

Zomato Case Study

Number of orders in each Location:

```
db.estaurant.aggregate([{$group:{_id:"$location",
orderCount:{$sum:1}}},{ $sort:{orderCount:1}}])
```

```
zomato> db.Restaurant.aggregate([{$group:{_id:"$location", orderCount:{$sum:1}}},{ $sort:{orderCount:1}}])

[
  { _id: 'Peenya', orderCount: 1 },
  { _id: 'Rajarajeshwari Nagar', orderCount: 2 },
  { _id: 'Jakkur', orderCount: 3 },
  { _id: 'West Bangalore', orderCount: 6 },
  { _id: 'Yelahanka', orderCount: 6 },
  { _id: 'Central Bangalore', orderCount: 8 },
  { _id: 'Nagarbhavi', orderCount: 9 },
  { _id: 'Kengeri', orderCount: 9 },
  { _id: 'Hebbal', orderCount: 14 },
  { _id: 'North Bangalore', orderCount: 14 },
  { _id: 'Uttarahalli', orderCount: 17 },
  { _id: 'KR Puram', orderCount: 18 },
  { _id: 'Kanakapura Road', orderCount: 19 },
  { _id: null, orderCount: 21 },
  { _id: 'Mysore Road', orderCount: 22 },
  { _id: 'Langford Town', orderCount: 27 },
  { _id: 'Sankey Road', orderCount: 27 },
  { _id: 'Rammurthy Nagar', orderCount: 32 },
  { _id: 'Magadi Road', orderCount: 34 }
]
```

Find total number of hotels in Bangalore and list top 5

```
db.Restaurant.find({}, {name:1, rate:1, votes:1}).limit(5)
```

```
zomato> db.Restaurant.find({}, {name:1, rate:1, votes:1}).limit(5)
[
  {
    _id: ObjectId('6673e792838e35463441f8a9'),
    name: 'Jalsa',
    rate: '4.1/5',
    votes: 775
  },
  {
    _id: ObjectId('6673e792838e35463441f8aa'),
    name: 'Spice Elephant',
    rate: '4.1/5',
    votes: 787
  },
  {
    _id: ObjectId('6673e792838e35463441f8ab'),
    name: 'San Churro Cafe',
    rate: '3.8/5',
    votes: 918
  },
  {
    _id: ObjectId('6673e792838e35463441f8ac'),
    name: 'Addhuri Udupi Bhojana',
    rate: '3.7/5',
    votes: 88
  },
  {
    _id: ObjectId('6673e792838e35463441f8ad'),
    name: 'Grand Village',
    rate: '3.8/5',
    votes: 166
  }
]
zomato> _
```

Find the most liked dishes by the customer

```
db.Restaurant.aggregate([ { $unwind: "$dish_liked" }, { $group: { _id: "$dish_liked", count: { $sum: 1 } } }, { $sort: { count: -1 } }, { $limit: 10 } ])
```

```
zomato> db.Restaurant.aggregate([ { $unwind: "$dish_liked" }, { $group: { _id: "$dish_liked", count: { $sum: 1 } } }, { $sort: { count: -1 } }, { $limit: 10 } ])
[
  { _id: 'Biryani', count: 182 },
  { _id: 'Chicken Biryani', count: 73 },
  { _id: 'Friendly Staff', count: 69 },
  { _id: 'Waffles', count: 68 },
  { _id: 'Paratha', count: 57 },
  { _id: 'Masala Dosa', count: 56 },
  { _id: 'Rooftop Ambience', count: 42 },
  { _id: 'Coffee', count: 42 },
  { _id: 'Pizza', count: 38 },
  { _id: 'Burgers', count: 33 }
]
```

Find total Sales in each hotel.

```
db.Restaurant.aggregate([{$group:{_id:"$name", totalSales:{$sum:"$approx_cost(for two people)"}}} ,{$sort:{totalSales:-1}}])
```

```
zomato> db.Restaurant.aggregate([{$group:{_id:"$name", totalSales:{$sum:"$approx_cost(for two people)"}}} ,{$sort:{totalSales:-1}}])
[
  { _id: 'Cafe Coffee Day', totalSales: 81100 },
  { _id: 'Smooor', totalSales: 51100 },
  { _id: 'Onesta', totalSales: 51000 },
  { _id: 'Empire Restaurant', totalSales: 48650 },
  { _id: 'Pizza Hut', totalSales: 45650 },
  { _id: 'Beijing Bites', totalSales: 45300 },
  { _id: 'Petoo', totalSales: 43550 },
  { _id: 'Truffles', totalSales: 38700 },
  { _id: 'Mani's Dum Biryani', totalSales: 35250 },
  { _id: 'Smally's Resto Cafe', totalSales: 35100 },
  { _id: 'Subway', totalSales: 33700 },
  { _id: 'Burger King', totalSales: 32700 },
  { _id: 'Mudpipe Cafe', totalSales: 31950 },
  { _id: 'Chung Wah', totalSales: 30450 },
  { _id: 'The Chocolate Heaven', totalSales: 30400 },
  { _id: 'Sweet Truth', totalSales: 30000 },
  { _id: 'New Prashanth Hotel', totalSales: 29900 },
  { _id: 'Domino's Pizza', totalSales: 29600 },
  { _id: 'Pizza Stop', totalSales: 29500 },
  { _id: 'McDonald's', totalSales: 29500 }
]
```

