

Assignment 2

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

```
-->db.zipcodes.find({city: "ATLANTA"})
```

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

```
-->db.zipcodes.aggregate({$match: {city: "ATLANTA"}})
```

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

```
-->
```

```
    db.zipcodes.aggregate([  
... {$match: {city: "ATLANTA"}},  
... {$count: "AtlantaCityCount"}  
... ])
```

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

```
-->
```

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

```
{ "_id" : null, "totalpopulation" : 630046 }
```

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

```
--> db.zipcodes.aggregate([ {$group: {_id: {state: "$state"},totalpop: {$sum: "$pop"}}} ])
```

2. sort the results by population, highest first

```
--> db.zipcodes.aggregate([  
  
{$group: {_id: {state: "$state"},totalpop: {$sum: "$pop"}}},  
  
{$sort: {"totalpop": -1}}  
  
])
```

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

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

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([  
  
... {$group: {_id: {state: "$state",city: "$city"},totalpop: {$sum: "$pop"}}}  
  
... ])
```

2. sort the results by population, highest first

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

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

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

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

```
-->db.zipcodes.aggregate([
  {$match: {state: "Texas"}},
  {$group {_id: {city: "$city", $pop: "$pop"}} {$sum: "$pop"}, ""}},
  {$sort: {"totalpop": -1}}
])
state: "$state",
```