

Exercício 1

Objetivo

Esta atividade tem o objetivo de exercitar de maneira prática o que foi aprendido pelo aluno no contexto do MongoDB.

Sobre a base de dados

Neste laboratório você utilizará um dataset contendo informações sobre restaurantes. A coleção de restaurantes contém 3772 documentos. Cada documento contém informações sobre um único restaurante.

Veja um exemplo de documento de um dos restaurantes e entenda a estrutura/schema:

```
{
  "address": {
    "building": "1007",
    "coord": [ -73.856077, 40.848447 ],
    "street": "Morris Park Ave",
    "zipcode": "10462"
  },
  "borough": "Bronx",
  "cuisine": "Bakery",
  "grades": [
    { "date": { "$date": 1393804800000 }, "grade": "A", "score": 2 },
    { "date": { "$date": 1378857600000 }, "grade": "A", "score": 6 },
    { "date": { "$date": 1358985600000 }, "grade": "A", "score": 10 },
    { "date": { "$date": 1322006400000 }, "grade": "A", "score": 9 },
    { "date": { "$date": 1299715200000 }, "grade": "B", "score": 14 }
  ],
  "name": "Morris Park Bake Shop",
  "restaurant_id": "30075445"
}
```

Baixando a coleção

In [1]:

```
!wget https://www.w3resource.com/mongodb-exercises/restaurants.zip
!unzip -o restaurants.zip
!rm restaurants.zip
```

```
--2020-10-04 18:46:28-- https://www.w3resource.com/mongodb-exercise
s/restaurants.zip
Resolving www.w3resource.com (www.w3resource.com)... 172.67.69.127,
104.26.15.93, 104.26.14.93, ...
Connecting to www.w3resource.com (www.w3resource.com)|172.67.69.127
|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 262722 (257K) [application/zip]
Saving to: 'restaurants.zip'
```

```
restaurants.zip      100%[=====>] 256.56K  --.-KB/s
in 0.03s
```

```
2020-10-04 18:46:28 (7.35 MB/s) - 'restaurants.zip' saved [262722/26
2722]
```

```
Archive:  restaurants.zip
  inflating: restaurants.json
```

Importando a coleção para o MongoDB

Utilizaremos o `mongoimport` para importar a coleção `restaurants.json`. Mais informações sobre esta ferramenta podem ser encontradas em

<https://docs.mongodb.com/manual/reference/program/mongoimport/#bin.mongoimport>
(<https://docs.mongodb.com/manual/reference/program/mongoimport/#bin.mongoimport>).

Modifique o comando abaixo, alterando o nome do banco de dados e da coleção para nomes de sua preferência.

In [2]:

```
!mongoimport --db exercicio1 --collection restaurants --drop --file $(pwd)/resta
urants.json
```

```
2020-10-04T18:49:37.177+0000    connected to: mongodb://localhost/
2020-10-04T18:49:37.178+0000    dropping: exercicio1.restaurants
2020-10-04T18:49:37.986+0000    3772 document(s) imported successf
ly. 0 document(s) failed to import.
```

Opções para fazer consultas no dataset

Usando Python

In [3]:

```
from pymongo import MongoClient
from pprintpp import pprint
import warnings
warnings.filterwarnings('ignore')
mongoclient = MongoClient('localhost', 27017)
db = mongoclient.exerciciol
print(db)
```

```
Database(MongoClient(host=['localhost:27017'], document_class=dict,
tz_aware=False, connect=True), 'exerciciol')
```

In [4]:

```
db.restaurants.find({}).count()
```

Out[4]:

3772

Mongo Shell

In [5]:

```
! mongo --quiet --eval 'db.restaurants.find().count();' exerciciol
```

3772

Mongo Shell e Python

In [6]:

```
documento_busca = {
}

! mongo --quiet --eval "db.restaurants.find().count();" exerciciol
```

3772

Questões Exemplo

[Questão Exemplo A] Mostre um documento qualquer da coleção restaurants

In [7]:

```
result = db.restaurants.find({}).limit(1)
pprint( list(result) )
```

```
[
  {
    '_id': ObjectId('5f7a1941d9051e2349415a2d'),
    'address': {
      'building': '1007',
      'coord': [-73.856077, 40.848447],
      'street': 'Morris Park Ave',
      'zipcode': '10462',
    },
    'borough': 'Bronx',
    'cuisine': 'Bakery',
    'grades': [
      {
        'date': datetime.datetime(2014, 3, 3, 0, 0),
        'grade': 'A',
        'score': 2,
      },
      {
        'date': datetime.datetime(2013, 9, 11, 0, 0),
        'grade': 'A',
        'score': 6,
      },
      {
        'date': datetime.datetime(2013, 1, 24, 0, 0),
        'grade': 'A',
        'score': 10,
      },
      {
        'date': datetime.datetime(2011, 11, 23, 0, 0),
        'grade': 'A',
        'score': 9,
      },
      {
        'date': datetime.datetime(2011, 3, 10, 0, 0),
        'grade': 'B',
        'score': 14,
      },
    ],
    'name': 'Morris Park Bake Shop',
    'restaurant_id': '30075445',
  },
]
```

[Questão Exemplo B] Encontre o documento referente ao restaurante de nome "Kosher Island"

In [8]:

```

result = db.restaurants.find({"name": "Kosher Island"})
pprint( list(result) )

[
  {
    '_id': ObjectId('5f7a1941d9051e2349415a32'),
    'address': {
      'building': '2206',
      'coord': [-74.1377286, 40.6119572],
      'street': 'Victory Boulevard',
      'zipcode': '10314',
    },
    'borough': 'Staten Island',
    'cuisine': 'Jewish/Kosher',
    'grades': [
      {
        'date': datetime.datetime(2014, 10, 6, 0, 0),
        'grade': 'A',
        'score': 9,
      },
      {
        'date': datetime.datetime(2014, 5, 20, 0, 0),
        'grade': 'A',
        'score': 12,
      },
      {
        'date': datetime.datetime(2013, 4, 4, 0, 0),
        'grade': 'A',
        'score': 12,
      },
      {
        'date': datetime.datetime(2012, 1, 24, 0, 0),
        'grade': 'A',
        'score': 9,
      },
    ],
    'name': 'Kosher Island',
    'restaurant_id': '40356442',
  },
]

```

Questões a serem resolvidas

[Questão 1] Mostre o nome de todos os restaurantes sem repetir. Separadamente, mostre também todos os tipos distintos de cozinhas.

In [10]:

```
result = db.restaurants.distinct("name")  
list(result)
```

Out[10]:

```
['(Lewis Drug Store) Locanda Vini E Olii',  
'1 East 66Th Street Kitchen',  
'101 Deli',  
'101 Restaurant And Bar',  
'1020 Bar',  
'104-01 Foster Avenue Coffee Shop(Ups)',  
'10Th Avenue Pizza & Cafe',  
'111 Restaurant',  
'15 East Restaurant',  
'200 Fifth Avenue Restaurant & Sports Bar',  
'21 Club',  
'2A',  
'3 Deli & Grill',  
'3 Guys',  
'3 Guys Resturant',  
'42Nd Street Pizza Diner',  
'44 & X Hell'S Kitchen',  
'44 Sw Ristorante & Bar',  
'5 Burro Cafe',  
'525 Lex Restaurant & Bar',  
'7 Stars',  
'71 Irving Place',  
'7B Bar',  
'7Th Avenue Donut Shop',  
'810 Deli & Cafe',  
'9024/Catering By Michael Schick Inc.',  
'9Th Ave Saloon',  
'A & B Deli & Catering',  
'A & S Pizzeria',  
'A Salt & Battery',  
'A-1 Pizza Shop',  
'A.J. Pizzeria',  
'Abigael'S On Broadway',  
'Abir Halal Restaurant',  
'Abitino'S Pizza',  
'Absolute Bagels',  
'Academy Restaurent',  
'Acappella Restaurant',  
'Acapulco Deli & Restaurant',  
'Ace Bar',  
'Acme Bar & Grill',  
'Acqua',  
'Acqua Santa',  
'Acquista Trattoria',  
'Adria Hotel',  
'Adrian & Rocky'S Caterers',  
'Afghan Kebab House',  
'Afghan Kebab House #1',  
'African Market (Baboon Cafe)',  
'African Terrace',  
'Africana Restaurant',  
'Afternoone'S Restaurant',  
'Agave',  
'Agra Restaurant',  
'Ah! Chihuahua',  
'Air France Lounge',  
'Air India Lounge',  
'Airport Deli',  
'Ajanta India',
```