Find Which hotels has highest number of customers

```
db.Restaurant.aggregate({$group:{_id:"$name", customerCount:{$sum:1}}},{$sort:{customerCount:-1}},{$limit:10})
```

```
zomato> db.Restaurant.aggregate({$group:{_id:"$name", customerCount:{$sum:1}}},{$sort:{customerCount:-1}},{$limit:10})
[
  { _id: 'Cafe Coffee Day', customerCount: 96 },
  { _id: 'Onesta', customerCount: 85 },
  { _id: 'Just Bake', customerCount: 73 },
  { _id: 'Empire Restaurant', customerCount: 71 },
  { _id: 'Five Star Chicken', customerCount: 70 },
  { _id: 'Kanti Sweets', customerCount: 68 },
  { _id: 'Petoo', customerCount: 66 },
  { _id: 'Polar Bear', customerCount: 65 },
  { _id: 'Baskin Robbins', customerCount: 64 },
  { _id: 'Chef Baker's', customerCount: 62 }
]
```

Find total sales of each dish in each hotel

```
db.Restaurant.aggregate([
{
  $match: {
    dish_liked: { $ne: null }
  }
}]
```

```

    }
  },
  {
    $group: {
      _id: {
        name: "$name",
        dish_liked: "$dish_liked"
      },
      total_sales: {
        $sum: "$approx_cost(for two people)"
      }
    }
  },
  {
    $sort: {
      "_id.name": 1,
      total_sales: -1
    }
  }
})

```

```

... ])
[
  {
    _id: {
      name: 1947,
      dish_liked: 'Palak Paneer, Aam Panna, Crispy Corn, Gajar Ka Halwa, Panipuri, Kulfi, Salads'
    },
    total_sales: 4750
  },
  {
    _id: {
      name: 1947,
      dish_liked: 'Jal-jeera, Roti, Dhokla, Biryani, Kheer, Chaach, Dal Tadka'
    },
    total_sales: 2850
  },
  {
    _id: {
      name: 1947,
      dish_liked: 'Salads, Paneer Butter Masala, Rabri, Gajar Ka Halwa, Manchow Soup, Aam Panna, Tomato Basil Soup'
    },
    total_sales: 1700
  },
  {
    _id: {
      name: 1947,
      dish_liked: 'Pasta, Tomato Soup, Salad, Kulcha, Chaat, Kulfi, Panipuri'
    },
    total_sales: 1700
  }
]

```

Find the hotels which has menu and which don't have menu

```
db.Restaurant.find({menu_item:{$exists:true, $eq:[]},{name:1,_id:0})
```

```
momo> db.Restaurant.find({menu_item:{exists:true, $eq:[ ]},{name:1, _id:0})
```

```
{
  { name: 'Jalsa' },
  { name: 'Spice Elephant' },
  { name: 'San Churro Cafe' },
  { name: 'Addhuri Udupi Bhojana' },
  { name: 'Grand Village' },
  { name: 'Timepass Dinner' },
  { name: 'Rosewood International Hotel - Bar & Restaurant' },
  { name: 'Onesta' },
  { name: 'Penthouse Cafe' },
  { name: 'Smaczego' },
  {
    name: 'CafÃ\x83Ã\x82Ã\x83Ã\x82Ã\x83Ã\x83Ã\x82Ã\x83Ã\x82Ã\x82Ã\x83Ã\x82Ã\x82Ã Down The Alley'
  },
  { name: 'Cafe Shuffle' },
  { name: 'The Coffee Shack' },
  { name: 'Caf-Eleven' },
  { name: 'San Churro Cafe' },
  { name: 'Cafe Vivacity' },
  { name: 'Catch-up-ino' },
  { name: "Kirthi's Biryani" },
  { name: 'T3H Cafe' },
  { name: '360 Atoms Restaurant And Cafe' }
```

```
db.Restaurant.find({menu_item:{$exists:true,$ne:[]},{name:1,_id:0})
```

```
zomato> db.Restaurant.find({menu_item:{$exists:true, $ne:[]}}, {name:1, _id:0})
[
  { name: 'Sweet Truth' },
  { name: 'Faasos' },
  { name: 'Maruthi Davangere Benne Dosa' },
  { name: 'Kitchen Garden' },
  { name: 'Recipe' },
  { name: 'Tasty Bytes' },
  { name: 'Shree Cool Point' },
  { name: 'FreshMenu' },
  { name: "Namma Brahmin's Idli" },
  { name: 'Sri Guru Kottureshwara Davangere Benne Dosa' },
  { name: 'Bengaluru Coffee House' },
  { name: 'Anna Kuteera' },
  { name: 'Vijayalakshmi' },
  { name: 'Sri Udupi Food Hub' },
  { name: 'Udupi Upahar' },
  { name: "New Gowda's Fried Chicken" },
  { name: 'HOT COFFEE' },
  { name: 'Sagar Deluxe' },
  { name: 'Grazers' },
  { name: 'By 2 Coffee' }
]
```

