

## **CREATING THE DATABASE AND TABLES**

First, create the database 'School':

```
mysql> create database School;  
Query OK, 1 row affected (0.14 sec)
```

Then, use the database bank to creating tables inside it

```
mysql> use School;  
Database changed
```

- **Create table 'School'**

```
mysql> create table School(school_id int, school_name varchar(26),  
school_pincode int, school_contact int, school_type varchar(10));  
Query OK, 0 rows affected (0.58 sec)
```

- **Create table 'Teachers'**

```
mysql> create table Teachers(teacher_id int, teacher_name varchar(26),  
teacher_contact int, teacher_subject varchar(20), stud_id varchar(12),  
subj_id varchar(7));  
Query OK, 0 rows affected (1.45 sec)
```

- **Create table 'Students'**

```
create table Students(student_id varchar(12), student_name varchar(26),  
student_contact int, student_dob date, sub_id varchar(7));  
Query OK, 0 rows affected (0.49 sec)
```

- **Create table 'Subjects'**

```
mysql> create table Subjects(subject_id varchar(7), subject_name  
varchar(20), subject_credits int, subject_type varchar(5), teach_id int);  
Query OK, 0 rows affected (0.77 sec)
```

- **Create table 'Examination'**

```
mysql> create table Examination(exam_id int, exam_hall varchar(5),  
exam_date date, stud_attendance float, subj_id varchar(7), stud_id  
varchar(7));  
Query OK, 0 rows affected (0.59 sec)
```

All the tables have been successfully created. Now, the data needs to be inserted:

## INSERTING RECORDS

- Inserting records into **School** table

```
mysql> insert into School values(12345, 'Presidency School', 560064,
987654321, 'private');
Query OK, 1 row affected (0.28 sec)
mysql> insert into School values(23456, 'Government High School', 560046,
876543219, 'government');
Query OK, 1 row affected (0.06 sec)
mysql> insert into School values(34567, 'Navodaya School', 560026,
765432198, 'government');
Query OK, 1 row affected (0.18 sec)
mysql> insert into School values(45678, 'Cordial School', 560062,
654321987, 'private');
Query OK, 1 row affected (0.09 sec)
mysql> insert into School values(56789, 'Kendriya Vidyalaya', 560056,
543219876, 'government');
Query OK, 1 row affected (0.10 sec)
```

- Inserting records into **Teachers** table

```
mysql> insert into Teachers values(2312, 'Vinay', 988776654, 'Mathematics',
'20211CSE0408', 'MAT1001' );
Query OK, 1 row affected (0.09 sec)
mysql> insert into Teachers values(3423, 'Jayashree', 877665543, 'Science',
'20211CSE0421', 'SCI1001' );
Query OK, 1 row affected (0.12 sec)
mysql> insert into Teachers values(4534, 'Ravikumar', 766554321, 'English',
'20211CSE0413', 'ENG1001' );
Query OK, 1 row affected (0.06 sec)
mysql> insert into Teachers values(5645, 'Parvathi', 655443322, 'Hindi',
'20211CSE0422', 'HIN1001' );
Query OK, 1 row affected (0.18 sec)
mysql> insert into Teachers values(6756, 'Ramesh', 544332219, 'Social',
'20211CSE0430', 'SOC1001' );
Query OK, 1 row affected (0.07 sec)
```

- Inserting records into **Students** table

```
mysql> insert into Students values('20211CSE0408', 'Harshini', 986532871,
'2003-12-11', 'MAT1001');
Query OK, 1 row affected (0.06 sec)
mysql> insert into Students values('20211CSE0413', 'Sushma', 865328719,
'2002-04-24', 'ENG1001');
Query OK, 1 row affected (0.12 sec)
mysql> insert into Students values('20211CSE0421', 'Sinchana', 653287198,
'2004-06-28', 'SCI1001');
Query OK, 1 row affected (0.08 sec)
mysql> insert into Students values('20211CSE0422', 'Kushal', 532871985,
'2003-06-02', 'HIN1001');
Query OK, 1 row affected (0.10 sec)
mysql> insert into Students values('20211CSE0421', 'Venkat', 532871985,
'2003-08-20', 'SOC1001');
```

Query OK, 1 row affected (0.15 sec)

- Inserting records into **Subjects** table

```
mysql> insert into Subjects values('ENG1001','English',3,'core',4534);
Query OK, 1 row affected (0.12 sec)
mysql> insert into Subjects values('HIN1001','Hindi',2,'open',5645);
Query OK, 1 row affected (0.14 sec)
mysql> insert into Subjects values('SOC1001','Social',4,'core',6756);
Query OK, 1 row affected (0.08 sec)
mysql> insert into Subjects values('MAT1001','Mathematics',4,'core',2312);
Query OK, 1 row affected (0.87 sec)
mysql> insert into Subjects values('SCI1001','Science',4,'core',3423);
Query OK, 1 row affected (0.92 sec)
```

- Inserting records into **Examination** table

Let's insert the values into Examination table after adding some constraints.

## ADDING CONSTRAINTS

- Adding **primary key** and **not null** to **School** table

```
alter table School add constraint pri primary key(school_id);
Query OK, 0 rows affected (2.12 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table School modify school_pincode int not null;
Query OK, 0 rows affected (2.42 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table School modify school_contact int not null;
Query OK, 0 rows affected (1.72 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

- Adding **primary key** and **not null** to **Students** table

```
mysql> alter table Students add constraint pri primary key(student_id);
Query OK, 0 rows affected (2.60 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Students modify student_contact int not null;
Query OK, 0 rows affected (1.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Students modify sub_id varchar(7) not null;
Query OK, 0 rows affected (1.33 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

- Adding **primary key**, **not null** and **foreign key** to **Subjects** table

```
mysql> alter table Subjects add constraint pri primary key(subject_id);
Query OK, 0 rows affected (1.54 sec)
```

```

Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Subjects modify subject_type varchar(5) not null;
Query OK, 0 rows affected (2.03 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Subjects modify subject_name varchar(20) not null;
Query OK, 0 rows affected (1.69 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Subjects add constraint fk_teach_id foreign
key(teach_id) references Teachers(teacher_id);
Query OK, 3 rows affected (2.03 sec)
Records: 3 Duplicates: 0 Warnings: 0

```

- Adding **primary key, not null** and **foreign key** to **Teachers** table

```

mysql> alter table Teachers add constraint pri primary key(teacher_id);
Query OK, 0 rows affected (2.04 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Teachers modify teacher_subject varchar(20) not null;
Query OK, 0 rows affected (1.40 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Teachers add constraint fk_stud_id foreign key(stud_id)
references Students(student_id);
Query OK, 5 rows affected (2.23 sec)
Records: 5 Duplicates: 0 Warnings: 0

```

- Adding **primary key, not null, check constraint** and **foreign key** to **Examination** table

```

mysql> alter table Examination add constraint pri primary key(exam_id);
Query OK, 0 rows affected (1.69 sec)
Records: 0 Duplicates: 0 Warnings: 0
alter table Examination modify exam_date date not null;
Query OK, 0 rows affected (2.01 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Examination modify exam_hall varchar(5) not null;
Query OK, 0 rows affected (1.91 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Examination add constraint ck_stud_attendance
check(stud_attendance>75);
Query OK, 0 rows affected (1.72 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table Examination add constraint fk_stud_id foreign
key(stud_id) references Students(student_id);
Query OK, 1 row affected (9.78 sec)
Records: 1 Duplicates: 0 Warnings: 0

```