

```

test> exit
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection country --file /country-mongodb/country.json
2024-03-20T02:29:15.805+0000 Failed: open /country-mongodb/country.json: no such file or directory
2024-03-20T02:29:15.805+0000 0 document(s) imported successfully. 0 document(s) failed to import.
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection country --file /Home/~/Cuntry-mongodb/country.json
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection country --file ~/country-mongodb/country.json
2024-03-20T02:30:57.178+0000 Failed: open /home/ubuntu/country-mongodb/country.json: no such file or directory
2024-03-20T02:30:57.178+0000 0 document(s) imported successfully. 0 document(s) failed to import.
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection country --file country-mongodb/country.json
2024-03-20T02:31:13.049+0000 Failed: open country-mongodb/country.json: no such file or directory
2024-03-20T02:31:13.050+0000 0 document(s) imported successfully. 0 document(s) failed to import.
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection country --file country-mongodb/country.json
2024-03-20T02:31:38.019+0000 Failed: open country-mongodb/country.json: no such file or directory
2024-03-20T02:31:38.020+0000 0 document(s) imported successfully. 0 document(s) failed to import.
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection country --file country-mongodb/country-mongodb.json
2024-03-20T02:31:44.874+0000 connected to: mongodb://localhost/
2024-03-20T02:31:44.948+0000 239 document(s) imported successfully. 0 document(s) failed to import.
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection city --file country-mongodb/city-mongodb.json
2024-03-20T02:32:54.165+0000 connected to: mongodb://localhost/
2024-03-20T02:32:54.299+0000 4079 document(s) imported successfully. 0 document(s) failed to import.
ubuntu@ip-172-31-17-8:~$ mongoimport --db dsci551 --collection countryLanguage --file country-mongodb/countrylanguage-mongodb.json
2024-03-20T02:33:33.536+0000 connected to: mongodb://localhost/
2024-03-20T02:33:33.580+0000 984 document(s) imported successfully. 0 document(s) failed to import.
ubuntu@ip-172-31-17-8:~$ mongosh
Current Mongosh Log ID: 65fa4b03155cf59205c00e7d
Connecting to: mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.2.1
Using MongoDB: 7.0.7
Using Mongosh: 2.2.1

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For mongosh info see: <https://docs.mongodb.com/mongodb-shell/>

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The server generated these startup warnings when booting
2024-03-20T02:00:27.761+00:00: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://d
ochub.mongodb.org/core/prodnotes-filesystem
2024-03-20T02:00:28.544+00:00: Access control is not enabled for the database. Read and write access to data and configuration i
s unrestricted
2024-03-20T02:00:28.544+00:00: vm.max_map_count is too low
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test> use dsci551
switched to db dsci551
dsci551> show collections
city
country
countryLanguage
dsci551> db.countryLanguage.renameCollection("countrylanguage")
{ ok: 1 }
dsci551> show collections
city
country
countryLanguage
dsci551> db.country.aggregate([
...   { $match: { GNP: { $gte: 100000 }, Population: { $gte: 1000000 } } },
...   { $group: { _id: "$Continent", count: { $sum: 1 } } }
... ])
[
  { _id: 'Oceania', count: 1 },
  { _id: 'Europe', count: 17 },
  { _id: 'South America', count: 3 },
  { _id: 'North America', count: 3 },
  { _id: 'Asia', count: 11 },
  { _id: 'Africa', count: 1 }
]
dsci551> db.city.aggregate([
...   { $match: { CountryCode: "USA" } },
...   { $group: { _id: "$District" } },
...   { $count: "numberOfDistricts" }
... ])
[ { numberOfDistricts: 45 } ]
dsci551> db.country.find({ Capital: 0 }).count()
7
dsci551> db.country.aggregate([
...   { $lookup: { from: "city", localField: "Capital", foreignField: "_id", as: "capitalCity" } },
...   { $match: { capitalCity: { $eq: [] } } },
...   { $count: "noCapitalCities" }
... ])
[ { noCapitalCities: 239 } ]
dsci551> db.country.aggregate([ { $lookup: { from: "city", localField: "Capital", foreignField: "_id", as: "capitalCity" } }, { $ma
tch: { capitalCity: { $eq: [] } } }, { $count: "countriesWithNoCapitalCities" } ] )
[ { countriesWithNoCapitalCities: 239 } ]
dsci551> db.city.aggregate([
...   { $match: { Population: { $gt: 100000 } } },
...   { $group: { _id: "$CountryCode", numberOfCities: { $sum: 1 } } },
...   { $sort: { numberOfCities: -1 } },
...   { $limit: 10 },

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...   { $project: { _id: 0, countryCode: "$_id", numberOfCities: 1 } }
