

```
drop database if exists online_edu;
create database online_edu;
use online_edu;
```

```
create table Category(c_name varchar(15), c_id varchar(8) not null,
                    primary key (c_id)
);
```

```
create table Student(s_name varchar(20) not null , student_id integer not null, category_id
varchar(8),
                    primary key(student_id),
                    foreign key(category_id) references Category(c_id)
);
```

```
create trigger Before_Category_Delete
before delete on Category
for each row
update Student
set category_id = null
where category_id = old.c_id;
```

```
create table Minor_in (Ccategory varchar(15), Ss_id integer,
                    primary key(Ccategory, Ss_id),
                    foreign key (Ccategory) references Category(c_id) on delete cascade,
                    foreign key (Ss_id) references Student(student_id)
                    on delete cascade
);
```

```
create table Courses(cou_id varchar(8) not null, cou_name varchar(30), category_id varchar(8),
                    primary key (cou_id),
                    foreign key (category_id) references Category(c_id)
                    on delete cascade
);
```

```
create table Instructor(i_id integer not null, i_name varchar(20),
                    primary key (i_id)
);
```

```
create table Section(section_number integer not null, co_id varchar(8), inst_id integer,
                    primary key (section_number, co_id),
                    foreign key (co_id) references Courses(cou_id) on delete cascade,
                    foreign key (inst_id) references Instructor(i_id)
                    on delete cascade
```

);

```
create table Enrolled_in(Sst_id integer , Ssec_num integer, Sco_id varchar(8), Grade
numeric(4,1) check (Grade > 0),
    primary key (Sst_id, Ssec_num, Sco_id),
    foreign key (Ssec_num, Sco_id) references Section(section_number, co_id) on delete
cascade,
    foreign key (Sst_id) references Student(student_id)
    on delete cascade
);
```

```
create table Drops(Sst_id integer, Ssec_num integer, Sco_id varchar(8),
    primary key(Sst_id, Ssec_num, Sco_id),
    foreign key(Ssec_num, Sco_id) references Section(section_number, co_id) on delete
cascade,
    foreign key (Sst_id) references Student(student_id)
    on delete cascade
);
```

```
create trigger Before_Drops_insert
before insert on Drops
for each row
delete from Enrolled_in
where Sst_id=New.Sst_id and Ssec_num=New.Ssec_num and Sco_id=New.Sco_id;
```

```
create table Sec_Assignments(s_numb integer, co_id varchar(8), ass_no integer,
    primary key (s_numb, co_id, ass_no),
    foreign key (s_numb, co_id) references Section(section_number, co_id)
    on delete cascade
);
```

```
create table Sec_Exams(s_numb integer, co_id varchar(8), exam_no integer,
    primary key(s_numb, co_id, exam_no),
    foreign key(s_numb, co_id) references Section(section_number, co_id)
    on delete cascade
);
```

```
create trigger After_Exams_insert
after insert on Sec_Exams
for each row
```

```
update Enrolled_in
set Grade=Grade+0.1
where Ssec_num=New.s_num and Sco_id=New.co_id;
```

```
create table Sec_Quizzes(s_num integer, co_id varchar(8), quiz_no integer,
    primary key(s_num, co_id, quiz_no),
    foreign key(s_num, co_id) references Section(section_number, co_id)
on delete cascade
);
```

```
insert into Category values('Engineer', '01');
insert into Category values('Music', '02');
insert into Category values('Art', '03');
insert into Category values('Biology', '04');
insert into Category values('Psychology', '05');
```

```
insert into Student values('Wen Li', 012543466, '04');
insert into Student values('Min Lu', 012543455, '01');
insert into Student values('Megha Nair', 012543477, '03');
insert into Student values('Arturo Reyes', 012543499, '02');
insert into Student values('Rian Jacob', 012543478, '01');
insert into Student values('Ashley Jones', 012543490, '01');
insert into Student values('Liam Davis', 012563478, '02');
insert into Student values('Logan Brown', 012500490, '03');
insert into Student values('Ava White', 012943466, '04');
