

Executing MySQL Statements

1. Let play around with MySQL database. The following are Tables with some sample data that we will create and manipulate. These tables created in the **myhotel** database. (PK is a Primary Key)

Table name: Hotel		
hotelNo (Primary key)	hotelName	city
H111	Hilton Hotel	Washington
S111	Sheraton Hotel	London
R123	Regency Hotel	New York
R456	Renaissance Hotel	Tokyo

Table name: Room			
roomNo (PK)	hotelNo (PK)	roomType	price (USD)
1	H111	S	72.00
2	S111	D	99.99
3	R123	P	80.50
4	R456	S	72.00

Table name: Guest		
guestNo (PK)	guestName	guestAddress
G111	Jodie Foster	Washington
G112	Meg Ryan	New York
G321	Michael J. Fox	Chicago
G900	Katmasu	Chiba

Table name: Booking				
hotelNo (PK)	guestNo (PK)	dateFrom (PK)	dateTo	roomNo
H111	G111	2003-01-01	2003-01-02	1
S111	G112	2003-01-01	2003-01-04	2
R123	G321	2003-02-04	2003-02-10	3
R456	G900	2003-03-22	2003-04-02	4

2. First of all create a database named myhotel. MySQL is not case sensitive, so the uppercase and lowercase is similar. Try executes the following SQL statements.

```
mysql> show databases;
```

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| test |
+-----+
3 rows in set (0.03 sec)

mysql>
```

```
mysql> create database myhotel;
```

```
mysql> create database myhotel;
Query OK, 1 row affected (0.00 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| myhotel   |
| mysql    |
| test     |
+-----+
4 rows in set (0.00 sec)

mysql>
```

3. In order to use myhotel database, we need to change to that database using the use command.

```
mysql> use myhotel;
```

```
mysql> use myhotel;
Database changed
mysql>
```

4. Next, while in myhotel database, create a table named Hotel.

```
mysql> create table Hotel(
  -> hotelNo char(7),
  -> hotelName varchar(20),
  -> city char(20) not null,
  -> primary key (hotelNo)
  -> )
  -> type=innodb;
mysql>
```

5. Use desc (describe) command to check the table property.

```
mysql> desc Hotel;
```

```
mysql> create table Hotel(
  -> hotelNo char(7),
  -> hotelName varchar(20),
  -> city char(20) not null,
  -> primary key (hotelNo)
  -> )
  -> type=innodb;
Query OK, 0 rows affected, 1 warning (0.09 sec)

mysql> desc Hotel;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelNo | char(7) | NO | PRI | | |
| hotelName | varchar(20) | YES | | NULL | |
| city | char(20) | NO | | | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

