Bond & Pollard Ltd

Sales Order Import User Guide

Demo Application

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[Date]

Contents

CSV file import process

1. Sales order data is received in CSV format text files.
2. The files are named with the prefix 'order', and extension '.csv'.
3. Each file must have a unique name.
4. The process must be automated to run every hour, and import all new order CSV files received.
5. The data must be validated, and if there are any errors, the entire CSV file must be rejected, moved to an 'Error' directory, and all errors reported.
6. A manual procedure is required to fix rejected files.
7. If the data passes validation, load the data into the order tables.
8. Move successfully imported files to a 'Processed' archive directory.
9. Delete old error messages relating to the orders that have been successfully imported.

Fixing rejected files

1. Manual intervention is required.
2. An import error report will show the following information for each rejected file:
   a. Filename.
   b. A key value that uniquely identifies the order: Order Reference.
   c. CSV data record (all fields).
   d. An error message identifying the invalid data.
   e. Date and time error reported.
3. Locate the rejected CSV file in the Error directory, via the filename on the error report.
4. Edit the CSV file, and manually correct each error reported.
   a. Order Reference may be altered, but you must check that there are no existing orders with the same reference.
   b. Dates must be in the format DD/MM/YYYY.
   c. Ship Date must be on or later than the Order Date, in the format DD/MM/YYYY.
   d. Customer ID invalid: contact the sales department to either obtain the correct code, or have a new account created.
   e. Product ID invalid: contact the sales department for the correct code.
5. Move the corrected file to the 'Received' directory to be re-processed.

Importing an Order CSV File

In this demonstration we will:

1. Attempt to import order data from a CSV file which contains several errors.
2. Run a report to find out what the errors were.
3. Fix the errors in the CSV file.
4. Run the import process again with the corrected CSV file.
5. Run an order report to view the newly imported orders.

For this demonstration we will use the test order file **order_data 017 ERRORS.csv** which is the in the *data\pending* directory. Note that this file contains a number of errors, so the import will fail.

Receiving CSV Files

Copy the CSV file from the data directory Pending to Received.

Running The Import Program

Click on the APPSDEMO desktop shortcut.
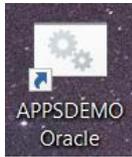
Run the *import_order* batch program. Enter the following commands at the prompt:

XEPDB1\APPSDEMO>cd com

XEPDB1\APPSDEMO>import_order

You will be prompted to enter the password for the connection user, *demo_connect.*

```
XEPDB1\APPSDEMO>cd com

XEPDB1\APPSDEMO>import_order

XEPDB1\APPSDEMO>ECHO OFF
Enter the password for DEMO_CONNECT:mydemo23
CSV FILE FOUND: D:\USER_DATA\XEPDB1\APPSDEMO\data\RECEIVED\order_data 017 ERRORS.csv
        1 file(s) copied.

SQL*Plus: Release 21.0.0.0.0 - Production on Thu Apr 20 12:05:32 2023
Version 21.3.0.0.0

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Last Successful login time: Thu Apr 20 2023 12:03:07 +01:00

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Version 21.3.0.0.0

old   2:   v_filename VARCHAR2(100) := '&1';
new   2:   v_filename VARCHAR2(100) := 'order_data 017 ERRORS.csv';
Information from program  at 20-APR-23 12:04:32.915000000 Message: Order Data
Import from file: order_data 017 ERRORS.csv SQLERRM is  (Log mode is S)
Error from program IMPORT.ORD_IMP at 20-APR-23 12:04:32.972000000 Message:
Invalid data importing file order_data 017 ERRORS.csv SQLERRM is ORA-20001:
(Log mode is B)
Error from program IMPORT_ORDER.SQL at 20-APR-23 12:04:32.978000000 Message:
Error importing file order_data 017 ERRORS.csv SQLERRM is ORA-20099: Order
import failed. View errors in IMPORTERROR for file order_data 017 ERRORS.csv
(Log mode is B)

PL/SQL procedure successfully completed.

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Version 21.3.0.0.0

XEPDB1\APPSDEMO>
```

Application Log

The program reported that there were errors importing the file *order_data 017 ERRORS.csv.*

To investigate further, open SQL Developer, connect to *demo_connect,* then open and run the SQL script ***applog.***

```
                              Bond and Pollard Limited
                              ========================
Application Log                                                          Page:        1


Message                      Logged At           Username    SQLERRM                        Program      Severity      RECID
---------------------------- ------------------- ----------- ------------------------------ ------------ ------------ --------
Invalid data importing file or 20/04/23 12:04:32.96 APPSDEMO  ORA-20001:                     IMPORT.ORD_I Error           34
der_data 017 ERRORS.csv      9000                                                           MP

Error importing file order_dat 20/04/23 12:04:32.97 APPSDEMO  ORA-20099: Order import failed IMPORT_ORDER Error           35
a 017 ERRORS.csv             7000                 . View errors in IMPORTERROR f .SQL
                                                  or file order_data 017 ERRORS.
                                                  csv
```

Note the error messages reported for the order file we tried to import.

