

Task 4 - Exploratory Data Analysis - Terrorism (Level - Intermediate)

Exploratory Data Analysis - Terrorism (Level - Intermediate) Assignment - 4

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Importing the required Libraries

```
In [1]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import seaborn as sns
%matplotlib inline
from sklearn.cluster import KMeans
from sklearn import datasets
import warnings
warnings.filterwarnings("ignore")
import os
import mpl_toolkits
import json
print('Libraries are imported Successfully')
```

Libraries are imported Successfully

Importing the dataset

```
In [15]: df=pd.read_csv('globalterrorism.csv',low_memory=False,encoding = "ISO-8859-1")
```

```
In [16]: df
```

```
Out[16]:
```

	eventid	iyear	imonth	iday	approxdate	extended	resolution	country	country_txt	region	...	addnotes	scite1	...
0	1970000000001	1970	7	2	NaN	0	NaN	58	Dominican Republic	2	...	NaN	NaN	
1	1970000000002	1970	0	0	NaN	0	NaN	130	Mexico	1	...	NaN	NaN	
2	1970010000001	1970	1	0	NaN	0	NaN	160	Philippines	5	...	NaN	NaN	
3	1970010000002	1970	1	0	NaN	0	NaN	78	Greece	8	...	NaN	NaN	
4	1970010000003	1970	1	0	NaN	0	NaN	101	Japan	4	...	NaN	NaN	
...	
181686	201712310022	2017	12	31	NaN	0	NaN	182	Somalia	11	...	NaN	"Somalia: Al-Shabaab Militants Attack Army Che...	"High Sc High
181687	201712310029	2017	12	31	NaN	0	NaN	200	Syria	10	...	NaN	"Putin's 'victory' in Syria has turned into a ...	Ru sc ki Hme ba
181688	201712310030	2017	12	31	NaN	0	NaN	160	Philippines	5	...	NaN	"Maguindanao clashes trap tribe members," Phil...	
181689	201712310031	2017	12	31	NaN	0	NaN	92	India	6	...	NaN	"Trader escapes grenade attack in Imphal," Bus...	
181690	201712310032	2017	12	31	NaN	0	NaN	160	Philippines	5	...	NaN	"Security tightened in Cotabato following IED ...	"Se tigh Col Ma

181691 rows × 135 columns

```
In [17]: df.shape
```

```
Out[17]: (181691, 135)
```

Cleaning or pre-processing of data

```
In [18]: # Taking only wanted data so choosing the wanted column required for performing EDA
usecols= [1, 5, 8, 10, 11, 12, 13, 14, 25, 26, 27, 29, 35, 58, 69, 71, 82, 98, 100, 101, 103, 104, 106]
renamescols= {
    'iyear': 'uyear',
    'country_txt' : 'country_txtt',
    'region_txt' : 'region_txtt',
    'latitude': 'lat',
    'longitude': 'long',
    'provstate': 'provsstate',
    'attacktype1_txt' : 'attackedtype1',
    'targettype1_txt' : 'targettype1',
    'weaptype1_txt' : 'weapontype',
    'nperps' : 'nperhps',
    'nkill' : 'nkilled',
    'nkillter': 'nkilledter',
    'nwound' : 'nwounded',
    'nwondte': 'nwoundedte',
    'propextent_txt' : 'propertyextent'
}
```

```
In [19]: ## Reading the dataset
df =pd.read_csv('globalterrorism.csv',encoding= 'ISO-8859-1', usecols=usecols)
df.rename(columns=renamescols, inplace =True)
print('Data read Successfully')
```

Data read Successfully

```
In [21]: df
```

```
Out[21]:
```

	uyear	extended	country_txtt	region_txtt	provsstate	city	lat	longitude	multiple	success	...	gname	nperhp
0	1970	0	Dominican Republic	Central America & Caribbean	NaN	Santo Domingo	18.456792	-69.951164	0.0	1	...	MANO-D	NaN
1	1970	0	Mexico	North America	Federal	Mexico city	19.371887	-99.086624	0.0	1	...	23rd of September Communist League	7.0
2	1970	0	Philippines	Southeast Asia	Tarlac	Unknown	15.478598	120.599741	0.0	1	...	Unknown	NaN
3	1970	0	Greece	Western Europe	Attica	Athens	37.997490	23.762728	0.0	1	...	Unknown	NaN
4	1970	0	Japan	East Asia	Fukouka	Fukouka	33.580412	130.396361	0.0	1	...	Unknown	NaN
...
181686	2017	0	Somalia	Sub-Saharan Africa	Middle Shebelle	Ceelka Geelow	2.359673	45.385034	0.0	1	...	Al-Shabaab	-99.0
181687	2017	0	Syria	Middle East & North Africa	Lattakia	Jableh	35.407278	35.942679	0.0	1	...	Muslim extremists	-99.0
181688	2017	0	Philippines	Southeast Asia	Maguindanao	Kubentog	6.900742	124.437908	0.0	1	...	Bangsamoro Islamic Freedom Movement (BIFM)	-99.0
181689	2017	0	India	South Asia	Manipur	Imphal	24.798346	93.940430	0.0	0	...	Unknown	-99.0
181690	2017	0	Philippines	Southeast Asia	Maguindanao	Cotabato City	7.209594	124.241966	0.0	0	...	Unknown	-99.0

177134 rows × 23 columns

```
In [20]: ## Removing the unknowns values from the columns
df=df[pd.notnull(df.lat)]
df=df[pd.notnull(df.longitude)]
print("Unknown values are removed from the columns")
```

Unknown values are removed from the columns

```
In [23]: ## Unknown values are removed from the columns
## Number of Duplicate Values in the dataset
df.duplicated().sum()
```

```
Out[23]: 21123
```

```
In [24]: ##Removal of Duplicated values
df.drop_duplicates(keep=False,inplace=True)
## Checking Null Values in the dataset
df.isnull().sum()
```

```
Out[24]: uyear      0
extended    0
country_txtt 0
region_txtt 0
provsstate  409
city        366
lat         0
longitude   0
multiple    1
success     0
suicide     0
attackedtype1 0
targtype1_txt 0
gname       0
nperhps     51729
claimed     47212
weapon_type 0
nkilled     7555
nkilledter  48051
nwounded    12494
nwoundte    50093
property     0
propertyextent 94965
dtype: int64
```

```
In [25]: df.fillna(0)
```

Out[25]:

	uyear	extended	country_txtt	region_txtt	provsstate	city	lat	longitude	multiple	success	...	gname	nperhp
0	1970	0	Dominican Republic	Central America & Caribbean	0	Santo Domingo	18.456792	-69.951164	0.0	1	...	MANO-D	0.0
1	1970	0	Mexico	North America	Federal	Mexico city	19.371887	-99.086624	0.0	1	...	23rd of September Communist League	7.0
2	1970	0	Philippines	Southeast Asia	Tarlac	Unknown	15.478598	120.599741	0.0	1	...	Unknown	0.0
3	1970	0	Greece	Western Europe	Attica	Athens	37.997490	23.762728	0.0	1	...	Unknown	0.0
4	1970	0	Japan	East Asia	Fukouka	Fukouka	33.580412	130.396361	0.0	1	...	Unknown	0.0
...
181686	2017	0	Somalia	Sub-Saharan Africa	Middle Shebelle	Ceelka Geelow	2.359673	45.385034	0.0	1	...	Al-Shabaab	-99.0
181687	2017	0	Syria	Middle East & North Africa	Lattakia	Jableh	35.407278	35.942679	0.0	1	...	Muslim extremists	-99.0
181688	2017	0	Philippines	Southeast Asia	Maguindanao	Kubentog	6.900742	124.437908	0.0	1	...	Bangsamoro Islamic Freedom Movement (BIFM)	-99.0
181689	2017	0	India	South Asia	Manipur	Imphal	24.798346	93.940430	0.0	0	...	Unknown	-99.0
181690	2017	0	Philippines	Southeast Asia	Maguindanao	Cotabato City	7.209594	124.241966	0.0	0	...	Unknown	-99.0

146986 rows × 23 columns

```
In [26]: df.isnull()
```

Out[26]:

	uyear	extended	country_txtt	region_txtt	provsstate	city	lat	longitude	multiple	success	...	gname	nperhps	claimed	weap
0	False	False	False	False	True	False	False	False	False	False	...	False	True	True	
1	False	False	False	False	False	False	False	False	False	False	...	False	False	True	
2	False	False	False	False	False	False	False	False	False	False	...	False	True	True	
3	False	False	False	False	False	False	False	False	False	False	...	False	True	True	
4	False	False	False	False	False	False	False	False	False	False	...	False	True	True	
...
181686	False	False	False	False	False	False	False	False	False	False	...	False	False	False	
181687	False	False	False	False	False	False	False	False	False	False	...	False	False	False	
181688	False	False	False	False	False	False	False	False	False	False	...	False	False	False	
181689	False	False	False	False	False	False	False	False	False	False	...	False	False	False	
181690	False	False	False	False	False	False	False	False	False	False	...	False	False	False	

