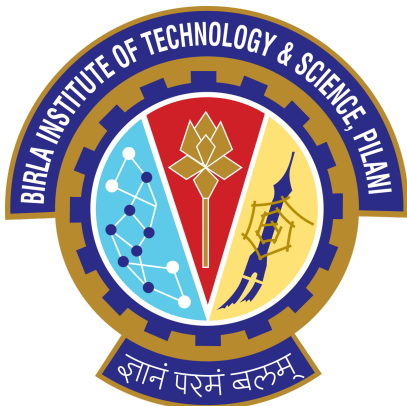




# BDS Assignment 01

DSECLZG522 | Group 141

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## Group 141 Members

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## DATASET USED

### COVID-19 Kaggle Dataset

We have used the given dataset from the provided Kaggle [link](#).

## OUTCOMES

### 1. The number of new cases, new deaths and new recovered

Showing all Available Databases:

```
>_MONGOSH
> show dbs
< admin    40.00 KiB
  config  108.00 KiB
  covid    53.91 MiB
  local    72.00 KiB
> use covid
< 'switched to db covid'
```

Number of new cases, new deaths and new recovered:

```
>_MONGOSH
> db.country_wise_latest.aggregate([
  { $group: {
    _id: 0,
    NewCases: { $sum: "$New cases"
    },
    NewDeaths: { $sum: "$New deaths"
    },
    NewRecovered: { $sum: "$New recovered"
    }
  }
  ]);
< { _id: 0,
  NewCases: 228693,
  NewDeaths: 5415,
  NewRecovered: 174623 }
```

## 2. The number of death cases in each country of continent Asia and also the corresponding WHO regions

```
>_MONGOSH
> db.worldometer_data.aggregate(
  { $match : { Continent : "Asia" } },
  { $project: {
    "Country/Region": 1,
    "TotalDeaths": 1,
    "WHO Region": 1
  }
}).pretty();
< { _id: ObjectId("63ae99dae438d2d1e3d029f0"),
  'Country/Region': 'India',
  TotalDeaths: 41638,
  'WHO Region': 'South-EastAsia' }
{ _id: ObjectId("63ae99dae438d2d1e3d029f8"),
  'Country/Region': 'Iran',
  TotalDeaths: 17976,
  'WHO Region': 'EasternMediterranean' }
{ _id: ObjectId("63ae99dae438d2d1e3d029fa"),
  'Country/Region': 'Saudi Arabia',
  TotalDeaths: 3055,
  'WHO Region': 'EasternMediterranean' }
```

```
{ _id: ObjectId("63ae99dae438d2d1e3d029fb"),
  'Country/Region': 'Pakistan',
  TotalDeaths: 6035,
  'WHO Region': 'EasternMediterranean' }
{ _id: ObjectId("63ae99dae438d2d1e3d029fc"),
  'Country/Region': 'Bangladesh',
  TotalDeaths: 3306,
  'WHO Region': 'South-EastAsia' }
{ _id: ObjectId("63ae99dae438d2d1e3d029fe"),
  'Country/Region': 'Turkey',
  TotalDeaths: 5798,
  'WHO Region': 'Europe' }
{ _id: ObjectId("63ae99dae438d2d1e3d02a02"),
  'Country/Region': 'Iraq',
  TotalDeaths: 5161,
  'WHO Region': 'EasternMediterranean' }
{ _id: ObjectId("63ae99dae438d2d1e3d02a03"),
  'Country/Region': 'Philippines',
  TotalDeaths: 2150,
  'WHO Region': 'WesternPacific' }
{ _id: ObjectId("63ae99dae438d2d1e3d02a04"),
  'Country/Region': 'Indonesia',
  TotalDeaths: 5521,
  'WHO Region': 'South-EastAsia' }
```

```
{ _id: ObjectId("63ae99dae438d2d1e3d02a06"),  
  'Country/Region': 'Qatar',  
  TotalDeaths: 178,  
  'WHO Region': 'EasternMediterranean' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a07"),  
  'Country/Region': 'Kazakhstan',  
  TotalDeaths: 1058,  
  'WHO Region': 'Europe' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a0c"),  
  'Country/Region': 'Oman',  
  TotalDeaths: 492,  
  'WHO Region': 'EasternMediterranean' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a0d"),  
  'Country/Region': 'Israel',  
  TotalDeaths: 576,  
  'WHO Region': 'Europe' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a12"),  
  'Country/Region': 'Kuwait',  
  TotalDeaths: 469,  
  'WHO Region': 'EasternMediterranean' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a14"),  
  'Country/Region': 'UAE',  
  TotalDeaths: 354,  
  'WHO Region': 'EasternMediterranean' }
```

```
{ _id: ObjectId("63ae99dae438d2d1e3d02a17"),  
  'Country/Region': 'Singapore',  
  TotalDeaths: 27,  
  'WHO Region': 'WesternPacific' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a1d"),  
  'Country/Region': 'Bahrain',  
  TotalDeaths: 156,  
  'WHO Region': 'EasternMediterranean' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a1e"),  
  'Country/Region': 'Japan',  
  TotalDeaths: 1026,  
  'WHO Region': 'WesternPacific' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a1f"),  
  'Country/Region': 'Armenia',  
  TotalDeaths: 772,  
  'WHO Region': 'Europe' }  
{ _id: ObjectId("63ae99dae438d2d1e3d02a21"),  
  'Country/Region': 'Kyrgyzstan',  
  TotalDeaths: 1447,  
  'WHO Region': 'Europe' }
```

