**Mongodb Assignment 2**

Import the zips.json file into your MongoDB. Database name is "population" and collection name is "zipcodes".

C:\Users\Ksheera R>mongoimport --db population --collection zipcode --file "C:\Users\Ksheera R\OneDrive\Desktop\work\zip.json"

2021-10-24T20:33:44.229+0530 connected to: mongodb://localhost/

2021-10-24T20:33:45.028+0530 29353 document(s) imported successfully. 0 document(s) failed to import.

> show dbs

admin 0.000GB

config 0.000GB

local 0.000GB

mongo\_practice 0.000GB

population 0.004GB

test 0.000GB

> use population

switched to db population

> show collections

zipcode

zipcodes

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"}]}).pretty()

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

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

{

"\_id" : "30303",

"city" : "ATLANTA",

"loc" : [

-84.388846,

33.752504

],

"pop" : 1845,

"state" : "GA"

}

{

"\_id" : "30306",

"city" : "ATLANTA",

"loc" : [

-84.351418,

33.786027

],

"pop" : 20081,

"state" : "GA"

}

{

"\_id" : "30305",

"city" : "ATLANTA",

"loc" : [

-84.385145,

33.831963

],

"pop" : 19122,

"state" : "GA"

}

{

"\_id" : "30307",

"city" : "ATLANTA",

"loc" : [

-84.335957,

33.769138

],

"pop" : 16330,

"state" : "GA"

}

{

"\_id" : "30308",

"city" : "ATLANTA",

"loc" : [

-84.375744,

33.771839

],

"pop" : 8549,

"state" : "GA"

}

{

"\_id" : "30311",

"city" : "ATLANTA",

"loc" : [

-84.470219,

33.722957

],

"pop" : 34880,

"state" : "GA"

}

{

"\_id" : "30314",

"city" : "ATLANTA",

"loc" : [

-84.425546,

33.756103

],

"pop" : 26649,

"state" : "GA"

}

{

"\_id" : "30316",

"city" : "ATLANTA",

"loc" : [

-84.333913,

33.721686

],

"pop" : 34668,

"state" : "GA"

}

{

"\_id" : "30310",

"city" : "ATLANTA",

"loc" : [

-84.423173,

33.727849

],

"pop" : 34017,

"state" : "GA"

}

{

"\_id" : "30312",

"city" : "ATLANTA",

"loc" : [

-84.378125,

33.746749

],

"pop" : 17683,

"state" : "GA"

}

{

"\_id" : "30315",

"city" : "ATLANTA",

"loc" : [

-84.380771,

33.705062

],

"pop" : 41061,

"state" : "GA"

}

{

"\_id" : "30313",

"city" : "ATLANTA",

"loc" : [

-84.39352,

33.76825

],

"pop" : 8038,

"state" : "GA"

}

{

"\_id" : "30318",

"city" : "ATLANTA",

"loc" : [

-84.445432,

33.786454

],

"pop" : 53894,

"state" : "GA"

}

{

"\_id" : "30319",

"city" : "ATLANTA",

"loc" : [

-84.335091,

33.868728

],

"pop" : 32138,

"state" : "GA"

}

{

"\_id" : "30317",

"city" : "ATLANTA",

"loc" : [

-84.31685,

33.749788

],

"pop" : 16395,

"state" : "GA"

}

{

"\_id" : "30327",

"city" : "ATLANTA",

"loc" : [

-84.419966,

33.862723

],

"pop" : 18467,

"state" : "GA"

}

{

"\_id" : "30329",

"city" : "ATLANTA",

"loc" : [

-84.321402,

33.823555

],

"pop" : 17013,

"state" : "GA"

}

{

"\_id" : "30309",

"city" : "ATLANTA",

"loc" : [

-84.388338,

33.798407

],

"pop" : 14766,

"state" : "GA"

}

{

"\_id" : "30331",

"city" : "ATLANTA",

"loc" : [

-84.520468,

33.72241

],

"pop" : 38185,

"state" : "GA"

}

{

"\_id" : "30330",

"city" : "ATLANTA",

"loc" : [

-84.434735,

33.70645

],

"pop" : 643,

"state" : "GA"

}

Type "it" for more

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

{

"\_id" : "30303",

"city" : "ATLANTA",

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"city" : "ATLANTA",

"loc" : [

-84.434735,

33.70645

],

"pop" : 643,

"state" : "GA"

}

Type "it" for more

> db.zipcodes.aggregate([{$group: {\_id: "$ATLANTA"}}, {$count: "zipcodes"}])

