
OASTools

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CHAPTER 1

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1.1 About

1.1.1 License

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1.1.2 Acknowledgements

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1.2 Installation

1.2.1 Prerequisites

- Python
- Pip

1.2.2 Latest revision from GitHub

Run the following command to install the latest version from GitHub:

```
pip install git+https://github.com/BilalShaikh42/oastools.git#egg=oastools[all]
```

1.2.3 Latest release From PyPI

Run the following command to install the latest release from PyPI:

```
pip install oastools[all]
```

1.3 Overview

1.4 oastools

1.4.1 oastools package

Subpackages

oastools.parse package

Submodules

oastools.parse.parser module

parser

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Date 2019-08-29

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Adapted from Swagger_Parser (MIT Licence) to work with openapi 3 https://github.com/Trax-air/swagger-parser/blob/master/swagger_parser/swagger_parser.py

class oastools.parse.parser.OASParser(*oas_spec, use_example=True*)

Bases: object

build_definitions_example()

Parse all definitions in the swagger specification.

build_one_definition_example(*def_name*)

Build the example for the given definition. :param def_name: Name of the definition.

Returns True if the example has been created, False if an error occurred.

static check_type(*value, type_def*)

Check if the value is in the type given in type_def. :param value: the var to test. :param type_def: string representing the type in swagger.

Returns True if the type is correct, False otherwise.

static get_definition_name_from_ref (*ref*)

Get the definition name of the given \$ref value(Swagger value). :param ref: ref value (ex: “#/definitions/CustomDefinition”)

Returns The definition name corresponding to the ref.

get_dict_definition (*dict, get_list=False*)

Get the definition name of the given dict. :param dict: dict to test. :param get_list: if set to true, return a list of definition that match the body.

if False, only return the first.

Returns The definition name or None if the dict does not match any definition. If get_list is True, return a list of definition_name.

get_example_from_prop_spec (*prop_spec, from_allof=False*)

Return an example value from a property specification. :param prop_spec: the specification of the property. :param from_allof: whether these properties are part of an

allof section

Returns An example value

get_path_spec (*path, action=None*)

Get the specification matching with the given path. :param path: path we want the specification. :param action: get the specification for the given action.

Returns A tuple with the base name of the path and the specification. Or (None, None) if no specification is found.

get_paths_data ()

Get data for each paths in the swagger specification. Get also the list of operationId.

get_request_data (*path, action, body=None*)

Get the default data and status code of the given path + action request. :param path: path of the request. :param action: action of the request(get, post, delete...) :param body: body sent, used to sent it back for post request.

Returns A tuple with the default response data and status code In case of default status_code, use 0

get_response_example (*resp_spec*)

Get a response example from a response spec.

get_send_request_correct_body (*path, action*)

Get an example body which is correct to send to the given path with the given action. :param path: path of the request :param action: action of the request (get, post, put, delete)

Returns A dict representing a correct body for the request or None if no body is required.

validate_additional_properties (*valid_response, response*)

Validates additional properties. In additional properties, we only need to compare the values of the dict, not the keys

Parameters

- **valid_response** – An example response (for example generated in `_get_example_from_properties(self, spec)`) Type is DICT
- **response** – The actual dict coming from the response Type is DICT

Returns A boolean - whether the actual response validates against the given example

validate_definition (*definition_name*, *dict_to_test*, *definition=None*)

Validate the given dict according to the given definition. :param definition_name: name of the the definition. :param dict_to_test: dict to test.

Returns True if the given dict match the definition, False otherwise.

validate_request (*path*, *action*, *body=None*, *query=None*)

Check if the given request is valid. Validates the body and the query # Rules to validate the BODY: # Let's limit this to mime types that either contain 'text' or 'json' # 1. if body is None, there must not be any required parameters in # the given schema # 2. if the mime type contains 'json', body must not be '', but can # be {} # 3. if the mime type contains 'text', body can be any string # 4. if no mime type ('consumes') is given.. DISALLOW # 5. if the body is empty ('' or {}), there must not be any required parameters # 6. if there is something in the body, it must adhere to the given schema # -> will call the validate body function

Parameters

- **path** – path of the request.
- **action** – action of the request(get, post, delete...).
- **body** – body of the request.
- **query** – dict with the query parameters.

Returns True if the request is valid, False otherwise.

class oastools.parse.parser.**OpenApiParser** (*path=None*)
Bases: object

Module contents

oastools.resolve package

Submodules

oastools.resolve.resolver module

resolver

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Date 2019-08-30

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class oastools.resolve.resolver.**Resolver** (*openapi_spec*, *path=None*)
Bases: object

oastools.resolve.resolver.**main**()

oastools.resolve.resolver.**resolve** (*path*, *rootpath*)

oastools.resolve.resolver.**traverse** (*spec*, *rootpath*, *callback=<function resolve>*)

Module contents

oastools.utils package

Submodules

oastools.utils.errors module

exception oastools.utils.errors.**Error** (*basemessage='Unspecified Error', message=''*)
Bases: `Exception`

exception oastools.utils.errors.**NotImplementedError** (*message=''*)
Bases: `oastools.utils.errors.Error`

An error to indicate that the requested operation has not yet been implemented

exception oastools.utils.errors.**ParseError** (*basemessage='ParserError', message=''*)
Bases: `oastools.utils.errors.Error`

oastools.utils.files module

class oastools.utils.files.**FileType**
Bases: `enum.Enum`

An enumeration.

JSON = 1

UNKWN = 0

YAML = 2

oastools.utils.files.**parse_file** (*path*)

Module contents

oastools.validate package

Module contents

Submodules

oastools.core module

oastools

Author Name <email>

Date 2019-8-28

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```

class oastools.core.ExampleClass (arg_1, arg_2, kwarg_1=None, kwarg_2=None)
    Bases: object

    Descripton of ExampleClass

    attr_1
        description of attr_1

        Type type of attr_1

    attr_2
        description of attr_2

        Type type of attr_2

    ...

    method_1 (arg_1, arg_2, kwarg_1=None, kwarg_2=None)
        Description of method_1

        Parameters

        • arg_1 (type of arg_1) – description of arg_1
        • arg_2 (type of arg_2) – description of arg_2
        • kwarg_1 (type of kwarg_1, optional) – description of kwarg_1
        • kwarg_2 (type of kwarg_2, optional) – description of kwarg_2
        • .. –

        Returns description of return value
        Return type type of return value
        Raises :obj:`type of raised exception(s)` – description of raised exceptions

```

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