146986 rows × 23 columns

In [27]:

df.isnull().sum()

Out[27]:

uyear0
extended0
country_txtt0
region_txtt0
provsstate409
city366
lat0
longitude0
multiple1
success0
suicide0
attackedtype10
targtype1_txt0
gname0
nperhps51729
claimed47212
weapontype0
nkilled7555
nkilledter48051
nwounded12494
nwoundte50093
property0
propertyextent94965
dtype: int64

In [28]:

df.fillna((0),inplace =True)
df.isnull().sum()

Out[28]:

uyear0
extended0
country_txtt0
region_txtt0
provsstate0
city0
lat0
longitude0
multiple0
success0
suicide0
attackedtype10
targtype1_txt0
gname0
nperhps0
claimed0
weapontype0
nkilled0
nkilledter0
nwounded0
nwoundte0
property0
propertyextent0
dtype: int64

In [29]:

df.isnull().sum()

```
Out[29]: uyear          0
extended        0
country_txtt    0
region_txtt     0
provsstate      0
city            0
lat             0
longitude       0
multiple        0
success         0
suicide         0
attackedtype1   0
targtype1_txt   0
gname           0
nperhps         0
claimed         0
weapontype      0
nkilled         0
nkilledter      0
nwounded        0
nwoundte        0
property        0
propertyextent  0
dtype: int64
```

```
In [30]: ## Checking out the number of columns with names
df.columns
```

```
Out[30]: Index(['uyear', 'extended', 'country_txtt', 'region_txtt', 'provsstate',
              'city', 'lat', 'longitude', 'multiple', 'success', 'suicide',
              'attackedtype1', 'targtype1_txt', 'gname', 'nperhps', 'claimed',
              'weapontype', 'nkilled', 'nkilledter', 'nwounded', 'nwoundte',
              'property', 'propertyextent'],
              dtype='object')
```

```
In [31]: df.dtypes
```

```
Out[31]: uyear          int64
extended        int64
country_txtt    object
region_txtt     object
provsstate      object
city            object
lat             float64
longitude       float64
multiple        float64
success         int64
suicide         int64
attackedtype1   object
targtype1_txt   object
gname           object
nperhps         float64
claimed         float64
weapontype      object
nkilled         float64
nkilledter      float64
nwounded        float64
nwoundte        float64
property        int64
propertyextent  object
dtype: object
```

```
In [32]: df.head(5)
```

	uyear	extended	country_txtt	region_txtt	provsstate	city	lat	longitude	multiple	success	...	gname	nperhps	claime
0	1970	0	Dominican Republic	Central America & Caribbean	0	Santo Domingo	18.456792	-69.951164	0.0	1	...	MANO-D	0.0	0.
1	1970	0	Mexico	North America	Federal	Mexico city	19.371887	-99.086624	0.0	1	...	23rd of September Communist League	7.0	0.
2	1970	0	Philippines	Southeast Asia	Tarlac	Unknown	15.478598	120.599741	0.0	1	...	Unknown	0.0	0.
3	1970	0	Greece	Western Europe	Attica	Athens	37.997490	23.762728	0.0	1	...	Unknown	0.0	0.
4	1970	0	Japan	East Asia	Fukouka	Fukouka	33.580412	130.396361	0.0	1	...	Unknown	0.0	0.

5 rows × 23 columns

Full Summery

```
In [33]: df.info()
```

```

<class 'pandas.core.frame.DataFrame'>
Int64Index: 146986 entries, 0 to 181690
Data columns (total 23 columns):
#   Column                Non-Null Count  Dtype
---  -
0   uyear                  146986 non-null  int64
1   extended               146986 non-null  int64
2   country_txtt           146986 non-null  object
3   region_txtt            146986 non-null  object
4   provsstate             146986 non-null  object
5   city                   146986 non-null  object
6   lat                    146986 non-null  float64
7   longitude               146986 non-null  float64
8   multiple               146986 non-null  float64
9   success                146986 non-null  int64
10  suicide                146986 non-null  int64
11  attackedtype1          146986 non-null  object
12  targtype1_txt         146986 non-null  object
13  gname                  146986 non-null  object
14  nperhps                146986 non-null  float64
15  claimed                146986 non-null  float64
16  weapontype             146986 non-null  object
17  nkilled                146986 non-null  float64
18  nkilledter             146986 non-null  float64
19  nwounded               146986 non-null  float64
20  nwoundte               146986 non-null  float64
21  property               146986 non-null  int64
22  propertyextent         146986 non-null  object
dtypes: float64(9), int64(5), object(9)
memory usage: 26.9+ MB

```

Count of Values in each column of Dataset

```
In [34]: df.nunique()
```

```

Out[34]: uyear                  47
extended                2
country_txtt           204
region_txtt            12
provsstate             2823
city                   34807
lat                    47873
longitude               47588
multiple                2
success                2
suicide                2
attackedtype1          9
targtype1_txt          22
gname                  3401
nperhps                109
claimed                3
weapontype             12
nkilled                201
nkilledter             96
nwounded               238
nwoundte               44
property               3
propertyextent         5
dtype: int64

```

Years OF Dataset

```
In [36]: df['uyear'].unique()
```

```

Out[36]: array([1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980,
        1981, 1986, 1982, 1983, 1984, 1985, 1987, 1988, 1989, 1990, 1991,
        1992, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003,
        2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014,
        2015, 2016, 2017], dtype=int64)

```

```

In [38]: # Counting of each year in the dataset
df['uyear'].value_counts()

```

```
Out[38]: 2014    14303
          2015    12449
          2016    11060
          2013    10435
          2017     9665
          2012     7604
          2008     4333
          2009     4169
          2011     4167
          2010     4103
          1992     3753
          1991     3236
          1989     3163
          2007     2925
          1988     2792
          1994     2637
          1990     2572
          2006     2542
          1984     2279
          1997     2267
          1983     2166
          1996     2146
          1987     2085
          1981     2021
          1980     1998
          1995     1998
          1982     1961
          1979     1949
          1986     1946
          1985     1923
          2005     1901
          2001     1782
          2000     1643
          2002     1244
          1999     1239
          1978     1205
          2003     1186
          2004     1104
          1977     986
          1998     826
          1976     688
          1975     575
          1970     518
          1974     424
          1971     366
          1973     349
          1972     303
          Name: uyear, dtype: int64
```

```
In [40]: #Total count of region in the Dataset
df['region_txt'].value_counts()
```

```
Out[40]: South Asia                39971
          Middle East & North Africa  39491
          Sub-Saharan Africa         15423
          South America              12978
          Western Europe             12285
          Southeast Asia             10980
          Central America & Caribbean  6995
          Eastern Europe              4599
          North America              2879
          East Asia                   628
          Central Asia                498
          Australasia & Oceania       259
          Name: region_txt, dtype: int64
```

```
In [41]: #Total Counts of Cities in the Dataset
df['city'].value_counts()
```

```
Out[41]: Unknown                5760
          Baghdad                4106
          Karachi                1493
          Mosul                  1455
          Mogadishu              1250
          ...
          Tuusula                 1
          Koh Mak                 1
          Shambuko                1
          Baladweyne              1
          Kubentog                1
          Name: city, Length: 34807, dtype: int64
```

```
In [42]: # Total counts of Attack type in the Dataset
df['attackedtype1'].value_counts()
```

Out[42]: Bombing/Explosion 67298
Armed Assault 36845
Assassination 16348
Hostage Taking (Kidnapping) 10018
Facility/Infrastructure Attack 7878
Unknown 6303
Hostage Taking (Barricade Incident) 846
Unarmed Assault 844
Hijacking 606
Name: attackedtype1, dtype: int64

In [43]: #Total Counts of Target type in Dataset
df['targtype1_txt'].value_counts()

Out[43]: Private Citizens & Property 34737
Military 24514
Police 21594
Government (General) 17536
Business 14623
Transportation 5309
Unknown 4096
Religious Figures/Institutions 3875
Educational Institution 3497
Government (Diplomatic) 3128
Utilities 2896
Terrorists/Non-State Militia 2778
Journalists & Media 2541
Violent Political Party 1644
Airports & Aircraft 1226
NGO 908
Telecommunication 809
Tourists 397
Maritime 285
Food or Water Supply 266
Abortion Related 203
Other 124
Name: targtype1_txt, dtype: int64

In [44]: # Statistical Summary of Data
df.describe()

