

```
In [1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [2]: df=pd.read_csv(r'C:\Users\user\Desktop\rainfall\NAGA MANI MIZO TRIPURA.csv')
df
```

Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
0	323	NAGA MANI MIZO TRIPURA	1902	4.8	0.5	36.3	297.8	215.5	480.1	392.4	312.8	318.7	102
1	324	NAGA MANI MIZO TRIPURA	1903	6.5	40.5	139.8	45.5	159.9	458.6	300.2	470.6	366.1	166
2	325	NAGA MANI MIZO TRIPURA	1904	2.3	46.9	47.5	290.3	230.5	455.3	423.5	423.6	375.8	128
3	326	NAGA MANI MIZO TRIPURA	1905	9.1	35.3	306.5	161.7	193.6	339.7	450.1	429.9	320.1	246
4	327	NAGA MANI MIZO TRIPURA	1906	7.0	71.5	72.5	99.0	302.7	417.4	475.2	439.2	439.1	142
...
109	432	NAGA MANI MIZO TRIPURA	2011	12.6	3.6	51.4	81.1	334.9	374.2	313.3	367.6	258.3	92
110	433	NAGA MANI MIZO TRIPURA	2012	24.5	10.2	20.3	243.5	163.5	396.2	280.1	342.7	248.7	160
111	434	NAGA MANI MIZO TRIPURA	2013	0.2	5.7	19.7	60.3	348.9	206.6	255.9	291.3	241.4	125
112	435	NAGA MANI MIZO TRIPURA	2014	1.2	21.0	25.4	49.6	192.5	268.3	295.7	372.3	300.9	69
113	436	NAGA MANI MIZO TRIPURA	2015	14.4	14.2	21.6	253.5	198.3	283.9	413.6	334.2	255.9	118

114 rows × 20 columns



```
In [3]: df=df.dropna()
df
```

Out[3]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
0	323	NAGA MANI MIZO TRIPURA	1902	4.8	0.5	36.3	297.8	215.5	480.1	392.4	312.8	318.7	102
1	324	NAGA MANI MIZO TRIPURA	1903	6.5	40.5	139.8	45.5	159.9	458.6	300.2	470.6	366.1	166
2	325	NAGA MANI MIZO TRIPURA	1904	2.3	46.9	47.5	290.3	230.5	455.3	423.5	423.6	375.8	128
3	326	NAGA MANI MIZO TRIPURA	1905	9.1	35.3	306.5	161.7	193.6	339.7	450.1	429.9	320.1	246
4	327	NAGA MANI MIZO TRIPURA	1906	7.0	71.5	72.5	99.0	302.7	417.4	475.2	439.2	439.1	142
...
109	432	NAGA MANI MIZO TRIPURA	2011	12.6	3.6	51.4	81.1	334.9	374.2	313.3	367.6	258.3	92
110	433	NAGA MANI MIZO TRIPURA	2012	24.5	10.2	20.3	243.5	163.5	396.2	280.1	342.7	248.7	160
111	434	NAGA MANI MIZO TRIPURA	2013	0.2	5.7	19.7	60.3	348.9	206.6	255.9	291.3	241.4	125
112	435	NAGA MANI MIZO TRIPURA	2014	1.2	21.0	25.4	49.6	192.5	268.3	295.7	372.3	300.9	69
113	436	NAGA MANI MIZO TRIPURA	2015	14.4	14.2	21.6	253.5	198.3	283.9	413.6	334.2	255.9	118

114 rows × 20 columns



```
In [4]: df.columns
```

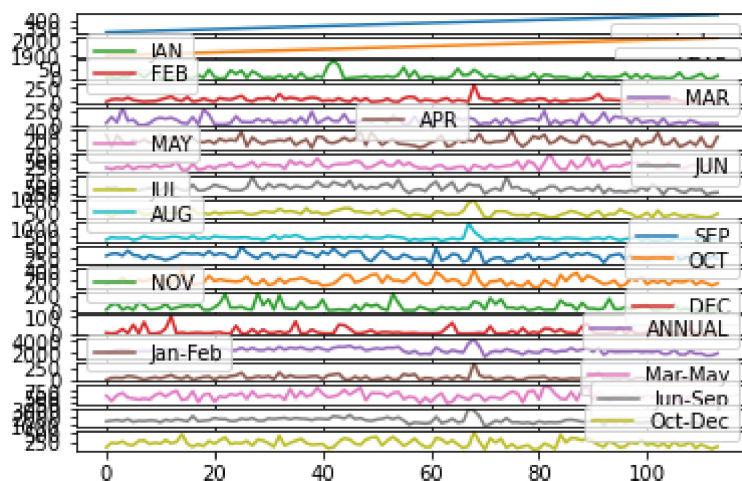
```
Out[4]: Index(['index', 'SUBDIVISION', 'YEAR', 'JAN', 'FEB', 'MAR', 'APR', 'MAY',
              'JUN', 'JUL', 'AUG', 'SEP', 'OCT', 'NOV', 'DEC', 'ANNUAL', 'Jan-Feb',
              'Mar-May', 'Jun-Sep', 'Oct-Dec'],
              dtype='object')
```

