Database Sample Code

Contents

[1. External Tab Delimited File Example 2](#_Toc373244263)

[2. External CSV File Example No. 1 2](#_Toc373244264)

[3. External CSV File Example No. 2 (using regexp) 3](#_Toc373244265)

[4. External Restful Webservices Pipe Delimited File 4](#_Toc373244266)

[a) Embedded java 4](#_Toc373244267)

[b) Create DB Stored Procedure 9](#_Toc373244268)

[c) Call Java DB Stored Procedure 9](#_Toc373244269)

[5. Triggers for SCD Type 2 Data Model 9](#_Toc373244270)

[6. Package Example 17](#_Toc373244271)

[d) Simple Cursor 18](#_Toc373244272)

[e) Simple Logging Example 24](#_Toc373244273)

[f) Simple History of Status Example 24](#_Toc373244274)

[g) Bulk Collect User Defined Type Example 26](#_Toc373244275)

[h) Instantiate Bulk Collect User Defined Type Example 26](#_Toc373244276)

[i) Simple Set Operations 28](#_Toc373244277)

[j) Simple Case Statement 32](#_Toc373244278)

[k) Simple Decode Statement 32](#_Toc373244279)

[l) Access DBLink 33](#_Toc373244280)

[m) Bulk Collect 37](#_Toc373244281)

[n) Bulk Collect Cursor 37](#_Toc373244282)

[o) Simple DB Link Example 51](#_Toc373244283)

[p) Nested Cursor 52](#_Toc373244284)

[q) Exception Sample 56](#_Toc373244285)

# External Tab Delimited File Example

-- -------------------------------------------------------------

-- 1. First physically create the directory c:\temp

-- 2. Then login as system and do:

-- A. CREATE OR REPLACE DIRECTORY TMP AS 'C:\temp';

CREATE OR REPLACE DIRECTORY tmp AS 'C:\temp';

-- B. GRANT READ, WRITE ON DIRECTORY TMP TO SAMPLECODE

GRANT READ, WRITE ON DIRECTORY tmp TO SAMPLECODE;

-- 3. Create the external table

DROP TABLE invoices\_external;

SELECT COUNT(\*) FROM invoices\_external;

CREATE TABLE invoices\_external

(

invoice\_id CHAR(6),

invoice\_date CHAR(13),

invoice\_amt CHAR(9),

account\_number CHAR(11)

)

ORGANIZATION EXTERNAL

(

TYPE oracle\_loader DEFAULT

DIRECTORY tmp ACCESS

PARAMETERS (records delimited BY newline SKIP 2 fields

( invoice\_id CHAR(6), invoice\_date CHAR(13),

invoice\_amt CHAR(9), account\_number CHAR(11)))

-- make sure there are no extra lines that might be interpreted as null later when loading into PK

LOCATION ('load\_invoices.txt')

);

SELECT \* FROM invoices\_external;

-- create table with correct data types

CREATE TABLE invoices\_revised

(

invoice\_id INTEGER,

invoice\_date DATE,

invoice\_amt NUMBER,

account\_number VARCHAR2(13)

);

INSERT INTO invoices\_revised

(invoice\_id, invoice\_date,invoice\_amt,account\_number)

SELECT invoice\_id, to\_date(invoice\_date,'mm/dd/yyyy'),

to\_number(invoice\_amt), account\_number

FROM invoices\_external;

SELECT \* FROM invoices\_revised;

# External CSV File Example No. 1

-- -------------------------------------------------------------

-- 1. First physically create the directory c:\temp

-- 2. Then login as system and do:

-- A. CREATE OR REPLACE DIRECTORY TMP AS 'C:\temp';

CREATE OR REPLACE DIRECTORY tmp AS 'C:\temp';

-- B. GRANT READ, WRITE ON DIRECTORY TMP TO CRUISES;

GRANT READ, WRITE ON DIRECTORY tmp TO samplecode;

-- 3. Create the external table

DROP TABLE song\_test;

CREATE TABLE song\_test

(sid NUMBER,

aid number,

title VARCHAR2(175),

wrt VARCHAR2(175),

secs NUMBER)