Import Errors Report

To view the detailed error messages, run the report *import_errors.sql.*

Note that Key Value refers to the Order Reference field in the CSV file. The CSV data is shown against each error message so you can identify the row in the CSV file that needs to be fixed.

```
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Data Import Error Report


Rec ID Filename         Key Value    Data                 Message                        SQLERRM                        Date                 User
------ ---------------- ------------ -------------------- ------------------------------ ------------------------------ -------------------- --------
   104 order_data 017 ERROR TEST0040  TEST0040,27/08/2022, Customer ID 103Z invalid                                     20-APR-23 12:04:32.9 APPSDEMO
       S.csv                          C,103Z,02/082022,101                                                             26000
                                      863,12

   105                   TEST0040     TEST0040,27/08/2022, Ship Date 02/082022 must be on                               20-APR-23 12:04:32.9 APPSDEMO
                                      C,103Z,02/082022,101  or later than the order date                               63000
                                      863,12               27/08/2022

   106                   TEST0040     TEST0040,27/08/2022, Customer ID 103Z invalid                                     20-APR-23 12:04:32.9 APPSDEMO
                                      C,103Z,02/08/2022,10                                                             64000
                                      0890Z,24

   107                   TEST0040     TEST0040,27/08/2022, Ship Date 02/08/2022 must be o                               20-APR-23 12:04:32.9 APPSDEMO
                                      C,103Z,02/08/2022,10 n or later than the order date                              64000
                                      0890Z,24             27/08/2022

   108                   TEST0040     TEST0040,27/08/2022, Product ID 100890Z invalid                                   20-APR-23 12:04:32.9 APPSDEMO
                                      C,103Z,02/08/2022,10                                                             64000
                                      0890Z,24

   109                   TEST0040     TEST0040,27/08/2022, Customer ID 103Z invalid                                     20-APR-23 12:04:32.9 APPSDEMO
                                      C,103Z,02/08/2022,10                                                             65000
                                      2130,100

   110                   TEST0040     TEST0040,27/08/2022, Ship Date 02/08/2022 must be o                               20-APR-23 12:04:32.9 APPSDEMO
                                      C,103Z,02/08/2022,10 n or later than the order date                              65000
                                      2130,100             27/08/2022

   111                   TEST0042     TEST0042,03/09/2022, Ship Date 02/09/2022 must be o                               20-APR-23 12:04:32.9 APPSDEMO
                                      ,101,02/09/2022,1018 n or later than the order date                              66000
                                      63,9                 03/09/2022

   112                   TEST0042     TEST0042,03/09/2022, Ship Date 02/09/2022 must be o                               20-APR-23 12:04:32.9 APPSDEMO
                                      ,101,02/09/2022,2003 n or later than the order date                              67000
                                      80,51A               03/09/2022

   113                   TEST0042     TEST0042,03/09/2022, Qty 51A invalid                                              20-APR-23 12:04:32.9 APPSDEMO
                                      ,101,02/09/2022,2003                                                             67000
                                      80,51A
```

The following errors have been reported:

- TEST0040: Customer ID 103Z is invalid – the Z on the end should not be there, so the customer cannot be found.
- TEST0040: Ship Date 02/08/2022 is earlier than the order date. To correct this error, we need to change it to a date on or after the order date 27/08/2022.
- TEST0040: Product 100890Z invalid – the Z on the end should not be there, so the product cannot be found.
- TEST0042: Ship Date 02/09/2022 is earlier than the order date. To correct this error, we need to change it to a date on or after the order date 03/09/2022.
- TEST0042: Qty 51A invalid number. Just remove the A from the end.

Fixing Errors

To fix the errors:

1. Find the CSV file in the error directory DATA_IN\error.
2. Edit the file and correct the above errors.
3. Move the file to the Received directory. For this demonstration, we will also rename the file to *order_data 017 FIXED.csv*
4. Run the *import_order* program again, and check for errors.