insert into Student values('Charlotte Green', 01543455, '01');
insert into Student values('Chloe Reed', 012223477, '01');
insert into Student values('Ella Wright', 013343499, '02');
insert into Student values('Rian Johnson', 013543478, '03');
insert into Student values('Matthew Jones', 0125411490, '01');
insert into Student values('Olivia Miller', 0125634888, '02');
insert into Student values('Sophia Wilson', 012655490, '03');
```

```
insert into Minor_in values('03', 012543499);
insert into Minor_in values('01', 012543466);
```

```
insert into Courses values('01', 'History of fine art in Europe', '03');
insert into Courses values('02', 'Genetics', '04');
insert into Courses values('03', 'Microbiology', '04');
```

```
insert into Courses values('04', 'Algorithms', '01');
insert into Courses values('05', 'Database', '01');
insert into Courses values('06', 'Programming in C++', '01');
insert into Courses values('07', 'Network', '01');
```

```
insert into Instructor values(012543401,'Kong Li');
insert into Instructor values(012543402,'Ron Mak');
insert into Instructor values(012543403,'Richard Sinn');
insert into Instructor values(012543433,'Li Sun');
insert into Instructor values(012543444,'Vera Lin');
insert into Instructor values(012543455,'Ding Xiao');
```

```
insert into Section values(1,'01',012543433);
insert into Section values(2,'01',012543444);
insert into Section values(1,'02',012543455);
insert into Section values(1,'03',012543455);
insert into Section values(1,'05',012543401);
insert into Section values(2,'05',012543402);
insert into Section values(3,'05',012543403);
insert into Section values(1,'06',012543402);
insert into Section values(1,'07',012543401);
insert into Section values(2,'07',012543403);
```

```
insert into Enrolled_in values(012543466,1,'01','3.9');
insert into Enrolled_in values(012543466,1,'05','3.8');
insert into Enrolled_in values(012543466,1,'06','3.8');
insert into Enrolled_in values(012543455,2,'01','3.6');
insert into Enrolled_in values(012543455,1,'02','3.2');
insert into Enrolled_in values(012543455,1,'03','2.5');
insert into Enrolled_in values(012543455,1,'05','3.6');
insert into Enrolled_in values(012543477,2,'05','3.8');
insert into Enrolled_in values(012543477,1,'06','3.7');
insert into Enrolled_in values(012543477,2,'07','3.7');
insert into Enrolled_in values(012543477,2,'01','3.9');
insert into Enrolled_in values(012543499,1,'05','3.7');
insert into Enrolled_in values(012543499,1,'07','3.9');
insert into Enrolled_in values(012563478,1,'05','3.8');
insert into Enrolled_in values(012655490,2,'01','3.6');
insert into Enrolled_in values(013343499,1,'03','2.5');
insert into Enrolled_in values(012563478,2,'05','3.8');
insert into Enrolled_in values(012500490,2,'07','3.7');
```

```
insert into Enrolled_in values(012563478,2,'01','3.9');
insert into Enrolled_in values(012543490,1,'05','3.7');
insert into Enrolled_in values(012543478,1,'07','3.9');
insert into Enrolled_in values(125411490,1,'07','3.9');
```

```
insert into Drops values(012543466,1,'01');
insert into Drops values(012543455,1,'02');
insert into Drops values(012543466,1,'06');
insert into Drops values(012543455,1,'03');
insert into Drops values(012543477,2,'07');
insert into Drops values(012543455,2,'01');
insert into Drops values(012543477,1,'06');
```

```
insert into Sec_Assignments values(1,'02',01);
insert into Sec_Assignments values(1,'06',01);
insert into Sec_Assignments values(1,'03',03);
insert into Sec_Assignments values(2,'07',04);
insert into Sec_Assignments values(2,'01',02);
insert into Sec_Assignments values(1,'01',02);
```

```
insert into Sec_Exams values(1,'02',01);
insert into Sec_Exams values(1,'06',01);
insert into Sec_Exams values(1,'03',03);
insert into Sec_Exams values(2,'07',04);
insert into Sec_Exams values(2,'01',02);
insert into Sec_Exams values(1,'01',02);
```

```
insert into Sec_Quizzes values(1,'02',01);
insert into Sec_Quizzes values(1,'06',01);
insert into Sec_Quizzes values(1,'03',03);
insert into Sec_Quizzes values(2,'07',04);
insert into Sec_Quizzes values(2,'01',02);
insert into Sec_Quizzes values(1,'01',02);
```