wk10Quiz_mongo_aggregation

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Problem 1:

States with populations of less than 8,000,000 people.

db.zips.aggregate({$group: {_id: "$state",totalPop:{$sum: "$pop"}}},{$match:{totalPop:{$lt:8000000}}}) { "id" : "WA", "totalPop" : 4866692 } { "id" : "HI", "totalPop" : 1108229 } { "id" : "OR", "totalPop" : 2842321 } { "id" : "NM", "totalPop" : 1515069 } { "id" : "UT", "totalPop" : 1722850 } { "id" : "OK", "totalPop" : 3145585 } { "id" : "LA", "totalPop" : 4217595 } { "id" : "NE", "totalPop" : 1578139 } { "id" : "MO", "totalPop" : 5110648 } { "id" : "MT", "totalPop" : 798948 } { "id" : "ND", "totalPop" : 638272 } { "id" : "AK", "totalPop" : 544698 } { "id" : "SD", "totalPop" : 695397 } { "id" : "DC", "totalPop" : 606900 } { "id" : "MN", "totalPop" : 4372982 } { "id" : "ID", "totalPop" : 1006749 } { "id" : "KY", "totalPop" : 3675484 } { "id" : "WI", "totalPop" : 4891769 } { "id" : "TN", "totalPop" : 4876457 } { "id" : "AZ", "totalPop" : 3665228 } Type "it" for more it { "id" : "CO", "totalPop" : 3293755 } { "id" : "KS", "totalPop" : 2475285 } { "id" : "MS", "totalPop" : 2573216 } { "id" : "IA", "totalPop" : 2776420 } { "id" : "NC", "totalPop" : 6628637 } { "id" : "VA", "totalPop" : 6181479 } { "id" : "IN", "totalPop" : 5544136 } { "id" : "ME", "totalPop" : 1226648 } { "id" : "WV", "totalPop" : 1793146 } { "id" : "MD", "totalPop" : 4781379 } { "id" : "GA", "totalPop" : 6478216 } { "id" : "NH", "totalPop" : 1109252 } { "id" : "NV", "totalPop" : 1201833 } { "id" : "DE", "totalPop" : 666168 } { "id" : "AL", "totalPop" : 4040587 } { "id" : "CT", "totalPop" : 3287116 } { "id" : "SC", "totalPop" : 3486703 } { "id" : "RI", "totalPop" : 1003218 } { "id" : "VT", "totalPop" : 562758 } { "id" : "MA", "totalPop" : 6016425 } Type "it" for more it { "id" : "WY", "totalPop" : 453528 } { "id" : "AR", "totalPop" : 2350725 } { "_id" : "NJ", "totalPop" : 7730188 } it no cursor

Problem 2.

The fifth largest city in the state of new york by population is in zip code 11212 #which is Brooklyn with a population of 87,079.

db.zips.aggregate([{$match: { state: "NY"}},{$sort: {pop:-1}}, {$limit: 5}])

{ "id" : "11226", "city" : "BROOKLYN", "loc" : [-73.956985, 40.646694], "pop" : 111396, "state" : "NY" } { "id" : "10021", "city" : "NEW YORK", "loc" : [-73.958805, 40.768476], "pop" : 106564, "state" : "NY" } { "id" : "10025", "city" : "NEW YORK", "loc" : [-73.968312, 40.797466], "pop" : 100027, "state" : "NY" } { "id" : "11373", "city" : "JACKSON HEIGHTS", "loc" : [-73.878551, 40.740388], "pop" : 88241, "state" : "NY"

} { "_id" : "11212", "city" : "BROOKLYN", "loc" : [-73.914483, 40.662474], "pop" : 87079, "state" : "NY" }

Problem 3.