### 3. The number of deaths that occurred on 12-02-2020

```
>_MONGOSH
> db.day_wise.aggregate(
  { $match : { Date : "2020-02-12" }
},
{ $group: { _id : null, sum : { $sum: "$Deaths" }
},
{$project: { _id: 0, sum: 1
}
});
< { sum: 1118 }
```

### 4. The number of active new cases (new cases-(new death+new recovered)) in a reverse sorted order based on the country name

```
>_MONGOSH
> db.country_wise_latest.aggregate(
  {
    $sort: {
      "Country/Region": -1
    }
  },
  {$project: {
    "Country/Region": 1,
    "New deaths": "$New deaths",
    "New recovered": "$New recovered",
    "New cases": "$New cases",
    "activeNewCases": {
      "$subtract": [
        "$New cases",
        {
          "$add": [
            "$New deaths",
            "$New recovered"
          ]
        }
      ]
    }
  }
});
```

```
< { _id: ObjectId("63ae90a8e438d2d1e3c54a82"),  
  'Country/Region': 'Zimbabwe',  
  'New deaths': 2,  
  'New recovered': 24,  
  'New cases': 192,  
  activeNewCases: 166 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a81"),  
  'Country/Region': 'Zambia',  
  'New deaths': 1,  
  'New recovered': 465,  
  'New cases': 71,  
  activeNewCases: -395 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a80"),  
  'Country/Region': 'Yemen',  
  'New deaths': 4,  
  'New recovered': 36,  
  'New cases': 10,  
  activeNewCases: -30 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a7f"),  
  'Country/Region': 'Western Sahara',  
  'New deaths': 0,  
  'New recovered': 0,  
  'New cases': 0,  
  activeNewCases: 0 }
```

```
{ _id: ObjectId("63ae90a8e438d2d1e3c54a7e"),  
  'Country/Region': 'West Bank and Gaza',  
  'New deaths': 2,  
  'New recovered': 0,  
  'New cases': 152,  
  activeNewCases: 150 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a7d"),  
  'Country/Region': 'Vietnam',  
  'New deaths': 0,  
  'New recovered': 0,  
  'New cases': 11,  
  activeNewCases: 11 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a7c"),  
  'Country/Region': 'Venezuela',  
  'New deaths': 4,  
  'New recovered': 213,  
  'New cases': 525,  
  activeNewCases: 308 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a7b"),  
  'Country/Region': 'Uzbekistan',  
  'New deaths': 5,  
  'New recovered': 569,  
  'New cases': 678,  
  activeNewCases: 104 }
```

```
{ _id: ObjectId("63ae90a8e438d2d1e3c54a7a"),  
  'Country/Region': 'Uruguay',  
  'New deaths': 1,  
  'New recovered': 3,  
  'New cases': 10,  
  activeNewCases: 6 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a79"),  
  'Country/Region': 'United Kingdom',  
  'New deaths': 7,  
  'New recovered': 3,  
  'New cases': 688,  
  activeNewCases: 678 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a78"),  
  'Country/Region': 'United Arab Emirates',  
  'New deaths': 1,  
  'New recovered': 328,  
  'New cases': 264,  
  activeNewCases: -65 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a77"),  
  'Country/Region': 'Ukraine',  
  'New deaths': 11,  
  'New recovered': 317,  
  'New cases': 835,  
  activeNewCases: 507 }
