MongoDB Aggregate Assignment

Atlanta Population :-

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

db.zipcodes.find({$and:[{city:"ATLANTA"},{state:"GA"}]})

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

db.zipcodes.aggregate([{$match:{city:"ATLANTA",state:"GA"}}])

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

db.zipcodes.aggregate([{$match:{city:"ATLANTA"}},

{$group:{\_id:"$city",count:{$sum:1}}}])

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

db.zipcodes.aggregate([{$match:{city:"ATLANTA"}},{$group:{\_id:"$city",

totalPopulation:{$sum:"$pop"}}}])

Populations By State:-

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

db.zipcodes.aggregate([{$group:{\_id:"$state",totalPopulation:{$sum:"$pop"}}}])

2. sort the results by population, highest first

db.zipcodes.aggregate([{$group:{\_id:"$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?

db.zipcodes.aggregate([{$group:{\_id:"$state",totalPopulation:{$sum:"$pop"}}},

{$sort:{totalPopulation:-1}},

{$limit:3}])

Populations by City:-

1. use 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' }

db.zipcodes.aggregate([{$group:{\_id:{city:"$city",state:"$state"},

totalPopulation:{$sum:"$pop"}}}])

2. sort the results by population, highest first

db.zipcodes.aggregate([{$group:{\_id:{city:"$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?

db.zipcodes.aggregate([{$group:{\_id:{city:"$city",state:"$state"},

totalPopulation:{$sum:"$pop"}}},

{$sort:{totalPopulation:-1}},

{$limit:3}])

4. What are the top 3 cities in population in Texas?

db.zipcodes.aggregate([{$match:{state:"TX"}},

{$group:{\_id:{city:"$city",population:"$pop"}}},

{$sort:{population:-1}},

{$limit:3}])

Bonus :-

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

db.zipcodes.aggregate([{$group:{\_id:"$state",avgCityPop:{$avg:"$pop"}}}])

2. What are the top 3 states in terms of average city population

db.zipcodes.aggregate([{$group:{\_id:"$state",avgCityPop:{$avg:"$pop"}}},

{$sort:{avgCityPop:-1}},

{$limit:3}])