'Ajisen Ramen',
'Akiyama Japanese Restaurant',
'Al Cholo Bakery',
'Al Di La',
'Al Forno',
'Al-Dente',
'Al-Mehran Restaurant',
'Aladdin',
'Alba Pizza',
'Alba'S Pizza',
'Albany Manor',
'Albella Ristorante & Bar',
'Aldo'S Ii Pizza And Restaurant',
'Alex'S Kitchen',
'Alfonso'S Bar',
'Alfonso'S Pastry Shoppe',
'Ali'S Roti Shop',
'Alibaba',
'Alibi Club',
'Alice'S Tea Cup',
'Alices',
'Aliotta Bake Shop',
'All American Coffee Shop',
'All American Deli',
'Allan'S Bakery',
'Alma',
'Almar',
'Alpha Donuts',
'Alta',
'Alyshia Aleem Coffee Shop',
'Am',
'Amaranth',
'Amazon Cafe',
'Ambassador Diner',
'Ambassador Dining Room At Saratoga Family Inn',
'Ambassador Theatre',
'Ambrosinos Pizzeria',
'Amelia'S Restaurant',
'Amerada Hess Express Cafe',
'American Airlines Employee Cafeteria',
'American Coffee Shop',
'American Express',
'American Hero & Sub'S',
'American Museum Of Natural History Food Court',
'Americas Burger And Wraps',
'Americas Restorante',
'Amf 34 Avenue Lanes',
'Amma',
'Amnon Kosher Pizza',
'Amore Pizzeria & Restaurant',
'Amsterdam Billiards',
'Amsterdam Restaurant & Tapas Lounge',
'Amy'S Bread',
'An Beal Bocht Cafe',
'Andre'S Hungarian',
'Andrew'S Coffee Shop',
'Andrew'S Diner',
'Andrews Coffee Shop',
'Andy'S Cafeteria',
'Anesis Cafe',
'Angel Flakes Patties',

'Angelica Kitchen',
"Angelica'S Bakery",
'Angelika Film Center',
'Angelo Of Mulberry St.',
"Angelo'S Pizzeria/Mimmo'S Restaurant",
'Anglers Club Of New York',
'Angry Wades',
'Anna Maria Pizza Pasta',
"Anna'S Cafe",
'Annam Braham Restaurant',
'Annelies Pastries',
"Annie Moore'S Restaurant",
"Annie'S Kitchen",
'Anopoli Family Restaurant',
'Anotheroom',
"Anthony'S Place",
'Antica Trattoria',
'Antojitos Mexicanos',
"Antonio'S Pizza",
"Antun'S",
'Anyway Cafe',
'Anyway Cafe Bar',
'Apollo Bakery',
'Appetito Restaurant',
"Applebaum'S",
"Applebee'S Neighborhood Grill & Bar",
'Aqua Grill',
'Aquamarina',
'Aqueduct North',
'Arabelle',
'Archer Sports Bar',
'Archives',
'Areo Restaurant',
"Aretsky'S Patroon",
'Arharn Thai Cuisine',
'Ariana Kebab House',
'Arirang Hibachi Steak House',
'Arirang Hibachi Steakhouse',
'Ariyoshi Japanese Restaurant',
'Arka Lounge',
"Arlene'S Grocery",
"Armando'S Pizza",
'Arno Ristorante',
'Arriba Arriba',
'Arte Cafe',
'Arte Restaurant',
"Arthur'S Tavern",
"Artie'S",
'Artisanal',
"Arturo'S",
"Arturo'S Pizza",
'Artuso Pastry Shop',
'Arzu Restaurant',
"Ashby'S Specialty",
'Astoria Bagel Shop',
'Astra',
'Astral Fitness & Wellness',
'Astro Restaurant',
'Astromundo Restaurant',
'Atlantic Grill',
'Atlantis Diner',

'Au Bon Pain',
'Auction House',
"Aunt Bella'S Rest Of Little Neck",
"Auntie Anne'S Pretzels",
'Austin House',
"Austin'S Steak & Ale House",
'Automatic Slims',
'Avellino Restaurant',
'Avra Estiatorio',
'Ayurveda Cafe',
'Azalea',
'Azuri Cafe',
'Azusa Of Japan',
'B & M Hot Bagel & Grocery',
'B. Smith Restaurant',
'B.B. Kings',
'B.Q.E. Cafe Billiards',
'B66 Club',
'Babbo Ristorante E Enoteca',
"Baby Bo'S Burritos",
'Back To Nature',
'Bad Boys Pizza',
'Bagel Bazaar',
"Bagel Bob'S",
'Bagel Cafe',
'Bagel Club',
'Bagel Corner',
'Bagel Deli / Village Green Deli',
'Bagel Depot',
'Bagel House',
'Bagel Land',
'Bagel Shoppe',
'Bagel Works',
'Bagelman Of Woodside',
'Bagels & Cream Deli',
'Bagels Deli',
'Bagels Etc',
'Bagels N Buns',
'Bahari Estiatorio',
'Bahia Restaurant & Cafe',
'Bais Rochel',
'Bake And Things Restaurant',
'Baker Street Pub',
"Baker'S Dozen Bagel",
'Bali Nusa Indonesian Restaurant',
"Ballato'S Restaurant",
'Ballfields Cafe',
'Bally Total Fitness',
'Balthazar Bakery',
'Balthazar Restaurant',
'Bamboo Garden',
'Bamboo Garden Restaurant',
"Bamonte'S Restaurant",
'Bangal Curry',
'Bangkok Grand Palace',
'Bangkok Thai House',
'Bank Of New York',
'Bank Of New York Cafe',
'Banshee Pub',
'Bar 515',
'Bar Association Of The City Of Ny Kitchen',

'Bar Coastal',
'Bar None',
'Bar Six',
'Bar Tabac',
'Bar Toto',
'Bar Veloce',
'Bar Vetro',
'Baraonda',
'Barbaresco',
'Barbes',
'Barbetta Restaurant',
"Barclay'S Capital",
'Barfly',
'Bari Sandwich Shop',
'Barios Pizza & Restaurant',
'Barnes & Noble Booksellers',
'Barnes & Noble Cafe',
'Barney Greengrass',
'Barone Pizza',
'Barracuda Bar',
'Barrage',
'Barranquilla Bakery & Restaurant',
'Barre Cafe At Steps',
'Barries Restaurant',
"Barrow'S Pub",
'Bartow Pizza',
'Baskin Robbins',
'Bassett Caterers',
'Basta Pasta Restaurant',
'Bateaux New York',
'Bay Pizzeria Restaurant',
'Bay Ridge Manor Catering',
'Baybridge Szechuan Restaurant',
'Bayridge Pizza',
'Beauty Bar',
'Beaver Pond',
'Becco',
'Bedford Cafe & Restaurant',
"Behan'S Pub",
'Bel Paese Italian Deli',
'Bel-Aire Diner',
'Belaire Cafe',
'Belasco Theatre',
'Bella Blu',
'Bella Luna',
'Bella Napoli',
'Bello Giardino',
'Bello Restaurant',
'Bellrose Deli',
'Belmora Pizza & Restaurant',
'Belvedere Cafe',
'Ben Ash Delicatessen',
"Ben'S Deli",
"Ben'S Kosher Deli & Restaurant",
"Ben'S Pizza",
'Ben-Best Deli & Restaurant',
'Benjamin',
"Bennie'S Thai Cafe",
"Benny'S Burritos",
"Benny'S Famous Pizza",
'Bennys Burritos',

'Bergen Bagels',
'Bergen Beach Cafe',
'Berkely',
'Bermy Luncheonette',
'Bernard B Jacobs Theater',
'Best Deli Cafe',
'Beth Torah Kosher Caterers',
'Beyoglu',
'Biarritz Bakery',
'Bicheiros Bar',
'Big Al'S Chicago Pizza",
'Big Als Chicago Pizza',
'Big Bar',
'Big Daddy'S Diner",
'Big Jons Pizza & Restaurant',
'Big New York Fried Chicken',
'Bijan'S",
'Bill'S Restaurant",
'Billiard Company',
'Billy'S Sport Bar Restaurant & Lounge",
'Billymarks West',
'Birdland',
'Bistro Citron',
'Bistro Les Amis',
'Bistro Ten-18',
'Bits Bite & Baguettes',
'Black And White',
'Black Fat Pussy Cat',
'Black Rock Cafe',
'Black Whale',
'Blake & Todd',
'Blanches @ Dkny',
'Blarney Bar',
'Blarney Castle',
'Blarney Rock',
'Blarney Stone',
'Bleecker Street Bar',
'Blimpie',
'Bliss Bakery & Cafe',
'Bliss Street Station Restaurant',
'Blockhead'S Burritos",
'Blockhead'S Mexican Diner",
'Blockheads',
'Blockheads Burritos',
'Blondies',
'Blue & Gold Bar',
'Blue & Gray Inn',
'Blue Bay Diner',
'Blue Bay Restaurant',
'Blue Diner',
'Blue Fin',
'Blue Hill Restaurant',
'Blue Mountain Restaurant & Jerk Center',
'Blue Note Jazz',
'Blue Ribbon',
'Blue Ribbon Brasserie',
'Blue Ribbon Sushi',
'Blue Smoke',
'Blue Water Grill',
'Bluestockings Womens Bookstore Cafe',
'Bobby Van'S",

