use world;

Q1 Script: db.country.find({GNP:{$gte:10000, $lte:15000}}, {Name:1, \_id: 0});

Output:

{ Name: 'Bulgaria' },

{ Name: 'Belarus' },

{ Name: 'Brunei' },

{ Name: 'CÃ´te dÂ’Ivoire' },

{ Name: 'Costa Rica' },

{ Name: 'Iraq' },

{ Name: 'Lithuania' },

{ Name: 'Sudan' },

{ Name: 'El Salvador' },

{ Name: 'Uzbekistan' }

Q2 Script: db.country.find({$where: "/0/.test(this.Capital)"}).count();

Output:

63

Q3 Script: db.country.distinct("Continent").length;

Output:

7

Q4 Script: db.country.find({},{Name:1, GNP:1, \_id:0}).sort({GNP:-1}).limit(5);

Output:

{ Name: 'United States', GNP: 8510700 },

{ Name: 'Japan', GNP: 3787042 },

{ Name: 'Germany', GNP: 2133367 },

{ Name: 'France', GNP: 1424285 },

{ Name: 'United Kingdom', GNP: 1378330 }

Q5 Script: db.countrylanguage.distinct("Language", {IsOfficial:{$eq:"T"}, Percentage:{$gte:95}});

Output:

'Albaniana', 'Arabic',

'Bengali', 'Dhivehi',

'Dutch', 'English',

'Faroese', 'Greek',

'Hungarian', 'Icelandic',

'Italian', 'Japanese',

'Kiribati', 'Kirundi',

'Korean', 'Malagasy',

'Maltese', 'Marshallese',

'Norwegian', 'Polish',

'Portuguese', 'Rwanda',

'Serbo-Croatian', 'Somali',

'Spanish', 'Tongan'

Q6 Script: db.city.find({Name:{$exists:true, $regex:/Los/i}, Population:{$gte:200000}}, {Name:1, \_id:0});

Output:

{ Name: 'Santiago de los Caballeros' },

{ Name: 'Santo Domingo de los Colorados' },

{ Name: 'Ecatepec de Morelos' },

{ Name: 'San NicolÃ¡s de los Garza' },

{ Name: 'Los Angeles' }

Q7 Script: db.country.aggregate({$group:{\_id:"$Continent", avgGNP:{$avg:"$GNP"}}});

Output:

{ \_id: 'Africa', avgGNP: 10006.465517241379 },

{ \_id: 'Europe', avgGNP: 206497.0652173913 },

{ \_id: 'Asia', avgGNP: 150105.72549019608 },

{ \_id: 'South America', avgGNP: 107991 },

{ \_id: 'Oceania', avgGNP: 14991.953571428572 },

{ \_id: 'North America', avgGNP: 261854.78918918918 },

{ \_id: 'Antarctica', avgGNP: 0 }

Q8 Script: db.countrylanguage.aggregate({$match:{IsOfficial:"T"}}, {$group:{\_id:"$Language", cnt:{$sum:1}}}, {$sort:{cnt:-1}}, {$limit:10});

Output:

{ \_id: 'English', cnt: 44 },

{ \_id: 'Arabic', cnt: 22 },

{ \_id: 'Spanish', cnt: 20 },

{ \_id: 'French', cnt: 18 },

{ \_id: 'Portuguese', cnt: 6 },

{ \_id: 'German', cnt: 6 },

{ \_id: 'Dutch', cnt: 4 },

{ \_id: 'Malay', cnt: 4 },

{ \_id: 'Italian', cnt: 4 },

{ \_id: 'Danish', cnt: 3 }

Q9 Script: db.country.aggregate({$match: {Continent: "North America", GNP: {$gte: 100000}}}, {$lookup: {from: "city", localField: "Capital", foreignField: "ID", as:"Capital"}}, {$project: {Name: 1, "Capital.Name":1, \_id:0}});

Output:

{ Name: 'Canada', Capital: [ { Name: 'Ottawa' } ] },

{ Name: 'Mexico', Capital: [ { Name: 'Ciudad de MÃ©xico' } ] },

{ Name: 'United States', Capital: [ { Name: 'Washington' } ] }

Q10 Script: db.countrylanguage.aggregate({$match: {Language: "English", IsOfficial: "T"}}, {$lookup: {from: "country", localField: "CountryCode", foreignField: "Code", as:"res"}}, {$match: {"res.Continent": "North America"}}, {$project: {"res.Name": 1, \_id: 0}});

Output:

{ res: [ { Name: 'Anguilla' } ] },

{ res: [ { Name: 'Antigua and Barbuda' } ] },

{ res: [ { Name: 'Belize' } ] },

{ res: [ { Name: 'Bermuda' } ] },

{ res: [ { Name: 'Barbados' } ] },

{ res: [ { Name: 'Canada' } ] },

{ res: [ { Name: 'Cayman Islands' } ] },

{ res: [ { Name: 'Saint Kitts and Nevis' } ] },

{ res: [ { Name: 'Saint Lucia' } ] },

{ res: [ { Name: 'Montserrat' } ] },

{ res: [ { Name: 'Turks and Caicos Islands' } ] },

{ res: [ { Name: 'United States' } ] },

{ res: [ { Name: 'Saint Vincent and the Grenadines' } ] },

{ res: [ { Name: 'Virgin Islands, British' } ] },

{ res: [ { Name: 'Virgin Islands, U.S.' } ] }