Contents:
Retrieve data from the open data interface of Statistics Netherlands (Centraal Bureau voor de Statistiek) with Python. The data is identical in content to the tables which can be retrieved and downloaded from StatLine. CBS datasets are accessed via the CBS open data portal.

The documentation of this package is found at this page and on readthedocs.io.

R user? Use cbsodataR.

1.1 Installation

From PyPi

```
pip install cbsodata
```

1.2 Usage

Load the package with

```
>>> import cbsodata
```

1.2.1 Tables

Statistics Netherlands (CBS) has a large amount of public available data tables (more than 4000 at the moment of writing). Each table is identified by a unique identifier (Identifier).
1.2.2 Info

Get information about a table with the `get_info` function.

```python
>>> info = cbsodata.get_info('82070ENG') # Returns a dict with info
>>> info['Title']
'Caribbean Netherlands; employed labour force characteristics 2012'
>>> info['Modified']
'2013-11-28T15:00:00'
```
1.2.3 Data

The function you are looking for!! The function `get_data` returns a list of dicts with the table data.

```python
>>> data = cbsodata.get_data('82070ENG')
[['CaribbeanNetherlands': 'Bonaire',
  'EmployedLabourForceInternatDef_1': 8837,
  'EmployedLabourForceNationalDef_2': 8559,
  'Gender': 'Total male and female',
  'ID': 0,
  'Periods': '2012',
  'PersonalCharacteristics': 'Total personal characteristics'},
['CaribbeanNetherlands': 'St. Eustatius',
  'EmployedLabourForceInternatDef_1': 2099,
  'EmployedLabourForceNationalDef_2': 1940,
  'Gender': 'Total male and female',
  'ID': 1,
  'Periods': '2012',
  'PersonalCharacteristics': 'Total personal characteristics'},
['CaribbeanNetherlands': 'Saba',
  'EmployedLabourForceInternatDef_1': 1045,
  'EmployedLabourForceNationalDef_2': 971,
  'Gender': 'Total male and female',
  'ID': 2,
  'Periods': '2012',
  'PersonalCharacteristics': 'Total personal characteristics']
]
```

The keyword argument `dir` can be used to download the data directly to your file system.

```python
>>> data = cbsodata.get_data('82070ENG', dir='dir_to_save_data')
```

1.2.4 Catalogs (dataderden)

There are multiple ways to retrieve data from catalogs other than `opendata.cbs.nl`. The code below shows 3 different ways to retrieve data from the catalog `dataderden.cbs.nl` (known from Iv3).

On module level.

```python
cbsodata.options.catalog_url = 'dataderden.cbs.nl'
# list tables
cbsodata.get_table_list()  # get dataset 47003NED
cbsodata.get_data('47003NED')
```

With context managers.

```python
with cbsodata.catalog('dataderden.cbs.nl '):
  # list tables
  cbsodata.get_table_list()  # get dataset 47003NED
cbsodata.get_data('47003NED')
```

As a function argument.
1.2.5 Pandas users

The package works well with Pandas. Convert the result easily into a pandas DataFrame with the code below.

```python
>>> data = pandas.DataFrame(cbsodata.get_data('82070ENG'))
>>> data.head()
```

The list of tables can be turned into a pandas DataFrame as well.

```python
>>> tables = pandas.DataFrame(cbsodata.get_table_list())
>>> tables.head()
```
Reference

Statistics Netherlands opendata API client for Python
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