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DBS201 Assignment 1 - (40 Marks)

Due Friday November 04 in class. Late penslty is 20% per day.

Your group must consist of 3 or 4 people. Submissions done by a single person will receive a 20% penalty.

Print out submission is required, must include clear screenshots mainly for sql statements.

You must hand in the Student Assignment Submission Form (below) with your assignment (one per group).

Student Assignment Submission Form

I/we declare that the attached assignment is my/our own work in accordance with the Seneca Academic Policy.

No part of this assignment has been copied manually or electronically from any other source (including web sites) or distributed to other students

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**Name(s) Signature StudentID(s)**

Only one account of the group members need to be used.

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::ASSIGNMENT #1:: PART A

Total Marks : 20

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Create a collection with name as EMP\_XXX. XXX are the last three characters from your userid.

Inside the collection create the following Employee table. Insert the data inside it.

>> Note: Employees is the work tables for these queries

Table: Employees (EmployeeID, First\_Name, Last\_Name, Dept\_Code, Hire\_Date, Credit\_Limit, Phone\_Ext, Manager\_id)

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Employee First\_Name Last\_Name Dept Hire\_Date Credit Phone Manager\_id

Id Code Limit Ext

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

201 Susan Brown Exe 01-Jun-1998 $30.00 3484 (null)

202 Jim Kern Sal 16-Aug-1999 $25.00 8722 201

203 Martha Woods Shp 02-Feb-2004 $25.00 7591 201

204 Ellen Owens Sal 01-Jul-2003 $15.00 6830 202

205 Henry Perkins Sal 01-Mar-2000 $25.00 5286 202

206 Carol Rose Act null null null (null)

207 Dan Smith Shp 01-Dec-2004 $25.00 2259 203

208 Fred Campbell Shp 01-Apr-2003 $30.00 1752 203

209 Paula Jacobs Mkt 17-Mar-1999 $15.00 3357 201

210 Nancy Hoffman Sal 16-Feb-2004 $25.00 2974 203

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

>> Write the query for the following tasks [2 marks each]:

#1. List the following columns of the Employees table in this order:

first name, last name, hire\_date, phone\_ext and department code

Change the name of the hire\_date column to Date\_of\_Joining within the result table. List the employees from the Sales and Marketing department only.

Sort the rows of the result table by the last\_name column in descending order.

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SQL QUery:

**SELECT FIRST\_NAME, LAST\_NAME, HIRE\_DATE AS DATE\_OF\_JOINING, PHONE\_CODE, DEPARTMENT FROM EMPLOYEES WHERE DEPARTMENT='Sal' OR DEPARTMENT ='Mkt' ORDER BY LAST\_NAME DESC**

#2. Write a SQL statement to add a new employee Rick Adam to the Employees table. Rick joined the Accounting department.

His date of joining is 18th Sept, 2011. He works for manager with id: 203. He is allotted any phone extension - 3757.

His credit limit is set to $35.00

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SQL QUery:

**INSERT INTO EMP\_B18/EMPLOYEES VALUES('211', 'Rick', 'Adam', 'Act', '09/18/2011', 35, 3757, '203')**

#3. List the employees that have a phone number starting with 7 or whose names are starting with letter - 'N'.

Show the employee\_id, first\_name, last\_name and phone\_ext. Sort the rows by employee\_id.

SQL QUery:

**SELECT EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, PHONE\_CODE FROM EMPLOYEES WHERE PHONE\_CODE LIKE '7%' OR FIRST\_NAME LIKE 'N%' ORDER BY EMPLOYEE\_ID**

#4. Using the Employees table, list the following columns:

dept\_code, credit\_limit, last\_name, first\_name

Place the columns in that order. Sort the rows by :

dept\_code in ascending order

credit\_limit in descending order

last\_name in ascending order.

And get only those employees who are having credit limits between 20 and 40.

Sql Query:

**SELECT DEPARTMENT,CREDIT,LAST\_NAME,FIRST\_NAME FROM EMPLOYEES**

**WHERE CREDIT BETWEEN 20 AND 40**

**ORDER BY CREDIT DESC, LAST\_NAME ASC**

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#5. From the Employees table, list the employee\_id, first\_name, last\_name and credit\_limit columns for employees

with the first names: Martha, Carol, Nancy

Sort the rows by the last name.

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SQl Query:

**SELECT EMPLOYEE\_ID,FIRST\_NAME,LAST\_NAME,CREDIT**

**FROM EMPLOYEES**

**WHERE FIRST\_NAME='MARTHA'OR FIRST\_NAME= 'CAROL'**

**OR FIRST\_NAME='NANCY' ORDER BY LAST\_NAME**

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#6. From the Employees table, get the department and credit limits for the employees 'Jim Kern'.

