

--Create and populate tables

```
create table MUSIC_TEACHER (  
    TeacherNo number(4) NOT NULL,  
    StudioNo number(2) NOT NULL,  
    FName varchar2(20) NOT NULL,  
    LName varchar2(20) NOT NULL,  
    Sex char(1) NOT NULL,  
    Street varchar2(20) NOT NULL,  
    City varchar2(25) NOT NULL,  
    State varchar2(20) NOT NULL,  
    Zip number(5) NOT NULL,  
    Phone number(10) NOT NULL,  
    Lv varchar2(2) NOT NULL,  
    PayRate number(5,2),  
    constraint MUSIC_TEACHER_pk primary key (TeacherNo, StudioNo),  
    constraint MUSIC_TEACHER_fk1 FOREIGN KEY (StudioNo) references STUDIO(StudioNo),  
    constraint StudioNo_ck check (StudioNo > 0 and StudioNo < 100),  
    constraint Sex_ck check (Sex = 'M' or Sex = 'F')  
);  
  
create table TEACHES (  
    TeacherNo number(4) NOT NULL,  
    StudentNo number(6) NOT NULL,  
    Instrument varchar2(20) NOT NULL,  
    Hours number(5, 2),  
    constraint TEACHES_pk PRIMARY KEY (TeacherNo, StudentNo),  
    constraint TEACHES_fk1 FOREIGN KEY (TeacherNo) references MUSIC_TEACHER(TeacherNo) on delete  
set null,  
    constraint TEACHES_fk2 FOREIGN KEY (StudentNo) references STUDENT(StudentNo) on delete set null  
);  
  
create table STUDENT (  
    StudentNo number(6) NOT NULL,  
    AccountNo number(9) NOT NULL,  
    FName varchar2(20) NOT NULL,  
    LName varchar2(20) NOT NULL,  
    Sex varchar2(1) NOT NULL,  
    Street varchar2(30) NOT NULL,  
    City varchar2(25) NOT NULL,  
    State varchar2(20) NOT NULL,  
    Zip number(5) NOT NULL,  
    BirthDate number(8) NOT NULL,  
    Lv varchar2(2),
```

```
Email varchar2(50),  
constraint STUDENT_pk PRIMARY KEY (StudentNo)  
);
```

```
create table GUARDIAN (  
    AccountNo number(9) NOT NULL,  
    FName varchar2(20) NOT NULL,  
    LName varchar2(20) NOT NULL,  
    Street varchar2(30) NOT NULL,  
    City varchar2(25) NOT NULL,  
    State varchar2(20) NOT NULL,  
    Zip number(5) NOT NULL,  
    Phone number(10) NOT NULL,  
    Email varchar2(50),  
    constraint GUARDIAN_pk PRIMARY KEY (AccountNo)  
);
```

```
create table STUDIO (  
    MgrID number(9) NOT NULL,  
    StudioNo number(6) NOT NULL,  
    Street varchar2(30) NOT NULL,  
    City varchar2(25) NOT NULL,  
    State varchar2(20) NOT NULL,  
    Zip number(5) NOT NULL,  
    constraint STUDIO_pk PRIMARY KEY (MgrID, StudioNo)  
);
```

```
create table MANAGER (  
    MgrID number(9) NOT NULL,  
    FName varchar2(20) NOT NULL,  
    LName varchar2(20) NOT NULL,  
    Street varchar2(30) NOT NULL,  
    City varchar2(25) NOT NULL,  
    State varchar2(20) NOT NULL,  
    Zip number(5) NOT NULL,  
    Phone number(10) NOT NULL,  
    Email varchar2(50),  
    PayRate number(5,2),  
    constraint MANAGER_pk PRIMARY KEY (MgrID)  
);
```

```
INSERT into MUSIC_TEACHER (TeacherNo, StudioNo, FName, LName, Sex, Street, City, State, Zip, Phone,
Lv, Payrate)
VALUES ('2244', '3', 'Monica', 'Lee', 'F', '3042 Sweetwater Dr.', 'Boise', 'Idaho', '83705', '2088046389',
'5a', '35.00')
```

```
INSERT into MUSIC_TEACHER (TeacherNo, StudioNo, FName, LName, Sex, Street, City, State, Zip, Phone,
Lv, Payrate)
VALUES ('4321', '2', 'Kristen', 'Lee', 'F', 'Rascal Pl.', 'Scottsdale', 'Arizona', '85250', '4805552400', '4b',
'27.50')
```

```
INSERT into MUSIC_TEACHER (TeacherNo, StudioNo, FName, LName, Sex, Street, City, State, Zip, Phone,
Lv, Payrate)
VALUES ('1234', '1', 'Jack', 'Flash', 'M', '123 River St.', 'Little Rock', 'Arkansas', '72223', '5015551234', '3a',
'30.00')
```

```
INSERT into MUSIC_TEACHER (TeacherNo, StudioNo, FName, LName, Sex, Street, City, State, Zip, Phone,
Lv, Payrate)
VALUES ('1212', '1', 'Jill', 'Vaughn', 'F', '9 Main St.', 'Little Rock', 'Arkansas', '72223', '5012222222', '4a',
'31.50')
```

```
INSERT into MUSIC_TEACHER (TeacherNo, StudioNo, FName, LName, Sex, Street, City, State, Zip, Phone,
Lv, Payrate)
VALUES ('2222', '3', 'Bruno', 'Boyd', 'M', 'Upton Ave.', 'Boise', 'Idaho', '83706', '2082223333', '3b', '31.75')
```

```
INSERT into MUSIC_TEACHER (TeacherNo, StudioNo, FName, LName, Sex, Street, City, State, Zip, Phone,
Lv, Payrate)
VALUES ('9876', '2', 'Juan', 'Julio', 'M', '19 Arizona Ave.', 'Scottsdale', 'Arizona', '85250', '4809998888',
'3b', '31.50')
```

```
INSERT into STUDENT (StudentNo, AccountNo, FName, LName, Sex, Street, City, State, Zip, BirthDate, Lv,
Email)
VALUES ('654321', '772529551', 'Mike', 'Fitz', 'M', '2345 Fast Ln.', 'Scottsdale', 'Arizona', '85250',
'04192011', '2a', 'Mikey@hotmail.com')
```

```
INSERT into STUDENT (StudentNo, AccountNo, FName, LName, Sex, Street, City, State, Zip, BirthDate, Lv,
Email)
VALUES ('112233', '715529551', 'Heather', 'Fitz', 'F', '2345 Fast Ln.', 'Scottsdale', 'Arizona', '85250',
'04192011', '2a', 'Heather29@gmail.com')
```

```
INSERT into STUDENT (StudentNo, AccountNo, FName, LName, Sex, Street, City, State, Zip, BirthDate, Lv,
Email)
```