"Bobby'S Coffee Shop",
'Bocca',
'Bocca Di Bacco',
'Bocelli',
'Bombay Masala',
'Bond St',
'Bonelle Pastry Shop',
"Bonnie'S Grill",
"Bono'S Cafe",
'Book Chang Dong Sodndubu',
'Booth Theater',
'Boots & Saddle Bar',
'Boston Jerk-City Restaurant',
'Boston Market',
'Boston Pizza',
'Botanica Bar',
'Bottino',
'Boulevard Tavern',
'Bourbon Street',
'Bowery Eletric',
'Bowler Land',
'Bowlmor Chelsea Piers',
'Box Car Lounge',
"Brady'S Bar",
"Brandy'S Piano Bar",
'Brasserie Athenee',
'Brasserie Les Halles',
"Braulio'S & Family Restaurant",
'Bravo Cafe Concert',
'Bravo Pizza',
'Brazil Grill',
'Bread',
'Bread Market Cafe',
"Brendan'S",
'Brennan & Carr',
'Bricco Restaurant',
'Bridgeview Diner',
'Brioso Ristorante',
'Broadhurst Theater',
'Broadway Bagel',
'Broadway Dive',
'Broadway Lounge',
'Broadway Pizza & Pasta',
'Broadway Restaurant',
'Broadway Station',
'Broadway Theatre',
'Bronx Grill',
'Brooklyn Botanic Catering Hall',
'Brooklyn Diner',
'Brooklyn Ice Cream Factory',
'Brooklyn Moon Cafe',
'Brooklyn Pizza',
'Brooklyn Pizza Ii',
'Brooks Atkinson Theater',
'Broome Street Bar',
"Brother Jimmy'S Bbq",
'Brunos On The Boulevard',
"Bubby'S",
'Buccaneer Diner',
"Buddy'S Burrito & Taco Bar",
"Buddy'S Wonder Bar",

'Bull Head Tavern',
'Bull Mccabes',
'Bull Shots',
"Bully'S Deli",
'Bum Bum Bar',
'Bungalow Bar & Restaurant',
'Buona Notte Ristorante',
'Buono Bakery',
"Burek'S Pizza",
'Burger Barn Restaurant',
'Burger Heaven',
'Burger King',
'Burger King/Metro Mall',
'Burgers & Cupcakes',
"Burke'S Pub",
'Burrito Box',
'Burrito Loco',
'Bus Stop Cafe',
'Buzz',
'C & B Luncheonette',
'C & C Catering',
'C & C Catering Service',
'C.U.N.Y Cafe',
'Cabana',
"Caesar'S Palace",
'Cafe 101',
'Cafe 101 16Th Floor Cafeteria',
'Cafe 212/Columbia Catering Kitchen - Alfred Lerner Hall',
'Cafe 31',
'Cafe 75 Bar',
'Cafe Al Mercato',
"Cafe Amore'S Restaurant",
'Cafe Angelique',
'Cafe Angus',
'Cafe Asean',
'Cafe Atelier (Art Students League)',
'Cafe Bar',
'Cafe Bella Vita',
'Cafe Beyond',
'Cafe Bonjour',
'Cafe Borgia Ii',
'Cafe Bravo',
'Cafe Buon Gusto',
'Cafe Capri',
'Cafe Cardini',
'Cafe Cello Deli',
'Cafe Champignon',
'Cafe Duke',
'Cafe Edison',
'Cafe Eighty Two',
'Cafe Espanol',
'Cafe Express',
'Cafe Frida',
'Cafe Gitane',
'Cafe Joul',
'Cafe K',
'Cafe Lalo',
"Cafe Lou'S",
'Cafe Loup',
'Cafe Luka',
'Cafe Luluc',

'Cafe Luna',
'Cafe Luxembourg',
'Cafe Madison',
'Cafe Mae Mae',
'Cafe Metro',
'Cafe Mogador',
'Cafe Ole Usa',
'Cafe Orlin',
'Cafe Paris',
'Cafe Rakka',
'Cafe Renaissance',
'Cafe Riazor',
'Cafe Ronda',
'Cafe Rustico Ii',
'Cafe Sabarsky',
'Cafe Spice',
'Cafe Steinhof',
'Cafe Un Deux Trois',
'Cafe Volna',
'Cafe Zaiya',
'Cafeteria',
'Cafeteria- Lirr Employees',
'Caffe Buon Gusto',
'Caffe Dante',
'Caffe Egidio',
'Caffe Grazie',
'Caffe Linda',
'Caffe Napoli',
'Caffe Palermo',
'Caffe Reggio',
'Caffe Roma',
'Caffe Venezia',
'Caffe Vivaldi',
'Caffe' Romeo",
'Caffee Express',
'Caliente Cab Co',
'Cambridge Caterers',
'Camilles',
'Campagnola Restaurant',
'Campanile',
'Campeon',
'Campus Center Cafeteria',
'Campus Eatery',
'Canaletto Ristorante',
'Canard Inc',
'Candies Bar',
'Candle Bar',
'Candle Cafe',
'Canlon'S Restaurant",
'Canyon Road Grill',
'Capitol Restaurant',
'Cappuccino Cafe',
'Capri Bakery',
'Capri Ii Pizza',
'Capri Pizza Restaurant',
'Caprice',
'Captain'S Pizzeria And Restaurant",
'Cara Mia',
'Caravan Chicken',
'Caravan Of Dreams',
'Caribbean Sports',

'Caridad',
'Caridad Restaurant',
'Carleton Lounge - Mudd Building',
'Carlos Pizza',
'Carlow East',
'Carmine'S',
'Carmine'S Restaurant',
'Carnegie Delicatessen & Restaurant',
'Carol'S Cafe',
'Caroline'S On Broadway',
'Carom Cafe Billiards',
'Carry On Tea & Sympathy',
'Caruso Pizza #2',
'Caruso Pizzeria & Restaurant',
'Carvel',
'Carvel Ice Cream',
'Casa',
'Casa Bella',
'Casa Java',
'Casa Pepe',
'Casa Promesa',
'Casabianca Pizzeria',
'Casanova Restaurant',
'Cascarino'S',
'Cascarino'S Pizza',
'Cassidy'S Ale House',
'Cassis Bistro/Brasserie',
'Castlehill Diner',
'Catania'S Pizza Cafe',
'Caterina'S Pizza',
'Caterina'S Pizzeria',
'Cavallo'S Pizzeria',
'Cavatappo Grill',
'Cavo',
'Cbs Employee Cafeteria',
'Cea Lo Cafe',
'Cebu',
'Celeste'S Snack Bar',
'Central Cafe',
'Central Park Boathouse',
'Cha Cha'S Backyard Garden Bar & Cafe',
'Chadash Falafel & Pizza',
'Chadwick'S',
'Champ Gourmet',
'Champ'S Deli',
'Champion Bakery',
'Chan'S Kitchen',
'Chap A Nosh/Yun Kee',
'Charle'S Corner Restaurant & Deli',
'Charles Pizzeria',
'Charlie'S Mom Chinese Restaurant',
'Charlies Sports Bar',
'Charo Restaurant',
'Chase Edr',
'Che Bella Pizza',
'Checkers',
'Chef Ho'S',
'Cheito Duran Deli Grocery',
'Chelsea Square Restaurant',
'Chelsea Trattoria',
'Chen'S Chinese',

'Cherokee Deli',
'Cherry Tavern',
'Chez Jaqueline',
'Chez Josephine',
'Chez Napoleon',
"Chic-Fil-A, Quiznos Subs, Jw'S, Tossed",
'Chick-N-Ribs',
'Chicken Delicious',
'Chicken Festival',
'Chicken Holiday Express',
'Chickpea',
'China Chalet',
'China Fun',
'China Glatt',
'China Grill',
'China New Star',
'China Wok Ii',
'Chinantla',
'Chirping Chicken',
'Chiu Hong Bakery',
'Cho Dang Gol',
'Cho-Sen Garden',
"Chock Full O' Nuts",
"Chop'T",
'Chopstix Restaurant',
'Choy Le Chinese Restaurant',
"Christie'S",
"Christina'S Restaurant",
"Chuck E Cheese'S",
'Churrascaria Plataforma',
'Ciao Bella',
"Cibar - Lady Mendl'S Tea Salon",
'Cibo',
'Cilantro',
'Cindy Restaurant Luncheonette',
'Cinema Cafe & Bar',
'Cinema The Brasserie',
'Cinnabon World Famous Cinnamon Rolls',
'Cipriani Dolci',
'Cipriani Downtown Restaurant',
'Circa Tabac',
'Circle In The Square Theatre',
'Circle Pizzeria',
"Circle'S Grill",
'Circo Pastry Shop',
'Circo Restaurant',
'Ciro Pizza',
"Ciro'S Pizza Restaurant",
'Ciros Pastry Shop',
'Citibank Employee Cafeteria',
'Citibank Executive Conference Center',
'Citrus Bar & Grill',
'City Chow Cafe',
'City Chow Cafe V (Equinox)',
'City College Cafeteria',
'City Crab',
'City Hall Restaurant',
'City Island Deli',
'City Island Diner /Snug Bar',
'City Lobster & Steak',
'City Market Cafe',

