
apicore Documentation

Release 1.0

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Set of core libraries usefull for building REST API and Microservices based on Flask.

The code is open source, release under MIT and written in Python 3.

```
apt-get install build-essential python3-dev  
pip install apicore
```


CHAPTER 1

Features

- Cross-origin resource sharing (CORS) ready
- Data caching with redis server or direct in memory
- Configuration file loader
- A simple Logger
- Raise exception conform to HTTP status codes
- Authorization using JSON Web Token(JWT) issued from an OpenID Connect provider
- OpenAPI 3.0 specification embedded with Swagger UI

CHAPTER 2

Example

```
#!/usr/bin/env python

from apicore import api, Logger, config, Http409Exception, Authorization

Logger.info("Starting {} API Server...".format(config.app_name))

@api.route('/error/')
def error():
    """
    summary: Raise an exception
    responses:
      409:
        description: Conflict
    """
    raise Http409Exception()

@api.route('/jwt/')
def jwt():
    userProfile = Authorization()
    print(userProfile);
    return "JWT Valid!"

if __name__ == "__main__":
    api.debug = config.debug
    api.run()
```


CHAPTER 3

Configuration

Configuration is set in `conf/config.yaml` file (see `apicore.config.Config`).

Name	Default value	Description
app_name	"Meezio"	Application's name.
debug	True	Active debug mode.
iss-Whitelist	None	Whitelist for OIDC issuers. If not set, every issuers are allowed except ones from blacklist.
issBlacklist	None	Blacklist for OIDC issuers. synaxte : same as 'iss' claim in the JWT.
prefix	""	Add a prefix to URL path (ie: "/api").
redis	None	Redis server used for caching data : <code>redis://:password@localhost:6379/0</code> . If not set use memory.
smtp_host	"localhost"	SMTP server used to sent email.
swagger-ui	"/"	Relative URL path to embedded Swagger UI (<code>prefix + swagger_ui</code>).
tokenExpire	True	Check 'exp' claim in JWT to validate token.

CHAPTER 4

OpenAPI 3.0

- See [specification](#) for syntax.
- Document route's methods with [Operation Object](#) using yaml syntax.
- Document your API in `conf/openapi.yaml` file.
- Access your documentation through a python dictionary : `api.oas.specs`.
- Your spec is available at `http[s]://<hostname>/openapi.json`.
- Default path to `http[s]://<hostname>/` to see your spec with Swagger UI (set `swagger_ui` in `conf/config.yaml` to change path)
- Full exemple :

```
@api.route('/sellers/<idseller>', methods=['GET', 'PUT'])
def seller(idseller):
    """
    description: "Path Item Object" level here, only common_responses is added to_
    ↪ OpenApi specification. Next level are "Operation Object".
    parameters:
      - name: idseller
        in: path
        description: uuid of seller
        required: true
        type: string
        format: uuid
    common_responses:
      400:
        description: Invalid request
      401:
        description: Authentication required
      403:
        description: Ressource access denied
      500:
        description: Server internal error
    ---
```

```
tags:
  - profile
summary: Find a seller profile by ID
responses:
  200:
    description: Success
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/Seller'
  404:
    description: Ressource does not exist
  406:
    description: Nothing to send maching Access-* headers
---
tags:
  - profile
summary: Update seller profile
requestBody:
  content:
    application/json:
      schema:
        $ref: '#/components/schemas/Seller'
      required: true
responses:
  200:
    description: Success
"""
pass

print(api.oas.spec)
```

5.1 api

`api` is the application, instance of `apicore.api.API` inherited from `flask.Flask`. It handle Cross-origin resource sharing (CORS) and JSON responde message (instead of HTML).

5.2 Authorization

5.3 cache

`cache` is an instance of `apicore.cache.Cache`

5.4 config

`config` is an instance of `apicore.config.Config`

5.5 Exceptions

5.6 Lang

5.7 Logger

Todo:

- i18n HTTP response messages.
 - Configure using command line argument and environment variables which override configuration file.
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