**MONGODB – Assignment2**

**BHARATH SIMHA REDDY MARAM**

**> db.zipcodes.find()**

{ "\_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" : "01005", "city" : "BARRE", "loc" : [ -72.108354, 42.409698 ], "pop" : 4546, "state" : "MA" }

{ "\_id" : "01007", "city" : "BELCHERTOWN", "loc" : [ -72.410953, 42.275103 ], "pop" : 10579, "state" : "MA" }

{ "\_id" : "01008", "city" : "BLANDFORD", "loc" : [ -72.936114, 42.182949 ], "pop" : 1240, "state" : "MA" }

{ "\_id" : "01010", "city" : "BRIMFIELD", "loc" : [ -72.188455, 42.116543 ], "pop" : 3706, "state" : "MA" }

{ "\_id" : "01011", "city" : "CHESTER", "loc" : [ -72.988761, 42.279421 ], "pop" : 1688, "state" : "MA" }

{ "\_id" : "01012", "city" : "CHESTERFIELD", "loc" : [ -72.833309, 42.38167 ], "pop" : 177, "state" : "MA" }

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

{ "\_id" : "01020", "city" : "CHICOPEE", "loc" : [ -72.576142, 42.176443 ], "pop" : 31495, "state" : "MA" }

{ "\_id" : "01022", "city" : "WESTOVER AFB", "loc" : [ -72.558657, 42.196672 ], "pop" : 1764, "state" : "MA" }

{ "\_id" : "01026", "city" : "CUMMINGTON", "loc" : [ -72.905767, 42.435296 ], "pop" : 1484, "state" : "MA" }

{ "\_id" : "01027", "city" : "MOUNT TOM", "loc" : [ -72.679921, 42.264319 ], "pop" : 16864, "state" : "MA" }

{ "\_id" : "01028", "city" : "EAST LONGMEADOW", "loc" : [ -72.505565, 42.067203 ], "pop" : 13367, "state" : "MA" }

{ "\_id" : "01030", "city" : "FEEDING HILLS", "loc" : [ -72.675077, 42.07182 ], "pop" : 11985, "state" : "MA" }

{ "\_id" : "01031", "city" : "GILBERTVILLE", "loc" : [ -72.198585, 42.332194 ], "pop" : 2385, "state" : "MA" }

{ "\_id" : "01032", "city" : "GOSHEN", "loc" : [ -72.844092, 42.466234 ], "pop" : 122, "state" : "MA" }

{ "\_id" : "01033", "city" : "GRANBY", "loc" : [ -72.520001, 42.255704 ], "pop" : 5526, "state" : "MA" }

{ "\_id" : "01034", "city" : "TOLLAND", "loc" : [ -72.908793, 42.070234 ], "pop" : 1652, "state" : "MA" }

{ "\_id" : "01035", "city" : "HADLEY", "loc" : [ -72.571499, 42.36062 ], "pop" : 4231, "state" : "MA" }

Type "it" for more

**ATLANTA POPULATION**

**> db.zipcodes.find({city:"ATLANTA",state:"GA"})**

{ "\_id" : "30303", "city" : "ATLANTA", "loc" : [ -84.388846, 33.752504 ], "pop" : 1845, "state" : "GA" }

{ "\_id" : "30305", "city" : "ATLANTA", "loc" : [ -84.385145, 33.831963 ], "pop" : 19122, "state" : "GA" }

{ "\_id" : "30306", "city" : "ATLANTA", "loc" : [ -84.351418, 33.786027 ], "pop" : 20081, "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" : "30309", "city" : "ATLANTA", "loc" : [ -84.388338, 33.798407 ], "pop" : 14766, "state" : "GA" }

{ "\_id" : "30310", "city" : "ATLANTA", "loc" : [ -84.423173, 33.727849 ], "pop" : 34017, "state" : "GA" }

{ "\_id" : "30311", "city" : "ATLANTA", "loc" : [ -84.470219, 33.722957 ], "pop" : 34880, "state" : "GA" }

{ "\_id" : "30312", "city" : "ATLANTA", "loc" : [ -84.378125, 33.746749 ], "pop" : 17683, "state" : "GA" }

{ "\_id" : "30313", "city" : "ATLANTA", "loc" : [ -84.39352, 33.76825 ], "pop" : 8038, "state" : "GA" }

{ "\_id" : "30314", "city" : "ATLANTA", "loc" : [ -84.425546, 33.756103 ], "pop" : 26649, "state" : "GA" }

{ "\_id" : "30315", "city" : "ATLANTA", "loc" : [ -84.380771, 33.705062 ], "pop" : 41061, "state" : "GA" }

{ "\_id" : "30316", "city" : "ATLANTA", "loc" : [ -84.333913, 33.721686 ], "pop" : 34668, "state" : "GA" }