In [5]: df.info()

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 114 entries, 0 to 113
Data columns (total 20 columns):
#   Column                Non-Null Count  Dtype
---  -
0   index                 114 non-null   int64
1   SUBDIVISION           114 non-null   object
2   YEAR                  114 non-null   int64
3   JAN                   114 non-null   float64
4   FEB                   114 non-null   float64
5   MAR                   114 non-null   float64
6   APR                   114 non-null   float64
7   MAY                   114 non-null   float64
8   JUN                   114 non-null   float64
9   JUL                   114 non-null   float64
10  AUG                   114 non-null   float64
11  SEP                   114 non-null   float64
12  OCT                   114 non-null   float64
13  NOV                   114 non-null   float64
14  DEC                   114 non-null   float64
15  ANNUAL                114 non-null   float64
16  Jan-Feb              114 non-null   float64
17  Mar-May              114 non-null   float64
18  Jun-Sep              114 non-null   float64
19  Oct-Dec              114 non-null   float64
dtypes: float64(17), int64(2), object(1)
memory usage: 18.7+ KB
```

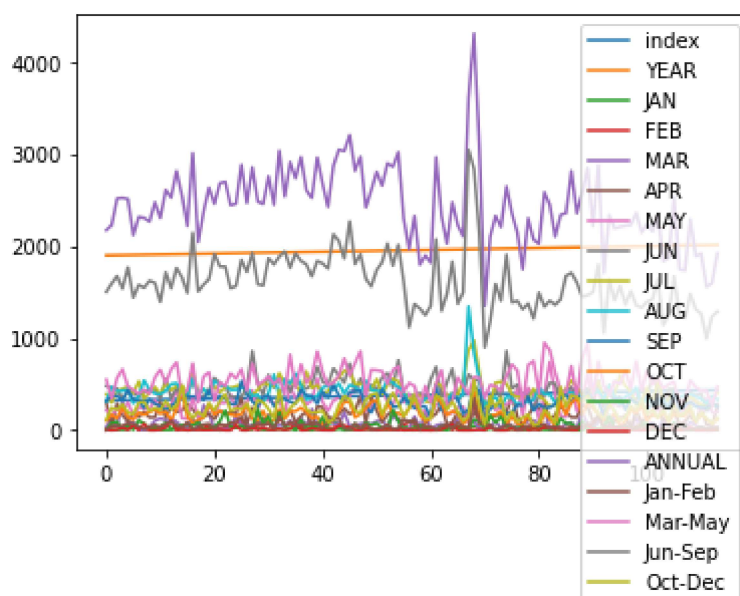
In [6]: df.plot.line(subplots=True)

Out[6]: array([<AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>, <AxesSubplot:>], dtype=object)



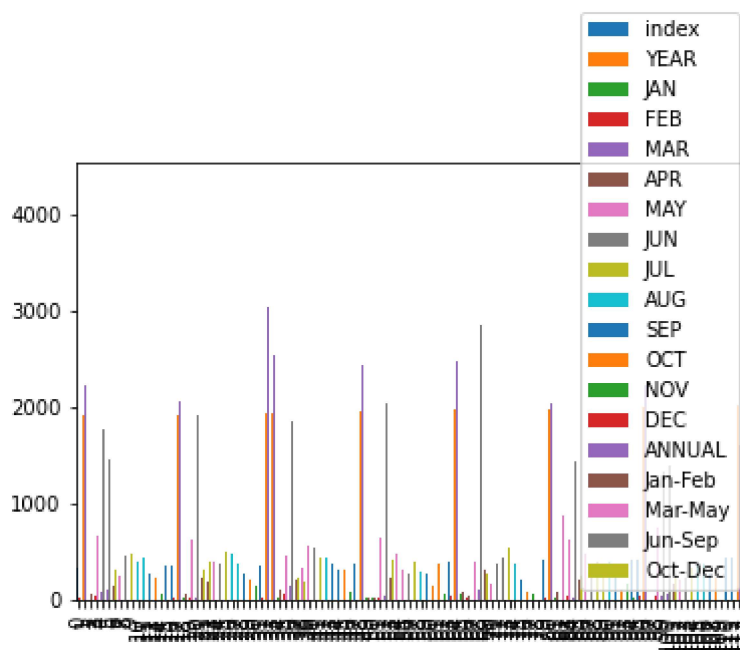
```
In [7]: df.plot.line()
```