```

```
{ _id: ObjectId("63ae90a8e438d2d1e3c54a76"),  
  'Country/Region': 'Uganda',  
  'New deaths': 0,  
  'New recovered': 4,  
  'New cases': 13,  
  activeNewCases: 9 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a75"),  
  'Country/Region': 'US',  
  'New deaths': 1076,  
  'New recovered': 27941,  
  'New cases': 56336,  
  activeNewCases: 27319 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a74"),  
  'Country/Region': 'Turkey',  
  'New deaths': 17,  
  'New recovered': 982,  
  'New cases': 919,  
  activeNewCases: -80 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a73"),  
  'Country/Region': 'Tunisia',  
  'New deaths': 0,  
  'New recovered': 15,  
  'New cases': 3,  
  activeNewCases: -12 }
```

```
{ _id: ObjectId("63ae90a8e438d2d1e3c54a72"),  
  'Country/Region': 'Trinidad and Tobago',  
  'New deaths': 0,  
  'New recovered': 0,  
  'New cases': 1,  
  activeNewCases: 1 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a71"),  
  'Country/Region': 'Togo',  
  'New deaths': 0,  
  'New recovered': 8,  
  'New cases': 6,  
  activeNewCases: -2 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a70"),  
  'Country/Region': 'Timor-Leste',  
  'New deaths': 0,  
  'New recovered': 0,  
  'New cases': 0,  
  activeNewCases: 0 }  
{ _id: ObjectId("63ae90a8e438d2d1e3c54a6f"),  
  'Country/Region': 'Thailand',  
  'New deaths': 0,  
  'New recovered': 2,  
  'New cases': 6,  
  activeNewCases: 4 }
```

## 5. The names of the countries with more than 9000 active cases and more than 800 deaths

```
>_MONGOSH  
> db.country_wise_latest.find({  
  "Active": {$gt: 9000  
  },  
  "Deaths": {$gt: 800  
  }  
},  
{  
  _id: 0,  
  "Country/Region": 1,  
  "Active": 1,  
  "Deaths": 1  
});
```



```
< { 'Country/Region': 'Afghanistan', Deaths: 1269, Active: 9796 }
  { 'Country/Region': 'Argentina', Deaths: 3059, Active: 91782 }
  { 'Country/Region': 'Bangladesh', Deaths: 2965, Active: 97577 }
  { 'Country/Region': 'Belgium', Deaths: 9822, Active: 39154 }
  { 'Country/Region': 'Bolivia', Deaths: 2647, Active: 47056 }
  { 'Country/Region': 'Brazil', Deaths: 87618, Active: 508116 }
  { 'Country/Region': 'Canada', Deaths: 8944, Active: 107514 }
  { 'Country/Region': 'Chile', Deaths: 9187, Active: 18782 }
  { 'Country/Region': 'Colombia', Deaths: 8777, Active: 117163 }
  { 'Country/Region': 'Dominican Republic',
    Deaths: 1083,
    Active: 32869 }
  { 'Country/Region': 'Ecuador', Deaths: 5532, Active: 40733 }
  { 'Country/Region': 'Egypt', Deaths: 4652, Active: 52992 }
  { 'Country/Region': 'France', Deaths: 30212, Active: 108928 }
  { 'Country/Region': 'Guatemala', Deaths: 1761, Active: 11093 }
  { 'Country/Region': 'Honduras', Deaths: 1166, Active: 33536 }
  { 'Country/Region': 'India', Deaths: 33408, Active: 495499 }
  { 'Country/Region': 'Indonesia', Deaths: 4838, Active: 37292 }
  { 'Country/Region': 'Iran', Deaths: 15912, Active: 22550 }
  { 'Country/Region': 'Iraq', Deaths: 4458, Active: 30983 }
  { 'Country/Region': 'Italy', Deaths: 35112, Active: 12581 }
```

