Python Libraries- Pandas and Numpy

I have created a jupyter notebook for performing the operations on a dataset "**Global Armed Forces Dataset**", which consists of a detailed analysis of the manpower allocated to each country's armed services, shedding light on their military capabilities and potential readiness for various defense scenarios.

I have used python libraries such as Numpy and Pandas to perform on the dataset and finally use matplotlib for plotting and presenting the data.

Results:

	SR.NO	Country	Active military	Reserve military	Paramilitary	Total	Per 1,000 capita(active)	Per 1,000 capita(total)
0	1	Afghanistan	250000	75000	170000	495000	7.2	14.2
1	2	Albania	8000	0	0	8000	2.6	2.6
2	3	Algeria	130000	150000	187200	467200	3.1	11.2
3	4	Angola	107000	0	10000	117000	3.5	3.9
4	5	Antigua and Barbuda	180	80	0	260	1.9	2.7

```
*[37]: # the columns
       print(df.columns)

       Index(['SR.NO', 'Country', 'Active military', 'Reserve military',
              'Paramilitary', 'Total', 'Per 1,000 capita(active)',
              'Per 1,000 capita(total)'],
             dtype='object')

[38]: print(list(df.columns))

       ['SR.NO', 'Country', 'Active military', 'Reserve military', 'Paramilitary', 'Total', 'Per 1,000 capita(active)', 'Per 1,000 capita(total)']
```

•[41]:
```
# calculating the percentages of reserve personeles around the world
df['Percentage_Reserve'] = np.round((df['Reserve military'] / df['Total']) * 100, 2)
print(df[['Country', 'Reserve military', 'Total', 'Percentage_Reserve']].head())
```

```
              Country  Reserve military   Total  Percentage_Reserve
0         Afghanistan             75000  495000               15.15
1             Albania                 0    8000                0.00
2             Algeria            150000  467200               32.11
3              Angola                 0  117000                0.00
4  Antigua and Barbuda                80     260               30.77
```

```
4  Antigua and Barbuda                80     260               30.77
```

•[42]:
```
# top 10

top10_total = df.sort_values('Total', ascending=False).head(10)
print(top10_total[['Country', 'Total']])
```

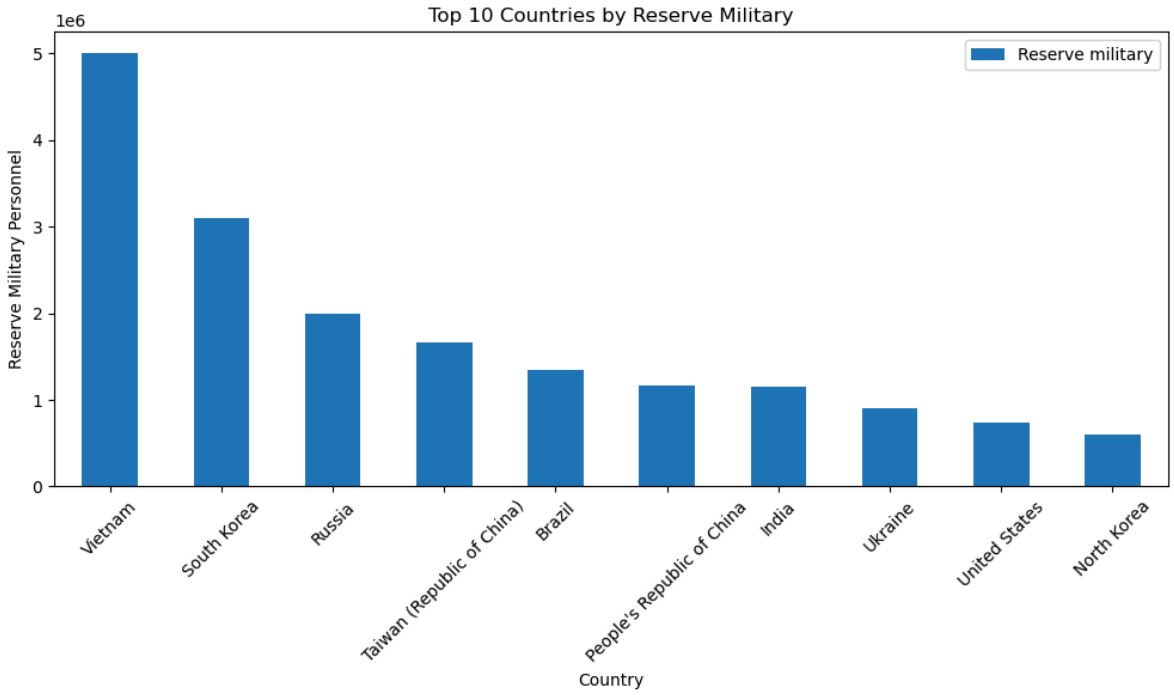
```
                        Country    Total
114                 North Korea  7769000
142                 South Korea  6712500
168                     Vietnam  5522000
70                        India  5137500
33   People's Republic of China  4015000
130                      Russia  3708000
21                       Brazil  2101500
164                United States  2072950
151  Taiwan (Republic of China)  1831800
118                    Pakistan  1495000
```

```
high_reserve = df[df['Percentage_Reserve'] > 50]
print(high_reserve[['Country', 'Reserve military', 'Total', 'Percentage_Reserve']])
```

	Country	Reserve military	Total	Percentage_Reserve
6	Armenia	210000	259100	81.05
8	Austria	125600	147650	85.07
9	Azerbaijan	330000	471950	69.92
14	Belarus	289500	444850	65.08
21	Brazil	1340000	2101500	63.76
37	Croatia	18350	36550	50.21
39	Cyprus	50000	65750	76.05
42	Denmark	44000	58500	75.21
46	Ecuador	118000	158750	74.33
51	Estonia	17500	24600	71.14
53	Fiji	6000	9500	63.16
54	Finland	254000	292000	86.99
61	Greece	221350	368050	60.14
62	Guatemala	63850	106900	59.73
67	Honduras	60000	82950	72.33
75	Israel	465000	642500	72.37
86	Latvia	15900	22110	71.91
101	Moldova	58000	64050	90.55
102	Mongolia	137000	154200	88.85
116	Norway	40000	63250	63.24
122	Paraguay	164500	193250	85.12
123	Peru	188000	346000	54.34
126	Portugal	211700	263650	80.30
130	Russia	2000000	3708000	53.94
134	Serbia	50150	82000	61.16
137	Singapore	252500	310900	81.22
149	Switzerland	196450	216000	90.95
151	Taiwan (Republic of China)	1657000	1831800	90.46
153	Tanzania	80000	108400	73.80
161	Ukraine	900000	1211000	74.32
168	Vietnam	5000000	5522000	90.55

```
# plotting the data
```

Plotting of data and final conclusion


Top 10 Countries by Reserve Military
1e6
Reserve military
Reserve Military Personnel
0
1
2
3
4
5
Vietnam
South Korea
Russia
Taiwan (Republic of China)
Brazil
People's Republic of China
India
Ukraine
United States
North Korea
Country