'City Pie',
"Cj Sullivan'S",
'Claddagh Inn',
"Clark'S Restaurant",
'Classic Coffee Shop',
'Cleary Gottlieb',
"Cleopatra'S Needle",
'Clinton Restaurant',
'Clinton Street Baking Company',
'Cloister Cafe',
'Club 101',
'Club Macanudo (Cigar Bar)',
'Club Metropolitan',
'Cobblestone Pub',
'Cocktail Room (Nyac)',
"Cody'S Ale House Grill",
'Coffee Express',
'Coffee Shop',
'Coliseum Bar Restaurant',
'Collado Restaurant',
'Colonnade Diner',
'Colony Club',
'Columbo Yogurt/ Taco Bell/ Nathans/ Tim Horton/Pizza Hut',
'Columbus Citizens Foundation',
'Columbus Gourmet Food',
'Columbus House',
'Comic Strip',
'Community Food And Juice',
'Como Pizza',
'Concession # 110',
'Concession # 120/ The Bullpen',
'Concession Stand 330',
'Concourse Jamaican Bakery',
'Connecticut Muffin',
"Connie O'S",
"Connolly'S",
"Connolly'S Corner",
"Connolly'S Pub",
'Constantines Deli',
"Conti'S",
'Continental Luncheonette & Deli',
'Convivium Osteria',
"Coogan'S",
"Cookie'S Lounge",
'Cool Zone',
'Cooper Town Diner',
'Coopers Tavern',
'Copper Kettle',
"Coppola'S",
'Coral Diner',
'Corato I Pizza & Restaurant',
'Corato Pizza Ii',
'Cornelia Street Cafe',
'Corner Bistro',
'Corner Cafe And Bakery',
'Corner Gourmet Ii',
'Cort Theatre',
'Cositas Ricas',
'Cosmos Restaurant',
'Costco Wholesale',
'Country Donuts',

'Court Order',
'Court Square Diner',
'Courtyard By Marriott',
"Cousin John'S Cafe And Bakery",
'Cowgirl Hall Of Fame',
'Coyote Ugly',
'Cozy Soup & Burger',
'Crab Shanty',
'Craft',
"Cranberry'S",
'Cravath Cafe',
'Create & Go',
'Creative Cakes',
'Creative Edge Caterers',
'Credit Agricole',
'Credit Agricole-Cbi Executive Room',
'Crescent Corner',
"Crif Dogs / Please Don'T Tell",
'Criminal Court Bldg Cafeteria',
'Cronin & Phelan Pub & Restaurant',
'Crossbay Diner',
'Crossroads (Marriott Marquis)',
'Crosstown Diner',
'Crown Diner',
'Crown Fried Chicken',
'Crown Gourmet Deli',
'Crystal Curry House',
'Crystal Manor',
'Crystal Palace',
'Crystal Room',
'Cuccios Bakery',
'Cuchifrito',
'Cuchifritos',
'Cucina Di Pesce',
'Cucina Gourmet',
'Cucina Vivolo',
'Culinart Cafe',
"Cullen'S Tavern",
'Cup & Saucer',
'Curry In A Hurry',
"Curves Gentleman'S Club",
'D & P Restaurant & Cocktail',
"D'Angelo'S Pizzeria And Restaurant",
"D'Aquila Bakery",
'D.B.A. ',
'Da Marino Restaurant',
'Da Mikelle Ii',
'Da Nico Restaurant',
'Da Rosina Restaurant',
'Da Silvano Restaurant',
'Da Tommasso',
'Da Umberto Restaurant',
'Da Vinci Pizza',
"Daddy'S",
'Dagan Pizza',
'Dagan Pizza & Dairy Restaurant',
'Dairy Luncheonette',
'Dairy Palace',
'Dakota Diner',
'Dallas Bbq',
'Dan Tempura',

'Dancing Crane Cafe (Bx Zoo)',
"Dangerfield'S Night Club",
'Dani Pizza And Restaurant',
'Daniel',
"Daniel'S Bagel",
"Daniello'S Pizzeria",
'Danny Blaine',
"Danny'S Deli",
"Danny'S Pizzeria & Cafe",
"Danny'S Pizzeria Ii",
"Dante'S Gourmet Food",
"Dave'S Tavern",
'Davis Polk Dining Room',
'Dazies Restaurant',
'Db Bistro Moderne',
'De Robertis Pastry Shop',
"Deacon Brodie'S",
'Death & Co',
"Deb'S",
'Debevoise & Plimpton',
"Defonte'S Sandwich Shop",
'Del Corso Pizzeria',
"Del Frisco'S",
'Deli Plus (Inside Port Authority Station)',
'Delias Lounge Cafe',
'Delight Donut',
'Delmonico Gourmet',
"Delmonico'S Kitchen",
'Delmonicos',
'Delta Grill',
'Deluxe',
'Demarchelier Restaurant',
"Dempsey'S Pub",
"Denino'S Pizzeria Tavern",
"Dennis' Place",
"Denny'S Pub",
"Desmond'S Tavern",
'Desseo Night Club',
'Deux Amis',
'Devasthanam Canteen',
'Devon & Blakely',
"Di Luvio'S Deli",
'Diamante Poblano Restaurant',
"Digby'S",
'Dim Sum Go Go',
'Dinastia China',
'Diner',
'Dining Room',
"Dino'S Pizza & Pasta",
'Distilled',
'Dive 75',
'Dive Bar',
'Divers Cove',
'Diwan-E- Khaas',
'Diwan-E-Khaas',
"Dizzy'S Restaurant",
'Dj Reynolds Pub And Restaurant',
'Do Hwa',
'Doc Holidays',
'Doc Watsons',
'Doc Wine Bar',

'Dock Street Bar & Grill',
'Dojo Restaurant',
'Dolcino Trattoria Toscana',
"Dominick'S Bar & Restaurant",
"Domino'S Pizza",
'Don Alex Restaurant',
'Don Coqui',
'Don Filippo Restaurant',
'Don Giovanni Restaurant',
'Don Paco Lopez Panderia',
'Don Pedro Restaurant',
'Don Pepi Pizza',
'Don Pepis Delicatessen',
'Don Peppe',
"Donato'S Pizzeria Restaurant",
"Donohue'S Steak House",
'Donut Pub',
'Donut Stop',
'Doral Donuts',
"Dorrian'S Red Hand Restaurant",
'Dosa Hutt',
'Double Dragon',
'Douglaston Club',
'Douglaston Golf Snacks',
'Down The Hatch',
'Down Town Association',
'Downtown Bakery Ii Mexican Food',
'Downtown Deli',
"Doyle'S Corner",
'Dragon City',
'Dragon Land Bakery',
'Dream Pizza',
'Dublin 6',
'Due',
"Duffy'S",
"Duke'S",
'Dunkin Donuts',
"Dunkin' Donuts",
"Dunkin' Donuts Baskin Robbins",
"Dunkin' Donuts Baskin Robbins",
"Dunkin' Donuts, Baskin Robbins",
"Dunkin' Donuts/Baskin Robbins",
"Dunkin' Donuts/Baskin Robins",
"Dunkin' Donuts/Baskin' Robbins",
"Dunkin' Donuts/Subway",
'Dyckman Bar',
'Dyckman Express Restaurant',
'Dyker Beach Golf (Grill Room)',
'Dyker Park Bagels',
"Dylan'S Candybar",
'Dynasty',
'E & L Bakery & Coffee Shop',
'E-Dah Korean Bbq Lounge',
'E.A.T. Cafe',
'E.J Luncheonette',
'Ear Inn',
'East Dynasty',
'East Japanese Restaurant/ Bar',
'East Of Eighth',
'Eastwood Manor',
'Eat-A-Bagel (Andrew J. Barbery Ferry Boat)',

'Eatery Restaurant',
'Ebe Ye Yie African Restaurant',
"Edward'S",
"Egger'S Ice Cream Parlor",
'Egyptian Coffee Shop',
'El Aguila Bakery',
'El Anzuelo Fino Restaurant',
'El Azteca Mexican Restaurant',
'El Boqueron Tapas Bar & Restaurant',
'El Buen Ambiente',
'El Cantinero',
'El Caramelo Coffee Shop',
'El Caribe',
'El Castillo De Jagua Rest',
'El Castillo De Madison',
'El Centro',
'El Charro Bakery',
'El Charro Espanol',
"El Chivito D'Oro Iii",
'El Continental Restaurant',
'El Cuencanito',
'El Dorado Cafe',
'El Dorado Sports Lounge',
'El Familiar Restaurant',
'El Gauchito Restaurant',
'El Greco Diner',
'El Hornero Bakery',
'El Lina Restaurant',
'El Loco Burrito',
'El Malecon Restaurant',
'El Mariachi Restaurant',
'El Molino Rojo Restaurant',
'El Nuevo Amanecer Restaurant',
'El Nuevo Ambiente Restaurant',
'El Nuevo Cafe Latino',
'El Nuevo Conquistador',
'El Olivo',
'El Paraiso Bar & Restaurant',
'El Pollo Peruano',
'El Pote Espanol',
'El Pulgarcito De America',
'El Ranchito De Daisy',
'El Rey De La Caridad',
'El Rey Mexican Restaurant',
'El Rinconcito Restaurant',
'El Rio Grande',
'El Rumbero Bar Restaurant',
'El Salvador Restaurant',
'El Sitio Restaurant',
'El Tina Fish Market & Seafood Restaurant',
'El Vaquero Barras',
'Elegante Pizza',
"Eleni'S New York",
'Elephant & Castle',
'Elia',
'Elias Corner For Fish',
"Elio'S",
"Ellen'S Stardust Diner",
'Elmhurst Famous Pizza',
'Elmo',
'Elora Restaurant',

```
'Emerald Pub',  
"Emilia'S Restaurant",  
'Emilio Iii Bar',  
'Empire Szechuan Noodle House',  
'Empire Szechuan Village',  
'Empire Wok Kitchen',  
'Emporium Brasil Restaurant',  
"Enid'S",  
'Ennju',  
'Enzo Cafe',  
'Erawan Thai Cuisine',  
"Erin'S Isle",  
'Erminia Restaurant',  
'Ernst & Young Cafe',  
"Errol'S Bakery",  
'Esca',  
'Escuelita Club',  
'Esperanto',  
'Ess-A-Bagel',  
'Essex',  
'Estancia 460',  
'Estelle',  
'Estiatorio Milos',  
'Estihaya Asian Restaurant',  
'Ethel Barrymore Theater',  
'Ethos Greek Cuisine',  
...]
```

