California State University, San Bernardino School of Computer Science & Engineering
CSE572 W2019 -Database Systems
LAB 06 – LOADING DATA into Relational Tables

For this lab exercise, you will use the four tables (EMP, DEPT, PROJ, and EMP_PROJ) for the CoyoteCorp DB that you created in LAB 05.

EMP Data

empNo	fname	lname	address	sex	salary	position	deptNo
1000	Steven	King	731 Fondren, Houston, TX	M	30000	Programmer	60
1007	Diana	Lorentz	638 Voss, Bellaire, TX	F	24000	Clerk	20
2002	Pat	Fay	3321 Castle, Spring, TX	F	15000	Sales Representative	80
1760	Jonathan	Taylor	561 Rice, Houston, TX	M	60000	Manager	20
1740	Ellen	Abel	890 Stone, Houston, TX	F	65000	Manager	60
2060	William	Gietz	450 Berry, Bellaire, TX	M	65000	Manager	80
2000	Jennifer	Whalen	980 Fire Oak, Humble, TX	F	28000	Clerk	60
1444	Peter	Vargas	975 Dallas, Houston, TX	M	20000	Sales Representative	80

DEPT Data

deptNumber	deptName	Mgr
20	Marketing	1760
60	IT	1740
80	Sales	2060

PROJ Data

projNumber	projName	deptNum
10	Product X	20
20	Product Y	20
30	Computerization	60
40	Product Z	80
50	Mobile Apps	60

EMP_PROJ Data

empNo	projNo	hoursWorked
1000	30	32.5
1000	50	7.5
2002	10	40.0
1444	20	20.0
1760	10	5.0
1760	20	10.0
1740	50	15.0
2060	40	12.0

1. Log on to orafarm and be sure you are at your CSE572 directory.
    The next steps 2 .. must be done within orafarm and in your CSE572 directory.

2. Use the text editor (OUTSIDE ORACLE) to load data using SQL*Loader into the tables EMP and PROJ.

    To do this, you must have read first SQL*LOADER handout
    A1. Use the text editor to create the control file for table EMP using filename LOAD_EMP.ctl
        The contents of LOAD_EMP.ctl should be the following lines

    ---

    load data
    append
    into table EMP
    fields terminated by "/"
    (empNo, fname, lname, address, sex, salary, position)

        NOTE: the fields in the last line above are the attribute names (EXCEPT deptNo which is a FK) of EMP table. We will learn how to add deptNo value in LAB 05.
        We are using "/" instead of "," since address field has a "," in its value

    A2. Use the text editor to create the data file for table EMP using filename LOAD_EMP.dat
    The contents of LOAD_EMP.dat will contain all the tuples in EMP. [Refer to EMP DATA on page 1.]
    1000/Steven/King/731 Fondren, Houston, TX/M/30000/Programmer
    ……
    1444/Peter/Vargas/975 Dallas, Houston, TX/M/20000/Sales Representative
    NOTE: use one line per tuple found in EMP DATA and data for deptNo is not included.

    A3. Run SQL*LOADER to load data into the EMP table as follows: [Refer to p2 of SQL*LOADER handout.]

        sqlldr <your ORACLE user_id> **control =** LOAD_EMP **data =** LOAD_EMP
        replace <your ORACLE user_id> with your ORACLE username

        NOTE: The above syntax is a slight modification to that found in the handout.
        Since the sqlldr command did not include your oracle password, the system will prompt for you to type your ORACLE password.

        After executing sqlldr, there will a file in your directory named LOAD_EMP. log
        If there were errors in the data loading process, you will see an additional file name LOAD_EMP.bad

    Repeat steps A1-A3 above accordingly for table PROJ. Omit the foreign key attribute, deptNum in the .ctl file and omit the value of deptNum in the .dat file.

3. Logon to ORACLE.

    A1. Check that all data (except for deptNo) for EMP table have been loaded. HOW?
    A2. Repeat step 3A1 accordingly for DEPT PROJ table.
    A3. Use the standard INSERT implicit command syntax to populate DEPT table at the SQL prompt.

INSERT INTO DEPT
VALUES (10, 'Marketing',1760);
…..
Repeat the above implicit INSERT for the rest of the tuples in PROJ DEPT table.

A4. Check that all data for PROJ DEPT table has been entered.
A5. Use the substitution & method of INSERT command to populate EMP_PROJ table.
INSERT INTO EMP_PROJ VALUES ('&empNo', '&projNo', &hoursWorked);

NOTE: enclose &empNo in ' ' if the datatype is a string – VARCHAR2 or CHAR
If empNo is NUMBER datatype then do not enclose &empNo in ' '!

A6. Check that all data for EMP_PROJ table has been entered.

4. Logoff from ORACLE.
5. Logoff from orafarm.
6. Logoff from CSE network.