Out[44]:

	uyear	extended	lat	longitude	multiple	success	suicide	nperhps	claim
count	146986.000000	146986.000000	146986.000000	1.469860e+05	146986.000000	146986.000000	146986.000000	146986.000000	146986.000
mean	2003.593499	0.050590	23.688252	-5.548676e+02	0.086716	0.886499	0.043460	-42.688957	0.033
std	12.936236	0.219159	17.899265	2.248011e+05	0.281419	0.317205	0.203891	108.563825	0.934
min	1970.000000	0.000000	-53.154613	-8.618590e+07	0.000000	0.000000	0.000000	-99.000000	-9.000
25%	1992.000000	0.000000	11.400638	8.808213e+00	0.000000	1.000000	0.000000	-99.000000	0.000
50%	2010.000000	0.000000	31.322678	4.376645e+01	0.000000	1.000000	0.000000	0.000000	0.000
75%	2014.000000	0.000000	34.621521	6.980546e+01	0.000000	1.000000	0.000000	0.000000	0.000
max	2017.000000	1.000000	74.633553	1.793667e+02	1.000000	1.000000	1.000000	25000.000000	1.000

In [46]: #Correlation among the columns
df.corr()

Out[46]:

	uyear	extended	lat	longitude	multiple	success	suicide	nperhps	claimed	nkilled	nkilledter	nwounded
uyear	1.000000	0.087284	0.139096	0.004487	0.193094	-0.057795	0.137812	-0.311391	0.078669	0.015626	0.073930	0.011551
extended	0.087284	1.000000	-0.030879	0.000609	0.003550	0.078878	-0.041591	-0.028576	0.008195	0.011553	0.009054	-0.011720
lat	0.139096	-0.030879	1.000000	0.001662	0.016759	-0.060591	0.074789	-0.075284	0.018524	-0.018130	0.013955	0.015584
longitude	0.004487	0.000609	0.001662	1.000000	0.000824	-0.000942	0.000571	-0.001061	0.000097	-0.000520	0.000278	0.000231
multiple	0.193094	0.003550	0.016759	0.000824	1.000000	0.011408	0.063561	-0.065299	0.050722	0.029170	0.033471	0.025853
success	-0.057795	0.078878	-0.060591	-0.000942	0.011408	1.000000	-0.029239	0.025294	-0.004817	0.052270	-0.022147	0.024457
suicide	0.137812	-0.041591	0.074789	0.000571	0.063561	-0.029239	1.000000	0.057148	0.038451	0.133932	0.100651	0.094581
nperhps	-0.311391	-0.028576	-0.075284	-0.001061	-0.065299	0.025294	0.057148	1.000000	-0.053815	0.032582	0.008837	0.017312
claimed	0.078669	0.008195	0.018524	0.000097	0.050722	-0.004817	0.038451	-0.053815	1.000000	0.013441	0.028469	0.005461
nkilled	0.015626	0.011553	-0.018130	-0.000520	0.029170	0.052270	0.133932	0.032582	0.013441	1.000000	0.351714	0.449810
nkilledter	0.073930	0.009054	0.013955	0.000278	0.033471	-0.022147	0.100651	0.008837	0.028469	0.351714	1.000000	0.026830
nwounded	0.011551	-0.011720	0.015584	0.000231	0.025853	0.024457	0.094581	0.017312	0.005461	0.449810	0.026830	1.000000
nwoundte	0.048757	0.003929	0.024175	0.000168	0.017624	-0.014449	0.005092	-0.001160	0.021594	0.110741	0.359480	0.034977
property	-0.248604	0.001607	-0.067313	-0.001360	-0.079118	-0.037473	-0.073900	0.083877	0.040990	-0.014897	-0.046847	-0.008023

In [47]: #Slicing of Data


```
df.iloc[0]
```

```
Out[47]: uyear          1970
extended          0
country_txtt      Dominican Republic
region_txtt       Central America & Caribbean
provsstate        0
city              Santo Domingo
lat               18.456792
longitude         -69.951164
multiple          0.0
success           1
suicide           0
attackedtype1     Assassination
targtype1_txt     Private Citizens & Property
gname             MANO-D
nperhps           0.0
claimed           0.0
weaponotype       Unknown
nkilld            1.0
nkilldter         0.0
nwounded          0.0
nwoundte          0.0
property          0
propertyextent    0
Name: 0, dtype: object
```

```
In [48]: df.iloc[:,1]
```

```
Out[48]: 0          0
1          0
2          0
3          0
4          0
..
181686     0
181687     0
181688     0
181689     0
181690     0
Name: extended, Length: 146986, dtype: int64
```

Visualizing the Data

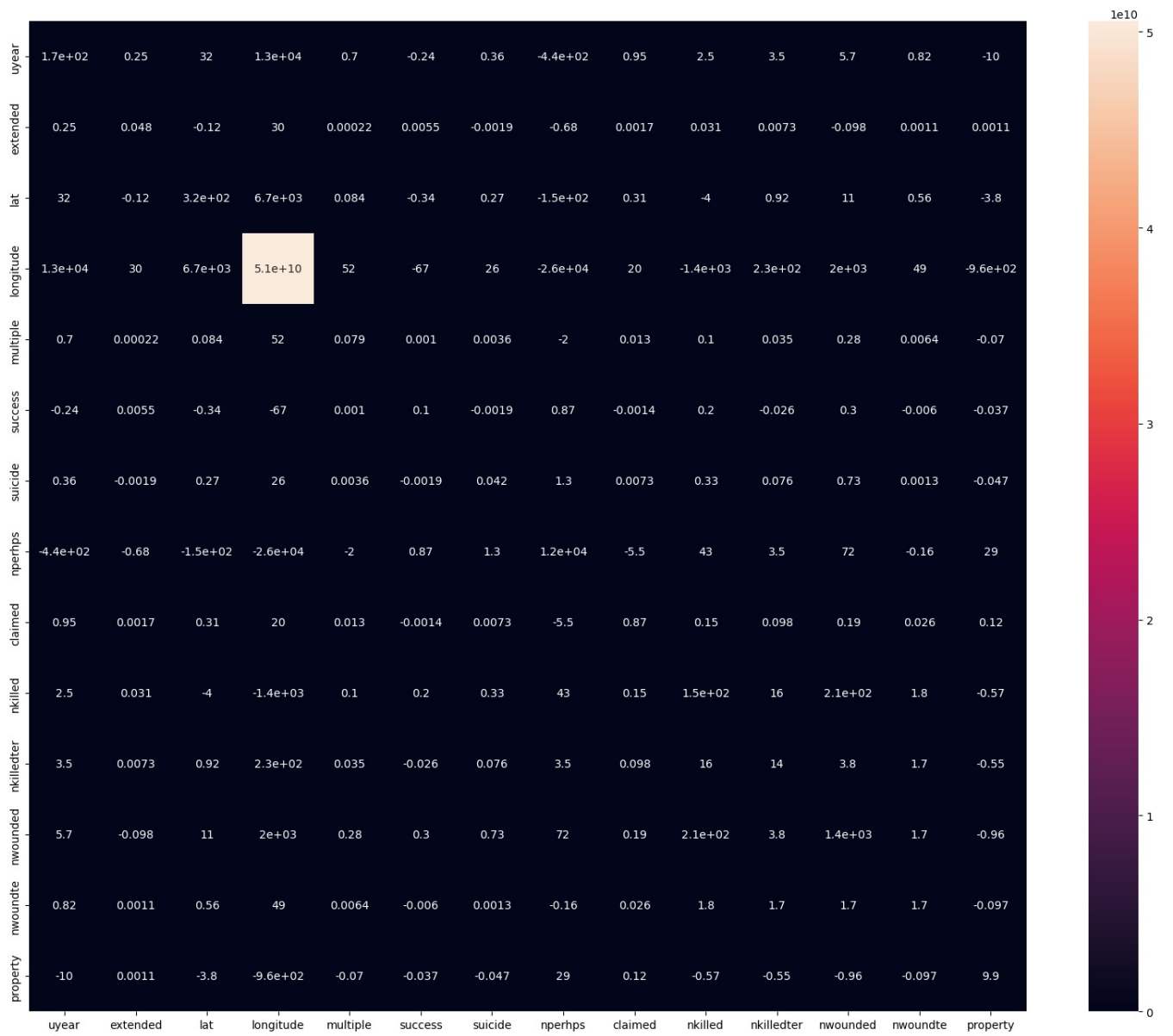
Heat map of Correlation among the columns

```
In [49]: fig,axes = plt.subplots(1,1,figsize=(20,16))
sns.heatmap(df.corr(), annot =True)
plt.show()
```