In [12]:

```
resultB = db.restaurants.distinct("cuisine")  
list(resultB)
```


Out[12]:

```
['Afghan',  
'African',  
'American ',  
'Armenian',  
'Asian',  
'Bagels/Pretzels',  
'Bakery',  
'Bangladeshi',  
'Barbecue',  
'Bottled beverages, including water, sodas, juices, etc.',  
'Brazilian',  
'Café/Coffee/Tea',  
'Café/Coffee/Tea',  
'Caribbean',  
'Chicken',  
'Chinese',  
'Chinese/Cuban',  
'Chinese/Japanese',  
'Continental',  
'Czech',  
'Delicatessen',  
'Donuts',  
'Eastern European',  
'Egyptian',  
'English',  
'Ethiopian',  
'Filipino',  
'French',  
'German',  
'Greek',  
'Hamburgers',  
'Hotdogs',  
'Ice Cream, Gelato, Yogurt, Ices',  
'Indian',  
'Indonesian',  
'Irish',  
'Italian',  
'Japanese',  
'Jewish/Kosher',  
'Juice, Smoothies, Fruit Salads',  
'Korean',  
'Latin (Cuban, Dominican, Puerto Rican, South & Central American)',  
'Mediterranean',  
'Mexican',  
'Middle Eastern',  
'Moroccan',  
'Not Listed/Not Applicable',  
'Other',  
'Pakistani',  
'Pancakes/Waffles',  
'Peruvian',  
'Pizza',  
'Pizza/Italian',  
'Polish',  
'Portuguese',  
'Russian',  
'Salads',  
'Sandwiches',  
'Sandwiches/Salads/Mixed Buffet',
```

```
'Seafood',  
'Soul Food',  
'Soups & Sandwiches',  
'Spanish',  
'Steak',  
'Tapas',  
'Tex-Mex',  
'Thai',  
'Turkish',  
'Vegetarian',  
'Vietnamese/Cambodian/Malaysia']
```

[Questão 2] Mostre o nome e o tipo de cozinha de 5 restaurantes quaisquer sem exibir o campo "_id"

In [13]:

```
result = db.restaurants.find({},  
                               {"_id": 0,  
                                "name": 1,  
                                "cuisine": 1}).limit(5)  
list(result)
```

Out[13]:

```
[{'cuisine': 'Bakery', 'name': 'Morris Park Bake Shop'},  
 {'cuisine': 'Hamburgers', 'name': 'Wendy'S'},  
 {'cuisine': 'Irish', 'name': 'Dj Reynolds Pub And Restaurant'},  
 {'cuisine': 'Jewish/Kosher', 'name': 'Tov Kosher Kitchen'},  
 {'cuisine': 'American ', 'name': 'Brunos On The Boulevard'}]
```

[Questão 3] Mostre 5 restaurantes no bairro "Bronx"

In [14]:

```
result = db.restaurants.find({"borough": "Bronx"}).limit(5)
list(result)
```

Out[14]:

```
{['_id': ObjectId('5f7a1941d9051e2349415a2d'),
  'address': {'building': '1007',
              'coord': [-73.856077, 40.848447],
              'street': 'Morris Park Ave',
              'zipcode': '10462'},
  'borough': 'Bronx',
  'cuisine': 'Bakery',
  'grades': [{'date': datetime.datetime(2014, 3, 3, 0, 0),
              'grade': 'A',
              'score': 2},
             {'date': datetime.datetime(2013, 9, 11, 0, 0), 'grade': 'A', 'score': 6},
             {'date': datetime.datetime(2013, 1, 24, 0, 0), 'grade': 'A', 'score': 10},
             {'date': datetime.datetime(2011, 11, 23, 0, 0), 'grade': 'A', 'score': 9},
             {'date': datetime.datetime(2011, 3, 10, 0, 0), 'grade': 'B', 'score': 14}],
  'name': 'Morris Park Bake Shop',
  'restaurant_id': '30075445'},
{'_id': ObjectId('5f7a1941d9051e2349415a37'),
  'address': {'building': '2300',
              'coord': [-73.8786113, 40.8502883],
              'street': 'Southern Boulevard',
              'zipcode': '10460'},
  'borough': 'Bronx',
  'cuisine': 'American ',
  'grades': [{'date': datetime.datetime(2014, 5, 28, 0, 0),
              'grade': 'A',
              'score': 11},
             {'date': datetime.datetime(2013, 6, 19, 0, 0), 'grade': 'A', 'score': 4},
             {'date': datetime.datetime(2012, 6, 15, 0, 0), 'grade': 'A', 'score': 3}],
  'name': 'Wild Asia',
  'restaurant_id': '40357217'},
{'_id': ObjectId('5f7a1941d9051e2349415a4d'),
  'address': {'building': '1236',
              'coord': [-73.8893654, 40.81376179999999],
              'street': '238 Spofford Ave',
              'zipcode': '10474'},
  'borough': 'Bronx',
  'cuisine': 'Chinese',
  'grades': [{'date': datetime.datetime(2013, 12, 30, 0, 0),
              'grade': 'A',
              'score': 8},
             {'date': datetime.datetime(2013, 1, 8, 0, 0), 'grade': 'A', 'score': 10},
             {'date': datetime.datetime(2012, 6, 12, 0, 0), 'grade': 'B', 'score': 15}],
  'name': 'Happy Garden',
  'restaurant_id': '40363289'},
{'_id': ObjectId('5f7a1941d9051e2349415a51'),
  'address': {'building': '1006',
              'coord': [-73.84856870000002, 40.8903781],
              'street': 'East 233 Street',
              'zipcode': '10466'},
  'borough': 'Bronx',
  'cuisine': 'Ice Cream, Gelato, Yogurt, Ices',
```

```

'grades': [{'date': datetime.datetime(2014, 4, 24, 0, 0),
          'grade': 'A',
          'score': 10},
{'date': datetime.datetime(2013, 9, 5, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2013, 2, 21, 0, 0), 'grade': 'A', 'score': 9},
{'date': datetime.datetime(2012, 7, 3, 0, 0), 'grade': 'A', 'score': 11},
{'date': datetime.datetime(2011, 7, 11, 0, 0), 'grade': 'A', 'score': 5}],
'name': 'Carvel Ice Cream',
'restaurant_id': '40363093'},
{'_id': ObjectId('5f7a1941d9051e2349415a5c'),
'address': {'building': '277',
'coord': [-73.8941893, 40.8634684],
'street': 'East Kingsbridge Road',
'zipcode': '10458'},
'borough': 'Bronx',
'cuisine': 'Chinese',
'grades': [{'date': datetime.datetime(2014, 3, 3, 0, 0),
          'grade': 'A',
          'score': 10},
{'date': datetime.datetime(2013, 9, 26, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2013, 3, 19, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2012, 8, 29, 0, 0), 'grade': 'A', 'score': 11},
{'date': datetime.datetime(2011, 8, 17, 0, 0), 'grade': 'A', 'score': 13}],
'name': 'Happy Garden',
'restaurant_id': '40364296'}}

```

[Questão 4] Altere o tipo de cozinha do restaurante "Kosher Island" para "Sea food"

In [15]:

```

db.restaurants.update(
    { "name": "Kosher Island"},
    { "$set": { "cuisine": "Sea food"} })

```

Out[15]:

```
{'n': 1, 'nModified': 1, 'ok': 1.0, 'updatedExisting': True}
```

[Questão 5] Mostre e remova o(s) restaurante(s) com zipcode "10314"

In [16]:

```
result3 = db.restaurants.find({"address.zipcode": "10314"})  
list(result3)
```

