9.1: Load Variable-Length Data

**Step 1:** Crosscheck for the relation. If it does not exist, create the Dept table.

**Step 2:** Create and save the control file named as ‘deptcontrol.ctl’ in the specified location. Control file should contain following details:

12,RESEARCH,"SARATOGA"

10,"ACCOUNTING",CLEVELAND

11,"ART",SALEM

13,FINANCE,"BOSTON"

21,"SALES",PHILA.

22,"SALES",ROCHESTER

42,"INT'L","SAN FRAN

Example 112: Control File

**Step 3:** Execute the SQL Loader command at the command prompt and verify the updated Relation by issuing the command given below:

SQL>select \* from dept;

Example 13: Sample Code

9.2: Use the SQL Loader utility. Upload the data file having Fixed-Format Fields, as shown below, into Emp table.

**Data file**

* Given below are a few sample data lines from the file ulcase2.dat.
* Blank fields are automatically set to null.

7782 CLARK MANAGER 7839 2572.50 10

7839 KING PRESIDENT 5500.00 10

7934 MILLER CLERK 7782 920.00 10

7566 JONES MANAGER 7839 3123.75 20

7499 ALLEN SALESMAN 7698 1600.00 300.00 30

7654 MARTIN SALESMAN 7698 1312.50 1400.00 30

7658 CHAN ANALYST 7566 3450.00 20

7654 MARTIN SALESMAN 7698 1312.50 1400.00 30

Example 124: Sample Code

9.3: Load combined physical records

**Control file:**

The control file is ulcase4.ctl:

LOAD DATA

INFILE 'ulcase4.dat'

1) DISCARDFILE 'ulcase4.dsc'

2) DISCARDMAX 999

3) REPLACE

4) CONTINUEIF THIS (1) = '\*'

INTO TABLE emp

(empno POSITION(1:4) INTEGER EXTERNAL,

ename POSITION(6:15) CHAR,

job POSITION(17:25) CHAR,

mgr POSITION(27:30) INTEGER EXTERNAL,

sal POSITION(32:39) DECIMAL EXTERNAL,

comm POSITION(41:48) DECIMAL EXTERNAL,

deptno POSITION(50:51) INTEGER EXTERNAL,

hiredate POSITION(52:60) INTEGER EXTERNAL)

Example 135: Control file

**Datafile**

A sample datafile used for this case, ulcase4.dat, is shown below. Asterisks are in the first position. Further, a newline character, though not visible, is in position 20. Note that clerk’s commission is -10, and SQL\*Loader loads the value, converting it to a negative number.

\*7782 CLARK

MANAGER 7839 2572.50 -10 25 12-NOV-85

\*7839 KING

PRESIDENT 5500.00 25 05-APR-83

\*7934 MILLER

CLERK 7782 920.00 25 08-MAY-80

\*7566 JONES

MANAGER 7839 3123.75 25 17-JUL-85

\*7499 ALLEN

SALESMAN 7698 1600.00 300.00 25 3-JUN-84

\*7654 MARTIN

SALESMAN 7698 1312.50 1400.00 25 21-DEC-85

\*7658 CHAN

ANALYST 7566 3450.00 25 16-FEB-84

\*CHEN

ANALYST 7566 3450.00 25 16-FEB-84

\*7658 CHIN

ANALYST 7566 3450.00 25 16-FEB-84

Example 146: Datafile

9.4: Load data into multiple tables.

The control file is ulcase5.ctl.

-- Loads EMP records from first 23 characters

-- Creates and loads PROJ records for each PROJNO listed

-- for each employee

LOAD DATA

INFILE 'ulcase5.dat'

BADFILE 'ulcase5.bad'

DISCARDFILE 'ulcase5.dsc'

1) REPLACE

2) INTO TABLE emp

(empno POSITION(1:4) INTEGER EXTERNAL,

ename POSITION(6:15) CHAR,

deptno POSITION(17:18) CHAR,

mgr POSITION(20:23) INTEGER EXTERNAL)

2) INTO TABLE proj

-- PROJ has two columns, both not null: EMPNO and PROJNO

3) WHEN projno != ' '

(empno POSITION(1:4) INTEGER EXTERNAL,

3) projno POSITION(25:27) INTEGER EXTERNAL) -- 1st proj

2) INTO TABLE proj

4) WHEN projno != ' '

(empno POSITION(1:4) INTEGER EXTERNAL,

4) projno POSITION(29:31 INTEGER EXTERNAL) -- 2nd proj

2) INTO TABLE proj

5) WHEN projno != ' '

(empno POSITION(1:4) INTEGER EXTERNAL,

5) projno POSITION(33:35) INTEGER EXTERNAL) -- 3rd proj

Example 157: Control File

**Notes:**

1. REPLACE specifies that if there is data in the tables to be loaded (emp and proj), SQL\*loader should delete the data before loading new rows.
2. Multiple INTO TABLE clauses load two tables, emp and proj. The same set of records is processed three times, using different combinations of columns each time to load table proj.
3. WHEN loads only rows with nonblank project numbers. When projno is defined as columns 25...27, rows are inserted into proj only if there is a value in those columns.
4. When projno is defined as columns 29...31, rows are inserted into proj only if there is a value in those columns.
5. When projno is defined as columns 33...35, rows are inserted into proj only if there is a value in those columns.

**Datafile:**

1234 BAKER 10 9999 101 102 103

1234 JOKER 10 9999 777 888 999

2664 YOUNG 20 2893 425 abc 102

5321 OTOOLE 10 9999 321 55 40

2134 FARMER 20 4555 236 456

2414 LITTLE 20 5634 236 456 40

6542 LEE 10 4532 102 321 14

2849 EDDS xx 4555 294 40

4532 PERKINS 10 9999 40

1244 HUNT 11 3452 665 133 456

123 DOOLITTLE 12 9940 132

1453 MACDONALD 25 5532 200

Example 18: Datafile

9.5: Use SQL Loader utility to load specific data from the given flat file into the table. (To Do)

The given flat file contains data in the form of DEPTNO, DEPTNAME, and LOCATION. Using SQL Loader utility, load only DEPTNO and LOCATION from the .dat file into the department table. Do not overwrite the source data present in department table.

12, Research, "Saratoga"

10, "Accounting", Cleveland

11, "Art", Salem

13, Finance, Boston

21, Sales, Phila

22, Sales, Rochester

42, "Int'l", "San Fran"

Example19: Flat file