6. Use the up and/or down arrow of your keyboard to repeat the previously used commands or MySQL statements. Create another table named Room, Guest and Booking.

```
mysql> create table Room(  
-> roomNo numeric(3),  
-> hotelNo char(5),  
-> roomType char(2),  
-> price decimal(4,2),  
-> primary key (roomNo, hotelNo)  
-> )  
-> type=innodb;
```

```
mysql> create table Room(  
-> roomNo numeric(3),  
-> hotelNo char(5),  
-> roomType char(2),  
-> price decimal(4,2),  
-> primary key (roomNo, hotelNo)  
-> )  
-> type=innodb;  
Query OK, 0 rows affected, 1 warning (0.09 sec)  
mysql> desc Room;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| roomNo | decimal(3,0) | NO | PRI | 0 | |  
| hotelNo | char(5) | NO | PRI | | |  
| roomType | char(2) | YES | | NULL | |  
| price | decimal(4,2) | YES | | NULL | |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.00 sec)  
mysql>
```

```
mysql> create table Guest(  
-> guestNo char(5),  
-> guestName varchar(30),  
-> guestAddress char(50),  
-> primary key (guestNo)  
-> )  
-> type=innodb;
```

```
mysql> create table Guest(  
-> guestNo char(5),  
-> guestName varchar(30),  
-> guestAddress char(50),  
-> primary key (guestNo)  
-> )  
-> type=innodb;  
Query OK, 0 rows affected, 1 warning (0.08 sec)  
mysql> desc Guest;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| guestNo | char(5) | NO | PRI | | |  
| guestName | varchar(30) | YES | | NULL | |  
| guestAddress | char(50) | YES | | NULL | |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)
```

```
mysql> create table Booking(hotelNo char(5), guestNo char(5), dateFrom date,
-> dateTo date, roomNo decimal, primary key(hotelNo,guestNo,dateFrom))
-> type=innodb;
```

```
mysql> create table Booking(hotelNo char(5), guestNo char(5), dateFrom date,
-> dateTo date, roomNo decimal, primary key(hotelNo,guestNo, dateFrom))
-> type=innodb;
Query OK, 0 rows affected, 1 warning (0.08 sec)

mysql> desc Booking;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| hotelNo | char(5) | NO | PRI | | |
| guestNo | char(5) | NO | PRI | | |
| dateFrom | date | NO | PRI | 0000-00-00 | |
| dateTo | date | YES | | NULL | |
| roomNo | decimal(10,0) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)

mysql> _
```

```
mysql> show tables;
```

```
mysql> show tables;
+-----+
| Tables_in_myhotel |
+-----+
| booking            |
| guest              |
| hotel              |
| room               |
+-----+
4 rows in set (0.00 sec)

mysql> _
```

7. Next, let insert some data into our tables.

```
mysql> insert into Hotel
-> values('H111','Hilton Hotel','Washington');
mysql> insert into Hotel
-> values('S111','Sheraton Hotel','London');
mysql> insert into Hotel
-> values('R123','Regency Hotel','New York');
mysql> insert into Hotel
-> values('R456','Renaissance Hotel','Tokyo');
```

8. Verify our data insertion using the Select command.

```
mysql> select * from Hotel;
```

```
mysql> insert into Hotel
-> values('H111','Hilton Hotel','Washington');
Query OK, 1 row affected (0.05 sec)

mysql> insert into Hotel
-> values('S111','Sheraton Hotel','London');
Query OK, 1 row affected (0.03 sec)

mysql> insert into Hotel
-> values('R123','Regency Hotel','New York');
Query OK, 1 row affected (0.03 sec)

mysql> insert into Hotel
-> values('R456','Renaissance Hotel','Tokyo');
```

```
mysql> insert into Room values('1','H111','S','72.00');
mysql> insert into Room values('2','S111','D','99.99');
mysql> insert into Room values('3','R123','P','80.50');
mysql> insert into Room values('4','R456','S','72.00');
mysql> select * from Room;
```

```
mysql> insert into Room values('1','H111','S','72.00');
Query OK, 1 row affected (0.08 sec)

mysql> insert into Room values('2','S111','D','99.99');
Query OK, 1 row affected (0.05 sec)

mysql> insert into Room values('3','R123','P','80.50');
Query OK, 1 row affected (0.03 sec)

mysql> insert into Room values('4','R456','S','72.00');
Query OK, 1 row affected (0.03 sec)

mysql> select * from Room;
+----+-----+-----+-----+
| roomNo | hotelNo | roomType | price |
+----+-----+-----+-----+
| 1 | H111 | S | 72.00 |
| 2 | S111 | D | 99.99 |
| 3 | R123 | P | 80.50 |
| 4 | R456 | S | 72.00 |
+----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

```
mysql> insert into Guest values('G111','Jodie Foster','Washington');
mysql> insert into Guest values('G112','Meg Ryan','New York');
mysql> insert into Guest values('G321','Michael J. Fox','Chicago');
mysql> insert into Guest values('G900','Katmasu','Chiba');
mysql> select * from Guest;
```

