DoJSON is a simple Pythonic JSON to JSON converter.
Installation

DoJSON is on PyPI so all you need is:

```
$ pip install dojson
```
Example

A simple example on how to convert MARCXML to JSON:

```python
from dojson.contrib.marc21.utils import create_record, split_stream
from dojson.contrib.marc21 import marc21

[marc21.do(create_record(data)) for data in split_stream(open('/tmp/data.xml', 'r'))]
```
DoJSON API.

```python
class dojson.Overdo(bases=None, entry_point_group=None)
    Translation index.
    
    build()
    Build.
    
    do(blob, ignore_missing=True)
    Translate blob values and instantiate new model instance.
    Raises MissingRule when no rule matched and ignore_missing is False.
    
    Parameters
    • blob – dict-like object on which the matching rules are going to be applied.
    • ignore_missing – Set to False if you prefer to raise an exception MissingRule for the first key that it is not matching any rule.
    
    New in version 1.0.0: ignore_missing allows to specify if the function should raise an exception.
    
    missing(blob)
    Return keys with missing rules.
    
    over(name, *source_tags)
    Register creator rule.
```

### 3.1 Command line interface

DoJSON command line interface.

This script is installed using the magic `console_script` section in `entry_points` parameters thanks to `setuptools`. In order to get help from console one can run:

```bash
$ dojson --help
```

#### Extensions

New extensions with loaders, dumpers, or rules can be provided via entry points.

- `dojson.cli.load` functions expecting a stream and returning Python dict or iterator;
- `dojson.cli.dump` functions expecting a Python object and returning `str`;
- `dojson.cli.rule` instances of `dojson.Overdo` with loaded rules.
dojson.cli.open_entry_point(group_name)
Open entry point.

3.2 Contrib

Define model for transforming MARC21.
4.1 Version 1.0.1 (released 2016-01-19):

4.1.1 Bug fixes

• Fixes support for Python 3.5.1.

4.2 Version 1.0.0 (released 2016-01-14):

4.2.1 Incompatible changes

• Removes support for single key matching multiple rules. Please make your rules mutually exclusive!
  • controlfields 00x are expected to be the element or a list of multiple elements.

4.2.2 New features

• Adds new keyword argument `ignore_missing` to `Overdo.do` method to specify if method should raise `MissingRule` exception when there is no matching rule for a key.
  • Adds new CLI option `--strict` to the `do` command that sets the `ignore_missing` argument to `False`. (#51)
  • MARC XML serialization from `to_marc21`.

4.2.3 Improved features

• Adds support for Python 3+.
  • Uses an `OrderedDict` to let the external tools working on `dict` (like json) behave correctly.
  • All results from rules using `for_each_value` decorator are being automatically extended. This is useful for repeatable MARC21 fields with different indicators. (#53)
  • Record are stored in an immutable sorted structure which enables to keep the intended order while offering easy ways to access, index and manipulate.
  • Adds two records to be tested.
  • Reorders some of the assertion: `expected == actual`. 
4.3 Version 0.4.0 (released 2015-11-18):

4.3.1 New features

• Improves dojson.contrib.marc2.utils.load() to read the input by iterating of the open stream, rather than loading it all in memory in one go. (#45) (#46)
• Renames OverUndo to Underdo following same name convention as for Overdo.

4.3.2 Bug fixes

• Fixes indicator extraction from value in Underdo model.

4.4 Version 0.3.0 (released 2015-11-09):

4.4.1 New features

• Adds experimental rules for converting human readable JSON into a JSON representation of the MARC21 Format.
• Adds do and missing commands for dojson command line interface (see dojson --help for more information).

4.4.2 Improved features

• Adds missing mapping for the first indicator of field 856.

4.5 Version 0.2.0 (released 2015-10-07):

4.5.1 New features

• Adds the possibility to use base DoJSON model so the rules are “inherited” from them.
• Adds new decorator ignore_value that remove the key in the resulting json for None value.

4.5.2 Improved features

• Uses entry points instead of plain imports to load the creator rules.

4.5.3 Bug fixes

• Removes calls to PluginManager consider_setuptools_entrypoints() removed in PyTest 2.8.0.
4.6 Version 0.1.1 (released 2015-07-27):

- Sorts and removes duplicated enum values.
- Swaps wrongly defined repeatable and non-repeatable subfields. (#23)
- Addresses issue when allowed indicators where defined as a range. (#22)

4.7 Version 0.1.0 (released 2015-07-03):

- Initial public release.
Bug reports, feature requests, and other contributions are welcome. If you find a demonstrable problem that is caused by the code of this library, please:

1. Search for already reported problems.
2. Check if the issue has been fixed or is still reproducible on the latest master branch.
3. Create an issue with a test case.

If you create a feature branch, you can run the tests to ensure everything is operating correctly:

```
$ python setup.py test
...
====== 31 passed, 23 skipped in 1.37 seconds ======
```

You can also test your feature branch using Docker:

```
$ docker-compose build
$ docker-compose run web python setup.py test
$ docker-compose run web python setup.py build_sphinx
$ docker-compose run web pep257 --match-dir='dojson'
```
DoJSON is developed for the Invenio digital library software.

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