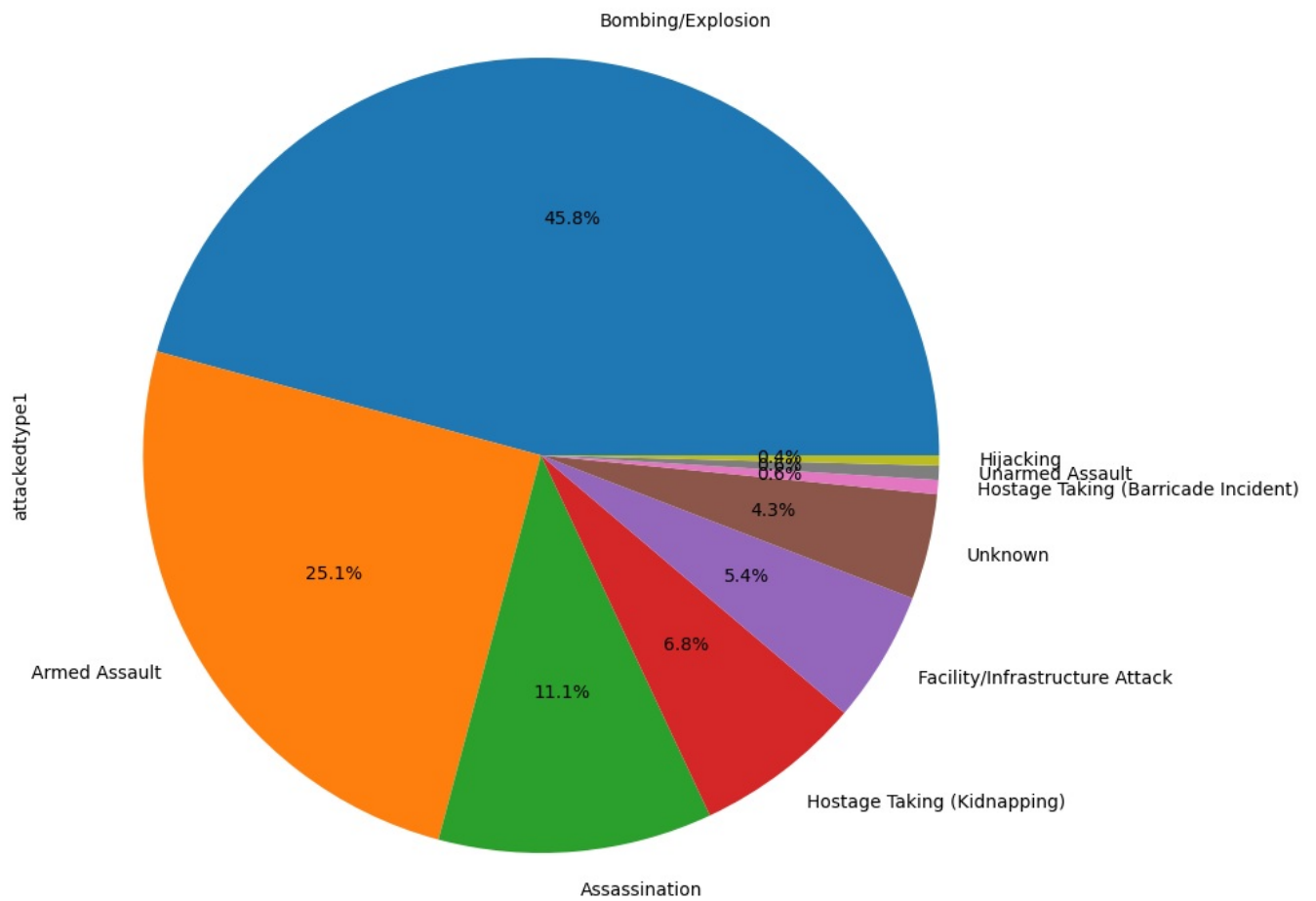
Heat map of Covariance among the set of variables

```
In [50]: fig,axes = plt.subplots(1,1,figsize=(20,16))
sns.heatmap(df.cov(), annot =True)
plt.show()
```



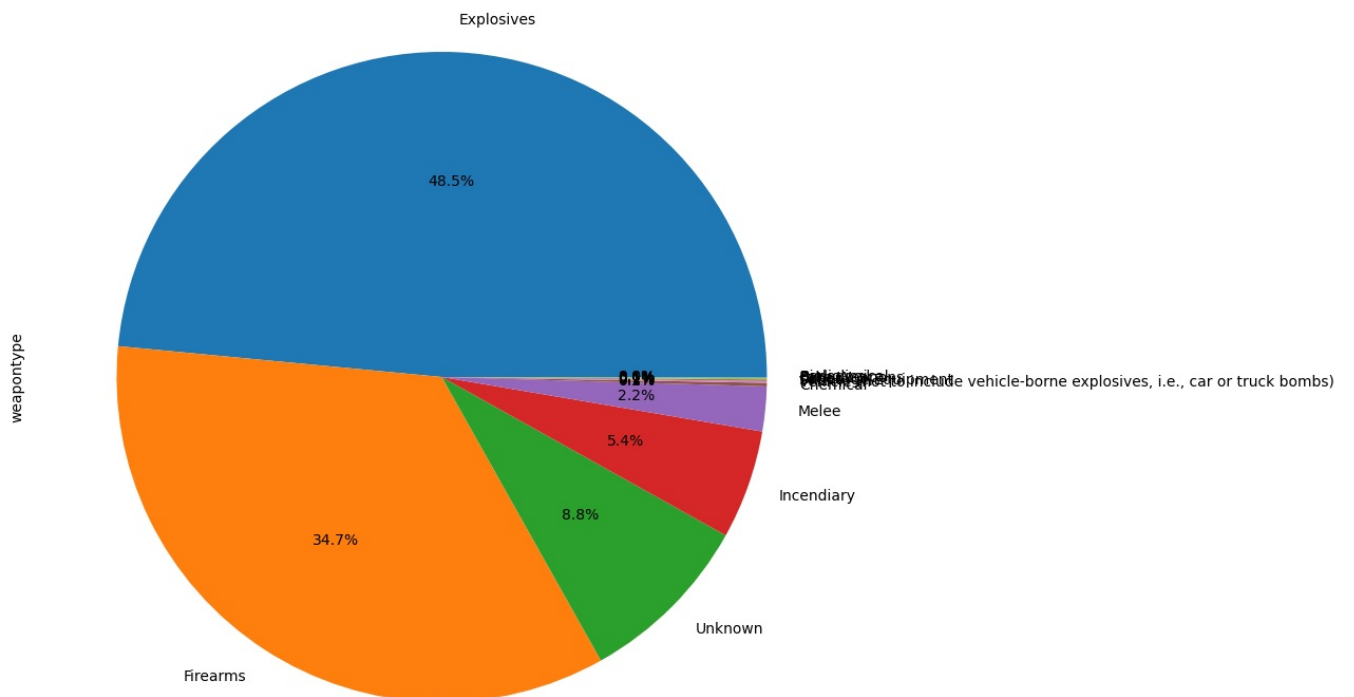
Pie Plot of Attacks types

```
In [51]: plt.figure(figsize=(10,10))
df['attackedtype1'].value_counts().plot.pie(autopct = "%1.1f%%")
plt.show()
```



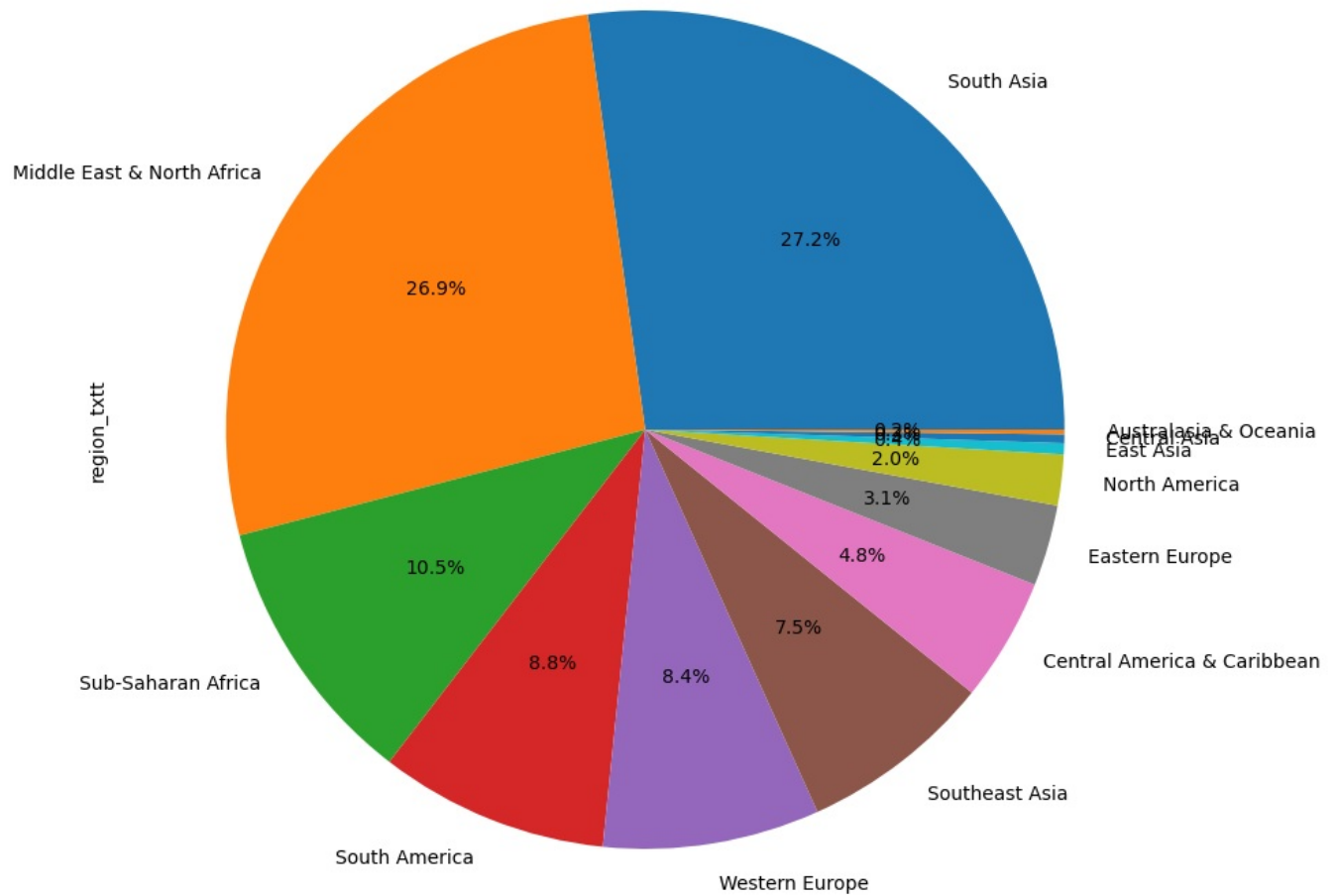
Pie plot for Weapon types used

```
In [52]: plt.figure(figsize=(10,10))
df['weapontype'].value_counts().plot.pie(autopct = "%1.1f%%")
plt.show()
```



