MongoDB Assignment A2(Aggregation Exercises)

Using MongoDb Compass

Imported zips.son file

Atlanta Population:

1.use db.zipcodes.find() to filter results to only the results where city is ATLANTA and state is GA.

{$and:[{"city":"ATLANTA"},{"state":"GA"}]}

2.use db.zipcodes.aggregate with $match to do the same as above.

[

{

'$match': {

'city': 'ATLANTA',

'state': 'GA'

}

}

]

3. use $group to count the number of zip codes in Atlanta.

[

{

'$match': {

'city': 'ATLANTA'

}

}, {

'$group': {

'\_id': '$city',

'zipcode': {

'$sum': 1

}

}

}

]

4.use $group to find the total population in Atlanta.

[

{

'$match': {

'city': 'ATLANTA'

}

}, {

'$group': {

'\_id': '$city',

'totalPopulation': {

'$sum': '$pop'

}

}

}

]

2.Population By State

1.use aggregate to calculate the total population for each state

[

{

'$group': {

'\_id': '$state',

'totalPopulation': {

'$sum': '$pop'

}

}

}

]

2.sort the results by population, higher first.

[

{

'$group': {

'\_id': '$state',

'totalPopulation': {

'$sum': '$pop'

}

}

}, {

'$sort': {

'totalPopulation': -1

}

}

]

3. limit the results to just the first 3 results. What are the top 3 states in population.

[

{

'$group': {

'\_id': '$state',

'totalPopulation': {

'$sum': '$pop'

}

}

}, {

'$sort': {

'totalPopulation': -1

}

}, {

'$limit': 3

}

]

1.CA 2.NY 3.TX

Populations by city

1. aggregate to calculate the total population for each city (you have to use city/state combination). You can use a combination for the \_id of the $group (city:”$city”, state:”$state”)

[

{

'$group': {

'\_id': {

'city': '$city',

'state': '$state'

},

'totalPopulation': {

'$sum': '$pop'

}

}

}

]

2. Sort the results by population, highest first

[

{

'$group': {

'\_id': {

'city': '$city',

'state': '$state'

},

'totalPopulation': {

'$sum': '$pop'

}

}

}, {

'$sort': {

'totalPopulation': 1

}

}

]

3. limit the results to just the first 3 results. What are the top 3 cities in population?

[

{

'$group': {

'\_id': {

'city': '$city',

'state': '$state'

},

'totalPopulation': {

'$sum': '$pop'

}

}

}, {

'$sort': {

'totalPopulation': -1

}

}, {

'$limit': 3

}

]

1.city:CHICAGO state :IL 2.BR0OKLYN, NY 3.LOS ANGELES,CA

4. what are the top 3 cities in population in texas?

[

{

'$match': {

'state': 'TX'

}

}, {

'$sort': {

'pop': -1

}

}, {

'$limit': 3

}

]

1.BROWNSVILLE 2.ALTON 3.SAN ANTONIO

BONUS

1.write a query to get the average city population for each state.

[

{

'$group': {

'\_id': '$state',

'average': {

'$avg': '$pop'

}

}

}

]

2. what are the top 3 states in terms of average city problems?

[

{

'$group': {

'\_id': '$state',

'average': {

'$avg': '$pop'

}

}

}, {

'$sort': {

'average': 1

}

}

]

1. ND 2. SD 3.VT (Asc)

1.DC 2.CA 3.FL (Desc)