Project Summary

What is your name?

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What area of the world you used for your project? Post a link to the map position and write a short description. Note that the osm file of the map should be at least 50MB.

URL: http://www.openstreetmap.org/export#map=11/42.3124/-70.9979

I chose Boston area because I lived there for while, I know the area and would like its map to be improved in quality!

Is there any other important information that you would want your project evaluator to know?

The purpose of these codes is to clean data, which gathered from open street map, which collected from http://www.openstreetmap.org/export#map=16/42.3739/-71.1051

As example.osm . Please read direction below to how to use this project folder.

Direction

Where to start?

Please find out manager.py and run this code. By running manager.py, a json file will be created in the directory called example.osm.json. After that I used command below

```
mongoimport -d map -c boston --file example.osm.json
```

to import my data to dabase called map and collection named boston

After that there is a file called dbinsert.py which contains mongodb queries

What is size of example.osm in this project?

It is 4.4 MB

What problems I faced working with this dataset?

I needed to convert dataset from

```
<node id="257489574" visible="true" version="3"
changeset="16874014" timestamp="2013-07-08T13:51:19Z"
user="Manu1400" uid="181135" lat="42.3744821" lon="-
71.1040915">
  <tag k="address" v="1493 Cambridge Street, Cambridge,
MA"/>
  <tag k="amenity" v="hospital"/>
  <tag k="attribution" v="Office of Geographic and
Environmental    Information (MassGIS), Commonwealth of
Massachusetts Executive Office of Environmental Affairs"/>
  <tag k="emergency" v="yes"/>
  <tag k="emergency_room" v="yes"/>
  <tag k="massgis:id" v="69"/>
  <tag k="name" v="Cambridge Health Alliance-Cambridge
Hospital"/>
  <tag k="short_name" v="Cambridge Hospital"/>
  <tag k="source_url"
v="http://mass.gov/mgis/hospitals.htm"/>
 </node>
```

To following json format


```
{    "amenity": "hospital",
    "attribution": "Office of Geographic and Environmental
Information (MassGIS), Commonwealth of Massachusetts Executive
Office of Environmental Affairs",
    "created": {
        "changeset": "16874014",
        "timestamp": "2013-07-08T13:51:19Z",
        "uid": "181135",
        "user": "Manu1400",
        "version": "3"
    },
    "emergency": "yes",
    "emergency_room": "yes",
    "id": "257489574",
    "massgis:id": "69",
    "name": "Cambridge Health Alliance-Cambridge Hospital",
    "pos": [
        42.3744821,
        -71.1040915
    ],
    "short_name": "Cambridge Hospital",
    "source_url": "http://mass.gov/mgis/hospitals.htm",
    "type": "node",
    "visible": "true" }
```

What type of question I asked from my dataset and what are their queries?

Find name of all restaurants and print their name and their cuisine

```
db.boston.find({"amenity":"restaurant"},{"name":1, "cuisine"
:1,"_id":0})
```

Find distinct values of amenity

```
db.boston.find({"amenity":{"$exists":1}},{"amenity":1,"_id":0}).d
istinct("amenity")
```

Count number of each amenity

```
db.boston.aggregate([{"$match":{"amenity":{"$exists":1}}},{"$grou
p":{"_id": "$amenity", "count":{"$sum":1}}}])
```

Get cafe's name and their addresses

```
db.boston.find({"address":{"$exists":1},"amenity":"cafe"},{"addre
ss":1,"name":1,"_id":0})
```

Find type and name of amenities are near by Harvard University Fine Arts Library

```
db.boston.find({"pos":{"$near":[42.3738824,-
71.1140051]},"amenity":{"$exists":1},"name":{"$exists":1}},{"name
":1,"amenity":1,"_id":0})
```