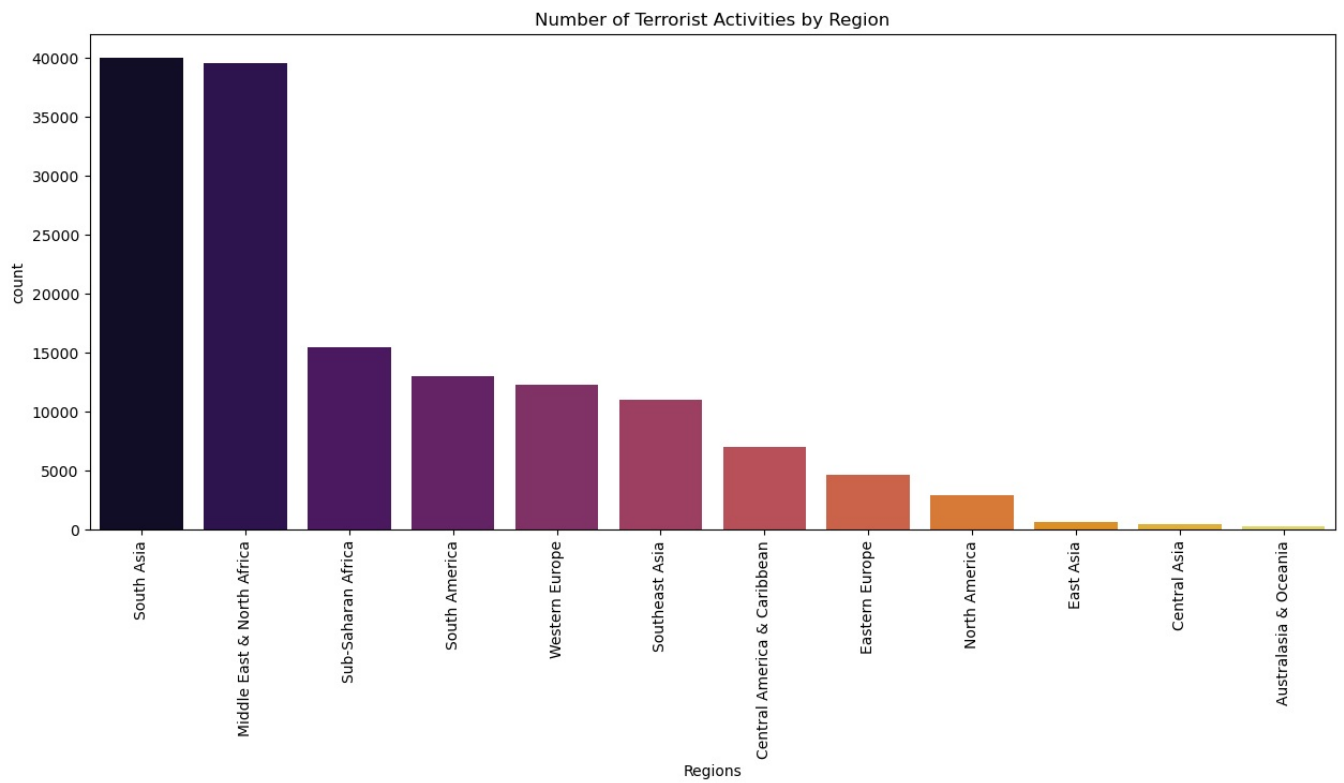
Pie Plot by Regions

```
In [53]: plt.figure(figsize=(10,10))
df['region_txt'].value_counts().plot.pie(autopct = "%1.1f%%")
plt.show()
```



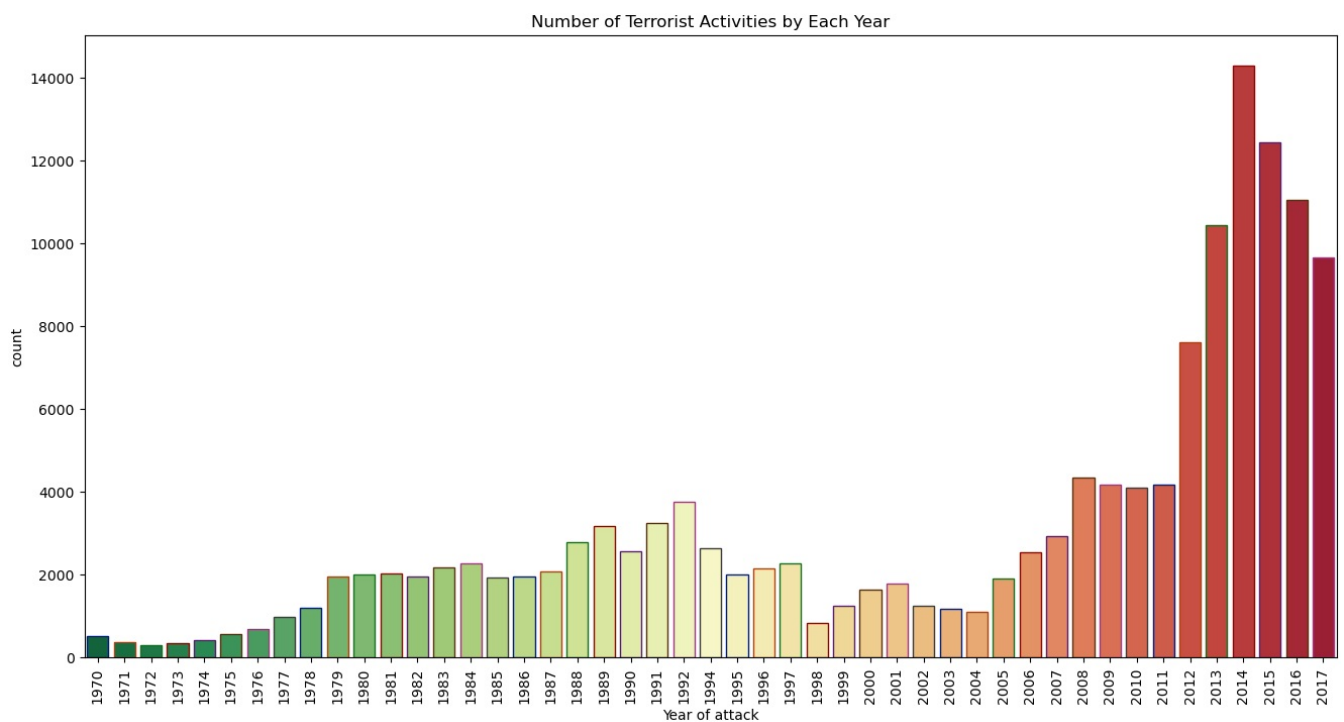
Number of Terrorist activities by Regions

```
In [54]: plt.subplots(figsize =(15,6))
sns.countplot('region_txt',data=df,palette='inferno',order=df['region_txt'].value_counts().index)
plt.xticks(rotation=90)
plt.xlabel('Regions')
plt.title('Number of Terrorist Activities by Region')
plt.show()
```



