Chapter 2. Federated Databases (2: Doc format: tabular structured CSV, XLSx)

Federated Database Object Study Case: source directory structure

- Support Software and configuration
    - fdbo_study_case/support
- Data Source Simulation Scripts
    - fdbo_study_case/1_DataSource
- Integration Structures
    - fdbo_study_case/2_AccessModel_XLS
    - fdbo_study_case/2_AccessModel_XML_JSON

PREPARE Source Data and Integration Context

- ORACLE_LOADER tool: accessible by CREATE TABLE clause - built-in Oracle PL/SQL runtime library.

- ExcelTable.lib PL/SQL Library to read XLSX files: installable as a custom PL/SQL library:

(***Simplified*** procedure)

- Download **ExcelTable-master.zip** from Teams/OnDrive resource directory:
    - Main Channel → File → Materiale de curs
        - **fdbo_study_case/support/2_AccessModel_XLS/**
            - **ExcelTable-master.zip**
    - Unzip to the local directory: *fdbo_study_case/support/2_AccessModel_XLS*
- Run *install.sql* from *fdbo_study_case/support/2_AccessModel_XLS/ExcelTable-master* directory with FDBO connection (connected with FDBO user).

(***Complete*** procedure)

- Download ExcelTable.zip from https://github.com/mbleron/ExcelTable
    - Unzip to the local directory: *fdbo_study_case/support/2_AccessModel_XLS*
    - Unzipping operation will generate the following directories:
        - *fdbo_study_case/support/2_AccessModel_XLS*
            - /ExcelTable-master
- Download *MSUtilities-master.zip* from https://github.com/mbleron/MSUtilities
    - Unzip to: *fdbo_study_case/support/2_AccessModel_XLS*
        - /ExcelTable-master/*MSUtilities*

        - Unzipping operation will generate the following directories:
            - *fdbo_study_case/support/2_AccessModel_XLS*
                - /ExcelTable-master/MSUtilities/CDFManager
            - *fdbo_study_case/support/2_AccessModel_XLS*
                - /ExcelTable-master/MSUtilities/OfficeCrypto
    - Download *ExcelCommons-main.zip* from https://github.com/mbleron/ExcelCommons
        - Unzip to: *fdbo_study_case/support/2_AccessModel_XLS*
            - /ExcelTable-master/ExcelCommons
        - Unzipping operation will generate the following directories:
            - *fdbo_study_case/support/2_AccessModel_XLS*
                - /ExcelTable-master/ExcelCommons/plsql
    - Run *install.sql* from *fdbo_study_case/support/2_AccessModel_XLS/ExcelTable-master* directory with FDBO connection (connected with FDBO user).

CASE STUDY 1: ORCL FDB CSV Data Source File

- Access CSV Data Source File from
    - directory: fdbo_study_case/1_DataSources
        - /13_DS_CSV_CTG_CUST_EMP.csv
        - /13_DS_CSV_CTG_CUST_TO.csv
        - /13_DS_CSV_Periods.csv
- Create EXT_FILE_DS Oracle Directory Schema Object linked to local [fdbo_study_case/1_DataSource] directory
    - SQL Developer:
        - connect with **FDBO**;
        - fdbo_study_case/2_AccessModel_XLS/23_AM_CSV_ExternalTable_View.sql
            - Create EXT_FILE_DS Oracle Directory Schema Object linked to local [fdbo_study_case/1_DataSource] directory
            - CREATE external TABLEs.

CASE STUDY 2: ORCL FDB Excel Data Source File

- Access XLSx Data Source File from
    - directory: fdbo_study_case/1_DataSources
        - /13_DS_XLS_CustProdCateg.xlsx
- Create EXT_FILE_DS Oracle Directory Schema Object linked to local [fdbo_study_case/1_DataSource] directory
    - SQL Developer:
        - connect with **FDBO**;
        - fdbo_study_case/2_AccessModel_XLS/23_AM_XLS_ExcelTable_View.sql

- Check EXT_FILE_DS Oracle Directory Schema Object
- CREATE VIEWS from data regions(from local sheets).

Chapter 2. Federated Databases (2: Doc format: hierarchical XML, JSON)

CASE STUDY 1: ORCL FDB XML Data Source File

- Access XML Data Source File from
    - directory: fdbo_study_case/1_DataSources
        - /14_DS_XML_Locations.xml
- Create EXT_FILE_DS Oracle Directory Schema Object linked to local [fdbo_study_case/1_DataSource] directory
    - SQL Developer:
        - connect with **FDBO**;
        - fdbo_study_case/2_AccessModel_XML_JSON
            - /24_AM_XML_ExtTbl_View.sql

CASE STUDY 2: ORCL FDB JSON Data Source File

- Access JSON Data Source File from
    - directory: fdbo_study_case/1_DataSources
        - /15_DS_JSON_Locations.json
- Create EXT_FILE_DS Oracle Directory Schema Object linked to local [fdbo_study_case/1_DataSource] directory
    - SQL Developer:
        - connect with **FDBO**;
        - fdbo_study_case/2_AccessModel_XML_JSON
            - /24_AM_JSON_ExtTbl_View.sql