Editing the file to correct the reported errors:
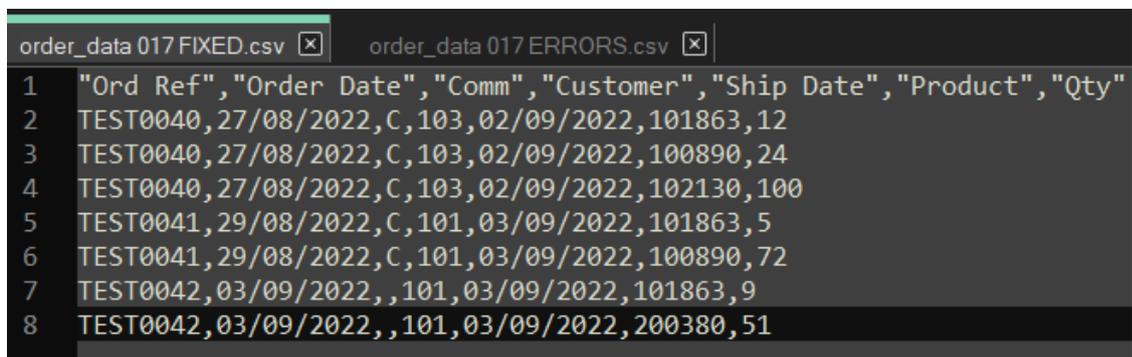
Run the *import_order* process again.

Enter the password for *demo_connect* when prompted.

```
XEPDB1\APPSDEMO>import_order

XEPDB1\APPSDEMO>ECHO OFF
Enter the password for DEMO_CONNECT:mydemo23
CSV FILE FOUND: D:\USER_DATA\XEPDB1\APPSDEMO\data\RECEIVED\order_data 017 FIXED.csv
        1 file(s) copied.

SQL*Plus: Release 21.0.0.0.0 - Production on Thu Apr 20 13:04:56 2023
Version 21.3.0.0.0

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Last Successful login time: Thu Apr 20 2023 12:07:24 +01:00

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Version 21.3.0.0.0

old   2:   v_filename VARCHAR2(100) := '&1';
new   2:   v_filename VARCHAR2(100) := 'order_data 017 FIXED.csv';
Information from program  at 20-APR-23 13:04:56.416000000 Message: Order Data
Import from file: order_data 017 FIXED.csv SQLERRM is  (Log mode is S)
Information from program  at 20-APR-23 13:04:56.568000000 Message: Success!
SQLERRM is  (Log mode is S)

PL/SQL procedure successfully completed.

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Version 21.3.0.0.0

XEPDB1\APPSDEMO>
```

Note that this time we see the message **"Success!".**

Run the *import_errors.sql* report again. This time, there should be no errors reported for the orders in the CSV file.

Orders Report

Finally, run the orders report, ***orders_param.sql.*** Specify the range of orders to report as TEST0040 to TEST0042:

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Sales Order Report                                                              Page:        1


Order ID Ord Ref    Date Ordered To Ship     Comm     Total  Cust Name          Rep        Item Product Description
-------- ---------- ------------ ------------ ---- ----------- ------ ---------------- ---------- ---- ------- --------------------
    Price     Qty  Item Total
--------- -------- -----------
   10856 TEST0040  27-AUG-22   02-SEP-22   C      1,882.00   103 JUST TENNIS      WARD         1 101863 SP JUNIOR RACKET
   12.50      12      150.00

   10856 TEST0040  27-AUG-22   02-SEP-22   C      1,882.00   103 JUST TENNIS      WARD         2 100890 ACE TENNIS NET
   58.00      24    1,392.00

   10856 TEST0040  27-AUG-22   02-SEP-22   C      1,882.00   103 JUST TENNIS      WARD         3 102130 RH: "GUIDE TO TENNIS
                                                                                                        "      3.40      100
    340.00

   10857 TEST0041  29-AUG-22   03-SEP-22   C      4,238.50   101 TKB SPORT SHOP   WARD         1 101863 SP JUNIOR RACKET
   12.50       5       62.50

   10857 TEST0041  29-AUG-22   03-SEP-22   C      4,238.50   101 TKB SPORT SHOP   WARD         2 100890 ACE TENNIS NET
   58.00      72    4,176.00

   10858 TEST0042  03-SEP-22   03-SEP-22            316.50   101 TKB SPORT SHOP   WARD         1 101863 SP JUNIOR RACKET
   12.50       9      112.50

   10858 TEST0042  03-SEP-22   03-SEP-22            316.50   101 TKB SPORT SHOP   WARD         2 200380 SB VITA SNACK-6 PACK
    4.00      51      204.00
```

The orders in the CSV file have now been successfully loaded into the database.