VALUES ('987654', '999999999', 'Stephen', 'Smith', 'M', '121 Hilltop Dr.', 'Boise', 'Idaho', '83716',  
'04262008', '3b', 'scubasteve@aquatic.org')

INSERT into STUDENT (StudentNo, AccountNo, FName, LName, Sex, Street, City, State, Zip, BirthDate, Lv,  
Email)

VALUES ('334455', '100100100', 'Johnny', 'Carson', 'M', '291 Epernay Pl.', 'Little Rock', 'Arkansas', '72223',  
'04262010', '3a', 'jcarson291@gmail.com')

INSERT into STUDENT (StudentNo, AccountNo, FName, LName, Sex, Street, City, State, Zip, BirthDate, Lv,  
Email)

VALUES ('300300', '123123123', 'Lisa', 'Simpson', 'F', '3042 Buffalo Ave.', 'Little Rock', 'Arkansas', '72223',  
'07072009', '2a', 'littlelisa@hotmail.com')

INSERT into STUDENT (StudentNo, AccountNo, FName, LName, Sex, Street, City, State, Zip, BirthDate, Lv,  
Email)

VALUES ('911911', '333222111', 'Jesse', 'James', 'M', '13th St.', 'Boise', 'Idaho', '83716', '12212008', '1b',  
'misterjesse@aol.com')

INSERT into TEACHES (TeacherNo, StudentNo, Instrument, Hours)

VALUES ('4321', '654321', 'Piano', '2')

INSERT into TEACHES (TeacherNo, StudentNo, Instrument, Hours)

VALUES ('4321', '112233', 'Piano', '1.5')

INSERT into TEACHES (TeacherNo, StudentNo, Instrument, Hours)

VALUES ('2244', '987654', 'Violin', '3.5')

INSERT into TEACHES (TeacherNo, StudentNo, Instrument, Hours)

VALUES ('1919', '911911', 'Guitar', '3')

INSERT into TEACHES (TeacherNo, StudentNo, Instrument, Hours)

VALUES ('2222', '778899', 'Drums', '3')

INSERT into TEACHES (TeacherNo, StudentNo, Instrument, Hours)

VALUES ('1212', '334455', 'Piano', '4')

INSERT into TEACHES (TeacherNo, StudentNo, Instrument, Hours)