{ "\_id" : "30317", "city" : "ATLANTA", "loc" : [ -84.31685, 33.749788 ], "pop" : 16395, "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" : "30324", "city" : "ATLANTA", "loc" : [ -84.354867, 33.820609 ], "pop" : 15044, "state" : "GA" }

{ "\_id" : "30326", "city" : "ATLANTA", "loc" : [ -84.358232, 33.848168 ], "pop" : 125, "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" }

Type "it" for more

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

{ "\_id" : "30303", "city" : "ATLANTA", "loc" : [ -84.388846, 33.752504 ], "pop" : 1845, "state" : "GA" }

{ "\_id" : "30305", "city" : "ATLANTA", "loc" : [ -84.385145, 33.831963 ], "pop" : 19122, "state" : "GA" }

{ "\_id" : "30306", "city" : "ATLANTA", "loc" : [ -84.351418, 33.786027 ], "pop" : 20081, "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" : "30309", "city" : "ATLANTA", "loc" : [ -84.388338, 33.798407 ], "pop" : 14766, "state" : "GA" }

{ "\_id" : "30310", "city" : "ATLANTA", "loc" : [ -84.423173, 33.727849 ], "pop" : 34017, "state" : "GA" }

{ "\_id" : "30311", "city" : "ATLANTA", "loc" : [ -84.470219, 33.722957 ], "pop" : 34880, "state" : "GA" }

{ "\_id" : "30312", "city" : "ATLANTA", "loc" : [ -84.378125, 33.746749 ], "pop" : 17683, "state" : "GA" }

{ "\_id" : "30313", "city" : "ATLANTA", "loc" : [ -84.39352, 33.76825 ], "pop" : 8038, "state" : "GA" }

{ "\_id" : "30314", "city" : "ATLANTA", "loc" : [ -84.425546, 33.756103 ], "pop" : 26649, "state" : "GA" }

{ "\_id" : "30315", "city" : "ATLANTA", "loc" : [ -84.380771, 33.705062 ], "pop" : 41061, "state" : "GA" }

{ "\_id" : "30316", "city" : "ATLANTA", "loc" : [ -84.333913, 33.721686 ], "pop" : 34668, "state" : "GA" }

{ "\_id" : "30317", "city" : "ATLANTA", "loc" : [ -84.31685, 33.749788 ], "pop" : 16395, "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" : "30324", "city" : "ATLANTA", "loc" : [ -84.354867, 33.820609 ], "pop" : 15044, "state" : "GA" }

{ "\_id" : "30326", "city" : "ATLANTA", "loc" : [ -84.358232, 33.848168 ], "pop" : 125, "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" }

