

```
In [2]: import pandas as pd
import numpy as np
```

## Loading the dataset

```
In [3]: df = pd.read_csv('country_wise_latest.csv')
df.head()
```

```
Out[3]:
```

	Country/Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases
0	Afghanistan	36263	1269	25198	9796	106	10	18	3.50
1	Albania	4880	144	2745	1991	117	6	63	2.95
2	Algeria	27973	1163	18837	7973	616	8	749	4.16
3	Andorra	907	52	803	52	10	0	0	5.73
4	Angola	950	41	242	667	18	1	0	4.32

```
In [4]: # describing the covid dataset
```

```
In [5]: df.describe()
```

```
Out[5]:
```

	Confirmed	Deaths	Recovered	Active	New cases	New deaths
count	1.870000e+02	187.000000	1.870000e+02	1.870000e+02	187.000000	187.000000
mean	8.813094e+04	3497.518717	5.063148e+04	3.400194e+04	1222.957219	28.957219
std	3.833187e+05	14100.002482	1.901882e+05	2.133262e+05	5710.374790	120.037173
min	1.000000e+01	0.000000	0.000000e+00	0.000000e+00	0.000000	0.000000
25%	1.114000e+03	18.500000	6.265000e+02	1.415000e+02	4.000000	0.000000
50%	5.059000e+03	108.000000	2.815000e+03	1.600000e+03	49.000000	1.000000
75%	4.046050e+04	734.000000	2.260600e+04	9.149000e+03	419.500000	6.000000
max	4.290259e+06	148011.000000	1.846641e+06	2.816444e+06	56336.000000	1076.000000

```
In [6]: # getting the datatype and information about the dataset
```

```
In [7]: df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 187 entries, 0 to 186
Data columns (total 15 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   Country/Region                        187 non-null    object
1   Confirmed                            187 non-null    int64
2   Deaths                              187 non-null    int64
3   Recovered                            187 non-null    int64
4   Active                               187 non-null    int64
5   New cases                            187 non-null    int64
6   New deaths                           187 non-null    int64
7   New recovered                         187 non-null    int64
8   Deaths / 100 Cases                  187 non-null    float64
9   Recovered / 100 Cases                187 non-null    float64
10  Deaths / 100 Recovered              187 non-null    float64
11  Confirmed last week                  187 non-null    int64
12  1 week change                        187 non-null    int64
13  1 week % increase                    187 non-null    float64
14  WHO Region                           187 non-null    object
dtypes: float64(4), int64(9), object(2)
memory usage: 22.0+ KB
```

## Check the Null values in the Dataset

```
In [8]: df.isnull().sum()
```

```
Out[8]: Country/Region      0
Confirmed                  0
Deaths                    0
Recovered                  0
Active                     0
New cases                  0
New deaths                 0
New recovered              0
Deaths / 100 Cases         0
Recovered / 100 Cases      0
Deaths / 100 Recovered    0
Confirmed last week        0
1 week change              0
1 week % increase          0
WHO Region                 0
dtype: int64
```

## Find Number of Unique Countries

method 1 ) using arrays

```
In [10]: country =[]
for i in df.values:
    country.append(i[0])
country = list(set(country))
print('Number of unique contries : ',len(country))
print('unique countries : ',country)
```

```
Number of unique contries : 187
unique countries : ['Israel', 'Luxembourg', 'Philippines', 'Lithuania', 'Papua New Guinea', 'Congo (Kinshasa)', 'United Kingdom', 'Thailand', 'Cabo Verde', 'Bulgaria', 'Honduras', 'Andorra', 'Burkina Faso', 'Gabon', 'Indonesia', 'Fiji', 'Italy', 'Jordan', 'India', 'Ethiopia', 'United Arab Emirates', 'France', 'Laos', 'Saint Lucia', 'Iran', 'Malaysia', 'Togo', 'West Bank and Gaza', 'Mauritania', 'Bosnia and Herzegovina', 'Western Sahara', 'Nicaragua', 'Argentina', 'Lesotho', 'El Salvador', 'Syria', 'Cuba', 'China', 'Finland', 'Belarus', 'Bahamas', 'Suriname', 'Dominica', 'Monaco', 'Holy See', 'Madagascar', 'Comoros', 'Chad', 'Gambia', 'Kenya', 'Peru', 'Azerbaijan', 'North Macedonia', 'Saint Kitts and Nevis', 'Libya', 'Eritrea', 'Zimbabwe', 'Barbados', 'Mexico', 'Kuwait', 'Cyprus', 'Seychelles', 'Ecuador', 'Uzbekistan', 'Saudi Arabia', 'Chile', 'South Korea', 'Venezuela', 'Slovakia', 'Austria', 'Zambia', 'Sweden', 'Central African Republic', 'Guinea', 'Oman', 'Guinea-Bissau', 'Poland', 'Benin', 'Armenia', 'Nigeria', 'Cote d'Ivoire', 'Iraq', 'Estonia', 'Ireland', 'Nepal', 'Latvia', 'Spain', 'Montenegro', 'Liechtenstein', 'Congo (Brazzaville)', 'Brazil', 'Slovenia', 'Yemen', 'Senegal', 'Qatar', 'New Zealand', 'Eswatini', 'Equatorial Guinea', 'Egypt', 'Malawi', 'Hungary', 'Jamaica', 'Albania', 'Colombia', 'South Africa', 'Grenada', 'Australia', 'Mongolia', 'Trinidad and Tobago', 'Timor-Leste', 'Turkey', 'Saint Vincent and the Grenadines', 'Serbia', 'Burma', 'Tajikistan', 'Sri Lanka', 'Kazakhstan', 'Rwanda', 'Germany', 'Switzerland', 'Namibia', 'Niger', 'Bangladesh', 'Bhutan', 'Lebanon', 'Croatia', 'Sudan', 'Guatemala', 'Taiwan*', 'Mozambique', 'Japan', 'Canada', 'Belize', 'Morocco', 'Netherlands', 'Paraguay', 'Bahrain', 'Malta', 'Pakistan', 'Russia', 'Iceland', 'Czechia', 'Afghanistan', 'Kyrgyzstan', 'Norway', 'Djibouti', 'Algeria', 'Bolivia', 'Ghana', 'Maldives', 'Denmark', 'Burundi', 'Ukraine', 'Singapore', 'Liberia', 'Tunisia', 'Costa Rica', 'Portugal', 'Sierra Leone', 'Mauritius', 'Romania', 'Haiti', 'Vietnam', 'Greenland', 'Georgia', 'Mali', 'Sao Tome and Principe', 'Antigua and Barbuda', 'South Sudan', 'Botswana', 'US', 'Moldova', 'Dominican Republic', 'Uganda', 'Uruguay', 'Brunei', 'Panama', 'San Marino', 'Belgium', 'Greece', 'Angola', 'Tanzania', 'Guyana', 'Somalia', 'Cameroon', 'Cambodia', 'Kosovo']
```