## 6. The country with the highest number of active cases and also with second highest death rate

```
>_MONGOSH

> db.country_wise_latest.find({}).sort({
  "Active": -1
}).limit(1)
< { _id: ObjectId("63ae90a8e438d2d1e3c54a75"),
  'Country/Region': 'US',
  Confirmed: 4290259,
  Deaths: 148011,
  Recovered: 1325804,
  Active: 2816444,
  'New cases': 56336,
  'New deaths': 1076,
  'New recovered': 27941,
  'Deaths / 100 Cases': Decimal128("3.45"),
  'Recovered / 100 Cases': Decimal128("30.9"),
  'Deaths / 100 Recovered': Decimal128("11.16"),
  'Confirmed last week': 3834677,
  '1 week change': 455582,
  '1 week % increase': Decimal128("11.88"),
  'WHO Region': 'Americas' }
```

```
>_MONGOSH
> db.country_wise_latest.find({}).sort({
  "Deaths / 100 Cases": -1
}).skip(1).limit(1)
< { _id: ObjectId("63ae90a8e438d2d1e3c54a79"),
  'Country/Region': 'United Kingdom',
  Confirmed: 301708,
  Deaths: 45844,
  Recovered: 1437,
  Active: 254427,
  'New cases': 688,
  'New deaths': 7,
  'New recovered': 3,
  'Deaths / 100 Cases': Decimal128("15.19"),
  'Recovered / 100 Cases': Decimal128("0.48"),
  'Deaths / 100 Recovered': Decimal128("3190.26"),
  'Confirmed last week': 296944,
  '1 week change': 4764,
  '1 week % increase': Decimal128("1.6"),
  'WHO Region': 'Europe' }
```

## 7. The total number of deaths all around the world

```
>_MONGOSH
> db.country_wise_latest.aggregate(
  [
    {$group: {
      _id: null,
      TotalDeaths: {$sum: "$Deaths"}
    }}
  ]
);
< { _id: null, TotalDeaths: 654036 }
```

## 8. The number of death cases and active cases between 28-01-2020 and 21-02-2020

```
>_MONGOSH
> db.day_wise.aggregate([
  {
    "$match": {      Date: {
      $gte: "2020-01-28", $lte: "2020-02-21"
    }
  },
  {$group: {_id: 0, death_cases: {$sum: "$Deaths"
    }, Active_cases: {$sum: "$Active"
    }
  }
  }
  });
< { _id: 0, death_cases: 25885, Active_cases: 886425 }
```