{ "zipcodes" : 1 }

> db.zipcodes.aggregate([{$group: {\_id: "ATLANTA", total: { $sum: "$pop"}}}])

{ "\_id" : "ATLANTA", "total" : 248408400 }

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

{ "\_id" : "RI", "pop" : 69 }

{ "\_id" : "MO", "pop" : 994 }

{ "\_id" : "LA", "pop" : 464 }

{ "\_id" : "NM", "pop" : 276 }

{ "\_id" : "WA", "pop" : 484 }

{ "\_id" : "AK", "pop" : 195 }

{ "\_id" : "MD", "pop" : 420 }

{ "\_id" : "NC", "pop" : 705 }

{ "\_id" : "NE", "pop" : 574 }

{ "\_id" : "OR", "pop" : 384 }

{ "\_id" : "VA", "pop" : 816 }

{ "\_id" : "WV", "pop" : 656 }

{ "\_id" : "NH", "pop" : 218 }

{ "\_id" : "NY", "pop" : 1595 }

{ "\_id" : "PA", "pop" : 1458 }

{ "\_id" : "MN", "pop" : 882 }

{ "\_id" : "DC", "pop" : 24 }

{ "\_id" : "TN", "pop" : 582 }

{ "\_id" : "KY", "pop" : 809 }

{ "\_id" : "MI", "pop" : 876 }

Type "it" for more

> it

{ "\_id" : "MA", "pop" : 474 }

{ "\_id" : "DE", "pop" : 53 }

{ "\_id" : "SC", "pop" : 350 }

{ "\_id" : "IA", "pop" : 922 }

{ "\_id" : "OH", "pop" : 1007 }

{ "\_id" : "IL", "pop" : 1237 }

{ "\_id" : "TX", "pop" : 1671 }

{ "\_id" : "ID", "pop" : 244 }

{ "\_id" : "MS", "pop" : 363 }

{ "\_id" : "NV", "pop" : 104 }

{ "\_id" : "WI", "pop" : 716 }

{ "\_id" : "OK", "pop" : 586 }

{ "\_id" : "HI", "pop" : 80 }

{ "\_id" : "AL", "pop" : 567 }

{ "\_id" : "GA", "pop" : 635 }

{ "\_id" : "SD", "pop" : 384 }

{ "\_id" : "MT", "pop" : 314 }

{ "\_id" : "UT", "pop" : 205 }

{ "\_id" : "CT", "pop" : 263 }

{ "\_id" : "AR", "pop" : 578 }

Type "it" for more

> db.zipcodes.aggregate([{$sort: {state: -1, pop: 1}}])

{ "\_id" : "82224", "city" : "LOST SPRINGS", "loc" : [ -104.920901, 42.729835 ], "pop" : 6, "state" : "WY" }

{ "\_id" : "82620", "city" : "ALCOVA", "loc" : [ -106.610199, 42.568383 ], "pop" : 10, "state" : "WY" }

{ "\_id" : "82630", "city" : "ARMINTO", "loc" : [ -107.343611, 43.120883 ], "pop" : 14, "state" : "WY" }

{ "\_id" : "82084", "city" : "TIE SIDING", "loc" : [ -105.446222, 41.052785 ], "pop" : 19, "state" : "WY" }

{ "\_id" : "82051", "city" : "LARAMIE", "loc" : [ -105.819708, 41.562721 ], "pop" : 22, "state" : "WY" }

{ "\_id" : "82936", "city" : "LONETREE", "loc" : [ -110.172862, 41.049144 ], "pop" : 24, "state" : "WY" }

{ "\_id" : "82925", "city" : "CORA", "loc" : [ -109.915351, 43.139921 ], "pop" : 30, "state" : "WY" }

{ "\_id" : "82844", "city" : "RANCHESTER", "loc" : [ -107.303429, 44.768228 ], "pop" : 32, "state" : "WY" }

{ "\_id" : "82715", "city" : "FOUR CORNERS", "loc" : [ -104.122897, 44.100747 ], "pop" : 38, "state" : "WY" }

{ "\_id" : "82081", "city" : "MERIDEN", "loc" : [ -104.286606, 41.54236 ], "pop" : 40, "state" : "WY" }

{ "\_id" : "82724", "city" : "OSHOTO", "loc" : [ -104.937659, 44.583023 ], "pop" : 57, "state" : "WY" }

{ "\_id" : "82842", "city" : "STORY", "loc" : [ -107.049229, 44.607169 ], "pop" : 63, "state" : "WY" }