**method 2. using nunique function**

```

In [13]: print('Number of unique countries :',df['Country/Region'].nunique())
print('unique countries : ',df['Country/Region'].unique())

Number of unique countries : 187
unique countries : ['Afghanistan' 'Albania' 'Algeria' 'Andorra' 'An
gola'
'Antigua and Barbuda' 'Argentina' 'Armenia' 'Australia' 'Austria'
'Azerbaijan' 'Bahamas' 'Bahrain' 'Bangladesh' 'Barbados' 'Belarus'
'Belgium' 'Belize' 'Benin' 'Bhutan' 'Bolivia' 'Bosnia and Herzegov
ina'
'Botswana' 'Brazil' 'Brunei' 'Bulgaria' 'Burkina Faso' 'Burma' 'Bu
rundi'
'Cabo Verde' 'Cambodia' 'Cameroon' 'Canada' 'Central African Repub
lic'
'Chad' 'Chile' 'China' 'Colombia' 'Comoros' 'Congo (Brazzaville)'
'Congo (Kinshasa)' 'Costa Rica' 'Cote d'Ivoire' 'Croatia' 'Cuba' '
Cyprus'
'Czechia' 'Denmark' 'Djibouti' 'Dominica' 'Dominican Republic' 'Ec
uador'
'Egypt' 'El Salvador' 'Equatorial Guinea' 'Eritrea' 'Estonia' 'Esw
atini'
'Ethiopia' 'Fiji' 'Finland' 'France' 'Gabon' 'Gambia' 'Georgia' 'G
ermany'
'Ghana' 'Greece' 'Greenland' 'Grenada' 'Guatemala' 'Guinea'
'Guinea-Bissau' 'Guyana' 'Haiti' 'Holy See' 'Honduras' 'Hungary'
'Iceland' 'India' 'Indonesia' 'Iran' 'Iraq' 'Ireland' 'Israel' 'It
aly'
'Jamaica' 'Japan' 'Jordan' 'Kazakhstan' 'Kenya' 'Kosovo' 'Kuwait'
'Kyrgyzstan' 'Laos' 'Latvia' 'Lebanon' 'Lesotho' 'Liberia' 'Libya'
'Liechtenstein' 'Lithuania' 'Luxembourg' 'Madagascar' 'Malawi' 'Ma
laysia'
'Maldives' 'Mali' 'Malta' 'Mauritania' 'Mauritius' 'Mexico' 'Moldo
va'
'Monaco' 'Mongolia' 'Montenegro' 'Morocco' 'Mozambique' 'Namibia'
'Nepal'
'Netherlands' 'New Zealand' 'Nicaragua' 'Niger' 'Nigeria'
'North Macedonia' 'Norway' 'Oman' 'Pakistan' 'Panama' 'Papua New G
uinea'
'Paraguay' 'Peru' 'Philippines' 'Poland' 'Portugal' 'Qatar' 'Roman
ia'
'Russia' 'Rwanda' 'Saint Kitts and Nevis' 'Saint Lucia'
'Saint Vincent and the Grenadines' 'San Marino' 'Sao Tome and Prin
cipe'
'Saudi Arabia' 'Senegal' 'Serbia' 'Seychelles' 'Sierra Leone' 'Sin
gapore'
'Slovakia' 'Slovenia' 'Somalia' 'South Africa' 'South Korea'
'South Sudan' 'Spain' 'Sri Lanka' 'Sudan' 'Suriname' 'Sweden'
'Switzerland' 'Syria' 'Taiwan*' 'Tajikistan' 'Tanzania' 'Thailand'
'Timor-Leste' 'Togo' 'Trinidad and Tobago' 'Tunisia' 'Turkey' 'US'
'Uganda' 'Ukraine' 'United Arab Emirates' 'United Kingdom' 'Urugua
y'
'Uzbekistan' 'Venezuela' 'Vietnam' 'West Bank and Gaza' 'Western S
ahara'
'Yemen' 'Zambia' 'Zimbabwe']

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