## 9. The latitude and longitude of countries ending with “ia” and the number of countries

```
>_MONGOSH
> db.covid_19_clean_complete.find({
  "Country/Region": {$regex: "ia$"}
},
{
  _id: 0,
  "Country/Region": 1,
  "Lat": 1,
  "Long": 1
});
```

```
< { 'Country/Region': 'Albania',  
    Lat: Decimal128("41.1533"),  
    Long: Decimal128("20.1683") }  
{ 'Country/Region': 'Algeria',  
    Lat: Decimal128("28.0339"),  
    Long: Decimal128("1.6596") }  
{ 'Country/Region': 'Armenia',  
    Lat: Decimal128("40.0691"),  
    Long: Decimal128("45.0382") }  
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-35.4735"),  
    Long: Decimal128("149.0124") }  
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-33.8688"),  
    Long: Decimal128("151.2093") }  
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-12.4634"),  
    Long: Decimal128("130.8456") }  
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-27.4698"),  
    Long: Decimal128("153.0251") }  
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-34.9285"),  
    Long: Decimal128("138.6007") }
```

```
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-42.8821"),  
    Long: Decimal128("147.3272") }  
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-37.8136"),  
    Long: Decimal128("144.9631") }  
{ 'Country/Region': 'Australia',  
    Lat: Decimal128("-31.9505"),  
    Long: Decimal128("115.8605") }  
{ 'Country/Region': 'Austria',  
    Lat: Decimal128("47.5162"),  
    Long: Decimal128("14.5501") }  
{ 'Country/Region': 'Bolivia',  
    Lat: Decimal128("-16.2902"),  
    Long: Decimal128("-63.5887") }  
{ 'Country/Region': 'Bulgaria',  
    Lat: Decimal128("42.7339"),  
    Long: Decimal128("25.4858") }  
{ 'Country/Region': 'Cambodia',  
    Lat: Decimal128("11.55"),  
    Long: Decimal128("104.9167") }  
{ 'Country/Region': 'Colombia',  
    Lat: Decimal128("4.5709"),  
    Long: Decimal128("-74.2973") }
```

```
{ 'Country/Region': 'Croatia',
  Lat: Decimal128("45.1"),
  Long: Decimal128("15.2") }
{ 'Country/Region': 'Czechia',
  Lat: Decimal128("49.8175"),
  Long: Decimal128("15.472999999999999") }
{ 'Country/Region': 'Estonia',
  Lat: Decimal128("58.5953"),
  Long: Decimal128("25.0136") }
{ 'Country/Region': 'Ethiopia',
  Lat: Decimal128("9.145"),
  Long: Decimal128("40.4897") }
```

```
>_MONGOSH
> db.covid_19_clean_complete.distinct("Country/Region",
  {
    "Country/Region": {$regex: "ia$"}
  },
  {
    _id: null,
    "Country/Region": 1
  }).length;
< 38
```

## 10. The countries with active cases on 30/03/2020

```
>_MONGOSH
> db.full_grouped.find({
  "Date": {$eq:new ISODate( "2020-03-30" )
  },
  "Active": {$gte: 0
  }
},
{
  _id: 0,
  "Country/Region": 1,
  "Active": 1,
  "Date": 1
});
```

```
< { Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Afghanistan',
  Active: 164 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Albania',
  Active: 168 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Algeria',
  Active: 512 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Andorra',
  Active: 352 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Angola',
  Active: 5 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Antigua and Barbuda',
  Active: 7 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Argentina',
  Active: 569 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Armenia',
  Active: 449 }
```

```
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Australia',
  Active: 4087 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Austria',
  Active: 8874 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Azerbaijan',
  Active: 243 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Bahamas',
  Active: 13 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Bahrain',
  Active: 232 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Bangladesh',
  Active: 25 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Barbados',
  Active: 33 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Belarus',
  Active: 120 }
```

```
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Belgium',
  Active: 9859 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Belize',
  Active: 3 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Benin',
  Active: 6 }
{ Date: 2020-03-30T00:00:00.000Z,
  'Country/Region': 'Bhutan',
  Active: 4 }
```

