Documentation for Importing Innovaplan to GoogleCalendar (InnoCal)

Introduction

This document explains the program **InnoCal.py**, developed for retrieving the calendar from the database of Innovaplan (IDB) and putting it in Google Calendar (GC) of the user.

Requirements

Program is run on `python3` in any machine where it has the connection to database `INNOVAPLAN_ITS`.
Along with the main file **InnoCal.py,** there are:

1. `Readme.txt` - guideline to run on windows.
2. `Util.py` - contains all the necessary functions that are used in `InnoCal.py`.
3. `Setup.py` - install the required packages, must run once in the beginning.
4. `config.json` - user modifiable file in the directory with extension of .json for configuration parameters:

Name	Description	Example
`PyFolder`	Directory of Python on Windows	C:\\Users\\stage.bayramov\\AppData\\Local\\Programs\\Python\\Python310\\
`server`	Server of Innovaplan	192.168.100.34
`port`	Port of the server	1433
`database`	DB	INNOVAPLAN_ITS
`username`	Username for database access	Sincro22
`password`	Password for database access	Sincro2@2Due

5. `InnoCalSCript` - Windows command line script for scheduler. Needs to be created for each machine.
6. `requirements.txt` - required python packages. Installed by Setup.py.
7. `locali.txt` - user modifiable file, “locali” that are going to be imported into Google
8. `locali_org.txt` - all the “locali” in order to see how they are called
9. `credentials.json` - Google OAuth2 credentials downloaded from Google Console by admin.
10. `pyodbc-<version_name>.whl` - python package for pyodbc library. Installed automatically.
11. `token.pickle` - automatically generated file by OAuth2. Needs to be deleted only before running the first time on a new machine.

None of the above mentioned files are to be deleted.
Once the program is run Google Authentication page is open in order to receive authentication from Google Calendar user to manage his/her calendar.

Code

Setup.py

Run only the first time to set up the necessary environment. Automatically installs the necessary packages from `requirements.txt` that are required to run the synchronization.

Util.py

It contains three main methods:

Name	Description
`getCalendarService()`	Create a GC API service instance *Parameters*: None *Returns*: service instance
`listCalendarsFromGoogle(service)`	List the existing GC *Parameters*: [service = GC service instance] *Returns*: list of GC calendars
`addEventToGoogle(df, service, locali)`	Runs the synchronization *Parameters*: [df = dataframe] *Returns:* None

InnoCal.py

Main program that does the synchronization from the IDB to GC. Can run as many times as it is necessary.
The schedule of the program is as follows:

1. It gets the information about occupied rooms from the IDB.
2. It gets the information about rooms that are required to be synchronized from the file `locali.txt`.
3. It opens the Google Authentication page in order to receive consent from the user. This step is done only once, in the beginning.
4. It saves the information about User's GC and matches the names of the calendars with required ones.
5. Iterates through the calendar while updating (deleting or adding) the GC based on IDB. Calendars created by the user do not get deleted or updated. When iteration is over calendars are added.
6. Create a file named `locali_org.txt` with the original names of the rooms from IDB in order for the user to be able to identify the names.

Useful links

1. Task Scheduler (Utilità di Pianificazione) https://www.fastweb.it/fastweb-plus/digital-magazine/come-fare-per-creare-task-automatici-con-windows/
2. Writing cmd script https://smallbusiness.chron.com/turbotax-taxes-13771756.html