**MongoDB Aggregation Assignment Solutions**

**ATLANTA population..**

1. db.zipcodes.find({$and:[{city: “ATLANTA”},{state: “GA”}]}).pretty();
2. db.zipcodes.aggregate({$match:{$and:[{city: “ATLANTA”},{state: “GA”}]}}).pretty();
3. db.zipcodes.aggregate({$match:{city:"ATLANTA"}},{$group:{\_id:"$state"}},{$count:"tot\_zipcode"});
4. db.zipcodes.aggregate([{$match:{city:“ATLANTA"}},{$group:{\_id:“$city”,“total\_pop”:{$sum: “$pop”}}}]);

**Populations By state…**

1. db.zipcodes.aggregate([{$group:{\_id: {state:"$state"}, "total\_pop":{$sum: "$pop"}}}]);
2. db.zipcodes.aggregate([{$group:{\_id: {"state":"$state"}, "total\_pop":{$sum: "$pop"}}},{$sort:{total\_pop:-1}}]);
3. db.zipcodes.aggregate([{$group:{\_id: {"state":"$state"}, "total\_pop":{$sum: "$pop"}}},{$sort:{total\_pop:-1}},{$limit:3}]);

(CA,NY,TX)

**Populations By City…**

1. db.zipcodes.aggregate([{$group:{\_id:{city: “$city”,state:“$state”}, “total\_pop”:{$sum: “$pop”}}}]);
2. db.zipcodes.aggregate([{$group:{\_id:{city:"$city",state:"$state"},"total\_pop":{$sum:"$pop"}}},{$sort:{total\_pop: -1}}]);
3. db.zipcodes.aggregate([{$group:{\_id:{city:"$city",state:"$state"},"total\_pop":{$sum:"$pop"}}},{$sort:{total\_pop:-1}},{$limit:3}]);

(CHICAGO,BROOKLYN,LOS ANGELES);

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

**Bonus…**

1. db.zipcodes.aggregate([{$group:{\_id:{state:"$state",city:"$city"},population:{$sum:"$pop"}}},{$group:{\_id:"$\_id.state",avgcitypopulation:{$avg:"$population"}}}]);
2. db.zipcodes.aggregate([{$group:{\_id:{state:"$state",city:"$city"},population:{$sum:"$pop"}}},{$group:{\_id:"$\_id.state",avgcitypopulation:{$avg:"$population"}}},{$sort:{avgcitypopulation:-1}},{$limit:3}]);