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Load sample datasets

The screenshot shows the MongoDB Atlas interface for a project named 'university'. The left sidebar contains navigation links for Deployment, Database, Data Lake, Data Services, Triggers, Data API, Data Federation, Security, Quickstart, Database Access, Network Access, and Advanced. The main content area is titled 'Database Deployments' and includes a search bar, a '+ Create' button, and a 'MongoDemo' section with 'Connect', 'View Monitoring', and 'Browse Collections' buttons. The 'Browse Collections' button is highlighted with a red box. Below this, there are performance metrics for Read, Write, Connections, In/Out B/s, and Data Size, each with a graph and an 'Upgrade' button. At the bottom, a table lists deployment details: Version (5.0.13), Region (AWS / Bahrain (me-south-1)), Cluster Tier (M0 Sandbox (General)), Type (Replica Set - 3 nodes), Backups (Inactive), Linked App Services (None Linked), and Atlas Search (Create Index).

The screenshot shows the MongoDB Atlas interface for the 'sample_airbnb' database. The left sidebar is the same as the previous screenshot. The main content area is titled 'MongoDemo' and includes a navigation bar with 'Overview', 'Real Time', 'Metrics', 'Collections', 'Search', 'Profiler', 'Performance Advisor', 'Online Archive', and 'Cmd Line Tool'. The 'Collections' tab is selected. Below the navigation bar, there is a '+ Create Database' button and a search bar. A list of collections is shown on the left, with 'sample_airbnb.listingsAndReviews' selected. The right pane displays details for this collection: 'sample_airbnb.listingsAndReviews', Storage Size (47.73MB), Logical Data Size (89.99MB), Total Documents (5555), and Indexes Total Size (556KB). There are buttons for 'Find', 'Indexes', 'Schema Anti-Patterns', 'Aggregation', and 'Search Indexes'. An 'INSERT DOCUMENT' button is also present. Below the collection details, there is a filter bar with a text input field containing '{ field: 'value' }' and buttons for 'Apply' and 'Reset'. The bottom of the page shows 'QUERY RESULTS: 1-20 OF MANY' and a table with one row containing an '_id' value of '10006546'.



USING THE SAMPLE DATASETS LOADED INTO MongoDB CLUSTER



sample_supplies.sales

```
{
  $project: {
    _id: 0,
    storeLocation: 1,
    customer: 1,
    couponUsed: 1,
    purchaseMethod: 1
  }, {
    $match: {
      couponUsed: true,
      purchaseMethod: 'Online',
      'customer.gender': 'F',
      'customer.age': {
        $lt: 45
      },
      storeLocation: {
        $in: [
          'London',
          'Denver'
        ]
      }
    }, {
      $group: {
        _id: '$storeLocation',
        avg_satisfaction: {
          $avg: '$customer.satisfaction'
        },
        num: {
          $sum: 1
        }
      }
    }
  }
}
```

The customers use coupon and purchase Method is Online, who gender is female and buys from two storeLocation (Denver or London) and age is under 45, the average satisfaction from 5 scale was in Denver=3.6 and in London=4.5, the total number achieve this query only 23.



sample_restaurants.restaurants

```
[{
  $project: {
    _id: 0,
    borough: 1,
    cuisine: 1,
    grades: 1,
    name: 1
  }
}, {
  $match: {
    cuisine: {
      $in: [
        'American',
        'Chinese',
        'Café/Coffee/Tea',
        'Pizza',
        'Italian'
      ]
    }
  },
  'grades.score': {
    $lt: 5
  },
  borough: {
    $in: [
      'Queens',
      'Staten Island',
      'Brooklyn'
    ]
  }
}, {
  $group: {
    _id: '$cuisine',
    count: {
      $sum: 1
    }
  }
}]
```

This query is comparing between 3 borough [Queens, Staten Island, Brooklyn], and look to the type of the cuisine provide from the to 5 cuisine [American, Chinese, Café/Coffee/Tea, Pizza, Italian], if the grade score less than 5 will classify them as bad restaurants.



sample_restaurants.restaurants

```
_id: "Italian"  
count: 85
```

```
_id: "Pizza"  
count: 212
```

```
_id: "American"  
count: 843
```

```
_id: "Chinese"  
count: 417
```

```
_id: "Café/Coffee/Tea"  
count: 224
```



American

Chinese

Café/Coffee/Tea

Pizza

Italian

