Assignment02

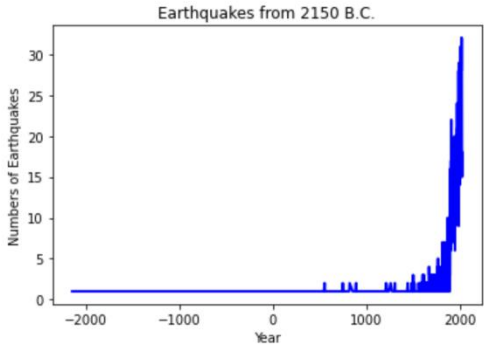
Name：Weihao Deng　　SID:12132195

1, Solution：

1-1：

```
Out[127]: Country
          CHINA          277
          IRAN           187
          TURKEY         164
          INDONESIA      134
          ITALY          119
          JAPAN          108
          PERU            86
          GREECE          77
          TAIWAN          66
          PHILIPPINES     60
          Name: Deaths, dtype: int64
```

1-2：



Q:Do you observe any trend? Explain why or why not?

A: Yes. The number of earthquakes has been increasing in the past few decades.

The reasons may be: 1, human beings have founded many reservoirs, 2, people have digged out all kinds of minerals, 3, the earth has been active.

1-3：

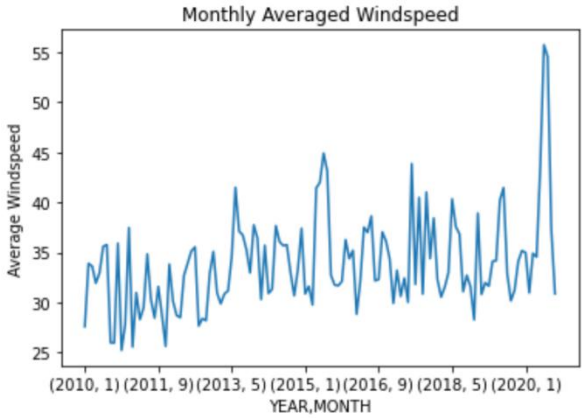
```
Please enter a country:CHINA
('CHINA', 610, 8.5,          Year    Mo    Dy
973   1668.0   7.0   25.0)
```

```
Please enter a country:IRAN
('IRAN', 380, 7.9,       Year    Mo    Dy
236   856.0   12.0   22.0)
```

```
Please enter a country:JAPAN
('JAPAN', 409, 9.1,          Year    Mo    Dy
5705   2011.0   3.0   11.0)
```

2, Solution:

2-1:

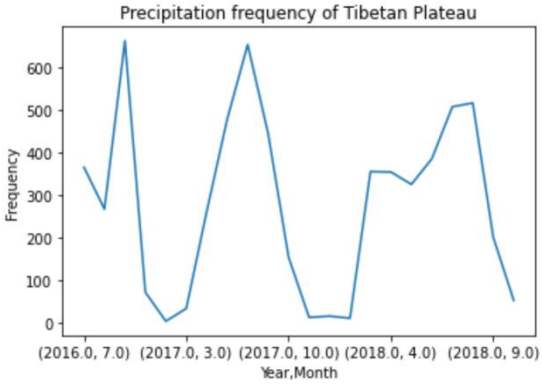


Q: Is there a trend in monthly averaged wind speed within the past 10 years?

A: Yes. The monthly averaged wind speed within the past 10 years has performed for the periodical change characteristics, and it has increased recently.

3, Solution:

Output:(precipitation frequency)

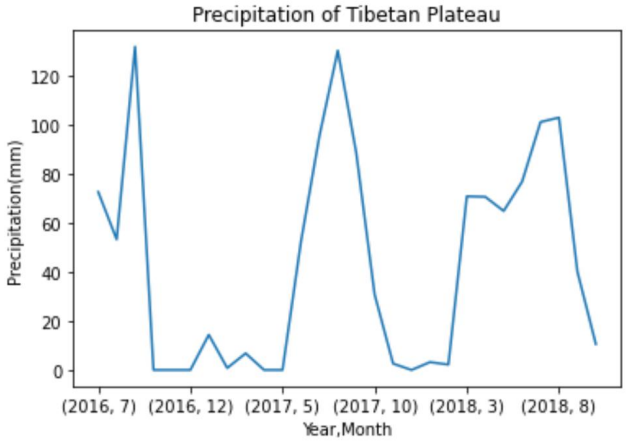


	#	Event	Year	Month	Day
count	6131.000000	6131.000000	6131.000000	6131.000000	6131.000000
mean	18368.998043	3064.207960	2017.233078	7.033437	16.162942
std	8834.070068	1769.726292	0.775221	1.963291	8.875523
min	1.000000	0.000000	2016.000000	1.000000	1.000000
25%	14606.500000	1531.500000	2017.000000	6.000000	9.000000
50%	18368.000000	3064.000000	2017.000000	7.000000	17.000000
75%	26288.500000	4596.500000	2018.000000	8.000000	24.000000
max	30622.000000	6129.000000	2018.000000	11.000000	31.000000

Instructions:
For the problem 1: Yunqiu Zhou inspired me how to use “return” properly.
For the problem 2: TA Wenfu Sun & Meixue Mao inspired me the type of the variable in the dataframe may not be “int”, that may be “str” or other types. Zelin Mai and me discussed how to solve “NaN” value.

For this assignment, some good results might be got while using python to solve data. However, some data solved by Excel could be more easily and convenient.

For example， for problem 3, the results are as follows.



	#	Event	Precipitation	P	Year	Month	Day
count	30716.000000	30716.000000	30716.000000	30716.000000	30716.000000	30716.000000	30716.000000
mean	15358.458556	611.624528	0.199538	0.039908	2016.976332	7.031905	16.007325
std	8867.158582	1457.796170	0.399659	0.079932	0.803172	2.863551	8.866788
min	0.000000	0.000000	0.000000	0.000000	2016.000000	1.000000	1.000000
25%	7679.750000	0.000000	0.000000	0.000000	2016.000000	5.000000	8.000000
50%	15358.500000	0.000000	0.000000	0.000000	2017.000000	8.000000	16.000000
75%	23037.250000	0.000000	0.000000	0.000000	2018.000000	9.000000	24.000000
max	30716.000000	6129.000000	1.000000	0.200000	2018.000000	12.000000	31.000000