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SQl Query:

**SELECT DEPARTMENT , CREDIT FROM EMPLOYEES WHERE**

**FIRST\_NAME ='JIM'AND LAST\_NAME = 'KERN'**

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#7. List the department and phone extension for all the employees who don't have a manager.

Sort the rows by the employee\_id.

Sql Query:

**SELECT DEPARTMENT, PHONE\_CODE FROM EMPLOYEES**

**WHERE MANAGE\_ID =' '**

**ORDER BY EMPLOYEE\_ID**

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#8. Write a query to display distinct department codes credit\_limits.

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SQl Query:

**SELECT DISTINCT DEPARTMENT, CREDIT FROM EMPLOYEES**

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#9. Delete all the employees who work for Shipping Department or who have manager\_id null.

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SQl Query:

**DELETE FROM EMPLOYEES**

**WHERE DEPARTMENT = 'SHP' OR MANAGE\_ID = ' '**

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#10. Increase the credit limits of all the employees by $15.00 who work for Accounting department.

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SQl Query:

**UPDATE EMPLOYEES SET CREDIT = CREDIT+15 WHERE DEPARTMENT ='ACT'**

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:: PART B::

Total Marks : 20

>> Note: Employees is work tables for these queries

Table: Employees

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Employee First\_Name Last\_Name Dept Hire\_Date Credit Phone Manager\_id

Id Code Limit Ext

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Create the following table in the collection you created in Part A, and insert data in it.

Table: Departments

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dept Name Location

Code

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Act Accounting Toronto

Exe Executive Montreal

Mkt Marketing Vancouer

Per Personnel Ottawa

Sal Sales New York

Shp Shipping Chicago

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>> Write the query for the following tasks:

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Task#1:

Consider the above two tables. write a query to set up the Referential Integrity

between these two tables. Also explain what is pre-requisite for setting up the RI between these two tables.[5 marks] >> Ans:

**ALTER TABLE DEPARTMENTS**

**ADD CONSTRAINT DEPARTMENT\_PK**

**PRIMARY KEY (DEPARTMENT)**

**ALTER TABLE DEPARTMENTS**

**ADD CONSTRAINT DEPARTMENT\_PK**

**PRIMARY KEY (DEPARTMENT)**

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Task#2:

For each employee show the employee\_id, first\_name, last\_name, dept\_code and the department name and location.

Sort the rows by the employee\_id. Show only the employee with ids between 203 and 207.[3 marks]

>> Sql Query:

**SELECT E.EMPLOYEE\_ID, E.FIRST\_NAME, E.LAST\_NAME, E.DEPARTMENT,**

**D.NAME, D.LOCATION**

**FROM EMPLOYEES E,DEPARTMENTS D**

**WHERE E.DEPARTMENT = D.DEPARTMENT**

**AND E.EMPLOYEE\_ID BETWEEN '203' AND '207'**

**ORDER BY E.EMPLOYEE\_ID**

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Task#3: Consider the above tables for performing the following: [3 marks each]

(A) : Inner Join on dept\_code. Display employee name from the employees table and department name from Department table. >> Sql Query:

**SELECT E.FIRST\_NAME, E.LAST\_NAME,**

**D.NAME**

**FROM EMPLOYEES E**

**INNER JOIN DEPARTMENTS D**

**ON E.DEPARTMENT = D.DEPARTMENT**

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(B) : Left Outer Join on dept\_code. Display employee name from the employees table and department name from Department table. >> Sql Query:

**SELECT E.FIRST\_NAME, E.LAST\_NAME,**

**D.NAME**

**FROM EMPLOYEES E**

**LEFT OUTER JOIN DEPARTMENTS D**

**ON E.DEPARTMENT = D.DEPARTMENT**

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(C) : Right Outer Join on dept\_code. Display employee name from the employees table and department name from Department table. >> Sql Query:

**SELECT E.FIRST\_NAME, E.LAST\_NAME,**

**D.NAME**

**FROM EMPLOYEES E**

**RIGHT OUTER JOIN DEPARTMENTS D**

**ON E.DEPARTMENT = D.DEPARTMENT**

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(D) : Full Outer Join on dept\_code. Display employee name from the employees table and department name from Department table.

>> Sql Query:

**SELECT E.FIRST\_NAME, E.LAST\_NAME,**

**D.NAME**

**FROM EMPLOYEES E**

**FULL OUTER JOIN DEPARTMENTS D**

**ON E.DEPARTMENT = D.DEPARTMENT**

=================================== END - Assignment # 1===================================