| O19003   | P00002     | 4           | 4         | 1050.00      |
| O19004   | P00002     | 2           | 2         | 1050.00      |
| O19004   | P00003     | 1           | 1         | 12000.00     |
| O19006   | P00001     | 10          | 5         | 525.00       |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

Query Processing:

1. List the product number, description, and the corresponding selling price for the products, with the selling price lying between Rs. 500 and Rs. 750.

```
SELECT product_no, description, sell_price FROM product_master WHERE sell_price
BETWEEN 500 AND 750;
```

OUTPUT:

```
+-----+-----+-----+
| product_no | description | sell_price |
+-----+-----+-----+
| P00001     | 1.44 Floppies | 525.00    |
| P00004     | 1.22 Floppies | 525.00    |
+-----+-----+-----+
2 rows in set (0.02 sec)
```

2. Display the order numbers and order dates for all the orders placed in the months of May and June.

```
SELECT order_no, order_date FROM sales_order WHERE DATE_FORMAT(order_date, '%M') IN ('May', 'June');
```

OUTPUT:

order_no	order_date
019001	2002-06-12
019002	2002-06-02
019005	2002-05-20
019006	2002-05-24

4 rows in set (0.02 sec)

3. List the product number, description, and aggregate quantities for the orders placed by 'Ravi' and 'Basu.'

```
SELECT pm.product_no, pm.description, sub.total_qty_ordered AS total_qty_ordered
FROM shop.product_master pm
JOIN (
    SELECT sod.product_no, SUM(sod.qty_ordered) AS total_qty_ordered
    FROM shop.sales_order_details sod
    WHERE sod.order_no IN (
        SELECT so.order_no FROM shop.sales_order so
        WHERE so.client_no IN (
            SELECT cm.client_no FROM shop.client_master cm
            WHERE cm.name IN ('RAVI', 'BASU'))
        GROUP BY sod.product_no )
    AS sub ON pm.product_no = sub.product_no;
```

OUTPUT:

product_no	description	total_qty_ordered
P00002	Monitors	2
P00003	Mouse	1

2 rows in set (0.00 sec)