{ "\_id" : "82080", "city" : "MC FADDEN", "loc" : [ -106.137861, 41.6327 ], "pop" : 79, "state" : "WY" }

{ "\_id" : "82642", "city" : "LYSITE", "loc" : [ -107.648781, 43.328417 ], "pop" : 81, "state" : "WY" }

{ "\_id" : "82052", "city" : "BUFORD", "loc" : [ -105.469697, 41.142115 ], "pop" : 97, "state" : "WY" }

{ "\_id" : "82332", "city" : "SAVERY", "loc" : [ -107.42338, 41.039485 ], "pop" : 97, "state" : "WY" }

{ "\_id" : "82428", "city" : "HYATTVILLE", "loc" : [ -107.605318, 44.250693 ], "pop" : 97, "state" : "WY" }

{ "\_id" : "82831", "city" : "ARVADA", "loc" : [ -106.109191, 44.689876 ], "pop" : 107, "state" : "WY" }

{ "\_id" : "82215", "city" : "HARTVILLE", "loc" : [ -104.729564, 42.33339 ], "pop" : 108, "state" : "WY" }

{ "\_id" : "82923", "city" : "BOULDER", "loc" : [ -109.540105, 42.688146 ], "pop" : 112, "state" : "WY" }

Type "it" for more

> it

{ "\_id" : "82922", "city" : "BONDURANT", "loc" : [ -110.335287, 43.223798 ], "pop" : 116, "state" : "WY" }

{ "\_id" : "82714", "city" : "DEVILS TOWER", "loc" : [ -104.793638, 44.617067 ], "pop" : 119, "state" : "WY" }

{ "\_id" : "82058", "city" : "GARRETT", "loc" : [ -105.550534, 42.142015 ], "pop" : 120, "state" : "WY" }

{ "\_id" : "82434", "city" : "OTTO", "loc" : [ -108.304673, 44.405644 ], "pop" : 120, "state" : "WY" }

{ "\_id" : "82217", "city" : "HAWK SPRINGS", "loc" : [ -104.329498, 41.741481 ], "pop" : 125, "state" : "WY" }

{ "\_id" : "82229", "city" : "SHAWNEE", "loc" : [ -105.032447, 42.839464 ], "pop" : 137, "state" : "WY" }

{ "\_id" : "82243", "city" : "VETERAN", "loc" : [ -104.370899, 41.982091 ], "pop" : 148, "state" : "WY" }

{ "\_id" : "82838", "city" : "PARKMAN", "loc" : [ -107.325393, 44.964965 ], "pop" : 148, "state" : "WY" }

{ "\_id" : "82512", "city" : "CROWHEART", "loc" : [ -109.296043, 43.371569 ], "pop" : 157, "state" : "WY" }

{ "\_id" : "82222", "city" : "LANCE CREEK", "loc" : [ -104.544958, 43.231636 ], "pop" : 181, "state" : "WY" }

{ "\_id" : "82725", "city" : "RECLUSE", "loc" : [ -105.776005, 44.786149 ], "pop" : 183, "state" : "WY" }

{ "\_id" : "82712", "city" : "BEULAH", "loc" : [ -104.153095, 44.573575 ], "pop" : 187, "state" : "WY" }

{ "\_id" : "82731", "city" : "GILLETTE", "loc" : [ -105.373236, 44.835689 ], "pop" : 187, "state" : "WY" }

{ "\_id" : "82938", "city" : "MC KINNON", "loc" : [ -109.874536, 41.040898 ], "pop" : 188, "state" : "WY" }

{ "\_id" : "83013", "city" : "MORAN", "loc" : [ -110.329429, 43.881635 ], "pop" : 191, "state" : "WY" }

{ "\_id" : "83011", "city" : "KELLY", "loc" : [ -110.544186, 43.609361 ], "pop" : 203, "state" : "WY" }

{ "\_id" : "82220", "city" : "KEELINE", "loc" : [ -104.720277, 42.839062 ], "pop" : 209, "state" : "WY" }

{ "\_id" : "83120", "city" : "FREEDOM", "loc" : [ -111.029178, 43.017167 ], "pop" : 212, "state" : "WY" }

{ "\_id" : "82450", "city" : "WAPITI", "loc" : [ -109.432629, 44.47967 ], "pop" : 214, "state" : "WY" }

{ "\_id" : "82054", "city" : "CARPENTER", "loc" : [ -104.276514, 41.042819 ], "pop" : 222, "state" : "WY" }

Type "it" for more

> db.zipcodes.find({pop: {$exists: true}}).limit(3)