Type "it" for more

**> db.zipcodes.aggregate([ {$match:{city:"ATLANTA"}}, {$group:{\_id:"$city",count:{$sum:1}}} ])**

{ "\_id" : "ATLANTA", "count" : 41 }

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

{ "\_id" : "ATLANTA", "totalpopulation" : 630046 }

**POPULATIONS BY STATE**

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

{ "\_id" : "AK", "Totalpopulation" : 544698 }

{ "\_id" : "RI", "Totalpopulation" : 1003218 }

{ "\_id" : "NY", "Totalpopulation" : 17990402 }

{ "\_id" : "CT", "Totalpopulation" : 3287116 }

{ "\_id" : "WV", "Totalpopulation" : 1793146 }

{ "\_id" : "NE", "Totalpopulation" : 1578139 }

{ "\_id" : "LA", "Totalpopulation" : 4217595 }

{ "\_id" : "TX", "Totalpopulation" : 16984601 }

{ "\_id" : "NH", "Totalpopulation" : 1109252 }

{ "\_id" : "VA", "Totalpopulation" : 6181479 }

{ "\_id" : "MN", "Totalpopulation" : 4372982 }

{ "\_id" : "NM", "Totalpopulation" : 1515069 }

{ "\_id" : "ME", "Totalpopulation" : 1226648 }

{ "\_id" : "NC", "Totalpopulation" : 6628637 }

{ "\_id" : "SC", "Totalpopulation" : 3486703 }

{ "\_id" : "OH", "Totalpopulation" : 10846517 }

{ "\_id" : "MA", "Totalpopulation" : 6016425 }

{ "\_id" : "TN", "Totalpopulation" : 4876457 }

{ "\_id" : "KY", "Totalpopulation" : 3675484 }

{ "\_id" : "DC", "Totalpopulation" : 606900 }

Type "it" for more

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

{ "\_id" : "CA", "Totalpopulation" : 29754890 }

{ "\_id" : "NY", "Totalpopulation" : 17990402 }

{ "\_id" : "TX", "Totalpopulation" : 16984601 }

{ "\_id" : "FL", "Totalpopulation" : 12686644 }

{ "\_id" : "PA", "Totalpopulation" : 11881643 }

{ "\_id" : "IL", "Totalpopulation" : 11427576 }

{ "\_id" : "OH", "Totalpopulation" : 10846517 }

{ "\_id" : "MI", "Totalpopulation" : 9295297 }

{ "\_id" : "NJ", "Totalpopulation" : 7730188 }

{ "\_id" : "NC", "Totalpopulation" : 6628637 }

{ "\_id" : "GA", "Totalpopulation" : 6478216 }

{ "\_id" : "VA", "Totalpopulation" : 6181479 }

{ "\_id" : "MA", "Totalpopulation" : 6016425 }

{ "\_id" : "IN", "Totalpopulation" : 5544136 }

{ "\_id" : "MO", "Totalpopulation" : 5110648 }

{ "\_id" : "WI", "Totalpopulation" : 4891769 }

{ "\_id" : "TN", "Totalpopulation" : 4876457 }

{ "\_id" : "WA", "Totalpopulation" : 4866692 }

{ "\_id" : "MD", "Totalpopulation" : 4781379 }

{ "\_id" : "MN", "Totalpopulation" : 4372982 }

Type "it" for more

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

{ "\_id" : { "state" : "CA" }, "Totalpopulation" : 29754890 }

{ "\_id" : { "state" : "NY" }, "Totalpopulation" : 17990402 }

{ "\_id" : { "state" : "TX" }, "Totalpopulation" : 16984601 }

**POPULATIONS BY CITY**

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

{ "\_id" : { "city" : "CORINNA", "state" : "ME" }, "Totalpopulation" : 2363 }

{ "\_id" : { "city" : "PORT BYRON", "state" : "IL" }, "Totalpopulation" : 3441 }

{ "\_id" : { "city" : "NASH", "state" : "ND" }, "Totalpopulation" : 6591 }

{ "\_id" : { "city" : "DUSTIN", "state" : "OK" }, "Totalpopulation" : 893 }

{ "\_id" : { "city" : "GRAND MARAIS", "state" : "MI" }, "Totalpopulation" : 508 }

{ "\_id" : { "city" : "PERRY", "state" : "MI" }, "Totalpopulation" : 5746 }

{ "\_id" : { "city" : "EAGLE LAKE", "state" : "FL" }, "Totalpopulation" : 1456 }

{ "\_id" : { "city" : "COLLINS", "state" : "IA" }, "Totalpopulation" : 764 }

{ "\_id" : { "city" : "HALBUR", "state" : "IA" }, "Totalpopulation" : 720 }

{ "\_id" : { "city" : "PISCATAWAY", "state" : "NJ" }, "Totalpopulation" : 47038 }

{ "\_id" : { "city" : "GILBOA", "state" : "OH" }, "Totalpopulation" : 10177 }

{ "\_id" : { "city" : "MARIBEL", "state" : "WI" }, "Totalpopulation" : 2251 }

{ "\_id" : { "city" : "HASTINGS", "state" : "NY" }, "Totalpopulation" : 2259 }

{ "\_id" : { "city" : "CONOVER", "state" : "OH" }, "Totalpopulation" : 1053 }

{ "\_id" : { "city" : "BROWNSVILLE", "state" : "CA" }, "Totalpopulation" : 1013 }

{ "\_id" : { "city" : "MONUMENT", "state" : "OR" }, "Totalpopulation" : 410 }

{ "\_id" : { "city" : "LAKEVIEW", "state" : "TX" }, "Totalpopulation" : 358 }

{ "\_id" : { "city" : "FLOYDS KNOBS", "state" : "IN" }, "Totalpopulation" : 9954 }

{ "\_id" : { "city" : "BONO", "state" : "OH" }, "Totalpopulation" : 3895 }

{ "\_id" : { "city" : "PEROTE", "state" : "AL" }, "Totalpopulation" : 1792 }

Type "it" for more

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

**{$sort:{Totalpopulation:-1}}])**

{ "\_id" : { "city" : "CHICAGO", "state" : "IL" }, "Totalpopulation" : 2452177 }

{ "\_id" : { "city" : "BROOKLYN", "state" : "NY" }, "Totalpopulation" : 2300504 }

{ "\_id" : { "city" : "LOS ANGELES", "state" : "CA" }, "Totalpopulation" : 2102295 }

{ "\_id" : { "city" : "HOUSTON", "state" : "TX" }, "Totalpopulation" : 2095918 }

{ "\_id" : { "city" : "PHILADELPHIA", "state" : "PA" }, "Totalpopulation" : 1610956 }

{ "\_id" : { "city" : "NEW YORK", "state" : "NY" }, "Totalpopulation" : 1476790 }

{ "\_id" : { "city" : "BRONX", "state" : "NY" }, "Totalpopulation" : 1209548 }

{ "\_id" : { "city" : "SAN DIEGO", "state" : "CA" }, "Totalpopulation" : 1049298 }