VALUES ('1212', '300300', 'Piano', '3.5')

INSERT into GUARDIAN (AccountNo, FName, LName, Street, City, State, Zip, Phone, Email)

VALUES ('123456789', 'Susan', 'Smith', '121 Hilltop Dr.', 'Boise', 'Idaho', '83716', '2085556666',  
'scubasusan@aquatic.org')

INSERT into GUARDIAN (AccountNo, FName, LName, Street, City, State, Zip, Phone, Email)  
VALUES ('987654321', 'Karen', 'Fitz', '2345 Fast Ln.', 'Scottsdale', 'Arizona', '85250', '4805432100',  
'karebear@aol.com')

INSERT into GUARDIAN (AccountNo, FName, LName, Street, City, State, Zip, Phone, Email)  
VALUES ('100100100', 'Benjamin', 'Carson', '291 Epernay Pl.', 'Little Rock', 'Arkansas', '72223',  
'5013334444', 'doctorcarson@gmail.com')

INSERT into GUARDIAN (AccountNo, FName, LName, Street, City, State, Zip, Phone, Email)  
VALUES ('123123123', 'Marge', 'Simpson', '3042 Buffalo Ave.', 'Little Rock', 'Arkansas', '72223',  
'5019998888', 'margie@hotmail.com')

INSERT into STUDIO (MgrID, StudioNo, Street, City, State, Zip)  
VALUES ('111222333', '2', '111 Main Street', 'Scottsdale', 'Arizona', '85250')

INSERT into STUDIO (MgrID, StudioNo, Street, City, State, Zip)  
VALUES ('123412345', '3', '223 Park Center Ave.', 'Boise', 'Idaho', '83706')

INSERT into STUDIO (MgrID, StudioNo, Street, City, State, Zip)  
VALUES ('111222333', '1', '19 Beale St.', 'Little Rock', 'Arkansas', '72223')

INSERT into MANAGER (MgrID, FName, LName, Street, City, State, Zip, Phone, Email, PayRate)  
VALUES ('888000999', 'Robert', 'Plant', 'Beale St.', 'Boise', 'Idaho', '83705', '2082223333',  
'singer@zeppelin.net', '44.50')

INSERT into MANAGER (MgrID, FName, LName, Street, City, State, Zip, Phone, Email, PayRate)  
VALUES ('222333444', 'George', 'Harrison', 'Abbey Rd.', 'Scottsdale', 'Arizona', '85250', '4801114444',  
'something@hotmail.com', '55.55')

INSERT into MANAGER (MgrID, FName, LName, Street, City, State, Zip, Phone, Email, PayRate)  
VALUES ('111222333', 'Alex', 'Hamilton', 'Constitution Pl.', 'Little Rock', 'Arkansas', '72223',  
'5014442020', 'alexander@gmail.com', '27.76')

--Functions and Sample Queries begin

```
CREATE or replace function NumOfStudents_ByStudio(studionum in studio.StudioNo%type)
return number as
studentct number;
begin
  select count(*)
    into studentct
  from studio, student, teaches, music_teacher
  where guardian.accountno=student.accountno and student.studentno=teaches.studentno
    and teaches.teacherno=music_teacher.teacherno and music_teacher.studiono=studio.studiono
    and studio.studiono=studionum;
return (studentct);
end;
```

```
CREATE or replace function Hours_ByStudio(studionum in studio.StudioNo%type)
return number as
hoursct number;
begin
  select sum(hours)
    into hoursct
  from studio, teaches, music_teacher
  where studio.studiono=music_teacher.studiono and music_teacher.teacherno=teaches.teacherno
    and studio.studiono=studionum;
return (hoursct);
end;
```

```
SELECT fname, lname, hours
FROM teaches, music_teacher
Where music_teacher.teacherno = teaches.teacherno;
```

```
SELECT count(*)
FROM student
WHERE sex='F';
```

```
SELECT music_teacher.fname, music_teacher.lname, student.fname, student.lname
FROM student, music_teacher, teaches
WHERE music_teacher.teacherno = teaches.teacherno and student.studentno = teaches.studentno
ORDER BY music_teacher.lname;
```

```
SELECT fname, lname, phone
FROM guardian, student
```

```
WHERE guardian.accountno=student.accountno and level='2a';
```

```
SELECT fname, lname, teacherno
```

```
FROM Music_Teacher, studio
```

```
WHERE studio.studiono=music_teacher.studiono and music_teacher.payrate>=30;
```

```
SELECT manager.fname, manager.lname, manager.phone
```

```
FROM manager, studio
```

```
WHERE studio.studiono=2;
```