starting with pandas

In [ ]:
```
!pip install pandas
```

importing the pandas library

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

reading the csv file

In [5]:
```
df = pd.read_csv('https://raw.githubusercontent.com/AshishJangra27/Data-Science-Specializa
```

printing the data set

In [6]:
```
df
```

Out[6]:

	Country/Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Dea Recov
0	Afghanistan	36263	1269	25198	9796	106	10	18	3.50	69.49	
1	Albania	4880	144	2745	1991	117	6	63	2.95	56.25	
2	Algeria	27973	1163	18837	7973	616	8	749	4.16	67.34	
3	Andorra	907	52	803	52	10	0	0	5.73	88.53	
4	Angola	950	41	242	667	18	1	0	4.32	25.47	1
...	...	...	...	...	...	...	...	...	...	...	
182	West Bank and Gaza	10621	78	3752	6791	152	2	0	0.73	35.33	
183	Western Sahara	10	1	8	1	0	0	0	10.00	80.00	1
184	Yemen	1691	483	833	375	10	4	36	28.56	49.26	5
185	Zambia	4552	140	2815	1597	71	1	465	3.08	61.84	
186	Zimbabwe	2704	36	542	2126	192	2	24	1.33	20.04	

187 rows × 15 columns

checking the null values

In [9]:
```
df.isnull().sum()
```

Out[9]:
```
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
```

here im using .sum() function to get count of the null values in each column, if the function is not used the output will be in tabular format which will be a bit of complex to understand

checking the unique values

In [11]:
```
df['Country/Region'].unique()
```

Out[11]:
```
array(['Afghanistan', 'Albania', 'Algeria', 'Andorra', 'Angola',
       'Antigua and Barbuda', 'Argentina', 'Armenia', 'Australia',
       'Austria', 'Azerbaijan', 'Bahamas', 'Bahrain', 'Bangladesh',
       'Barbados', 'Belarus', 'Belgium', 'Belize', 'Benin', 'Bhutan',
       'Bolivia', 'Bosnia and Herzegovina', 'Botswana', 'Brazil',
       'Brunei', 'Bulgaria', 'Burkina Faso', 'Burma', 'Burundi',
       'Cabo Verde', 'Cambodia', 'Cameroon', 'Canada',
       'Central African Republic', 'Chad', 'Chile', 'China', 'Colombia',
       'Comoros', 'Congo (Brazzaville)', 'Congo (Kinshasa)', 'Costa Rica',
       "Cote d'Ivoire", 'Croatia', 'Cuba', 'Cyprus', 'Czechia', 'Denmark',
       'Djibouti', 'Dominica', 'Dominican Republic', 'Ecuador', 'Egypt',
       'El Salvador', 'Equatorial Guinea', 'Eritrea', 'Estonia',
       'Eswatini', 'Ethiopia', 'Fiji', 'Finland', 'France', 'Gabon',
       'Gambia', 'Georgia', 'Germany', 'Ghana', 'Greece', 'Greenland',
       'Grenada', 'Guatemala', 'Guinea', 'Guinea-Bissau', 'Guyana',
       'Haiti', 'Holy See', 'Honduras', 'Hungary', 'Iceland', 'India',
       'Indonesia', 'Iran', 'Iraq', 'Ireland', 'Israel', 'Italy',
       'Jamaica', 'Japan', 'Jordan', 'Kazakhstan', 'Kenya', 'Kosovo',
       'Kuwait', 'Kyrgyzstan', 'Laos', 'Latvia', 'Lebanon', 'Lesotho',
       'Liberia', 'Libya', 'Liechtenstein', 'Lithuania', 'Luxembourg',
       'Madagascar', 'Malawi', 'Malaysia', 'Maldives', 'Mali', 'Malta',
       'Mauritania', 'Mauritius', 'Mexico', 'Moldova', 'Monaco',
       'Mongolia', 'Montenegro', 'Morocco', 'Mozambique', 'Namibia',
       'Nepal', 'Netherlands', 'New Zealand', 'Nicaragua', 'Niger',
       'Nigeria', 'North Macedonia', 'Norway', 'Oman', 'Pakistan',
       'Panama', 'Papua New Guinea', 'Paraguay', 'Peru', 'Philippines',
       'Poland', 'Portugal', 'Qatar', 'Romania', 'Russia', 'Rwanda',
       'Saint Kitts and Nevis', 'Saint Lucia',
       'Saint Vincent and the Grenadines', 'San Marino',
       'Sao Tome and Principe', 'Saudi Arabia', 'Senegal', 'Serbia',
       'Seychelles', 'Sierra Leone', 'Singapore', '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', 'Uruguay',
       'Uzbekistan', 'Venezuela', 'Vietnam', 'West Bank and Gaza',
       'Western Sahara', 'Yemen', 'Zambia', 'Zimbabwe'], dtype=object)
```