Find the average sales in each town in Bangalore and sort the result locationwise

```
db.Restaurant.aggregate([{$group:{_id:"$listed_in(city)", average_amount:{$avg:"$approx_cost(for two people)"}}} ,{$sort:{"_id":-1}}])
```

```
zomato> db.restaurants.aggregate([{$group:{_id:"$listed_in(city)", average_amount:{$avg:"$approx_cost(for two people)"}}} ,{$sort:{"_id":-1}}])
zomato>
zomato> db.Restaurant.aggregate([{$group:{_id:"$listed_in(city)", average_amount:{$avg:"$approx_cost(for two people)"}}} ,{$sort:{"_id":-1}}])
[
  { _id: 'Whitefield', average_amount: 423.99421128798843 },
  { _id: 'Sarjapur Road', average_amount: 427.1376811594203 },
  { _id: 'Residency Road', average_amount: 420.6663815226089 },
  { _id: 'Rajajinagar', average_amount: 379.485834287765 },
  { _id: 'Old Airport Road', average_amount: 417.0201577563541 },
  { _id: 'New BEL Road', average_amount: 399.1279069767442 },
  { _id: 'Marathahalli', average_amount: 418.2536520584329 },
  { _id: 'Mallleshwaram', average_amount: 406.2113127001067 },
  { _id: 'MG Road', average_amount: 430.82223962411905 },
  { _id: 'Lavelle Road', average_amount: 423.00158856235106 },
  { _id: 'Koramangala 7th Block', average_amount: 414.7888975762314 },
  { _id: 'Koramangala 6th Block', average_amount: 420.2173913043478 },
  { _id: 'Koramangala 5th Block', average_amount: 414.97365220916095 },
  { _id: 'Koramangala 4th Block', average_amount: 427.1937730438345 },
  { _id: 'Kammanahalli', average_amount: 420.6924315619968 },
  { _id: 'Kalyan Nagar', average_amount: 425.9046052631579 },
  { _id: 'Jayanagar', average_amount: 412.3905109489051 },
  { _id: 'JP Nagar', average_amount: 407.3459958932238 },
  { _id: 'Indiranagar', average_amount: 424.781121751026 },
  { _id: 'HSR', average_amount: 425.58995824875624 }
]
```

Find the hotels which has rating > 4.5 and cost < 500

```
db.Restaurant.aggregate([{$match:{$expr:{$and: [{$regexMatch:{input:"$rate", regex:/^[0-9]\.[0-9]+V[0-9]+$/}},{$gt: [{$toDouble:{$arrayElemAt: [{$split:["$rate", "/"], 0}], 4.5}}]}, "approx_cost(for two people)":{$lt: 500}}},{$project:{"name": 1, "rate": 1, "approx_cost(for two people)": 1, "cuisines": 1}}])
```

```
zomato> db.Restaurant.aggregate([{$match:{$expr:{$and: [{$regexMatch:{input:"$rate", regex:/^[0-9]\.[0-9]+V[0-9]+$/}},{$arrayElemAt: [{$split:["$rate", "/"], 0}], 4.5}}]}, "approx_cost(for two people)":{$lt: 500}}},{$project:{"name": 1, "rate": 1, "approx_cost(for two people)": 1, "cuisines": 1}}])
[
  {
    _id: ObjectId('6673e792838e35463441f94d'),
    name: 'The Blue Wagon - Kitchen',
    rate: '4.6/5',
    cuisines: 'Cafe, Beverages',
    'approx_cost(for two people)': 400
  },
  {
    _id: ObjectId('6673e792838e35463441fb21'),
    name: 'Taaza Thindi',
    rate: '4.7/5',
    cuisines: 'South Indian',
    'approx_cost(for two people)': 100
  },
  {
    _id: ObjectId('6673e793838e35463442027d'),
    name: 'The Blue Wagon - Kitchen',
    rate: '4.6/5',
    cuisines: 'Cafe, Beverages',
    'approx_cost(for two people)': 400
  }
]
```