## 11. The latitude and longitude of those countries which are having active cases greater than 100

```
>_MONGOSH
> db.covid_19_clean_complete.aggregate(
[
  {
    $match : {
      "Active": { $gt: 100
    }
  },
  { $project: { _id: 0,
    "Country/Region": 1,
    "Lat": 1,
    "Long": 1,
    "Active": 1
  }
}
];
```

```
< { 'Country/Region': 'China',  
    Lat: Decimal128("30.9756"),  
    Long: Decimal128("112.2707"),  
    Active: 399 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.9756"),  
  Long: Decimal128("112.2707"),  
  Active: 399 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.9756"),  
  Long: Decimal128("112.2707"),  
  Active: 494 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.9756"),  
  Long: Decimal128("112.2707"),  
  Active: 689 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("23.3417"),  
  Long: Decimal128("113.4244"),  
  Active: 109 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.9756"),  
  Long: Decimal128("112.2707"),  
  Active: 964 }
```

```
{ 'Country/Region': 'China',  
  Lat: Decimal128("29.1832"),  
  Long: Decimal128("120.0934"),  
  Active: 103 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.0572"),  
  Long: Decimal128("107.874"),  
  Active: 110 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("23.3417"),  
  Long: Decimal128("113.4244"),  
  Active: 147 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("37.8957"),  
  Long: Decimal128("114.9042"),  
  Active: 127 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.9756"),  
  Long: Decimal128("112.2707"),  
  Active: 1302 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("29.1832"),  
  Long: Decimal128("120.0934"),  
  Active: 127 }
```



```
{ 'Country/Region': 'China',  
  Lat: Decimal128("31.8257"),  
  Long: Decimal128("117.2264"),  
  Active: 106 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.0572"),  
  Long: Decimal128("107.874"),  
  Active: 132 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("23.3417"),  
  Long: Decimal128("113.4244"),  
  Active: 203 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("37.8957"),  
  Long: Decimal128("114.9042"),  
  Active: 167 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("30.9756"),  
  Long: Decimal128("112.2707"),  
  Active: 3349 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("27.6104"),  
  Long: Decimal128("111.7088"),  
  Active: 143 }
```

```
{ 'Country/Region': 'China',  
  Lat: Decimal128("27.614"),  
  Long: Decimal128("115.7221"),  
  Active: 106 }  
  
{ 'Country/Region': 'China',  
  Lat: Decimal128("29.1832"),  
  Long: Decimal128("120.0934"),  
  Active: 170 }
```

## 12. The countries and respective dates in which maximum increase of active cases occurred

```
>_MONGOSH
> db.full_grouped.aggregate(
  {
    $sort: {
      "Active":1,
      "Country/Region": 1
    }
  },
  {$group: {
    _id: "$Country/Region",
    "Date": {"$first": "$Date"},
    "max_increase": {"$max": "$Active"}
  },
});
```

```
< { _id: 'Fiji', Date: 2020-01-22T00:00:00.000Z, max_increase: 17 }
{ _id: 'Angola',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 667 }
{ _id: 'New Zealand',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 929 }
{ _id: 'Oman',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 23276 }
{ _id: 'Moldova',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 6780 }
{ _id: 'Portugal',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 24065 }
{ _id: 'Comoros',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 104 }
{ _id: 'Egypt',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 55230 }
{ _id: 'Benin',
  Date: 2020-01-22T00:00:00.000Z,
  max_increase: 929 }
```

```
{ _id: 'Burkina Faso',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 321 }  
{ _id: 'Malaysia',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 2596 }  
{ _id: 'Rwanda',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 899 }  
{ _id: 'Namibia',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 1734 }  
{ _id: 'Peru',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 108616 }  
{ _id: 'Sweden',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 73695 }  
{ _id: 'Switzerland',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 14349 }  
{ _id: 'Congo (Brazzaville)',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 2317 }
```

```
{ _id: 'Equatorial Guinea',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 2178 }  
{ _id: 'Colombia',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 117163 }  
{ _id: 'Iraq',  
  Date: 2020-01-22T00:00:00.000Z,  
  max_increase: 30983 }
```

-x-x Thank You -x-x