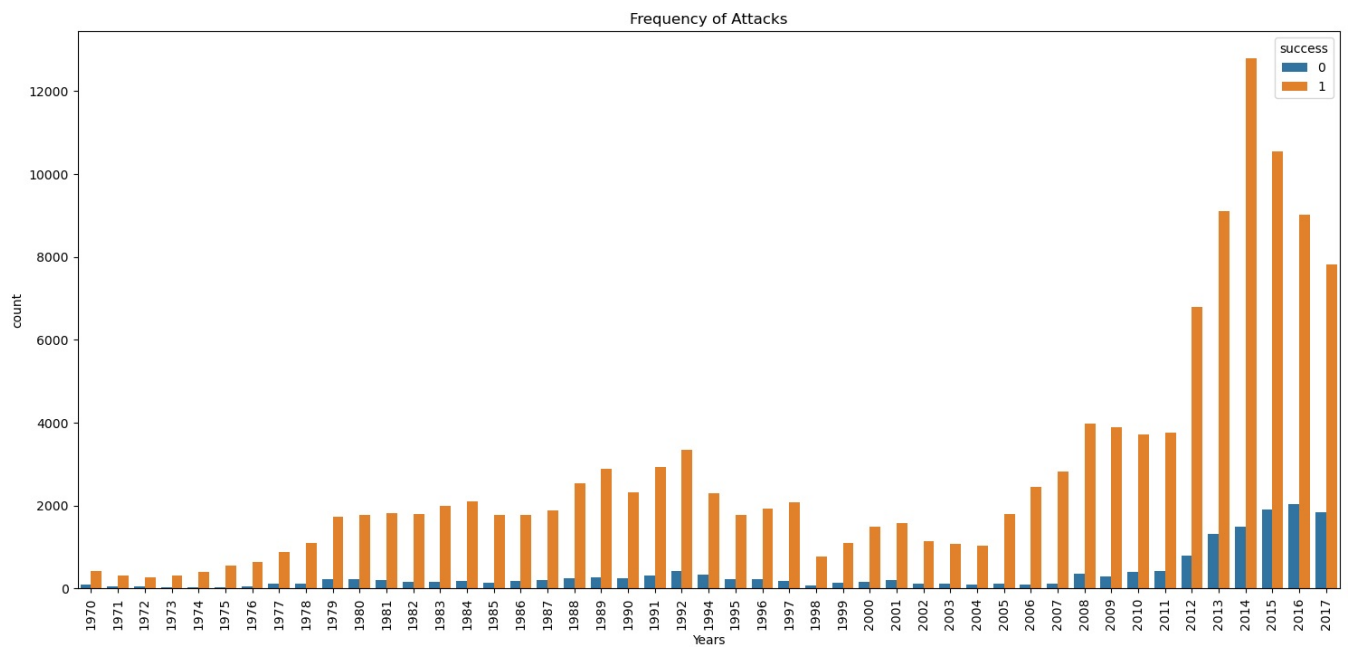
Number of Terrorist Activities by Each Year

```
In [55]: plt.subplots(figsize=(16,8))
sns.countplot('uyear',data=df,palette='RdYlGn_r',edgecolor=sns.color_palette('dark',8))
plt.xticks(rotation=90)
plt.xlabel('Year of attack')
plt.title('Number of Terrorist Activities by Each Year')
plt.show()
```



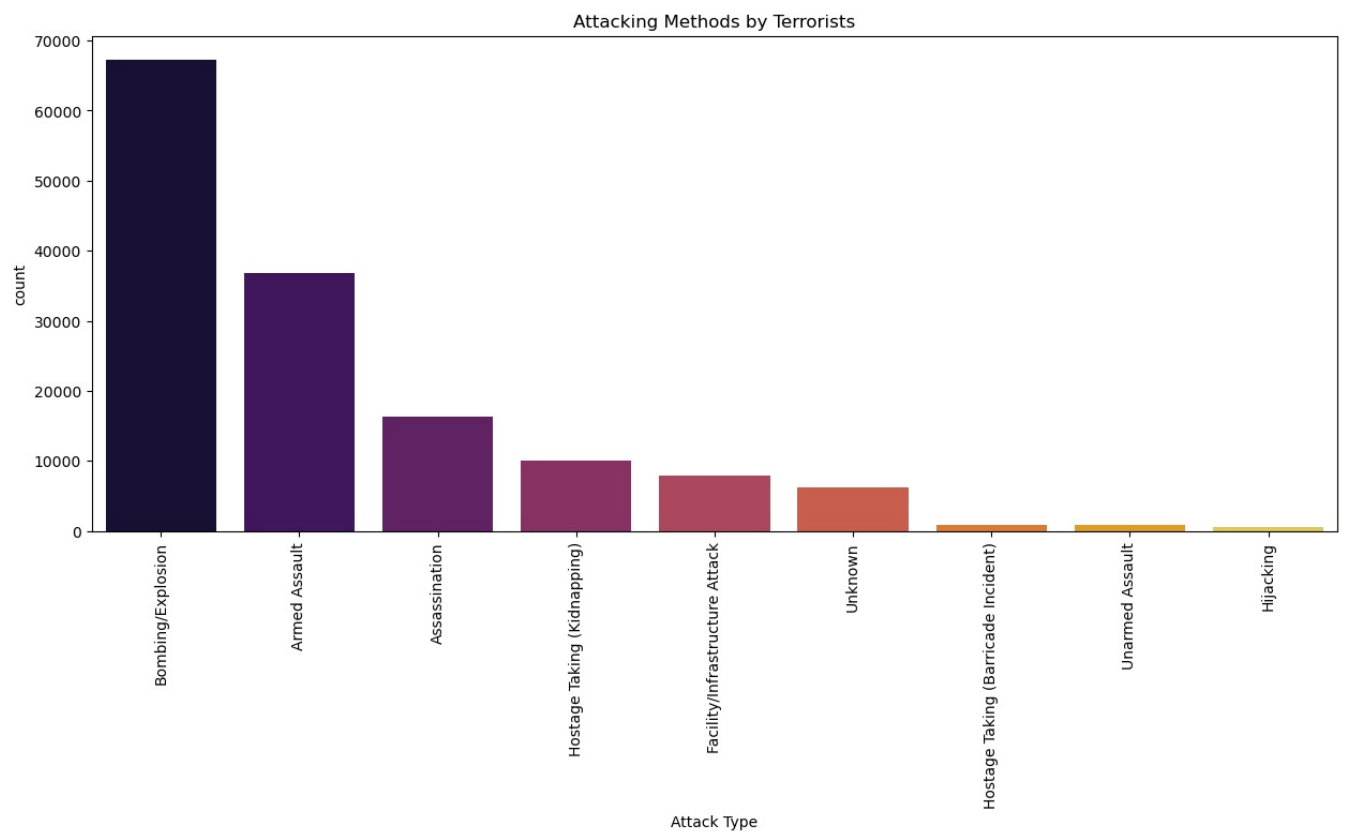
Frequency of Attacks

```
In [56]: plt.subplots(figsize=(18,8))
sns.countplot(x=df['uyear'], hue='success', data=df)
plt.xticks(rotation=90)
plt.xlabel('Years')
plt.title('Frequency of Attacks')
plt.show()
```