... ])
[
  { numberOfCities: 341, countryCode: 'CHN' },
  { numberOfCities: 310, countryCode: 'IND' },
  { numberOfCities: 245, countryCode: 'USA' },
  { numberOfCities: 226, countryCode: 'JPN' },
  { numberOfCities: 216, countryCode: 'BRA' },
  { numberOfCities: 166, countryCode: 'RUS' },
  { numberOfCities: 153, countryCode: 'MEX' },
  { numberOfCities: 117, countryCode: 'PHL' },
  { numberOfCities: 83, countryCode: 'DEU' },
  { numberOfCities: 68, countryCode: 'IDN' }
]
dsci551> db.city.aggregate([ { $match: { Population: { $gt: 100000 } } }, { $group: { _id: "$CountryCode", numberOfCities: { $sum: 1 } } }, { $sort: { numberOfCities: -1 } }, { $limit: 10 }, { $project: { _id: 0, countryCode: "$_id", numberOfCities: 1 } } ] )
[
  { numberOfCities: 341, countryCode: 'CHN' },
  { numberOfCities: 310, countryCode: 'IND' },
  { numberOfCities: 245, countryCode: 'USA' },
  { numberOfCities: 226, countryCode: 'JPN' },
  { numberOfCities: 216, countryCode: 'BRA' },
  { numberOfCities: 166, countryCode: 'RUS' },
  { numberOfCities: 153, countryCode: 'MEX' },
  { numberOfCities: 117, countryCode: 'PHL' },
  { numberOfCities: 83, countryCode: 'DEU' },
  { numberOfCities: 68, countryCode: 'IDN' }
]
dsci551> db.city.find({ CountryCode: "USA" }).sort({ Population: -1 }).limit(1).project({ Name: 1, Population: 1, _id: 0 })
TypeError: db.city.find({ ... }).project is not a function
dsci551> db.city.aggregate([
...   { $match: { CountryCode: "USA" } },
...   { $sort: { Population: -1 } },
...   { $limit: 1 },
...   { $project: { Name: 1, Population: 1, _id: 0 } }
... ])
[ { Name: 'New York', Population: 8008278 } ]
dsci551> db.city.aggregate([ { $match: { CountryCode: "USA" } }, { $sort: { Population: -1 } }, { $limit: 1 }, { $project: { Name: 1, Population: 1, _id: 0 } } ] )
[ { Name: 'New York', Population: 8008278 } ]
dsci551> db.city.aggregate([
...   { $match: { CountryCode: "USA" } },
...   { $group: { _id: "$District", totalPopulation: { $sum: "$Population" } } },
...   { $sort: { totalPopulation: -1 } },
...   { $limit: 1 },
...   { $project: { _id: 0, district: "$_id", totalPopulation: 1 } }
... ])
[ { totalPopulation: 16716706, district: 'California' } ]
dsci551> db.city.aggregate([ { $match: { CountryCode: "USA" } }, { $group: { _id: "$District", totalPopulation: { $sum: "$Population" } } }, { $sort: { totalPopulation: -1 } }, { $limit: 1 }, { $project: { _id: 0, districtState: "$_id", totalPopulation: 1 } } ] )
[ { totalPopulation: 16716706, districtState: 'California' } ]
dsci551> db.countrylanguage.find({ Language: "English", IsOfficial: "T", Percentage: { $gte: 90 } }).project({ CountryCode: 1, _id: 0 })
TypeError: db.countrylang ... 0 } }).project is not a function
dsci551> db.countrylanguage.aggregate([
...   { $match: { Language: "English", IsOfficial: "T", Percentage: { $gte: 90 } } },
...   { $project: { CountryCode: 1, _id: 0 } }
... ])

dsci551> db.countrylanguage.aggregate([
...   { $match: { Language: "English", IsOfficial: "T", Percentage: { $gte: 90 } } },
...   { $project: { CountryCode: 1, _id: 0 } }
... ])

dsci551> db.countrylanguage.aggregate([ { $match: { "_id.Language": "English", "IsOfficial": "T", "Percentage": { $gte: 90 } } }, { $project: { "CountryCode": "$_id.CountryCode", "_id": 0 } } ] )
[
  { CountryCode: 'BMU' },
  { CountryCode: 'GBR' },
  { CountryCode: 'IRL' }
]
dsci551> db.countrylanguage.aggregate([ { $match: { $or: [ { "_id.CountryCode": "USA" }, { "_id.CountryCode": "CAN" } ] } }, { $group: { _id: null, languages: { $addToSet: "$_id.Language" } } }, { $unwind: "$languages" }, { $sort: { "languages": 1 } }, { $project: { _id: 0, language: "$languages" } } ] )
[
  { language: 'Chinese' },
  { language: 'Dutch' },
  { language: 'English' },
  { language: 'Eskimo Languages' },
  { language: 'French' },
  { language: 'German' },
  { language: 'Italian' },
  { language: 'Japanese' },
  { language: 'Korean' },
  { language: 'Polish' },

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    { language: 'Portuguese' },
    { language: 'Punjabi' },
    { language: 'Spanish' },
    { language: 'Tagalog' },
    { language: 'Ukrainian' },
    { language: 'Vietnamese' }
  ]
dsci551> var gnp_China = db.country.find({Name: "China"}, {GNP: 1, _id: 0}).toArray()[0].GNP

dsci551> db.country.aggregate([ {$match: {GNP: {$gt: gnp_China}} }, {$sort: {GNP: -1} }, {$project: {_id: 0, Name: 1, GNP: 1}}])
[
  { Name: 'United States', GNP: 8510700 },
  { Name: 'Japan', GNP: 3787042 },
  { Name: 'Germany', GNP: 2133367 },
  { Name: 'France', GNP: 1424285 },
  { Name: 'United Kingdom', GNP: 1378330 },
  { Name: 'Italy', GNP: 1161755 }
]
dsci551>

```