

## Shikshit Gupta MongoDB Assignment 2

### atlanta population

1. use `db.zipcodes.find()` to filter results to only the results where city is ATLANTA and state is GA.
2. use `$match` and the aggregate function for the same query as question number
3. use `$group` to count the number of zip codes in Atlanta
4. use `$group` to find the total population in Atlanta

Solu 1. `db.zipcodes.find({ $and : [ {city:"ATLANTA"},{state:"GA"}]})`

Solu 2. `db.zipcodes.aggregate({$match: { $and : [{city:"ATLANTA"},{state:"GA"}]}})`

Solu 3. `db.zipcodes.aggregate([{$group:{_id:"$city",count:{$sum:1}}},{ $match:{_id:"ATLANTA"}}])`

Solu

4.`db.zipcodes.aggregate([{$group:{_id:"$city",count:{$sum:"$pop"}}},{ $match:{_id:"ATLANTA"}}])`

### population by state

1. use Aggregate to calculate the total population for each state
2. sort the results by population, highest first
3. limit the results to just the first 3 results. What are the top three states in population

Solu 1. `db.zipcodes.aggregate([{$group:{_id:"$city", count:{$sum:"$pop"}}}])`

Solu 2. `db.zipcodes.aggregate([{$group:{_id:"$city", count:{$sum:"$pop"}}},{ $sort:{count:-1}}])`

Solu 3. `db.zipcodes.aggregate([{$group:{_id:"$city", count:{$sum:"$pop"}}},{ $sort:{count:-1}},{$limit:3}])`

### population 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' }
2. sort the results by population, highest first
3. limit the results to just the first 3 results. What are the top 3 cities in population?
4. What are the top 3 cities in population in Texas?

Solu 1. `db.zipcodes.aggregate([{$group:{_id:{city:"$city", state:"$state"},count:{$sum:"$pop"}}}])`

Solu 2. `db.zipcodes.aggregate([{$group:{_id:{city:"$city", state:"$state"},count:{$sum:"$pop"}}},{ $sort:{count:-1}}])`

Error in 3 and 4