

Lab 6 - MongoDB

CSPB-3287

Sherry Saavedra

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1. How many distinct cuisines are represented in this collection?

```
HW_6_db> db.HW_6_data.distinct("cuisine").length
85
```

2. Return the name of all restaurants within the zipcode 11105 which serves Greek

```
HW_6_db> db.HW_6_data.find({"address.zipcode":"11105", cuisine:"Greek"}, {name:1, _id:0})
[
  { name: 'Igloo Ice Cream Cafe' },
  { name: 'Zorba'S' },
  { name: 'Agnanti Restaurant' },
  { name: 'Les Amis' },
  { name: 'Corner Taverna' },
  { name: 'Loukoumi Taverna' },
  { name: 'Pancoan Society Hippocrates' },
  { name: 'Stamatis Restaurant' },
  { name: 'Okeanos Greek Seafood' },
  { name: 'Central' },
  { name: 'Mp Taverna' },
  { name: 'Kopiaste' },
  { name: 'Tavern On Steinway' },
  { name: 'Telly'S Taverna' },
  { name: 'E Taverna' },
  { name: 'Tru' }
]
```

3. Find the borough with the most restaurants. Return the borough name and the

```
HW_6_db> db.HW_6_data.aggregate([{$sortByCount: "$borough"}, {$limit:1}])
[ { _id: 'Manhattan', count: 10259 } ]
```

4. How many restaurants in Manhattan have received a grade of "A" in all of their

```
HW_6_db> db.HW_6_data.aggregate([
... { $match: { borough: "Manhattan" } },
... { $match: { grades: { $not: { $elemMatch: { grade: { $ne: "A" } } } } } },
... { $count: "Total Number of Manhattan Restaurants with Grade A in All Inspections" }
... ])
[
  {
    'Total Number of Manhattan Restaurants with Grade A in All Inspections': 5962
  }
]
```

5. List the top 5 cuisines with the highest average inspection scores. Return the cuisine

```
HW_6_db> db.HW_6_data.aggregate([
... { $unwind: "$grades" },
... { $match: { "grades.score": { $type: "number", $gte: 0 } } },
... { $group: { _id: "$cuisine", avgScore: { $avg: "$grades.score" } } },
... { $sort: { avgScore: -1 } },
... { $limit: 5 },
... { $project: { _id: 0, cuisine: "$_id", average_score: { $round: ["$avgScore", 2] } } }
... ])
[
  { cuisine: 'Iranian', average_score: 17.12 },
  { cuisine: 'Hawaiian', average_score: 15.55 },
  { cuisine: 'Chinese/Japanese', average_score: 14.87 },
  { cuisine: 'Polynesian', average_score: 14.6 },
  { cuisine: 'Creole', average_score: 14.51 }
]
```

6. Find the restaurant with the lowest total score. Return the restaurant name and the

```
HW_6_db> db.HW_6_data.aggregate([
... { $unwind: "$grades" },
... { $match: { "grades.score": { $type: "number", $gte: 0 } } },
... { $group: {
... _id: { name: "$name", restaurant_id: "$restaurant_id" },
... totalScore: { $sum: "$grades.score" }
... }},
... { $sort: { totalScore: 1 } },
... { $limit: 1 },
... { $project: { _id: 0, name: "$_id.name", total_score: "$totalScore" } }
... ])
[ { name: 'Cofi Cafe', total_score: 0 } ]
```

7. List the top 5 restaurants with the highest inspection scores. Return the restaurant

```
HW_6_db> db.HW_6_data.aggregate([
...   {$unwind:"$grades"},
...   {$match:{"grades.score":{"$type":"number", $gte:0}}},
...   {$group: {_id:{"name":"$name", restaurant_id:"$restaurant_id"},
...   highestScore:{$max:"$grades.score"}}},
...   {$sort:{highestScore:-1, "_id.name":1}},
...   {$limit:5},
...   {$project:{_id:0, name:"$_id.name",highest_score:"$highestScore"}}
... ])
[
  { name: "Murals On 54/Randolphs'S", highest_score: 131 },
  { name: "Baluchi'S Indian Food", highest_score: 98 },
  { name: 'Bella Napoli', highest_score: 98 },
  { name: 'Gandhi', highest_score: 92 },
  { name: 'Concrete Restaurant', highest_score: 90 }
]
```