{ "\_id" : { "city" : "DETROIT", "state" : "MI" }, "Totalpopulation" : 963243 }

{ "\_id" : { "city" : "DALLAS", "state" : "TX" }, "Totalpopulation" : 940191 }

{ "\_id" : { "city" : "PHOENIX", "state" : "AZ" }, "Totalpopulation" : 890853 }

{ "\_id" : { "city" : "MIAMI", "state" : "FL" }, "Totalpopulation" : 825232 }

{ "\_id" : { "city" : "SAN JOSE", "state" : "CA" }, "Totalpopulation" : 816653 }

{ "\_id" : { "city" : "SAN ANTONIO", "state" : "TX" }, "Totalpopulation" : 811792 }

{ "\_id" : { "city" : "BALTIMORE", "state" : "MD" }, "Totalpopulation" : 733081 }

{ "\_id" : { "city" : "SAN FRANCISCO", "state" : "CA" }, "Totalpopulation" : 723993 }

{ "\_id" : { "city" : "MEMPHIS", "state" : "TN" }, "Totalpopulation" : 632837 }

{ "\_id" : { "city" : "SACRAMENTO", "state" : "CA" }, "Totalpopulation" : 628279 }

{ "\_id" : { "city" : "JACKSONVILLE", "state" : "FL" }, "Totalpopulation" : 610160 }

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

Type "it" for more

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

**{$sort:{Totalpopulation:-1}},{$limit:3}])**

{ "\_id" : { "city" : "CHICAGO", "state" : "IL" }, "Totalpopulation" : 2452177 }

{ "\_id" : { "city" : "BROOKLYN", "state" : "NY" }, "Totalpopulation" : 2300504 }

{ "\_id" : { "city" : "LOS ANGELES", "state" : "CA" }, "Totalpopulation" : 2102295 }

**> db.zipcodes.aggregate([**

**{$match:{state:"TX"}},**

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

**{$sort:{Totalpopulation:-1}},**

**{$limit:3}])**

{ "\_id" : { "city" : "HOUSTON", "state" : "TX" }, "Totalpopulation" : 2095918 }

{ "\_id" : { "city" : "DALLAS", "state" : "TX" }, "Totalpopulation" : 940191 }

{ "\_id" : { "city" : "SAN ANTONIO", "state" : "TX" }, "Totalpopulation" : 811792 }

**BONUS**

**> db.zipcodes.aggregate([ {$group:{\_id:{state:"$state"},Average:{$avg:"$pop"}}},**

**{$sort:{Average:-1}} ])**

{ "\_id" : { "state" : "DC" }, "Average" : 25287.5 }

{ "\_id" : { "state" : "CA" }, "Average" : 19627.236147757256 }

{ "\_id" : { "state" : "FL" }, "Average" : 15779.407960199005 }

{ "\_id" : { "state" : "RI" }, "Average" : 14539.391304347826 }

{ "\_id" : { "state" : "NJ" }, "Average" : 14315.162962962962 }

{ "\_id" : { "state" : "HI" }, "Average" : 13852.8625 }

{ "\_id" : { "state" : "AZ" }, "Average" : 13574.918518518518 }

{ "\_id" : { "state" : "MA" }, "Average" : 12692.879746835442 }

{ "\_id" : { "state" : "DE" }, "Average" : 12569.207547169812 }

{ "\_id" : { "state" : "CT" }, "Average" : 12498.539923954373 }

{ "\_id" : { "state" : "NV" }, "Average" : 11556.086538461539 }

{ "\_id" : { "state" : "MD" }, "Average" : 11384.235714285714 }

{ "\_id" : { "state" : "NY" }, "Average" : 11279.248902821317 }

{ "\_id" : { "state" : "OH" }, "Average" : 10771.119165839125 }

{ "\_id" : { "state" : "MI" }, "Average" : 10611.069634703197 }

{ "\_id" : { "state" : "GA" }, "Average" : 10201.914960629922 }

{ "\_id" : { "state" : "TX" }, "Average" : 10164.333333333334 }

{ "\_id" : { "state" : "WA" }, "Average" : 10055.148760330578 }

{ "\_id" : { "state" : "SC" }, "Average" : 9962.00857142857 }

{ "\_id" : { "state" : "NC" }, "Average" : 9402.321985815603 }

Type "it" for more

**> db.zipcodes.aggregate([ {$group:{\_id:{state:"$state"},Average:{$avg:"$pop"}}},**

**{$sort:{Average:-1}}, {$limit:3}])**

{ "\_id" : { "state" : "DC" }, "Average" : 25287.5 }

{ "\_id" : { "state" : "CA" }, "Average" : 19627.236147757256 }

{ "\_id" : { "state" : "FL" }, "Average" : 15779.407960199005 }