



Design Of Backend API:

--->Backend contains:

- 1)api1.py
- 2)api2.py
- 3)queryGenerate.py

--->queryGenerate.py

- 1)takes url as parameter
- 2)parses parameters
 - {
 - screen_name,
 - text,
 - favourties_count,
 - retweet_count,
 - dateStartDate,
 - dateEndDate,
 - name/screen_name/textStartsWith,
 - name/text/screen_nameEndsWith,
 - name/screen_name/textContains,
 - name/screen_name/textExact,
- 3)makes a dictionary object populated with queries
 - {
 - for example:
 - dictionary={'\$and':[
 - {'text':'innovation'},
 - {'retweet_count':{'\$gt':20}},
 - {'nameStartsWith':{'\$regex':'^sa.*'}}
- 4)returns query(as dictionary obj)

--->api1.py:

- 1)In api1 only according to text given in parameters the data is filtered
- 2)retrieved results are exported to pandas dataFrame as .csv file

```
{
    df=pd.DataFrame(results)
    df.to_csv("output.csv",mode='w',encoding='utf-8',sep=',')
}
```

--->api2.py:

- 1)In api2 first filter is applied parameter given (either screen_name or text)
- 2)with that filtered data remaining filters (if there) are applied
- 3)query from queryGenerate module is directory fed to find method in mongoDB

```
{
    db.collection.find(dictionary)
}
```

- 4)retrieved results are exported to pandas dataFrame as .csv file

```
{
    df=pd.DataFrame(results)
    df.to_csv("output.csv",mode='w',encoding='utf-8',sep=',')
}
```

Technologies used:

Language--->python

Database--->mongoDB

DatabaseDriver--->Pymongo

Web Framework--->flask

*tweepy library is used to connect to twitter API

*Data Samples are from twitter Search Api

Execution:

```
>>python api2.py (for api2.py)
>>python api1.py (for api1.py)
>>mongod --dbpath <path to ~/data/db/>
```

Packages need to be installed to execute the program:

- 1)flask
- 2)python(Python 2.6.1)
- 3)pandas(v0.22.0),mongoDB(mongodb-linux-x86_64-ubuntu1604-3.6.2)
- 4)pymongo(v3.6.0)
- 5)tweepy(v3.5.0)

References:

- 1) <http://flask.pocoo.org/docs/0.12/>
- 2) <https://docs.mongodb.com/manual/reference/mongo-shell/>
- 3) <https://docs.python.org/2/library/>
- 4) <https://docs.mongodb.com/getting-started/python/client/>