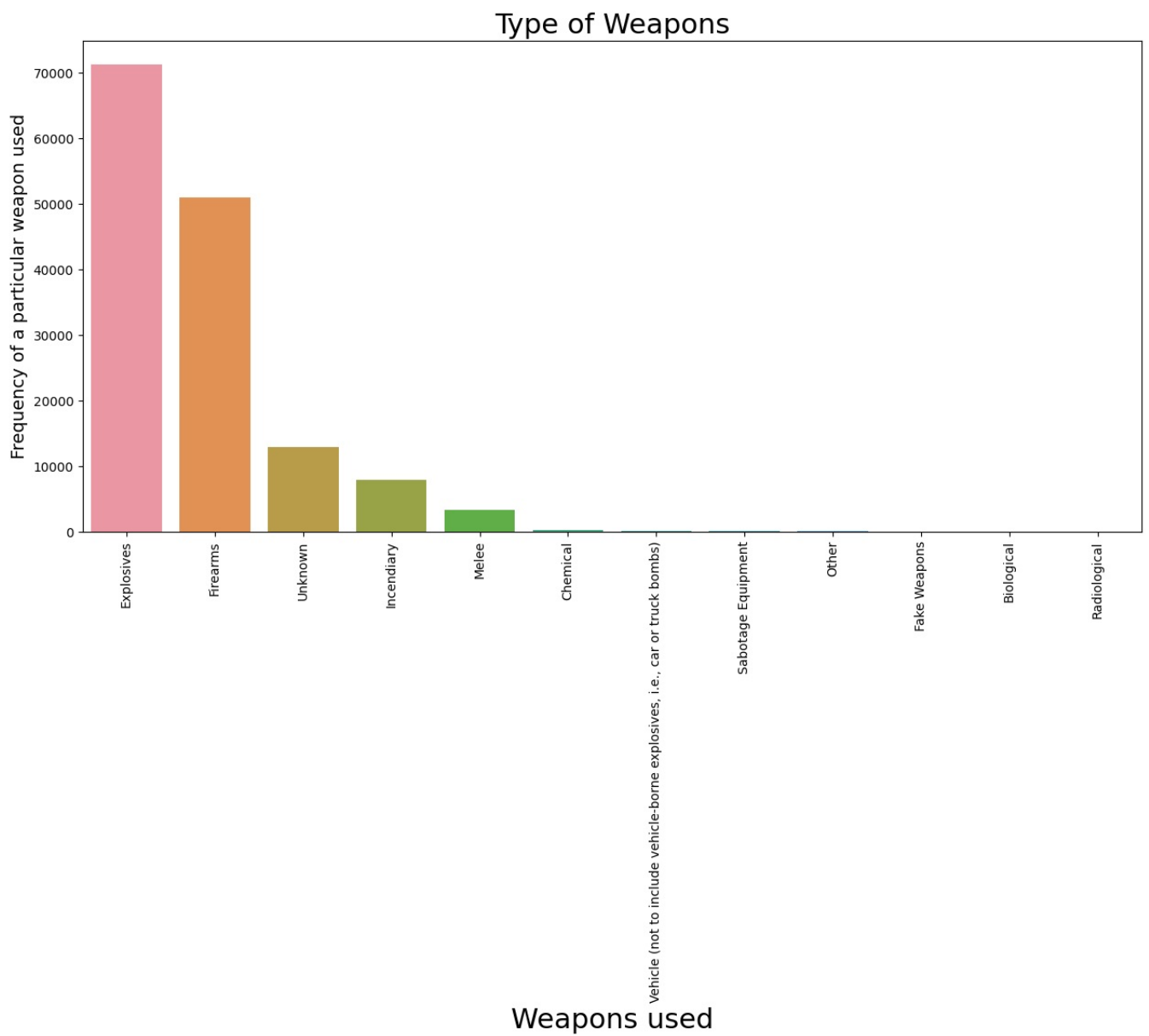
Attacking Methods by Terrorists

```
In [57]: plt.subplots(figsize =(15,6))
sns.countplot('attackedtype1',data=df,palette='inferno',order=df['attackedtype1'].value_counts().index)
plt.xticks(rotation=90)
plt.xlabel('Attack Type')
plt.title('Attacking Methods by Terrorists')
plt.show()
```



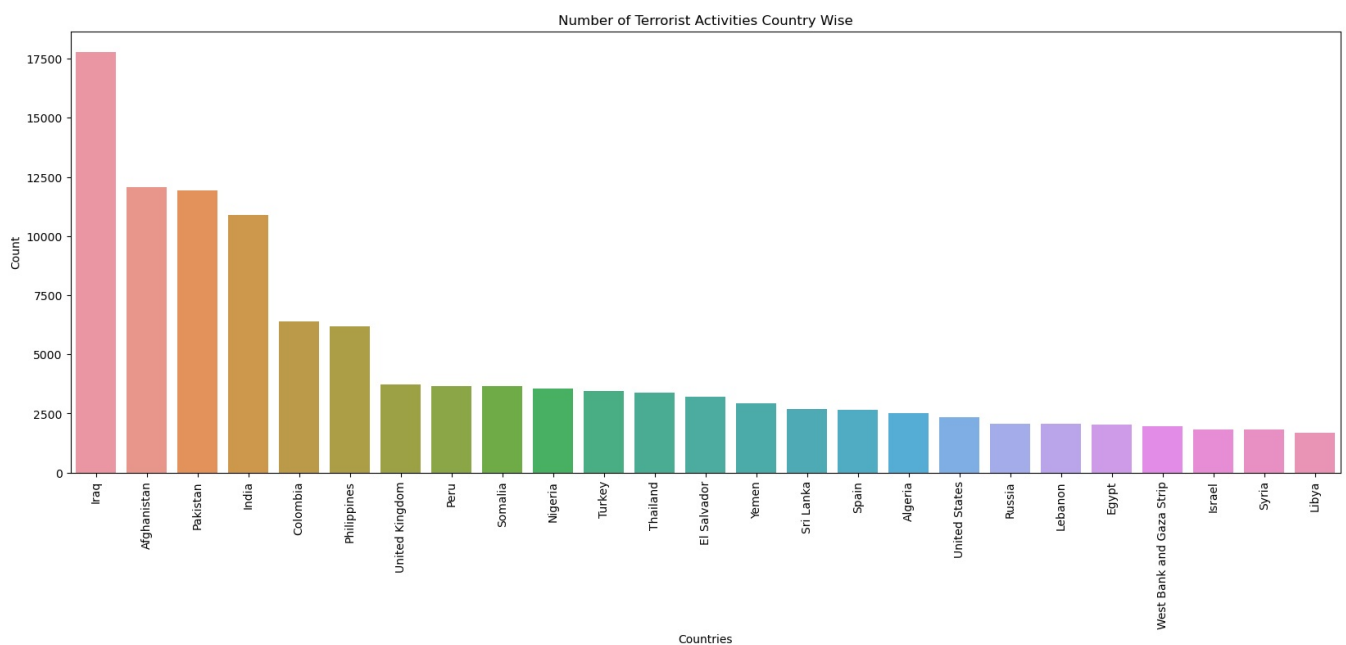
Types of Weapons used by terrorists

```
In [58]: plt.figure(figsize =(15,7))
sns.barplot(x=df['weapontype'].value_counts()[:50].index,y =df['weapontype'].value_counts()[:50].values)
plt.xticks(rotation=90)
plt.xlabel('Weapons used', fontsize =22)
plt.ylabel("Frequency of a particular weapon used", fontsize =14)
plt.title("Type of Weapons", fontsize =22)
plt.show()
```



Number of terrorist activities countrywise

```
In [59]: plt.figure(figsize=(20,7))
sns.barplot(x=df['country_txt'].value_counts()[:25].index, y=df['country_txt'].value_counts()[:25].values)
plt.xticks(rotation=90)
plt.xlabel('Countries')
plt.ylabel('Count')
plt.title("Number of Terrorist Activities Country Wise")
plt.show()
```

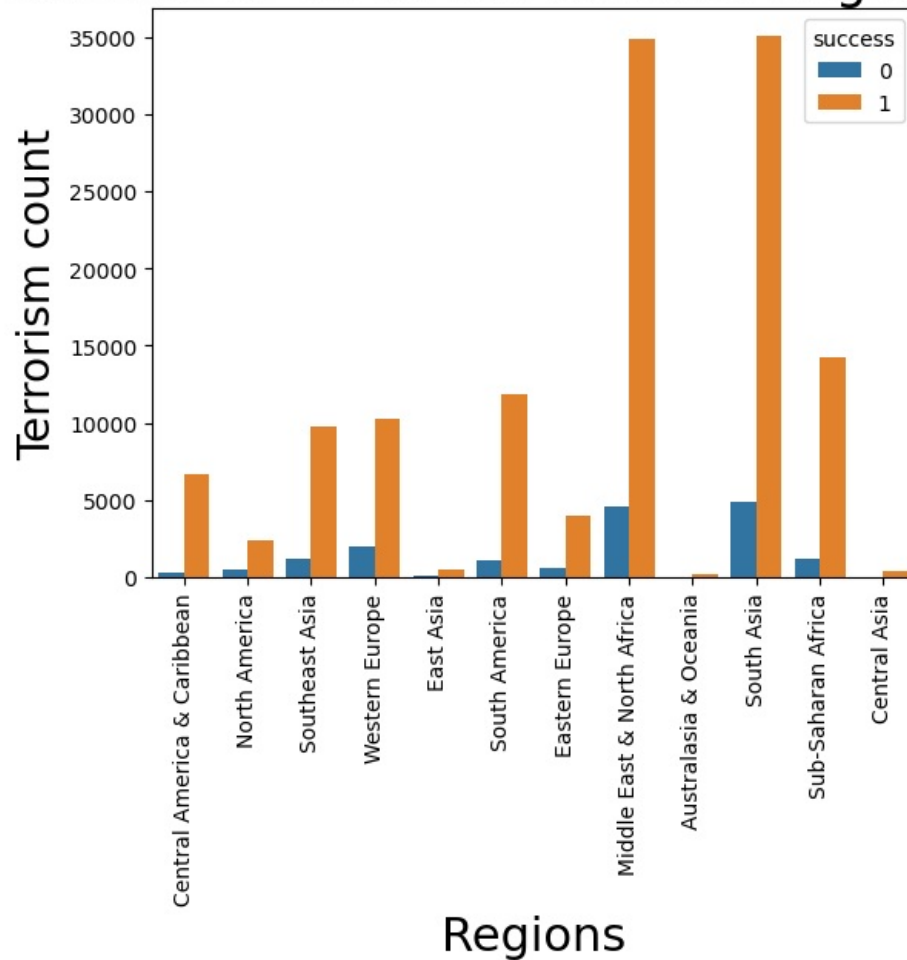


Number of Terrorist Activities by Region Wise

```
In [60]: sns.countplot(x=df['region_txt'], hue='success', data=df)
plt.xlabel("Regions", fontsize =22)
plt.xticks(rotation=90)
plt.ylabel("Terrorism count", fontsize =20)
plt.title("Number of Terrorist Activities Regionwise", fontsize =24)
```

