

1. db.colRestaurants.getIndexes()

```
dbRestaurants> db.colRestaurants.getIndexes()
[ { v: 2, key: { _id: 1 }, name: '_id_' } ]
```

2. 3772 documents were examined

```
executionStats: {
  executionSuccess: true,
  nReturned: 1,
  executionTimeMillis: 1,
  totalKeysExamined: 0,
  totalDocsExamined: 3772,
```

3. I'd say there are 4 fields: restaurant_id, name, borough, cuisine.
- 4.

```
dbRestaurants> db.colRestaurants.createIndex({name: 1})
name_1
dbRestaurants> db.colRestaurants.createIndex({restaurant_id: 1})
restaurant_id_1
dbRestaurants> db.colRestaurants.createIndex({borough: 1})
borough_1
dbRestaurants> db.colRestaurants.getIndexes()
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { name: 1 }, name: 'name_1' },
  { v: 2, key: { restaurant_id: 1 }, name: 'restaurant_id_1' },
  { v: 2, key: { borough: 1 }, name: 'borough_1' },
  { v: 2, key: { cuisine: 1 }, name: 'cuisine_1' }
]
```

- 5.

```
dbRestaurants> db.colRestaurants.createIndex({name: 1, grades: 1})
```

- 6.

```
executionStats: {
  executionSuccess: true,
  nReturned: 1,
  executionTimeMillis: 20,
  totalKeysExamined: 1,
  totalDocsExamined: 1,
```

7. db.colRestaurants.dropIndex({name: 1, grades: 1})

```
dbRestaurants> db.colRestaurants.dropIndex({name: 1, grades: 1})
{ nIndexesWas: 6, ok: 1 }
dbRestaurants> db.colRestaurants.getIndexes()
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { name: 1 }, name: 'name_1' },
  { v: 2, key: { restaurant_id: 1 }, name: 'restaurant_id_1' },
  { v: 2, key: { borough: 1 }, name: 'borough_1' },
  { v: 2, key: { cuisine: 1 }, name: 'cuisine_1' }
]
```

8. db.colRestaurants.aggregate([{\$group: {_id:"\$borough", totalRestaurant:{\$sum: 1}}]])

```
dbRestaurants> db.colRestaurants.aggregate([{$group: {_id:"$borough", totalRestaurant:{$sum: 1}}]])
[
  { _id: 'Queens', totalRestaurant: 738 },
  { _id: 'Staten Island', totalRestaurant: 158 },
  { _id: 'Brooklyn', totalRestaurant: 684 },
  { _id: 'Bronx', totalRestaurant: 309 },
  { _id: 'Manhattan', totalRestaurant: 1883 }
]
```

9. db.colRestaurants.aggregate([{\$match: {borough: "Staten Island"}},{\$group: {_id:"\$cuisine", No_restaurants_in_Staten:{\$sum: 1}}]])

```
dbRestaurants> db.colRestaurants.aggregate([{$match: {borough: "Staten Island"}},{$group: {_id:"$cuisine", No_restaurants_in_Staten:{$sum: 1}}]])
[
  { _id: 'Spanish', No_restaurants_in_Staten: 3 },
  { _id: 'Chinese', No_restaurants_in_Staten: 6 },
  { _id: 'Indian', No_restaurants_in_Staten: 1 },
  { _id: 'Bakery', No_restaurants_in_Staten: 7 },
  { _id: 'Café/Coffee/Tea', No_restaurants_in_Staten: 4 },
  { _id: 'Hamburgers', No_restaurants_in_Staten: 12 },
  { _id: 'Pizza', No_restaurants_in_Staten: 10 },
  { _id: 'Mexican', No_restaurants_in_Staten: 1 },
  { _id: 'Italian', No_restaurants_in_Staten: 17 },
  { _id: 'Delicatessen', No_restaurants_in_Staten: 6 },
  { _id: 'Japanese', No_restaurants_in_Staten: 1 },
  { _id: 'Jewish/Kosher', No_restaurants_in_Staten: 1 },
  { _id: 'Donuts', No_restaurants_in_Staten: 5 },
  {
    _id: 'Ice Cream, Gelato, Yogurt, Ices',
    No_restaurants_in_Staten: 4
  },
  {
    _id: 'Pizza/Italian', No_restaurants_in_Staten: 10 },
  { _id: 'American ', No_restaurants_in_Staten: 62 },
  { _id: 'German', No_restaurants_in_Staten: 1 },
  { _id: 'Bagels/Pretzels', No_restaurants_in_Staten: 5 },
  { _id: 'Chicken', No_restaurants_in_Staten: 2 }
]
```

10. db.colRestaurants.aggregate([{\$match: {borough: "Bronx"}},{\$group: {_id:"\$cuisine", Last_in_List:{\$last: "\$name"}}]])

```
dbRestaurants> db.colRestaurants.aggregate([{$match: {borough: "Bronx"}},{$group: {_id:"$cuisine", Last_in_List:{$last: "$name"}}]])
[
  { _id: 'Bagels/Pretzels', Last_in_List: 'Bagel Corner' },
  { _id: 'Ice Cream, Gelato, Yogurt, Ices', Last_in_List: 'Carvel' },
  { _id: 'Donuts', Last_in_List: 'Dunkin' Donuts' },
  { _id: 'African', Last_in_List: 'Ebe Ye Yie African Restaurant' },
  { _id: 'Other', Last_in_List: 'Johnny'S O'S' },
  { _id: 'Greek', Last_in_List: 'Gyro King' },
  { _id: 'Steak', Last_in_List: 'Jake'S Steakhouse' },
  { _id: 'Bakery', Last_in_List: 'Nb. National Bakery' },
  { _id: 'Café/Coffee/Tea', Last_in_List: 'Starbucks Coffee' },
  { _id: 'Pizza', Last_in_List: 'The Best Italian Pizza' },
  { _id: 'Caribbean', Last_in_List: 'Roca Tone Seafood Restaurant' },
  {
    _id: 'Delicatessen',
    Last_in_List: 'Fordham University - Student Deli'
  },
  { _id: 'Pancakes/Waffles', Last_in_List: 'Ihop' },
  { _id: 'Hamburgers', Last_in_List: 'Mcdonald'S' },
  { _id: 'American ', Last_in_List: 'Mug-Z'S Sports Bar' },
  { _id: 'Seafood', Last_in_List: 'Seafood City' },
  { _id: 'Chicken', Last_in_List: 'Popeyes Chicken & Biscuits' },
  {
    _id: 'Chinese/Cuban',
    Last_in_List: 'New Pabellon De Oro Restaurant'
  },
  { _id: 'Not Listed/Not Applicable', Last_in_List: 'The Lark'S Nest' },
  { _id: 'Sandwiches', Last_in_List: 'Subway' }
]
```

Type "it" for more