```
mysql> insert into Guest values('G111','Jodie Foster','Washington');
Query OK, 1 row affected (0.08 sec)

mysql> insert into Guest values('G112','Meg Ryan','New York');
Query OK, 1 row affected (0.05 sec)

mysql> insert into Guest values('G321','Michael J. Fox','Chicago');
Query OK, 1 row affected (0.03 sec)

mysql> insert into Guest values('G900','Katmasu','Chiba');
Query OK, 1 row affected (0.03 sec)

mysql> select * from Gueat;
ERROR 1146 (42S02): Table 'myhotel.gueat' doesn't exist
mysql> select * from Guest;
+----+-----+-----+
| guestNo | guestName | guestAddress |
+----+-----+-----+
| G111 | Jodie Foster | Washington |
| G112 | Meg Ryan | New York |
| G321 | Michael J. Fox | Chicago |
| G900 | Katmasu | Chiba |
+----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

```
mysql> insert into Booking
-> values('H111','G111','2003-01-01','2003-01-01','1');
mysql> insert into Booking
-> values('S111','G112','2003-01-01','2003-01-04','2');
mysql> insert into Booking
-> values('R123','G321','2003-02-04','2003-02-10','3');
```

```
mysql> insert into Booking
-> values('R456','G900','2003-03-22','2003-04-02','4');
mysql> select * from Booking;
```

```
mysql> insert into Booking
-> values('H111','G111','2003-01-01','2003-01-01','1');
Query OK, 1 row affected (0.06 sec)

mysql> insert into Booking
-> values('S111','G112','2003-01-01','2003-01-04','2');
Query OK, 1 row affected (0.03 sec)

mysql> insert into Booking
-> values('R123','G321','2003-02-04','2003-02-10','3');
Query OK, 1 row affected (0.03 sec)

mysql> insert into Booking
-> values('R456','G900','2003-03-22','2003-04-02','4');
Query OK, 1 row affected (0.03 sec)

mysql> select * from Booking;
+-----+-----+-----+-----+-----+
| hotelNo | guestNo | dateFrom | dateTo | roomNo |
+-----+-----+-----+-----+-----+
| H111    | G111    | 2003-01-01 | 2003-01-01 | 1      |
| R123    | G321    | 2003-02-04 | 2003-02-10 | 3      |
| R456    | G900    | 2003-03-22 | 2003-04-02 | 4      |
| S111    | G112    | 2003-01-01 | 2003-01-04 | 2      |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> _
```

9. Create another table in the same database.

```
mysql> CREATE TABLE tab1 (cola INTEGER,colb CHAR(10));
```

```
mysql> CREATE TABLE tab1 (cola INTEGER,colb CHAR(10));
Query OK, 0 rows affected (0.06 sec)

mysql> show tables;
+-----+
| Tables_in_myhotel |
+-----+
| booking            |
| guest              |
| hotel              |
| room               |
| tab1               |
+-----+
5 rows in set (0.00 sec)

mysql>
```

```
mysql> insert into tab1 values('1000','mike');
mysql> insert into tab1 values('900','John');
mysql> insert into tab1 values('435','Sarah');
mysql> select * from tab1;
```

```
mysql> insert into tab1 values('1000','mike');
Query OK, 1 row affected (0.05 sec)

mysql> insert into tab1 values('900','John');
Query OK, 1 row affected (0.05 sec)

mysql> insert into tab1 values('435','Sarah');
Query OK, 1 row affected (0.01 sec)

mysql> select * from tab1;
```

10. Renaming a table using Alter command.

```
mysql> alter table tab1 rename tab2;  
mysql> show tables;
```

```
mysql> alter table tab1 rename tab2;  
Query OK, 0 rows affected (0.06 sec)  
  
mysql> show tables;  
+-----+  
| Tables_in_myhotel |  
+-----+  
| booking           |  
| guest             |  
| hotel             |  
| room              |  
| tab2              |  
+-----+  
5 rows in set (0.00 sec)  
  
mysql>
```

