Behaviour Risk Model Algorithm (BRMA) Api
Design Doc

Input: (string)

GET/POST parameter: gps_data

desc: set of lines where each line have exactly three fields latitude, longitude and minutes spent at that location.

sample:

```
{'location':
        [
         {'duration': 120, 'latitude': 50.73858, 'longitude': 7.07873},
         {'duration': 120, 'latitude': 50.737204, 'longitude': 7.102983},
         {'duration': 120, 'latitude': 26.13, 'longitude': -80.32}
        ]
}
```

Output: (json)

desc: JSON consisting of:

a. __final__: the BRMA score ranging from 0 to 150

b. nimby_score: ranging from 0 to 50

c. yimby_score: ranging from 0 to 50

d. env_score: JSON consisting of:

* aqi: air quality score ranging from 0 to 12.5
* crime_score: ranging from 0 to 12.5

sample: {"brma_score": 69.25, "nimby_score": 0, "yimby_score": 50, "environment_score": {"normalized_environment_score": 19.25, "crime_rate": 6.375, "air_quality_index": 3.25}}

ProjectVision Error Codes:

100: `'invalid json'`
101: `'invalid value'`
102: `'missing value'`

Code Description:

repository: https://github.com/projectvision/healthapp-api2

command to run the api: *python web_api.py*

modules:

web_api: handler for get/post requests

scorer: computes nimby and yimby scores

env_scores: computes both the environment scores (aqi and crime)

crime_rate_api: interface for provide crime rates for a given lat/long

config: the yaml format file of yimby and nimby locations

requirements: list of required python libraries

templates/: containing the html

Procfile: heroku specific file for running the app

crime_rate.cc: utility script for parsing the crime date (not production relevant)

test_api: simple python script for demoing api usage.