ORGANIZATION EXTERNAL

(

TYPE ORACLE\_LOADER

DEFAULT DIRECTORY TMP

ACCESS PARAMETERS

(RECORDS DELIMITED BY NEWLINE

FIELDS TERMINATED BY ","

OPTIONALLY ENCLOSED BY '"'

MISSING FIELD VALUES ARE NULL

REJECT ROWS WITH ALL NULL FIELDS

( sid,

aid,

title,

wrt,

secs

)

)

LOCATION ('songs.csv')

)

REJECT LIMIT UNLIMITED;

SELECT \* FROM song\_test;

# External CSV File Example No. 2 (using regexp)

-- -------------------------------------------------------------

-- 1. First physically create the directory c:\temp

-- 2. Then login as system and do:

-- A. CREATE OR REPLACE DIRECTORY TMP AS 'C:\temp';

CREATE OR REPLACE DIRECTORY tmp AS 'C:\temp';

-- B. GRANT READ, WRITE ON DIRECTORY TMP TO CRUISES;

GRANT READ, WRITE ON DIRECTORY tmp TO samplecode;

DROP TABLE song\_ext;

CREATE TABLE song\_ext

(

song\_id NUMBER,

artist\_id NUMBER,

title VARCHAR2(100),

writer VARCHAR2(100),

seconds NUMBER

);

DECLARE

F UTL\_FILE.FILE\_TYPE;

V\_SID VARCHAR2(100);

V\_AID VARCHAR2(100);

V\_SONG VARCHAR2(100);

V\_WRT VARCHAR2(75);

V\_SECS VARCHAR2(100);

V\_LINE VARCHAR2(1000);

BEGIN

F := UTL\_FILE.FOPEN ('TMP', 'songs.csv', 'R');

IF UTL\_FILE.IS\_OPEN(F) THEN

LOOP

BEGIN

UTL\_FILE.GET\_LINE(F, V\_LINE, 1000);

IF V\_LINE IS NULL THEN

EXIT;

END IF;

V\_SID := REGEXP\_SUBSTR(V\_LINE, '[^,]+', 1, 1);

V\_AID := REGEXP\_SUBSTR(V\_LINE, '[^,]+', 1, 2);

V\_SONG := REGEXP\_SUBSTR(V\_LINE, '[^,]+', 1, 3);

V\_WRT := REGEXP\_SUBSTR(V\_LINE, '[^,]+', 1, 4);

V\_SECS := REGEXP\_SUBSTR(V\_LINE, '[^,]+', 1, 5);

INSERT INTO song\_ext VALUES(to\_number(V\_SID), to\_number(V\_AID), V\_SONG, V\_WRT,to\_number(V\_SECS));

COMMIT;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

EXIT;

END;

END LOOP;

END IF;

UTL\_FILE.FCLOSE(F);

END;

/

SELECT \* FROM song\_ext;

# External Restful Webservices Pipe Delimited File

## Embedded java

-- -------------------------------------------------------------

-- 1. First grant permission to user DASHBOARD

EXECUTE DBMS\_JAVA.GRANT\_PERMISSION( 'DASHBOARD', 'SYS:java.net.SocketPermission', '171.70.67.174:80', 'connect,resolve' );

-- 2. Next create JAVA SOURCE

DROP JAVA SOURCE DASHBOARD.GET\_EDCS\_REAL\_TIME;

CREATE OR REPLACE AND RESOLVE JAVA SOURCE NAMED DASHBOARD.GET\_EDCS\_REAL\_TIME as import java.io.IOException;

import java.io.IOException;

import java.io.BufferedReader;

import java.io.InputStreamReader;

import java.net.MalformedURLException;

import java.net.URL;

import java.sql.\*;

public class GET\_EDCS\_REAL\_TIME {

public static void main(String[] args) {

int[] edcs\_1\_RecordNums = new int[0];

String[] edcs\_2\_EDCSNums = new String[0];

int[] edcs\_3\_Revs = new int[0];

String[] edcs\_4\_FileNames = new String[0];

String[] edcs\_5\_Titles = new String[0];

String[] edcs\_6\_Types = new String[0];

String[] edcs\_7\_Status = new String[0];

String[] edcs\_8\_StatusDate = new String[0);