

Item 1 - Person Table

```
create table Person (  
  Name char(20),  
  ID char(9) not null,  
  Address char(30),  
  DOB date ) ;
```

Item 2 - Instructor table

```
create table Instructor (  
  InstructorID char(9) not null,  
  Rank char(12),  
  Salary int ) ;
```

Item 3 - Student Table

```
create table Student (  
  StudentID char(9),  
  Classification varchar(10),  
  GPA double,  
  MentorID char(9),  
  CreditHours int ) ;
```

Item 4 - Course Table

```
create table Course (  
  CourseCode char(6) not null,  
  CourseName char(50),  
  PreReq char(6) ) ;
```

Item 5 - Offering Table

```
create table Offering (  
  CourseCode char(6) not null,
```

SectionNo int not null,
InstructorID char(9) not null);

Item 6 - Enrollment Table

create table Enrollment (
CourseCode char(6) not null,
SectionNo int not null,
StudentID char(9) not null references Student,
Grade char(4) not null,
primary key (CourseCode, StudentID));

Adding Primary and foreign keys to tables

alter table Person add primary key (ID);
alter table Instructor add primary key (InstructorID);
alter table Student add primary key (StudentID);
alter table Course add primary key (CourseCode, PreReq);
alter table Offering add primary key (CourseCode, SectionNo);
alter table Instructor add foreign key (InstructorID) references Person (ID);
alter table Student add foreign key (StudentID) references Person (ID);
alter table Student add foreign key (MentorID) references Instructor (InstructorID);
alter table Offering add foreign key (InstructorID) references Instructor (InstructorID);
alter table Enrollment add foreign key (CourseCode) references Offering (CourseCode);
alter table Enrollment add foreign key (SectionNo) references Offering (SectionNo);

#Item 7 - Loading Person

load xml local infile 'Z:/ComS363//Person.xml'
into table Person
rows identified by '<Person>';

#Item 8 - Loading Instructor

load xml local infile 'Z:/ComS363//Instructor.xml'
into table Instructor
rows identified by '<Instructor>';

Item 9 - Loading Student

```
load xml local infile 'Z:/ComS363//Student.xml'
into table Student
rows identified by '<Student>';
```

#Item 10 - Loading Course

```
load xml local infile 'Z:/ComS363//Course.xml'
into table Course
rows identified by '<Course>';
```

#Item 11 - Loading Offering

```
load xml local infile 'Z:/ComS363//Offering.xml'
into table Offering
rows identified by '<Offering>';
```

#Item 12 - Loading Enrollment

```
load xml local infile 'Z:/ComS363//Enrollment.xml'
into table Enrollment
rows identified by '<Enrollment>';
```

#Item 13

```
select distinct StudentID, MentorID from Student s where s.GPA > 3.8 and s.Classification = "junior" or
s.Classification = "senior" ;
```

#Item 14

```
select distinct CourseCode, SectionNo from Enrollment e, Student s where e.StudentID = s.StudentID
and s.Classification = "sophomore" ;
```

#Item 15

```
select distinct Name, Salary from Person p, Instructor i, Student s where p.ID = i.InstructorID and
s.MentorID = i.InstructorID and s.Classification = "freshman" ;
```

#Item 16

```
select distinct sum(Salary) from Instructor i where i.InstructorID not in (select o.InstructorID from
Offering o) ;
```

#Item 17

```
select Name, DOB from Student s, Person p where year(p.DOB) = 1976 and s.StudentID = p.ID ;
```

#Item 18

```
select Name, Rank from Person p, Instructor i where p.ID = i.InstructorID and i.InstructorID not in (select o.InstructorID from Offering o) and i.InstructorID not in (select s.MentorID from Student s) ;
```

#Item 19

```
select ID, Name, DOB from Person p, Student s where p.ID = s.StudentID and p.DOB = (select max(DOB) from Person);
```

#Item 20

```
select ID, DOB, Name from Person p where p.ID not in (select i.InstructorID from Instructor i) and p.ID not in (select s.StudentID from Student s) ;
```

#Item 21

```
select InstructorDetails.Name, Count(*) totalCount from Instructor i inner join Person as InstructorDetails on InstructorDetails.ID = i.InstructorID inner join Student as Mentees on Mentees.MentorID = i.InstructorID group by InstructorDetails.Name ;
```

#Item 22

```
select Count(StudentID), Avg(GPA), Classification from Student group by Classification ;
```

#Item 23

```
select CourseCode, Count(StudentID) from Enrollment group by CourseCode order by 1 limit 1 ;
```

#Item 24

```
select s.StudentID, s.MentorID from Student s, Offering o, Enrollment e where e.StudentID = s.StudentID and o.InstructorID = s.MentorID and o.CourseCode = e.CourseCode ;
```

#Item 25

```
select StudentID, Name, CreditHours from Student s, Person p where p.ID = s.StudentID and s.Classification = "Freshman" and Year(p.DOB) >= 1976 ;
```

#Item 26

```
insert Person (Name, ID, Address, DOB) values ("Briggs Jason", 480293439, "215 North Hyland Avenue", '1975-01-15') ;
```

```
insert Student (Classification, GPA, MentorID, CreditHours, StudentID) values ("junior", 3.48, 201586985, 75, 480293439) ;
```

```
insert Enrollment (CourseCode, SectionNo, StudentID, Grade) values ("CS311", 2, 480293439, "A") ;
```

```
insert Enrollment (CourseCode, SectionNo, StudentID, Grade) values ("CS330", 1, 480293439, "A-") ;
```

Item 26 - Queries

```
select * from Person p where p.Name = "Briggs Jason" ;
```

select * from Student s where s.StudentID = 480293439 ;

select * from Enrollment e where e.StudentID = 480293439 ;

#Item 27

delete from Enrollment where exists (select * from Student s where s.StudentID = Enrollment.StudentID and s.GPA < 0.5) ;

delete from Student where GPA < 0.5 ;

#Item 27 Query

select * from Student s where s.GPA < 0.5 ;

#Item 28 Query Before

Select P.Name, I.Salary From Instructor I, Person P Where I.InstructorID = P.ID and P.Name = "Ricky Ponting" ;

Select P.Name, I.Salary From Instructor I, Person P Where I.InstructorID = P.ID and P.Name = "Darren Lehmann" ;

#Item 28 Second

update Instructor i set i.Salary = i.Salary * 1.1 where (select i.InstructorID from Person p, Student s where p.ID = i.InstructorID and s.MentorID = i.InstructorID and s.GPA > 3.0 group by i.InstructorID having count(s.StudentID) > 5) ;

#Item 29

insert Person (Name, ID, Address, DOB) values ("Trevor Horns", 000957303, "23 Canberra Street", '1964-09-23') ;

#Item 29 Query

select * from Person p where p.Name = "Trevor Horns" ;

#Item 30

delete from Enrollment where exists (select * from Person p where p.Name = "Jan Austin" and p.ID = Enrollment.StudentID) ;

delete from Student where exists (select * from Person p where p.Name = "Jan Austin" and p.ID = Student.StudentID) ;

delete from Instructor where exists (select * from Person p where p.Name = "Jan Austin" and p.ID = Instructor.InstructorID) ;

delete from Person where Person.name = "Jan Austin" ;

#Item 30 Query

select * from Person p where p.Name = "Jan Austin" ;