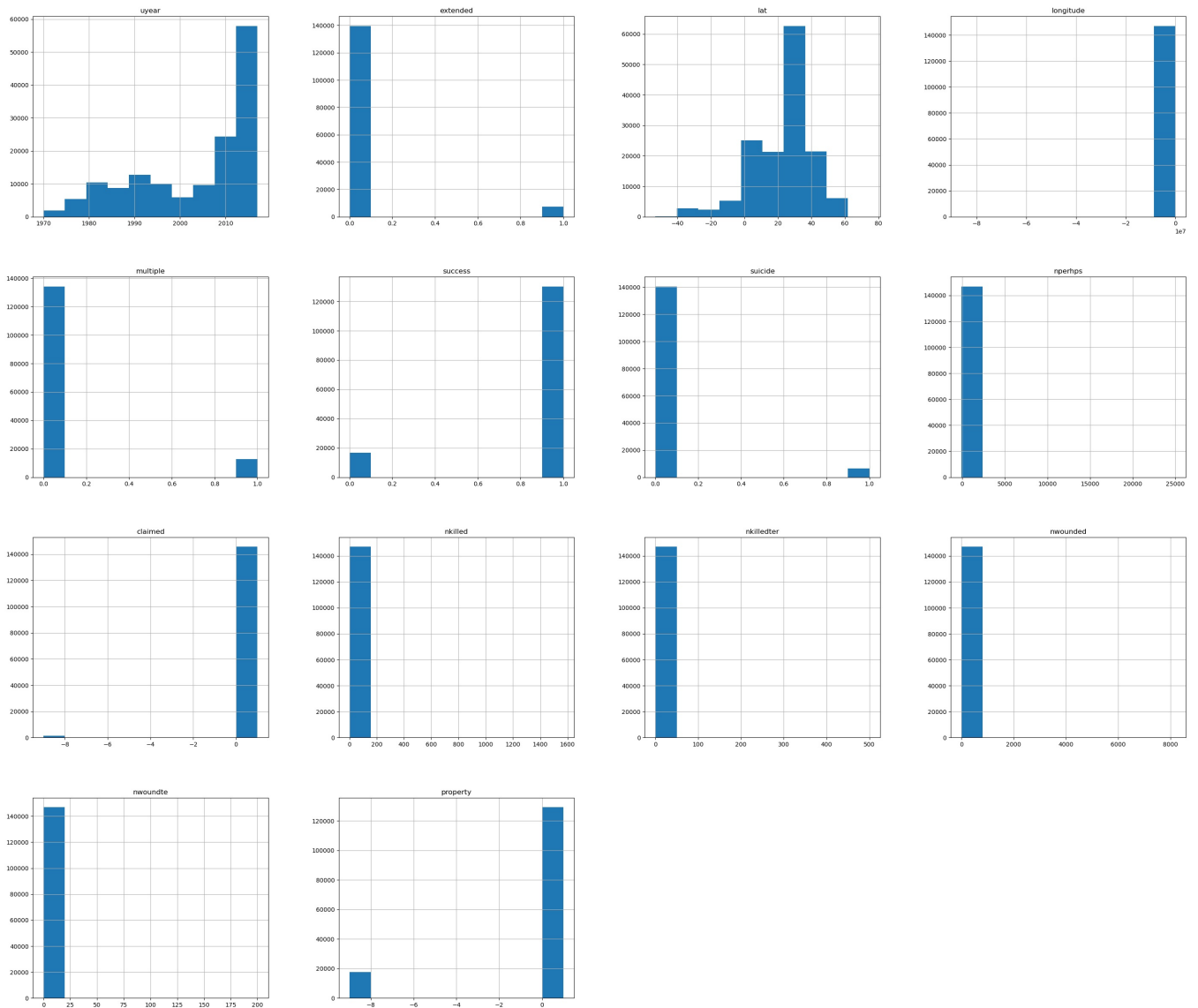
```
Out[60]: Text(0.5, 1.0, 'Number of Terrorist Activities Regionwise')
```

Number of Terrorist Activities Regionwise

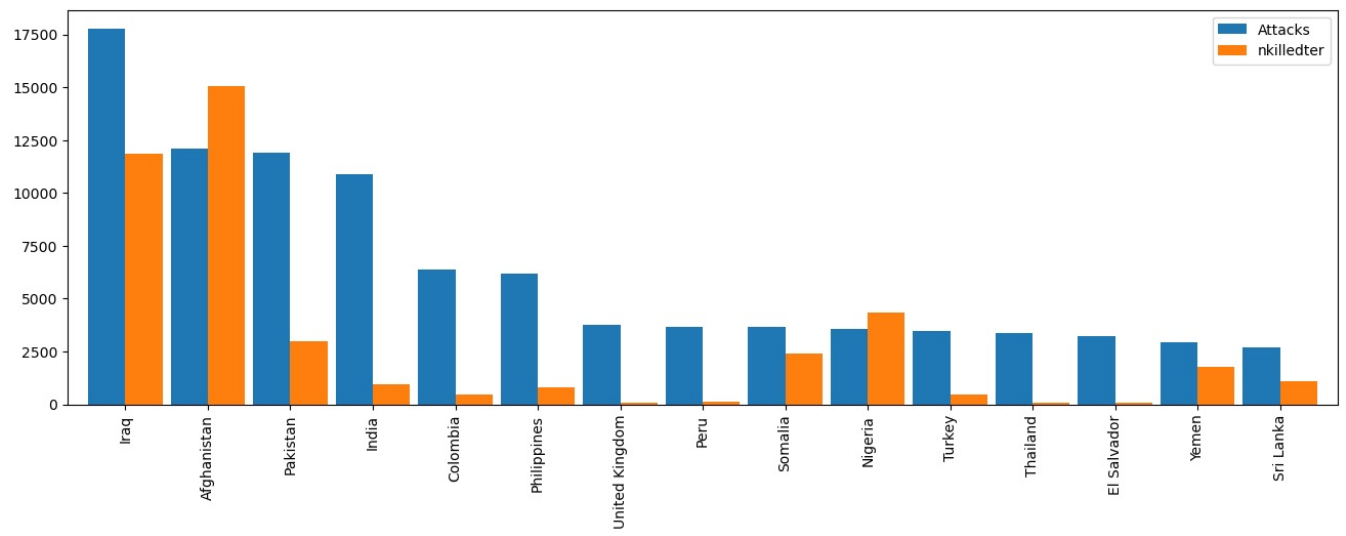


```
In [61]: df.hist(figsize =(35,30))
```

```
Out[61]: array([[<AxesSubplot:title={'center':'year'}>,
<AxesSubplot:title={'center':'extended'}>,
<AxesSubplot:title={'center':'lat'}>,
<AxesSubplot:title={'center':'longitude'}>],
[<AxesSubplot:title={'center':'multiple'}>,
<AxesSubplot:title={'center':'success'}>,
<AxesSubplot:title={'center':'suicide'}>,
<AxesSubplot:title={'center':'nperhps'}>],
[<AxesSubplot:title={'center':'claimed'}>,
<AxesSubplot:title={'center':'nkilled'}>,
<AxesSubplot:title={'center':'nkilledter'}>,
<AxesSubplot:title={'center':'nwounded'}>],
[<AxesSubplot:title={'center':'nwoundte'}>,
<AxesSubplot:title={'center':'property'}>, <AxesSubplot:>,
<AxesSubplot:>]], dtype=object)
```



```
In [62]: count_terror = df['country_txt'].value_counts()[15].to_frame()
count_terror.columns = ['Attacks']
count_kill = df.groupby('country_txt')['nkilledter'].sum().to_frame()
count_terror.merge(count_kill, left_index = True, right_index = True, how = 'left').plot.bar(width = 0.9)
fig = plt.gcf()
fig.set_size_inches(16, 5)
plt.show()
```



Conclusion :

Countries with the highest number of Terrorist Attacks: Iraq

Region with the highest number of Terrorist Attacks: Middle East & North Africa

Maximum number of people killed by a single terrorist attack are 1570 in Iraq

Year with the more attacks: 2014

Month with the most Attacks: 5

Most Attack types: Bombing/Explosions

Year with Highest number of frequencies of attacks : 2014

In []:

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