Out[16]:

```
{['_id': ObjectId('5f7a1941d9051e2349415a32'),
  'address': {'building': '2206',
              'coord': [-74.1377286, 40.6119572],
              'street': 'Victory Boulevard',
              'zipcode': '10314'},
  'borough': 'Staten Island',
  'cuisine': 'Sea food',
  'grades': [{'date': datetime.datetime(2014, 10, 6, 0, 0),
              'grade': 'A',
              'score': 9},
             {'date': datetime.datetime(2014, 5, 20, 0, 0), 'grade': 'A', 'score': 12},
             {'date': datetime.datetime(2013, 4, 4, 0, 0), 'grade': 'A', 'score': 12},
             {'date': datetime.datetime(2012, 1, 24, 0, 0), 'grade': 'A', 'score': 9}],
  'name': 'Kosher Island',
  'restaurant_id': '40356442'},
{'_id': ObjectId('5f7a1941d9051e2349415a52'),
  'address': {'building': '2491',
              'coord': [-74.1459332, 40.6103714],
              'street': 'Victory Boulevard',
              'zipcode': '10314'},
  'borough': 'Staten Island',
  'cuisine': 'Delicatessen',
  'grades': [{'date': datetime.datetime(2015, 1, 9, 0, 0),
              'grade': 'A',
              'score': 3},
             {'date': datetime.datetime(2013, 12, 5, 0, 0), 'grade': 'A', 'score': 10},
             {'date': datetime.datetime(2013, 6, 19, 0, 0), 'grade': 'A', 'score': 10},
             {'date': datetime.datetime(2013, 1, 8, 0, 0), 'grade': 'A', 'score': 11}],
  'name': 'Bagels N Buns',
  'restaurant_id': '40363427'},
{'_id': ObjectId('5f7a1941d9051e2349415a92'),
  'address': {'building': '1758',
              'coord': [-74.1220973, 40.6129407],
              'street': 'Victory Boulevard',
              'zipcode': '10314'},
  'borough': 'Staten Island',
  'cuisine': 'Pizza/Italian',
  'grades': [{'date': datetime.datetime(2014, 11, 20, 0, 0),
              'grade': 'A',
              'score': 5},
             {'date': datetime.datetime(2014, 1, 13, 0, 0), 'grade': 'B', 'score': 14},
             {'date': datetime.datetime(2013, 4, 25, 0, 0), 'grade': 'A', 'score': 10},
             {'date': datetime.datetime(2012, 10, 9, 0, 0), 'grade': 'A', 'score': 4},
             {'date': datetime.datetime(2012, 5, 2, 0, 0), 'grade': 'B', 'score': 22}],
  'name': "Joe & Pat'S Pizzeria",
  'restaurant_id': '40365454'},
{'_id': ObjectId('5f7a1941d9051e2349415b7a'),
  'address': {'building': '2055',
              'coord': [-74.1321, 40.612660000000001],
```

```

    'street': 'Victory Boulevard',
    'zipcode': '10314'},
    'borough': 'Staten Island',
    'cuisine': 'American ',
    'grades': [{ 'date': datetime.datetime(2014, 11, 6, 0, 0),
        'grade': 'B',
        'score': 25},
        { 'date': datetime.datetime(2014, 5, 6, 0, 0), 'grade': 'B', 'score': 20},
        { 'date': datetime.datetime(2013, 1, 26, 0, 0), 'grade': 'A', 'score': 13},
        { 'date': datetime.datetime(2011, 12, 17, 0, 0), 'grade': 'A', 'score': 7}],
    'name': "Schaffer'S Tavern",
    'restaurant_id': '40371771'},
    { '_id': ObjectId('5f7a1941d9051e2349415b80'),
      'address': { 'building': '275',
        'coord': [-74.1235473, 40.6215341],
        'street': 'Martling Ave',
        'zipcode': '10314'},
        'borough': 'Staten Island',
        'cuisine': 'American ',
        'grades': [{ 'date': datetime.datetime(2014, 4, 9, 0, 0),
            'grade': 'A',
            'score': 5},
            { 'date': datetime.datetime(2013, 1, 16, 0, 0), 'grade': 'A', 'score': 13},
            { 'date': datetime.datetime(2012, 1, 6, 0, 0), 'grade': 'A', 'score': 11}],
        'name': 'Exclusive Catering',
        'restaurant_id': '40372016'},
        { '_id': ObjectId('5f7a1941d9051e2349415bd6'),
          'address': { 'building': '0',
            'coord': [-84.1899005, 39.7642657],
            'street': 'Memorial Ice Skating',
            'zipcode': '10314'},
            'borough': 'Staten Island',
            'cuisine': 'American ',
            'grades': [{ 'date': datetime.datetime(2014, 2, 14, 0, 0),
                'grade': 'A',
                'score': 12},
                { 'date': datetime.datetime(2012, 2, 18, 0, 0), 'grade': 'A', 'score': 8}],
            'name': 'War Memorial Ice Skating Rink',
            'restaurant_id': '40376583'},
            { '_id': ObjectId('5f7a1941d9051e2349415c66'),
              'address': { 'building': '3115',
                'coord': [-74.16303719999999, 40.60731],
                'street': 'Victory Boulevard',
                'zipcode': '10314'},
                'borough': 'Staten Island',
                'cuisine': 'Pizza',
                'grades': [{ 'date': datetime.datetime(2014, 8, 7, 0, 0),
                    'grade': 'B',
                    'score': 21},
                    { 'date': datetime.datetime(2014, 1, 7, 0, 0), 'grade': 'A', 'score': 13},
                    { 'date': datetime.datetime(2012, 10, 9, 0, 0), 'grade': 'A', 'score': 13},
                    { 'date': datetime.datetime(2011, 10, 18, 0, 0), 'grade': 'A', 'score': 4}],

```



```

'name': "Pizza D'Oro",
'restaurant_id': '40383945'},
{'_id': ObjectId('5f7a1941d9051e2349415c78'),
'address': {'building': '2210',
'coord': [-74.1369752, 40.6118922],
'street': 'Victory Boulevard',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'Pizza',
'grades': [{'date': datetime.datetime(2015, 1, 7, 0, 0),
'grade': 'A',
'score': 8},
{'date': datetime.datetime(2013, 12, 5, 0, 0), 'grade': 'A', 'score': 12},
{'date': datetime.datetime(2013, 4, 25, 0, 0), 'grade': 'B', 'score': 17}],
'name': 'Dairy Palace',
'restaurant_id': '40385543'},
{'_id': ObjectId('5f7a1941d9051e2349415c8b'),
'address': {'building': '921',
'coord': [-74.1485484, 40.6248044],
'street': 'Richmond Avenue',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'American ',
'grades': [{'date': datetime.datetime(2015, 1, 15, 0, 0),
'grade': 'A',
'score': 12},
{'date': datetime.datetime(2014, 5, 20, 0, 0), 'grade': 'B', 'score': 20},
{'date': datetime.datetime(2013, 9, 18, 0, 0), 'grade': 'A', 'score': 7},
{'date': datetime.datetime(2013, 4, 4, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2012, 6, 28, 0, 0), 'grade': 'A', 'score': 12}],
'name': 'Dakota Diner',
'restaurant_id': '40385974'},
{'_id': ObjectId('5f7a1941d9051e2349415cbb'),
'address': {'building': '280',
'coord': [-74.1386716, 40.6160213],
'street': 'Watchogue Road',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'American ',
'grades': [{'date': datetime.datetime(2014, 7, 15, 0, 0),
'grade': 'B',
'score': 19},
{'date': datetime.datetime(2013, 12, 3, 0, 0), 'grade': 'B', 'score': 25},
{'date': datetime.datetime(2013, 5, 7, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2012, 6, 19, 0, 0), 'grade': 'A', 'score': 9},
{'date': datetime.datetime(2011, 12, 1, 0, 0), 'grade': 'B', 'score': 15},
{'date': datetime.datetime(2011, 7, 26, 0, 0), 'grade': 'C', 'score': 36}],
'name': 'Jimmy Max Restaurant',
'restaurant_id': '40387243'},
{'_id': ObjectId('5f7a1941d9051e2349415d62'),

```

```

    'address': {'building': '151',
    'coord': [-74.16906999999999, 40.60375],
    'street': 'Signs Road',
    'zipcode': '10314'},
    'borough': 'Staten Island',
    'cuisine': 'American ',
    'grades': [{'date': datetime.datetime(2014, 8, 28, 0, 0),
    'grade': 'A',
    'score': 12},
    {'date': datetime.datetime(2013, 7, 29, 0, 0), 'grade': 'C', 'score': 2},
    {'date': datetime.datetime(2012, 6, 20, 0, 0), 'grade': 'A', 'score': 4}],
    'name': 'Hillside Swimming Club',
    'restaurant_id': '40391824'},
{'_id': ObjectId('5f7a1941d9051e2349415dbb'),
'address': {'building': '2655',
'coord': [-74.1660553, 40.5823983],
'street': 'Richmond Avenue',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'Chinese',
'grades': [{'date': datetime.datetime(2014, 9, 24, 0, 0),
'grade': 'Z',
'score': 26},
{'date': datetime.datetime(2013, 9, 4, 0, 0), 'grade': 'A', 'score': 7},
{'date': datetime.datetime(2013, 3, 21, 0, 0), 'grade': 'C', 'score': 3},
{'date': datetime.datetime(2012, 1, 25, 0, 0), 'grade': 'A', 'score': 12}],
'name': 'Master Wok',
'restaurant_id': '40394394'},
{'_id': ObjectId('5f7a1941d9051e2349415e04'),
'address': {'building': '1660',
'coord': [-74.162854, 40.60778699999999],
'street': 'Richmond Avenue',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'Hamburgers',
'grades': [{'date': datetime.datetime(2014, 6, 3, 0, 0),
'grade': 'A',
'score': 10},
{'date': datetime.datetime(2013, 5, 23, 0, 0), 'grade': 'A', 'score': 12},
{'date': datetime.datetime(2012, 6, 5, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2011, 12, 27, 0, 0), 'grade': 'C', 'score': 52}],
'name': "Mcdonald'S",
'restaurant_id': '40395935'},
{'_id': ObjectId('5f7a1941d9051e2349415e9e'),
'address': {'building': '2187',
'coord': [-74.16253999999999, 40.594092],
'street': 'Richmond Avenue',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'American ',
'grades': [{'date': datetime.datetime(2013, 12, 5, 0, 0),
'grade': 'A',
'score': 9},