creating a list to append all the values in the 'Country/Region' column into an empty list to represent them in decent order and easy to find

In [13]:
```
lst = []
for i in df['Country/Region']:
    lst.append(i)
```

printing the list

In [14]:
```
lst
```

Out[14]:
```
['Afghanistan',
 'Albania',
 'Algeria',
 'Andorra',
 'Angola',
 'Antigua and Barbuda',
 'Argentina',
 'Armenia',
 'Australia',
 'Austria',
 'Azerbaijan',
 'Bahamas',
 'Bahrain',
 'Bangladesh',
 'Barbados',
 'Belarus',
 'Belgium',
 'Belize',
 'Benin',
 'Bhutan',
 'Bolivia',
 'Bosnia and Herzegovina',
 'Botswana',
 'Brazil',
 'Brunei',
 'Bulgaria',
 'Burkina Faso',
 'Burma',
 'Burundi',
 'Cabo Verde',
 'Cambodia',
 'Cameroon',
 'Canada',
 'Central African Republic',
 'Chad',
 'Chile',
 'China',
 'Colombia',
 'Comoros',
 'Congo (Brazzaville)',
 'Congo (Kinshasa)',
 'Costa Rica',
 "Cote d'Ivoire",
 'Croatia',
 'Cuba',
 'Cyprus',
 'Czechia',
 'Denmark',
 'Djibouti',
 'Dominica',
 'Dominican Republic',
 'Ecuador',
```

```
'El Salvador',
'Equatorial Guinea',
'Eritrea',
'Estonia',
'Eswatini',
'Ethiopia',
'Fiji',
'Finland',
'France',
'Gabon',
'Gambia',
'Georgia',
'Germany',
'Ghana',
'Greece',
'Greenland',
'Grenada',
'Guatemala',
'Guinea',
'Guinea-Bissau',
'Guyana',
'Haiti',
'Holy See',
'Honduras',
'Hungary',
'Iceland',
'India',
'Indonesia',
'Iran',
'Iraq',
'Ireland',
'Israel',
'Italy',
'Jamaica',
'Japan',
'Jordan',
'Kazakhstan',
'Kenya',
'Kosovo',
'Kuwait',
'Kyrgyzstan',
'Laos',
'Latvia',
'Lebanon',
'Lesotho',
'Liberia',
'Libya',
'Liechtenstein',
'Lithuania',
'Luxembourg',
'Madagascar',
'Malawi',
'Malaysia',
'Maldives',
'Mali',
'Malta',
'Mauritania',
'Mauritius',
'Mexico',
'Moldova',
'Monaco',
'Mongolia',
'Montenegro',
'Morocco',
```

```
'Mozambique',
'Namibia',
'Nepal',
'Netherlands',
'New Zealand',
'Nicaragua',
'Niger',
'Nigeria',
'North Macedonia',
'Norway',
'Oman',
'Pakistan',
'Panama',
'Papua New Guinea',
'Paraguay',
'Peru',
'Philippines',
'Poland',
'Portugal',
'Qatar',
'Romania',
'Russia',
'Rwanda',
'Saint Kitts and Nevis',
'Saint Lucia',
'Saint Vincent and the Grenadines',
'San Marino',
'Sao Tome and Principe',
'Saudi Arabia',
'Senegal',
'Serbia',
'Seychelles',
'Sierra Leone',
'Singapore',
'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',
'Uruguay',
'Uzbekistan',
'Venezuela',
```

```
 'Vietnam',
 'West Bank and Gaza',
 'Western Sahara',
 'Yemen',
 'Zambia',
 'Zimbabwe']
```

getting the count of the total unique values in the data set

In [15]:
```
df['Country/Region'].nunique()
```

Out[15]:
```
187
```