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A290-SQL

5/2/2015

**Assignment 3**

***Part I – Creating the Tables***

1. CREATE TABLE `Professor` (

`Prof\_ID` int(10) NOT NULL,

`Prof\_Name` varchar(50) NOT NULL,

`Prof\_Email` varchar(50) NOT NULL,

`Prof\_Office` varchar(100) NOT NULL,

PRIMARY KEY (`Prof\_ID`)

);

2. CREATE TABLE `Student` (

`Student\_ID` int(10) NOT NULL,

`Student\_Name` varchar(50) NOT NULL,

`Student\_Email` varchar(50) NOT NULL,

`Student\_Year` varchar(10) NOT NULL,

PRIMARY KEY (`Student\_ID`)

);

3. CREATE TABLE `Course` (

`Course\_ID` int(10) NOT NULL,

`Course\_Name` varchar(50) NOT NULL,

`Department` varchar(50) NOT NULL,

PRIMARY KEY (`Course\_ID`)

);

4. CREATE TABLE `Enrollment` (

`Student\_ID` int(10) NOT NULL,

`Professor\_ID` int(10) NOT NULL,

`Course\_ID` int(10) NOT NULL,

`Semester` varchar(25) NOT NULL,

`Grade` varchar(3) NOT NULL,

PRIMARY KEY (`Student\_ID`, `Professor\_ID`, `Course\_ID`, `Semester`),

CONSTRAINT `FK\_Enrollment\_Students`

FOREIGN KEY (`Student\_ID`) REFERENCES `Student` (`Student\_ID`),

CONSTRAINT `FK\_Enrollment\_Professors`

FOREIGN KEY (`Professor\_ID`) REFERENCES `Professor` (`Prof\_ID`),

CONSTRAINT `FK\_Enrollment\_Courses`

FOREIGN KEY (`Course\_ID`) REFERENCES `Course` (`Course\_ID`)

);

**Insert Statements:**

1. INSERT INTO `Professor`

VALUES

(0003438284,'Steve Smith','ssmith@college.edu','Flagler Building Room 201'),

(0003040029,'Fred Stanza','stanf@college.edu','Library Room 104'),

(0002938729,'Brandy Queens','queenb@college.edu','Union Starbucks'),

(0003848738,'Brad Bradleson','bradbrad@college.edu','Flagler Building Room 222'),

(0004938293,'Estabon Espenoza','eespenoza@college.edu','Library Starbucks');

2. INSERT INTO `Student`

VALUES

(0005993049,'Brent Bartles','bartleb@college.edu','Sophomore'),

(0005586949,'Riley Moo','moomoo@college.edu','Freshman'),

(0003849283,'Baxter Morris','baxtm@college.edu','Graduate'),

(0005839299,'Georgio Estobane','geoest@college.edu','Freshman'),

(0003929483,'Colin Farkone','farkone@college.edu','Junior'),

(0003929283,'Jorge Bonametchio','bonametchio@college.edu','Senior'),

(0004838293,'Alphonso Barone','baronea@college.edu','Junior');

3. INSERT INTO `Course`

VALUES

(129182829,'Physics 101','Physics'),

(193929304,'Calc 212','Math'),

(194958392,'Calc 213','Math'),

(198483728,'Database Concepts','Csci'),

(138493948,'English 400','Education'),

(103858390,'Intro to Telecom','Telecom'),

(193948392,'Stats','Math');

4. INSERT INTO `Enrollment`

VALUES

(0005993049,0003438284,129182829,'Spring 2014','A'),

(0003849283,0003848738,138493948,'Fall 2013','C'),

(0005586949,0002938729,129182829,'Fall 2012','B+'),

(0003929483,0003040029,103858390,'Summer 2011','A'),

(0003929283,0002938729,129182829,'Spring 2014','B-'),

(0004838293,0004938293,138493948,'Fall 2012','A'),

(0005993049,0002938729,129182829,'Fall 2014','B+'),

(0003929283,0004938293,198483728,'Spring 2014','C'),

(0005993049,0004938293,198483728,'Spring 2014','A-'),

(0005839299,0004938293,198483728,'Spring 2014','F'),

(0004838293,0004938293,198483728,'Spring 2014','A'),

(0005586949,0002938729,198483728,'Fall 2012','A'),

(0005993049,0003848738,138493948,'Summer 2011','D+'),

(0003929483,0003438284,193948392,'Fall 2012','C-'),

(0003929483,0002938729,129182829,'Summer 2013','D-');

***Part II – SQL Statement/Queries***

1. SELECT Student\_Name

FROM `Student`

WHERE Student\_ID IN ( SELECT Student\_ID

FROM `Enrollment`

WHERE Grade LIKE ‘A%’);

1. SELECT S.Student\_Name, E.Grade

FROM `Student` S, `Enrollment` E

WHERE S.Student\_ID = E.Student\_ID

AND E.Course\_ID = 198483728

AND E.Semester = ‘Spring 2014’;

3. SELECT P.Prof\_Name

FROM `Professor` P, `Course` C, `Enrollment` E

WHERE P.Prof\_ID = E.Professor\_ID

AND C.Course\_ID = E.Course\_ID

AND C.Department = ‘Math’;

4. SELECT Student\_Name

FROM `Student`

WHERE Student\_ID NOT IN (SELECT Student\_ID

FROM `Enrollment`

WHERE Grade LIKE ‘D%’

OR Grade LIKE ‘F’ );

5. SELECT C.Course\_Name, E.Semester, E.Grade

FROM `Course` C, `Enrollment` E

WHERE E.Student\_ID = 5586949

AND E.Course\_ID = C.Course\_ID;

6. SELECT DISTINCT S.Student\_Name, C.Course\_Name

FROM `Student` S, `Enrollment` E, `Course` C

WHERE C.Course\_ID IN (SELECT E1.Course\_ID

FROM `Enrollment` E1

WHERE S.Student\_ID = E.Student\_ID

AND S.Student\_ID = E1.Student\_ID

AND E.Course\_ID = E1.Course\_ID

AND E.Semester != E1.Semester);

7. SELECT DISTINCT P.Prof\_Name, E.Semester

FROM `Professor` P, `Enrollment` E

WHERE P.Prof\_ID IN (SELECT P1.Prof\_ID

FROM `Professor` P1, `Enrollment` E1

WHERE P.Prof\_ID = P1.Prof\_ID

AND P.Prof\_ID = E.Professor\_ID

AND P.Prof\_ID = E1.Professor\_ID

AND E.Semester = E1.Semester

AND E.Course\_ID != E1.Course\_ID);

8. SELECT S.Student\_Name, COUNT(\*)

FROM `Student` S, `Enrollment` E

WHERE S.Student\_ID = E.Student\_ID

GROUP BY E.Student\_ID

ORDER BY COUNT(\*);

9. SELECT DISTINCT C.Course\_Name

FROM `Course` C, `Enrollment` E

WHERE C.Course\_ID = E.Course\_ID

AND E.Semester = ‘Spring 2014’;

10. SELECT DISTINCT S.Student\_Name, P.Prof\_Name

FROM `Student` S, `Professor` P, `Enrollment` E

WHERE S.Student\_ID = E.Student\_ID

AND P.Prof\_ID = E.Professor\_ID

ORDER BY S.Student\_Name;