11. Update table's data using Update command.

```
mysql> UPDATE tab2 SET cola=cola+(0.05*cola);  
mysql> select * from tab2;
```

```
mysql> UPDATE tab2 SET cola=cola+(0.05*cola);  
Query OK, 3 rows affected (0.03 sec)  
Rows matched: 3 Changed: 3 Warnings: 0  
  
mysql> select * from tab2;  
+-----+-----+  
| cola | colb |  
+-----+-----+  
| 1050 | nike |  
| 945  | John |  
| 457  | Sarah|  
+-----+-----+  
3 rows in set (0.00 sec)  
  
mysql>
```

12. Playing with Select command, querying data.

```
mysql> select hotelName,city from Hotel;
```

```
mysql> select hotelName,city from Hotel;  
+-----+-----+  
| hotelName | city |  
+-----+-----+  
| Hilton Hotel | Washington |  
| Regency Hotel | New York |  
| Renaissance Hotel | Tokyo |  
| Sheraton Hotel | London |  
+-----+-----+  
4 rows in set (0.00 sec)  
  
mysql>
```

```
mysql> SELECT * FROM Hotel WHERE city='Washington';
```

```
mysql> SELECT * FROM Hotel WHERE city='Washington';  
+-----+-----+-----+  
| hotelNo | hotelName | city |  
+-----+-----+-----+  
| H111 | Hilton Hotel | Washington |  
+-----+-----+-----+  
1 row in set (0.00 sec)
```

```
mysql> SELECT guestName,guestAddress FROM Guest WHERE guestAddress='Washington' ORDER BY guestName;
```

```
mysql> SELECT guestName,guestAddress FROM Guest WHERE guestAddress='Washington' ORDER BY guestName;
+-----+-----+
| guestName | guestAddress |
+-----+-----+
| Jodie Foster | Washington |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

13. Deleting a record (row).

```
mysql> DELETE FROM tab2 WHERE cola=200;
mysql> DELETE FROM tab2 WHERE cola=945;
mysql> select * from tab2;
```

```
mysql> DELETE FROM tab2 WHERE cola=200;
Query OK, 0 rows affected (0.00 sec)

mysql> DELETE FROM tab2 WHERE cola=945;
Query OK, 1 row affected (0.01 sec)

mysql> select * from tab2;
+-----+-----+
| cola | colb |
+-----+-----+
| 1050 | mike |
| 457  | Sarah |
+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

14. Deleting all data from **tab2** table.

```
mysql> DELETE FROM tab2;
mysql> select * from tab2;
```

```
mysql> DELETE FROM tab2;
Query OK, 2 rows affected (0.05 sec)

mysql> select * from tab2;
Empty set (0.00 sec)

mysql>
```

15. Deleting a table named **tab2**.

```
mysql> DROP TABLE tab2;
mysql> show tables;
```

```
mysql> DROP TABLE tab2;
Query OK, 0 rows affected (0.05 sec)

mysql> show tables;
+-----+
| Tables_in_myhotel |
+-----+
| booking            |
| guest              |
| hotel              |
| room               |
+-----+
4 rows in set (0.00 sec)
```


16. Creating a new database named mynexthotel using Create command.

```
mysql> CREATE DATABASE mynexthotel;  
mysql> show databases;
```

17. Deleting the database using a Drop command.

```
mysql> DROP DATABASE mynexthotel;  
mysql> show databases;
```

```
mysql> CREATE DATABASE mynexthotel;  
Query OK, 1 row affected (0.01 sec)  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| myhotel |  
| mynexthotel |  
| mysql |  
| test |  
+-----+  
5 rows in set (0.00 sec)  
  
mysql> DROP DATABASE mynexthotel;  
Query OK, 0 rows affected (0.02 sec)  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| myhotel |  
| mysql |  
| test |  
+-----+  
4 rows in set (0.00 sec)  
  
mysql> _
```