

Source Code :

```
CREATE DATABASE Schools
```

```
USE Schools
```

```
-- Create the Subjects table
```

```
CREATE TABLE Subjects (  
    SubjectID INT PRIMARY KEY,  
    SubjectName VARCHAR(50) NOT NULL  
)
```

```
-- Insert data into Subjects table
```

```
INSERT INTO Subjects (SubjectID, SubjectName)  
VALUES  
    (1, 'Hindi'),  
    (2, 'Social Science'),  
    (3, 'Computer Science'),  
    (4, 'Chemistry')
```

```
-- Create the Classes table as:
```

```
CREATE TABLE Classes (  
    ClassID INT PRIMARY KEY,  
    ClassName VARCHAR(50) NOT NULL  
)
```

```
-- Insert data into Classes table
```

```
INSERT INTO Classes (ClassID, ClassName)
```

VALUES

(101, 'Class I'),
(102, 'Class II'),
(103, 'Class III'),
(104, 'Class IV')

-- Create the Students table as:

```
CREATE TABLE Students (  
    StudentID INT PRIMARY KEY,  
    FirstName VARCHAR(50) NOT NULL,  
    LastName VARCHAR(50) NOT NULL,  
    DateOfBirth DATE,  
    ClassID INT REFERENCES Classes(ClassID),  
    SubjectID INT REFERENCES Subjects(SubjectID)  
)
```

INSERT INTO Students (StudentID, FirstName, LastName, DateOfBirth, ClassID, SubjectID)

VALUES

(1, 'Nikhil', 'Sharma', '2000-01-01', 101, 1),
(2, 'Ashish', 'Bharti', '2001-06-11', 102, 2),
(3, 'Aman', 'Mittal', '2002-02-10', 103, 3),
(4, 'Pragya', 'Shankdhar', '2003-12-13', 104, 4),
(5, 'Apoorva', 'Rastogi', '2004-08-23', 101, 2)

-- Now made indexes for better performance

CREATE INDEX IX_Students_ClassID ON Students(ClassID)

CREATE INDEX IX_Students_SubjectID ON Students(SubjectID)

--To Retrieve the list of students in a specific class

```
SELECT FirstName, LastName
```

```
FROM Students
```

```
WHERE ClassID = 101
```

--To get the subject of a specific student as:

```
SELECT s.SubjectName
```

```
FROM Students stu
```

```
INNER JOIN Subjects s ON stu.SubjectID = s.SubjectID
```

```
WHERE stu.StudentID = 2
```

--Here It list all subjects taught in a specific class as:

```
SELECT DISTINCT s.SubjectName
```

```
FROM Students stu
```

```
INNER JOIN Subjects s ON stu.SubjectID = s.SubjectID
```

```
WHERE stu.ClassID = 101
```

```
select * from Classes
```

```
select * from Students
```

```
select * from Subjects
```