{ "\_id" : "01001", "city" : "AGAWAM", "loc" : [ -72.622739, 42.070206 ], "pop" : 15338, "state" : "MA" }

{ "\_id" : "01002", "city" : "CUSHMAN", "loc" : [ -72.51565, 42.377017 ], "pop" : 36963, "state" : "MA" }

{ "\_id" : "01013", "city" : "CHICOPEE", "loc" : [ -72.607962, 42.162046 ], "pop" : 23396, "state" : "MA" }

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

{ "\_id" : { "state" : "PA", "city" : "ATGLEN" }, "pop" : 2318 }

{ "\_id" : { "state" : "GA", "city" : "NEWINGTON" }, "pop" : 2296 }

{ "\_id" : { "state" : "NH", "city" : "NORTH HAVERHILL" }, "pop" : 1744 }

{ "\_id" : { "state" : "GA", "city" : "ATLANTA" }, "pop" : 609591 }

{ "\_id" : { "state" : "NY", "city" : "REDFORD" }, "pop" : 495 }

{ "\_id" : { "state" : "VA", "city" : "LYNCHBURG" }, "pop" : 55969 }

{ "\_id" : { "state" : "FL", "city" : "WILDWOOD" }, "pop" : 10604 }

{ "\_id" : { "state" : "MD", "city" : "FORT GEORGE G ME" }, "pop" : 11110 }

{ "\_id" : { "state" : "MI", "city" : "MUIR" }, "pop" : 1885 }

{ "\_id" : { "state" : "WI", "city" : "COMBINED LOCKS" }, "pop" : 2190 }

{ "\_id" : { "state" : "MI", "city" : "NAUBINWAY" }, "pop" : 1297 }

{ "\_id" : { "state" : "KS", "city" : "BELLAIRE" }, "pop" : 526 }

{ "\_id" : { "state" : "NM", "city" : "MONUMENT" }, "pop" : 0 }

{ "\_id" : { "state" : "NH", "city" : "WEST CHESTERFIEL" }, "pop" : 391 }

{ "\_id" : { "state" : "IA", "city" : "DUMONT" }, "pop" : 1302 }

{ "\_id" : { "state" : "CA", "city" : "ESSEX" }, "pop" : 214 }

{ "\_id" : { "state" : "WV", "city" : "FANROCK" }, "pop" : 120 }

{ "\_id" : { "state" : "WA", "city" : "FORT LEWIS" }, "pop" : 27463 }

{ "\_id" : { "state" : "NY", "city" : "KATONAH" }, "pop" : 12263 }

{ "\_id" : { "state" : "MI", "city" : "LESLIE" }, "pop" : 5493 }

Type "it" for more

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

{ "\_id" : "LA", "avgCityPop" : 10465.496277915632 }

{ "\_id" : "RI", "avgCityPop" : 19292.653846153848 }

{ "\_id" : "MO", "avgCityPop" : 5672.195338512764 }

{ "\_id" : "NM", "avgCityPop" : 5872.360465116279 }

{ "\_id" : "VT", "avgCityPop" : 2315.8765432098767 }

{ "\_id" : "WY", "avgCityPop" : 3384.5373134328356 }

{ "\_id" : "MD", "avgCityPop" : 12615.775725593667 }

{ "\_id" : "OR", "avgCityPop" : 8262.561046511628 }

{ "\_id" : "NE", "avgCityPop" : 3034.882692307692 }

{ "\_id" : "NC", "avgCityPop" : 10622.815705128205 }

{ "\_id" : "VA", "avgCityPop" : 8526.177931034483 }

{ "\_id" : "MN", "avgCityPop" : 5372.21375921376 }

{ "\_id" : "WV", "avgCityPop" : 2771.4775888717154 }

{ "\_id" : "NY", "avgCityPop" : 13131.680291970803 }

{ "\_id" : "PA", "avgCityPop" : 8679.067202337472 }

{ "\_id" : "NH", "avgCityPop" : 5232.320754716981 }

{ "\_id" : "KY", "avgCityPop" : 4767.164721141375 }

{ "\_id" : "TX", "avgCityPop" : 13775.02108678021 }

{ "\_id" : "TN", "avgCityPop" : 9656.350495049504 }

{ "\_id" : "MA", "avgCityPop" : 14855.37037037037 }

Type "it" for more

>db.zipcodes.aggregate([{$match:{state:”TX”}},{$group:{\_id:{city:”$city”}, pop:{$sum:”$pop”}}},{$sort:{pop:-1}},{$limit:3}])