CST 8215 - Lab 7A - SQL JOIN statements

Objective:

1. Write a query using INNER JOIN
2. Write a query using LEFT OUTER JOIN and RIGHT OUTER JOIN

Submission:

Upload the .sql to blackboard and Complete the online quiz on JOINs

Procedure:

Start postgreSQL, highlight “world” database that we used before. It has three tables already in it – country, city and countrylanguage. Now open an SQL Editor with world database active. Write all queries in the same .sql file and upload that file.

Exercise 1 INNER JOIN:

Type the following code and observe the results.

```
SELECT
        Country.Code,
        Country.Name,
        City.Name
FROM
        Country,
        City
WHERE
        Country.Code = City.CountryCode;
```

Use an INNER JOIN to write a query that will give the same result as the above query's result. Refer to slides from Joins related PPT lecture.

Exercise 2 LEFT JOIN:

World database has three tables, Country, City and CountryLanguage. In this exercise we shall use two tables Country and City. Write a query using LEFT JOIN to list all countries that do not have any cities in the city table. Your result should be similar to the following table. Hint: Use IS NULL to filter with a WHERE condition.

Country Code	**Country**
ATA	Antarctica
BVT	Bouvet Island
IOT	British Indian Ocean Territory
SGS	South Georgia and the South Sandwich Islands
HMD	Heard Island and McDonald Islands
ATF	French Southern territories
UMI	United States Minor Outlying Islands

Exercise 3 RIGHT JOIN:

Type the following code and observe the results. It lists six countries from Country Table which do not have any language listed.

```
SELECT
        Country.Code,
        Country.Name
FROM
        Country
WHERE
        Country.Code NOT IN( SELECT CountryCode FROM CountryLanguage );
```

Use RIGHT JOIN to join two tables Country and CountryLanguage and IS NULL to give the same results.

OPTIONAL – if you have extra time:

Additional Exercises for further understanding:

Background:

Use Player-Team-DDL-DML.sql

In the Lab Workbook - Read chapter 3 Advanced SQL beginning at page 23 of these notes. Study the contents of the three tables, table 3.6 on page 26, table 3.7 on page 26 and table 3.8 on page 26. Study the PRIMARY KEY and FOREIGN KEY constraints.

Procedure:

Start postgreSQL, run the file Player-Team-DDL-DML.sql, it will create three tables, Team, Player and PlayerTeam and add data to each of the three tables. Study the contents of the .sql. Study the logical ER diagram. Open a new .sql file in pgAdminIII editor. Type the query 3.2 listed on page 28, do not cut and paste the queries from the PDF file. Observe the results. Note: Query 3.2 joins three tables, in this exercise you are required to join two tables, Country and City. You can use "USING" only when the column names are the same.

Type and run queries 3.3, 3.4, 3.5 and 3.7 on page 28 onwards.

For more practice:

For each of the queries in queries 3.2, 3.3, 3.5 and 3.7 from page 28, write a query using a WHERE clause that will give the same results.