# xl2roefact PyPi library

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## System modules

x12roefact main and basic modules are:

- rdinv read an Excel file and extract invoice data to a JSON file format
- wrxml write, convert the JSON invoice file to a XML file format, respecting schemes required by RO EFact standard
- chkxml check generated XML file
- ldxml load an invoice (ie, its XML associated file) to ANAF SPV system
- chkisld check if an invoice is already loaded in ANAF SPV system
- config\_settings define system settings & parameters mainly used in invoice info / data detection and extract from invoice Excel format file
- app\_cli contains the code for x12roefact application command line (CLI) format

Below is presented the *skeleton logic* of those modules which and where is relevant ie meaning where is not enough obvious from code or code complexity exceed usual limits (*for example nore than 100 lines of code per function*). For more technical details and specification regarding modules see API Reference

#### rdinv module logic

Main function of rdinv module is rdinv(...) which has the following logic sections which are in **strict sequence in presented order**:

- search of invoice\_items\_area sub-table. This area is expected to contain invoice lines and is "processed" first because it is more structured and easier to identify; after its identification the header area is considered upper of it and footer area below it
- solve invoice\_items\_area in 2 step.... In this step the code-data-variables of items area will be initialized in order to hold information that will be found
- *localize and mark areas for...* section that follows natural the previous one by initializing code-data-variables forcheader and footer areas to hold their corresponding information
- solve invoice\_header\_area detailed initialize of header area code-data-variables
- ReNaSt -RegNameStrategy section that identify and extract the legal registered name of invoice customer
- section to (Excel data)--->(JSON) format preparation and finishing section which prepare Excel original data found to be be saved as JSON as a more "electronic interchangeable" structure
- for more details about code logic description and presentation, please contact RENware Software Systems

### Install library

Library can be installed using 2 methods:

- install from PyPi
- install from distribution packages

#### Install from PyPi

The library installation should be done using standard Python instruments:

pip install xl2roefact

#### Install from distribution packages

To install from distribution packages first download the package version intended to install (see download section), choose the package type (if you have no special option, then choose <code>WHEEL</code> format) and install it using <code>pip</code> as any other Python library installation (detailed in Python official documentation).

### Working directories

Below is a short description of most important directories that will (can!) be found on local development environment.

- invoice\_files/ default directory for Excel files which is intended to be processed
- build/ this directory which will contain intermediary files resulted from building CLI application, library distribution parts, etc. Directory is subject of .gitignore
- dist/ package files (wheels, dist), Windows executables, etc, generally all files subject of "public" distribution and download
- test\_\*/ contains test invoice samples (from client, a RENware one, a 3rd party one) and some useful specs in dev & test process

### Aspecte tehnice referitoare la formatul fisierului JSON aferent facturii

Acest fisier este cel generat de catre aplicatie in urma executiei acesteia cu comanda x12 j son . Structura de baza a acestui fisier este:

```
{
    "Invoice": {...},
    "meta_info": {...},
    "excel_original_data": {...}
}
```

Cheile de la primul nivel contin:

- Invoice datele efective ale facturii
- meta\_info
  - informatii referitoare la procesarea facturii si mapa de conversie a cheii Invoice din formatul JSON in formatul XML cerut de sistemul RO E-Fact
  - harta de ajutor in conversia formatului JSON in formatul XML acceptat de sistemul RO E-Fact (cheie meta\_info.map\_JSONkeys\_XMLtags) si definititiile XML aferente (cheie meta\_info.invoice\_XML\_schemes)
  - alte informatii despre fisierul Excel prelucrat (numele, worksheet cu factura, data si ora procesarii, CRC pentru verificare, etc)
- excel\_original\_data informatiile originale din fisierul Excel, asa cum au fost ele identificate si gasite precum si locatia (adresele celulelor). Aceste informatii sunt utile in cazul in care exista neclaritati in urma procesuluicde conversie pentru "a intelege" de unde si cum arata informatiile originale din fisierul Excel

An example of JSON generated file is available here

#### **API** Reference

## Download xl2roefact library

- 0.1.20.dev invoice customer address WHEEL
- 0.1.20.dev invoice customer address DIST

#### Arhiva versiuni publicate disponibile

- 0.1.19.dev invoice customer and partial invoice total values calculations WHEEL
- 0.1.19.dev invoice customer and partial invoice total values calculations DIST
- 0.1.18.dev invoice customer CUI partial invoice total values calculations WHEEL
- 0.1.18.dev invoice customer CUI partial invoice total values calculations DIST

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