
Requirements Parser Documentation

Release 0.2.0

David Fischer

Dec 17, 2021

Contents

1	Usage	3
1.1	Parsing requirement specifiers	3
1.2	Parsing version control requirements	3
1.3	Parsing local files	4
2	Changelog	5
3	Low level API	7
3.1	Higher level parsing	7
3.2	Lower level parsing	7
3.3	Misc functions	8
4	Indices and tables	9
	Python Module Index	11
	Index	13

Requirements parser is a Python module for parsing [Pip](#) requirement files.

Requirements parser is [BSD](#) licensed.

Quickstart:

```
>>> import requirements
>>> reqfile = """
Django>=1.5,<1.6
DocParser[PDF]==1.0.0
"""
>>> for req in requirements.parse(reqfile):
...     print(req.name, req.specs, req.extras)
...
Django [('>=', '1.5'), ('<', '1.6')] []
DocParser [('==', '1.0.0')] ['pdf']
```

Contents:

CHAPTER 1

Usage

Requirements parser works very similarly to the way pip actually parses requirement files except that pip typically proceeds to install the relevant packages.

Requirements come in a variety of forms such as requirement specifiers (such as `requirements>=0.0.5`), version control URIs, other URIs and local file paths.

1.1 Parsing requirement specifiers

```
import requirements
req = "django>=1.5,<1.6"
parsed = list(requirements.parse(req))[0]
parsed.name      # django
parsed.specs     # [('>=', '1.5'), ('<', '1.6')]
parsed.specifier # True
```

1.2 Parsing version control requirements

```
req = "-e git+git://github.com/toastdriven/django-
↪haystack@259274e4127f723d76b893c87a82777f9490b960#egg=django_haystack"
parsed = list(requirements.parse(req))[0]
parsed.name      # django_haystack
parsed.vcs       # git
parsed.revision  # 259274e4127f723d76b893c87a82777f9490b960
parsed.uri       # git+git://github.com/toastdriven/django-haystack
parsed.editable  # True (because of the -e option)
```

1.3 Parsing local files

```
req = "-e path/to/project"
parsed = list(requirements.parse(req))[0]
parsed.local_file      # True
parsed.path            # path/to/project
```


CHAPTER 2

Changelog

Version 0.2.0 (11 Jan 2018)

This release dropped support for Python 3.2.

- Support multiple hashing algorithms at the end of the URL (#24)
- Preserve login info in requirement URI (#33)
- Support subdirectory fragments (#32)
- Support version control URLs with extras (#30)

Version 0.1.0 (2 May 2015)

- Fix a bug involving parsing projects with underscores (#17)
- Parse recursive requirements (#19)

Version 0.0.6 (16 August 2013)

- Fixed a packaging error in v0.0.5

Version 0.0.5 (16 August 2013)

- **Backwards incompatible change** to refactor the parser.
- Parser now handles VCS specific revisions and parses out data such as whether the requirement is a local file or “editable”.
- Improved handling of “editable” requirements
- Improved handling of non-VCS URI requirements
- Fixes: #8, #10 and #12

3.1 Higher level parsing

Typically this is called via:

```
>>> import requirements
>>> requirements.parse('django>=1.5')
```

`requirements.parser.parse(reqstr)`

Parse a requirements file into a list of Requirements

See: `pip/req.py:parse_requirements()`

Parameters `reqstr` – a string or file like object containing requirements

Returns a *generator* of Requirement objects

3.2 Lower level parsing

Under the hood, the *Requirement* class does most of the heavy lifting.

class `requirements.requirement.Requirement(line)`

Represents a single requirement

Typically instances of this class are created with `Requirement.parse`. For local file requirements, there's no verification that the file exists. This class attempts to be *dict-like*.

See: <http://www.pip-installer.org/en/latest/logic.html>

Members:

- `line` - the actual requirement line being parsed
- `editable` - a boolean whether this requirement is “editable”
- `local_file` - a boolean whether this requirement is a local file/path

- `specifier` - a boolean whether this requirement used a requirement specifier (eg. “django>=1.5” or “requirements”)
- `vcs` - a string specifying the version control system
- `revision` - a version control system specifier
- `name` - the name of the requirement
- `uri` - the URI if this requirement was specified by URI
- `subdirectory` - the subdirectory fragment of the URI
- `path` - the local path to the requirement
- `hash_name` - the type of hashing algorithm indicated in the line
- `hash` - the hash value indicated by the requirement line
- `extras` - a list of extras for this requirement (eg. “mymodule[extra1, extra2]”)
- `specs` - a list of specs for this requirement (eg. “mymodule>1.5,<1.6” => [(‘>’, ‘1.5’), (‘<’, ‘1.6’)])

classmethod `parse` (*line*)

Parses a Requirement from a line of a requirement file.

Parameters `line` – a line of a requirement file

Returns a Requirement instance for the given line

Raises `ValueError` on an invalid requirement

classmethod `parse_editable` (*line*)

Parses a Requirement from an “editable” requirement which is either a local project path or a VCS project URI.

See: `pip/req.py:from_editable()`

Parameters `line` – an “editable” requirement

Returns a Requirement instance for the given line

Raises `ValueError` on an invalid requirement

classmethod `parse_line` (*line*)

Parses a Requirement from a non-editable requirement.

See: `pip/req.py:from_line()`

Parameters `line` – a “non-editable” requirement

Returns a Requirement instance for the given line

Raises `ValueError` on an invalid requirement

3.3 Misc functions

`requirements.version()`

Returns a string representation of the version

`requirements.version_tuple()`

Returns a 3-tuple of ints that represent the version

CHAPTER 4

Indices and tables

- `genindex`
- `modindex`
- `search`

r

`requirements`, 8

`requirements.parser`, 7

`requirements.requirement`, 7

P

`parse()` (*in module requirements.parser*), 7
`parse()` (*requirements.requirement.Requirement class method*), 8
`parse_editable()` (*requirements.requirement.Requirement class method*), 8
`parse_line()` (*requirements.requirement.Requirement class method*), 8

R

`Requirement` (*class in requirements.requirement*), 7
`requirements` (*module*), 8
`requirements.parser` (*module*), 7
`requirements.requirement` (*module*), 7

V

`version()` (*in module requirements*), 8
`version_tuple()` (*in module requirements*), 8