```

```

    {'date': datetime.datetime(2013, 3, 20, 0, 0), 'grade': 'A', 'score': 8},
    {'date': datetime.datetime(2012, 6, 16, 0, 0), 'grade': 'A', 'score': 12},
    {'date': datetime.datetime(2011, 6, 16, 0, 0), 'grade': 'A', 'score': 13},
    {'date': datetime.datetime(2011, 1, 14, 0, 0), 'grade': 'A', 'score': 9}],
    'name': "Henny'S Restaurant",
    'restaurant_id': '40398948'},
{'_id': ObjectId('5f7a1941d9051e2349415ee1'),
 'address': {'building': '1975',
 'coord': [-74.129932, 40.612816],
 'street': 'Victory Boulevard',
 'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'American ',
 'grades': [{'date': datetime.datetime(2014, 11, 6, 0, 0),
 'grade': 'Z',
 'score': 38},
 {'date': datetime.datetime(2013, 8, 17, 0, 0), 'grade': 'A', 'score': 13},
 {'date': datetime.datetime(2012, 7, 17, 0, 0), 'grade': 'A', 'score': 12},
 {'date': datetime.datetime(2012, 3, 10, 0, 0), 'grade': 'A', 'score': 10}],
 'name': "Legend'S Pub",
 'restaurant_id': '40400556'},
{'_id': ObjectId('5f7a1941d9051e2349415f04'),
 'address': {'building': '768',
 'coord': [-74.12184789999999, 40.608629000000001],
 'street': 'Manor Road',
 'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Pizza',
 'grades': [{'date': datetime.datetime(2014, 11, 6, 0, 0),
 'grade': 'A',
 'score': 13},
 {'date': datetime.datetime(2014, 4, 9, 0, 0), 'grade': 'A', 'score': 13},
 {'date': datetime.datetime(2013, 8, 6, 0, 0), 'grade': 'A', 'score': 11},
 {'date': datetime.datetime(2012, 6, 5, 0, 0), 'grade': 'A', 'score': 11},
 {'date': datetime.datetime(2011, 12, 3, 0, 0), 'grade': 'A', 'score': 13}],
 'name': 'Village Maria Pizza Ii',
 'restaurant_id': '40400898'},
{'_id': ObjectId('5f7a1941d9051e2349415f0e'),
 'address': {'building': '770',
 'coord': [-74.1219048, 40.6085365],
 'street': 'Manor Road',
 'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Chinese',
 'grades': [{'date': datetime.datetime(2014, 7, 22, 0, 0),
 'grade': 'A',
 'score': 13},
 {'date': datetime.datetime(2014, 1, 7, 0, 0), 'grade': 'A', 'score': 12},
 {'date': datetime.datetime(2013, 12, 10, 0, 0), 'grade': 'P', 'score': 12}],

```

```

ore': 3},
  {'date': datetime.datetime(2013, 4, 25, 0, 0), 'grade': 'B', 'score': 25},
  {'date': datetime.datetime(2012, 8, 8, 0, 0), 'grade': 'B', 'score': 23},
  {'date': datetime.datetime(2011, 12, 22, 0, 0), 'grade': 'B', 'score': 25},
  {'date': datetime.datetime(2011, 8, 10, 0, 0), 'grade': 'B', 'score': 22}],
  'name': 'Happy Fortune Ii',
  'restaurant_id': '40401094'},
{'_id': ObjectId('5f7a1941d9051e2349415fa9'),
 'address': {'building': '957',
  'coord': [-74.1305762, 40.6129841],
  'street': 'Jewett Avenue',
  'zipcode': '10314'},
  'borough': 'Staten Island',
  'cuisine': 'American ',
  'grades': [{'date': datetime.datetime(2014, 9, 11, 0, 0),
    'grade': 'A',
    'score': 10},
  {'date': datetime.datetime(2014, 3, 12, 0, 0), 'grade': 'A', 'score': 10},
  {'date': datetime.datetime(2012, 12, 26, 0, 0), 'grade': 'A', 'score': 13},
  {'date': datetime.datetime(2011, 12, 3, 0, 0), 'grade': 'A', 'score': 13}],
  'name': 'The Cake Chef',
  'restaurant_id': '40424709'},
{'_id': ObjectId('5f7a1941d9051e2349415fba'),
 'address': {'building': '1899',
  'coord': [-74.127349, 40.612969],
  'street': 'Victory Boulevard',
  'zipcode': '10314'},
  'borough': 'Staten Island',
  'cuisine': 'Bakery',
  'grades': [{'date': datetime.datetime(2013, 12, 4, 0, 0),
    'grade': 'A',
    'score': 13},
  {'date': datetime.datetime(2012, 12, 11, 0, 0), 'grade': 'A', 'score': 12}],
  'name': "Alfonso'S Pastry Shoppe",
  'restaurant_id': '40423819'},
{'_id': ObjectId('5f7a1941d9051e2349416011'),
 'address': {'building': '950',
  'coord': [-74.131142, 40.613148],
  'street': 'Jewett Avenue',
  'zipcode': '10314'},
  'borough': 'Staten Island',
  'cuisine': 'Hamburgers',
  'grades': [{'date': datetime.datetime(2015, 1, 16, 0, 0),
    'grade': 'A',
    'score': 2},
  {'date': datetime.datetime(2014, 8, 7, 0, 0), 'grade': 'A', 'score': 13},
  {'date': datetime.datetime(2014, 2, 24, 0, 0), 'grade': 'A', 'score': 5},
  {'date': datetime.datetime(2012, 12, 19, 0, 0), 'grade': 'A', 'score': 5}],
  'name': 'Burger King',
  'restaurant_id': '40513416'},

```

```

{'_id': ObjectId('5f7a1941d9051e2349416030'),
 'address': {'building': '2800',
 'coord': [-74.15198199999999, 40.6009948],
 'street': 'Victory Boulevard',
 'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Café/Coffee/Tea',
 'grades': [{'date': datetime.datetime(2014, 11, 18, 0, 0),
 'grade': 'A',
 'score': 5},
 {'date': datetime.datetime(2013, 11, 21, 0, 0), 'grade': 'A', 'score': 10},
 {'date': datetime.datetime(2012, 7, 31, 0, 0), 'grade': 'A', 'score': 11},
 {'date': datetime.datetime(2012, 3, 21, 0, 0), 'grade': 'A', 'score': 7}],
 'name': 'Food For Thought Library Cafe',
 'restaurant_id': '40516511'},
{'_id': ObjectId('5f7a1941d9051e2349416041'),
 'address': {'building': '2800',
 'coord': [-74.15198199999999, 40.6009948],
 'street': 'Victory Boulevard',
 'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'American ',
 'grades': [{'date': datetime.datetime(2014, 11, 18, 0, 0),
 'grade': 'A',
 'score': 12},
 {'date': datetime.datetime(2013, 11, 6, 0, 0), 'grade': 'A', 'score': 3},
 {'date': datetime.datetime(2012, 7, 6, 0, 0), 'grade': 'A', 'score': 13},
 {'date': datetime.datetime(2012, 2, 22, 0, 0), 'grade': 'A', 'score': 4}],
 'name': 'Campus Center Cafeteria',
 'restaurant_id': '40516509'},
{'_id': ObjectId('5f7a1941d9051e234941608b'),
 'address': {'building': '2845',
 'coord': [-74.1678299, 40.577238],
 'street': 'Richmond Avenue',
 'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Chinese',
 'grades': [{'date': datetime.datetime(2014, 9, 8, 0, 0),
 'grade': 'A',
 'score': 12},
 {'date': datetime.datetime(2014, 3, 4, 0, 0), 'grade': 'A', 'score': 6},
 {'date': datetime.datetime(2013, 2, 25, 0, 0), 'grade': 'A', 'score': 13},
 {'date': datetime.datetime(2012, 6, 12, 0, 0), 'grade': 'A', 'score': 9},
 {'date': datetime.datetime(2011, 11, 1, 0, 0), 'grade': 'B', 'score': 15}],
 'name': 'Jade Island Restaurant',
 'restaurant_id': '40536227'},
{'_id': ObjectId('5f7a1941d9051e2349416103'),
 'address': {'building': '3785',
 'coord': [-74.18227569999999, 40.5975538],
 'street': 'Victory Boulevard',
 'zipcode': '10314'},

