**MongoDB-Assignment Aggregration**

* **Atlanta Population**

1. db.zipcodes.find({state: 'GA',city: 'ATLANTA'})
2. db.zipcodes. aggregate (

[ { $match : {state: 'GA',city: 'ATLANTA'}} ]);

1. db.zipcodes. aggregate (

[ { $match : {state: 'GA',city: 'ATLANTA'}}, { $group: { \_id: null, count: { $sum: 1 } } } ]);

1. db.zipcodes. aggregate (

[ { $match : {state: 'GA',city: 'ATLANTA'}}, { $group: { Total Population: { $sum: “pop” } } } ]);

* **Populations By State**

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

{ $sort: { pop: 1 } },

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

{ $sort: { pop: 1 } },

{ $group:

{

\_id : "$\_id.state",

Statename: { $last: "$\_id.state" },

StatePop: { $last: "$totalpop" },

}

},

{$group:

{

{ $limit : 3 }

}

}]);

* **Populations by City**

1. db.zipcodes.aggregate( [ { $group:{

\_id: { state: "$state", city: "$city" },

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

1. db.zipcodes.aggregate( [ { $group:{

\_id: { state: "$state", city: "$city" },

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

{ $sort: { pop: 1 } }]);

1. db.zipcodes.aggregate( [ { $group:{

\_id: { state: "$state", city: "$city" },

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

{ $sort: { pop: 1 } }, {$group:

{

{ $limit : 3 }

}

}, { $group:

{

cityname: { $last: "$\_id.city" },

}

},

]);

1. db.zipcodes.aggregate( [ { $group:{

\_id: { state: "TEXAS", city: "$city" },

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

{ $sort: { pop: 1 } }, {$group:

{

{ $limit : 3 }

}

}, { $group:

{

\_id : "$\_id.state",

cityname: { $last: "$\_id.city" },

}

},

]);

* **Bonus**

1. db.zipcodes.aggregate( [

{ $group: { \_id: { state: "$state", city: "$city" }, pop: { $sum: "$pop" } } },

{ $group: { \_id: "$\_id.state", avgCityPop: { $avg: "$pop" } } }

] )

1. db.zipcodes.aggregate( [

{ $group: { \_id: { state: "$state", city: "$city" }, pop: { $sum: "$pop" } } },

{ $group: { \_id: "$\_id.state", avgCityPop: { $avg: "$pop" } } },

{ $sort: { avgcitypop: 1 } },{$group:

{

{ $limit : 3 }}, ] )