Find the best rated hotels, calculate the total votes and sort it in descending order of votes:

```
db.Restaurant.aggregate([ { $match: { $expr: { $and: [ { $regexMatch: { input: "$rate", regex: /^[0-9]\.[0-9]+\.[0-9]+\.[0-9]+$/ } }, { $not: { $in: ["$rate", ["NEW"]] } } } } }, { $addFields: { numericRating: { $toDouble: { $arrayElemAt: [ { $split: ["$rate", "/"], 0 } ] }, 0 } } }, { $group: { _id: "$name", averageRating: { $avg: "$numericRating" }, totalVotes: { $sum: "$votes" } } }, { $sort: { averageRating: -1, totalVotes: -1 } }, { $project: { _id: 0, name: "$_id", averageRating: 1, totalVotes: 1 } } ] )
```

```
zomato> db.Restaurant.aggregate([ { $match: { $expr: { $and: [ { $regexMatch: { input: "$rate", regex: /^[0-9]\.[0-9]+\.[0-9]+\.[0-9]+$/ } }, { $not: { $in: ["$rate", ["NEW"]] } } } } }, { $addFields: { numericRating: { $toDouble: { $arrayElemAt: [ { $split: ["$rate", "/"], 0 } ] }, 0 } } }, { $group: { _id: "$name", averageRating: { $avg: "$numericRating" }, totalVotes: { $sum: "$votes" } } }, { $sort: { averageRating: -1, totalVotes: -1 } }, { $project: { _id: 0, name: "$_id", averageRating: 1, totalVotes: 1 } } ] )
[
  {
    averageRating: 4.9,
    totalVotes: 49035,
    name: 'Byg Brewski Brewing Company'
  },
  {
    averageRating: 4.9,
    totalVotes: 15352,
    name: 'Asia Kitchen By Mainland China'
  },
  {
    averageRating: 4.9, totalVotes: 5490, name: 'Flechazo' },
  {
    averageRating: 4.9, totalVotes: 510, name: 'Punjab Grill' },
  {
    averageRating: 4.84,
    totalVotes: 12656,
    name: 'Belgian Waffle Factory'
  }
]
```

Activate Windows
Go to Settings to activate Windows

Delete the column dish_liked from the collection

```
db.Restaurant.updateMany( {}, { $unset: { dish_liked: "" } } )
```

```
zomato> db.Restaurant.updateMany( {}, { $unset: { dish_liked: "" } } )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 51717,
  modifiedCount: 0,
  upsertedCount: 0
}
```

Find the same named restaurants using \$text and \$Search

```
db.Restaurant.createIndex({ name: "text" });
```

```
zomato> db.Restaurant.createIndex({ name: "text" });
name_text
```

```
db.Restaurant.find({ $text: { $search: "\"RestaurantName\"" } });
```

```
zomato> db.Restaurant.find({ $text: { $search: "\"Sri Saravana Bhavan\"" } });
[
  {
    _id: ObjectId('6673e7ad838e35463442b69a'),
    url: 'https://www.zomato.com/bangalore/sri-saravana-bhavan-commercial-street?context=eyJzZSI6eyJlIjpjbIjYxNjIiIiw1MTg5MDQ0ODQ1LCI1MTFwMlIiIjU0MzMuIiw1NDM1MTI1XNDk1LCI1ODM1NTQ1NCIiIjE4MDk3OTExIiw1MTg2MzEwNzAlLCI1MDYwMSIiIjE4NzI5NzU3Iiw1MTg5NDYyMDk1LCI1ODcwNjg5OSIiIjE4NzMDNTA1Iiw1MTg3MjAxODk1XSw1dCI6Ikpbnml...
    address: '89, Ibrahim Sahib Street, Commercial Street, Bangalore',
    name: 'Sri Saravana Bhavan',
    online_order: 'No',
    book_table: 'No',
    rate: '3.9 /5',
    votes: 77,
    phone: '989 25591665\n+91 9449671362',
    location: 'Commercial Street',
    rest_type: 'Quick Bites',
    cuisines: 'South Indian',
    'approx_cost(for two people)': 150,
    reviews_list: '[{"Rated 4.0", "RATED\n Whenever I go to commercial make sure I eat at this place. They serve 3 types of Chutneys and sambar. They idl...
    menu_item: [],
    'listed_in(type)': 'Dine-out',
    'listed_in(city)': 'Residency Road'
  },
  {
    _id: ObjectId('6673e7a7838e35463442a2ca'),
    url: 'https://www.zomato.com/bangalore/sri-saravana-bhavan-commercial-street?context=eyJzZSI6eyJlIjpjbIjU4MTcwIiw1MTQwNzMLI1ODk0NjIwOSIiIjE4NDc2NDM5Ij...
  }
]
```