```

```

    'borough': 'Staten Island',
    'cuisine': 'American ',
    'grades': [{ 'date': datetime.datetime(2014, 4, 22, 0, 0),
                  'grade': 'A',
                  'score': 12},
                { 'date': datetime.datetime(2013, 1, 30, 0, 0), 'grade': 'A', 'score': 5},
                { 'date': datetime.datetime(2012, 5, 24, 0, 0), 'grade': 'A', 'score': 8},
                { 'date': datetime.datetime(2011, 12, 22, 0, 0), 'grade': 'A', 'score': 2}],
    'name': 'Mug Shots',
    'restaurant_id': '40550262'},
{'_id': ObjectId('5f7a1941d9051e23494161b5'),
 'address': { 'building': '2795',
              'coord': [-74.1674401, 40.5769947],
              'street': 'Richmond Avenue',
              'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Hamburgers',
 'grades': [{ 'date': datetime.datetime(2014, 11, 18, 0, 0),
               'grade': 'A',
               'score': 7},
             { 'date': datetime.datetime(2013, 11, 6, 0, 0), 'grade': 'A', 'score': 13},
             { 'date': datetime.datetime(2013, 1, 16, 0, 0), 'grade': 'A', 'score': 7}],
 'name': "Mcdonald'S",
 'restaurant_id': '40571705'},
{'_id': ObjectId('5f7a1941d9051e23494161fe'),
 'address': { 'building': '3785',
              'coord': [-74.18227569999999, 40.5975538],
              'street': 'Victory Boulevard',
              'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Chicken',
 'grades': [{ 'date': datetime.datetime(2014, 11, 8, 0, 0),
               'grade': 'A',
               'score': 11},
             { 'date': datetime.datetime(2014, 4, 24, 0, 0), 'grade': 'A', 'score': 12},
             { 'date': datetime.datetime(2013, 1, 17, 0, 0), 'grade': 'A', 'score': 12},
             { 'date': datetime.datetime(2012, 6, 9, 0, 0), 'grade': 'A', 'score': 10}],
 'name': 'Chicken Holiday Express',
 'restaurant_id': '40579745'},
{'_id': ObjectId('5f7a1941d9051e23494162a2'),
 'address': { 'building': '2505',
              'coord': [-74.1673983, 40.5865347],
              'street': 'Richmond Avenue',
              'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Café/Coffee/Tea',
 'grades': [{ 'date': datetime.datetime(2014, 3, 26, 0, 0),
               'grade': 'A',
               'score': 10},
             { 'date': datetime.datetime(2013, 1, 31, 0, 0), 'grade': 'A', 'score': 2},
             { 'date': datetime.datetime(2011, 12, 12, 0, 0), 'grade': 'A', 'score': 2}],

```

```

'name': 'Starbucks Coffee',
'restaurant_id': '40602872'},
{'_id': ObjectId('5f7a1941d9051e23494162d9'),
'address': {'building': '446',
'coord': [-74.16489229999999, 40.5897778],
'street': 'Nome Avenue',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'Pizza/Italian',
'grades': [{'date': datetime.datetime(2014, 11, 20, 0, 0),
'grade': 'A',
'score': 5},
{'date': datetime.datetime(2014, 2, 26, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2013, 6, 4, 0, 0), 'grade': 'A', 'score': 7},
{'date': datetime.datetime(2012, 4, 16, 0, 0), 'grade': 'A', 'score': 13}],
'name': 'Barios Pizza & Restaurant',
'restaurant_id': '40609705'},
{'_id': ObjectId('5f7a1941d9051e23494162da'),
'address': {'building': '2557',
'coord': [-74.16819079999999, 40.5854225],
'street': 'Richmond Avenue',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'Hamburgers',
'grades': [{'date': datetime.datetime(2015, 1, 15, 0, 0),
'grade': 'A',
'score': 11},
{'date': datetime.datetime(2014, 5, 20, 0, 0), 'grade': 'A', 'score': 7},
{'date': datetime.datetime(2013, 3, 1, 0, 0), 'grade': 'A', 'score': 3},
{'date': datetime.datetime(2012, 9, 11, 0, 0), 'grade': 'A', 'score': 10},
{'date': datetime.datetime(2012, 3, 27, 0, 0), 'grade': 'A', 'score': 12}],
'name': 'Burger King',
'restaurant_id': '40609680'},
{'_id': ObjectId('5f7a1941d9051e2349416308'),
'address': {'building': '1451',
'coord': [-74.1586641, 40.612597],
'street': 'Richmond Avenue',
'zipcode': '10314'},
'borough': 'Staten Island',
'cuisine': 'American ',
'grades': [{'date': datetime.datetime(2014, 4, 7, 0, 0),
'grade': 'A',
'score': 3},
{'date': datetime.datetime(2013, 1, 31, 0, 0), 'grade': 'A', 'score': 3},
{'date': datetime.datetime(2012, 1, 9, 0, 0), 'grade': 'A', 'score': 13}],
'name': "Applebee'S Neighborhood Grill & Bar",
'restaurant_id': '40620427'},
{'_id': ObjectId('5f7a1941d9051e2349416354'),
'address': {'building': '28030',
'coord': [-74.1629372, 40.5806591],
'street': 'Marsh Avenue',
'zipcode': '10314'},

```

```

    'borough': 'Staten Island',
    'cuisine': 'Ice Cream, Gelato, Yogurt, Ices',
    'grades': [{ 'date': datetime.datetime(2014, 5, 20, 0, 0),
                  'grade': 'A',
                  'score': 12},
                { 'date': datetime.datetime(2013, 4, 1, 0, 0), 'grade': 'A', 'score': 11},
                { 'date': datetime.datetime(2012, 4, 5, 0, 0), 'grade': 'A', 'score': 7}],
    'name': 'Carvel Ice Cream',
    'restaurant_id': '40639953'},
{'_id': ObjectId('5f7a1941d9051e23494164c0'),
 'address': { 'building': '1775',
               'coord': [-74.1928099, 40.6000765],
               'street': 'South Avenue',
               'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Pizza',
 'grades': [{ 'date': datetime.datetime(2014, 12, 16, 0, 0),
               'grade': 'B',
               'score': 16},
             { 'date': datetime.datetime(2014, 6, 25, 0, 0), 'grade': 'C', 'score': 32},
             { 'date': datetime.datetime(2013, 3, 12, 0, 0), 'grade': 'A', 'score': 10}],
 'name': "Chuck E Cheese'S",
 'restaurant_id': '40716299'},
{'_id': ObjectId('5f7a1941d9051e2349416639'),
 'address': { 'building': '26',
               'coord': [-74.1668698, 40.588193],
               'street': 'Richmond Hill Road',
               'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Hamburgers',
 'grades': [{ 'date': datetime.datetime(2014, 5, 19, 0, 0),
               'grade': 'A',
               'score': 9},
             { 'date': datetime.datetime(2013, 3, 12, 0, 0), 'grade': 'A', 'score': 7},
             { 'date': datetime.datetime(2011, 12, 12, 0, 0), 'grade': 'A', 'score': 3}],
 'name': "Wendy'S",
 'restaurant_id': '40782999'},
{'_id': ObjectId('5f7a1941d9051e2349416695'),
 'address': { 'building': '1445',
               'coord': [-74.1574104, 40.6117346],
               'street': 'Richmond Avenue',
               'zipcode': '10314'},
 'borough': 'Staten Island',
 'cuisine': 'Pizza',
 'grades': [{ 'date': datetime.datetime(2013, 12, 5, 0, 0),
               'grade': 'A',
               'score': 10},
             { 'date': datetime.datetime(2013, 4, 27, 0, 0), 'grade': 'B', 'score': 16},
             { 'date': datetime.datetime(2012, 5, 18, 0, 0), 'grade': 'B', 'score': 17},
             { 'date': datetime.datetime(2011, 12, 7, 0, 0), 'grade': 'A', 'score': 12},
             { 'date': datetime.datetime(2011, 7, 20, 0, 0), 'grade': 'A', 'score': 10}],

```


<https://hub.gke2.mybinder.org/user/thedatasociety-lab-mongodb-z0s7wrhc/lab>

```
ore': 11}],  
  'name': 'Lorenzos Bar & Grill (Hilton Garden)',  
  'restaurant_id': '40854101']}]
```

In [17]:

```
db.restaurants.remove({"address.zipcode": "10314"})  
list(result3)
```

Out[17]:

```
[]
```

[Questão 6] Adicione um campo status ao restaurante cujo nome é "Riviera Caterer". Status="demolido".

In [18]:

```
db.restaurants.update({"name": "Riviera Caterer"}, {"$set": {"status": "Demolido"}})
```

Out[18]:

```
{'n': 1, 'nModified': 1, 'ok': 1.0, 'updatedExisting': True}
```

[Questão Extra] Adicione um restaurante seguindo a estrutura de documentos da coleção

In []:

[Questão Extra] Adicione um campo cidade do restaurante criado anteriormente para "Ilheus"

In []:

[Questão Extra] Mostre o nome de todos os restaurantes que receberam pelo menos uma avaliação A