The total number of cities in each state:

db.zips.aggregate([{$group:{_id:{state:"$state"},numberOfCitiesInState:{$sum:1}}}])

{ "id" : { "state" : "WA" }, "numberOfCitiesInState" : 484 } { "id" : { "state" : "HI" }, "numberOfCitiesInState" : 80 } { "id" : { "state" : "CA" }, "numberOfCitiesInState" : 1516 } { "id" : { "state" : "OR" }, "numberOfCitiesInState" : 384 } { "id" : { "state" : "NM" }, "numberOfCitiesInState" : 276 } { "id" : { "state" : "UT" }, "numberOfCitiesInState" : 205 } { "id" : { "state" : "OK" }, "numberOfCitiesInState" : 586 } { "id" : { "state" : "LA" }, "numberOfCitiesInState" : 464 } { "id" : { "state" : "NE" }, "numberOfCitiesInState" : 574 } { "id" : { "state" : "TX" }, "numberOfCitiesInState" : 1671 } { "id" : { "state" : "MO" }, "numberOfCitiesInState" : 994 } { "id" : { "state" : "MT" }, "numberOfCitiesInState" : 314 } { "id" : { "state" : "ND" }, "numberOfCitiesInState" : 391 } { "id" : { "state" : "AK" }, "numberOfCitiesInState" : 195 } { "id" : { "state" : "SD" }, "numberOfCitiesInState" : 384 } { "id" : { "state" : "DC" }, "numberOfCitiesInState" : 24 } { "id" : { "state" : "MN" }, "numberOfCitiesInState" : 882 } { "id" : { "state" : "ID" }, "numberOfCitiesInState" : 244 } { "id" : { "state" : "KY" }, "numberOfCitiesInState" : 809 } { "id" : { "state" : "WI" }, "numberOfCitiesInState" : 716 } Type "it" for more > it { "id" : { "state" : "TN" }, "numberOfCitiesInState" : 582 } { "id" : { "state" : "AZ" }, "numberOfCitiesInState" : 270 } { "id" : { "state" : "CO" }, "numberOfCitiesInState" : 414 } { "id" : { "state" : "KS" }, "numberOfCitiesInState" : 715 } { "id" : { "state" : "MS" }, "numberOfCitiesInState" : 363 } { "id" : { "state" : "FL" }, "numberOfCitiesInState" : 804 } { "id" : { "state" : "IA" }, "numberOfCitiesInState" : 922 } { "id" : { "state" : "NC" }, "numberOfCitiesInState" : 705 } { "id" : { "state" : "VA" }, "numberOfCitiesInState" : 816 } { "id" : { "state" : "IN" }, "numberOfCitiesInState" : 676 } { "id" : { "state" : "ME" }, "numberOfCitiesInState" : 410 } { "id" : { "state" : "WV" }, "numberOfCitiesInState" : 656 } { "id" : { "state" : "MD" }, "numberOfCitiesInState" : 420 } { "id" : { "state" : "GA" }, "numberOfCitiesInState" : 635 } { "id" : { "state" : "NH" }, "numberOfCitiesInState" : 218 } { "id" : { "state" : "NV" }, "numberOfCitiesInState" : 104 } { "id" : { "state" : "DE" }, "numberOfCitiesInState" : 53 } { "id" : { "state" : "AL" }, "numberOfCitiesInState" : 567 } { "id" : { "state" : "CT" }, "numberOfCitiesInState" : 263 } { "id" : { "state" : "SC" }, "numberOfCitiesInState" : 350 } Type "it" for more > it { "id" : { "state" : "RI" }, "numberOfCitiesInState" : 69 } { "id" : { "state" : "PA" }, "numberOfCitiesInState" : 1458 } { "id" : { "state" : "VT" }, "numberOfCitiesInState" : 243 } { "id" : { "state" : "MA" }, "numberOfCitiesInState" : 474 } { "id" : { "state" : "WY" }, "numberOfCitiesInState" : 140 } { "id" : { "state" : "MI" }, "numberOfCitiesInState" : 876 } { "id" : { "state" : "OH" }, "numberOfCitiesInState" : 1007 } { "id" : { "state" : "AR" }, "numberOfCitiesInState" : 578 } { "id" : { "state" : "IL" }, "numberOfCitiesInState" : 1237 } { "id" : { "state" : "NJ" },

"numberOfCitiesInState" : 540 } { "_id" : { "state" : "NY" }, "numberOfCitiesInState" : 1595 } > it no cursor