```
Out[7]: <AxesSubplot:>
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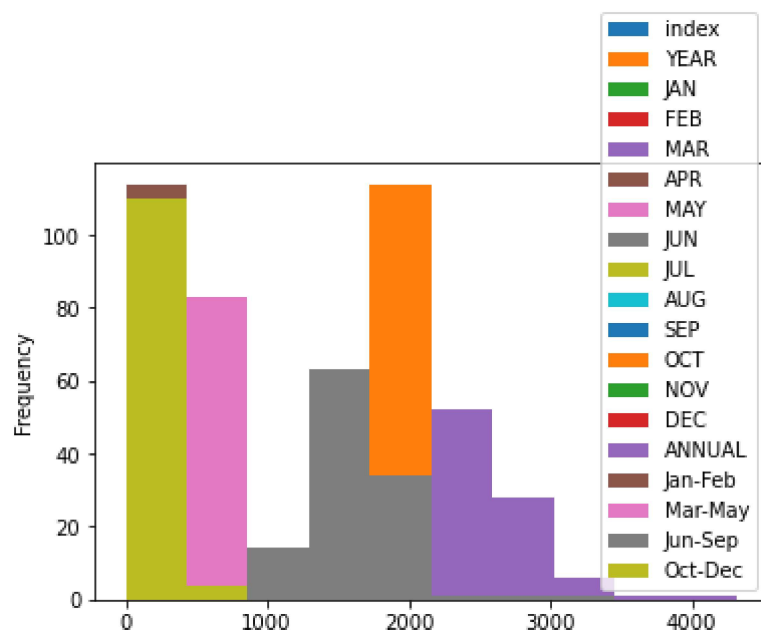
```
In [8]: df.plot.bar()
```

```
Out[8]: <AxesSubplot:>
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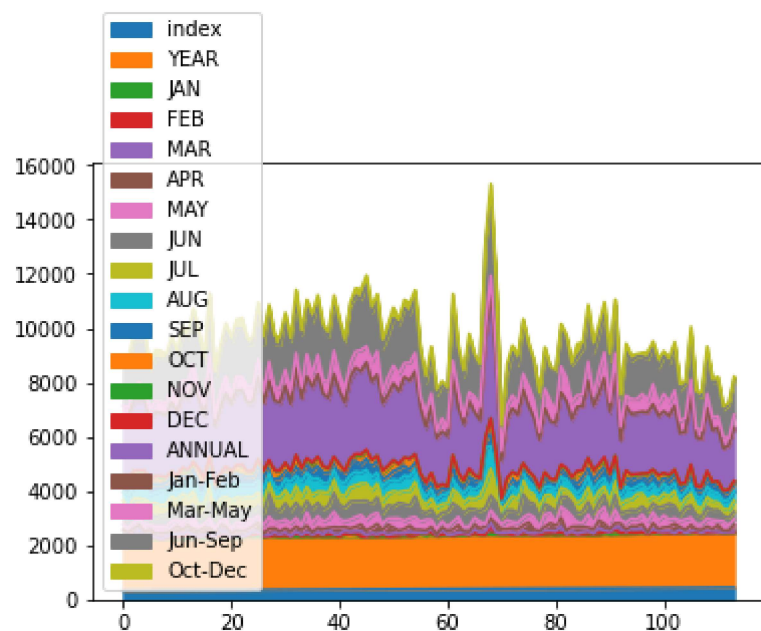
```
In [9]: df.plot.hist()
```

```
Out[9]: <AxesSubplot:ylabel='Frequency'>
```



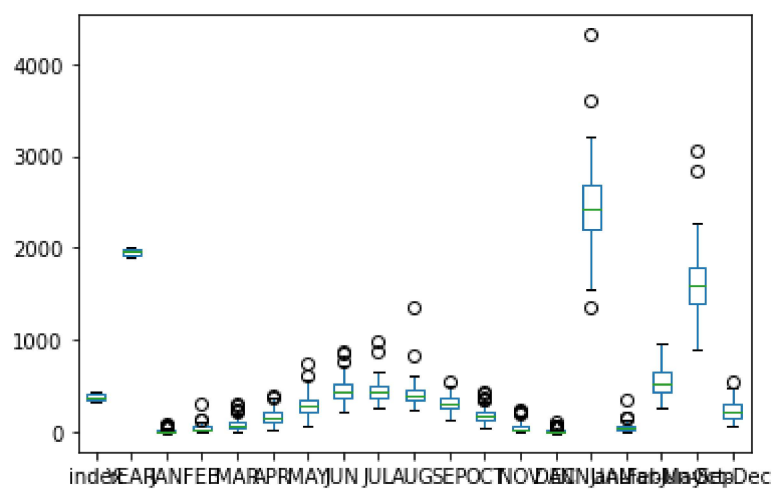
```
In [10]: df.plot.area()
```

```
Out[10]: <AxesSubplot:>
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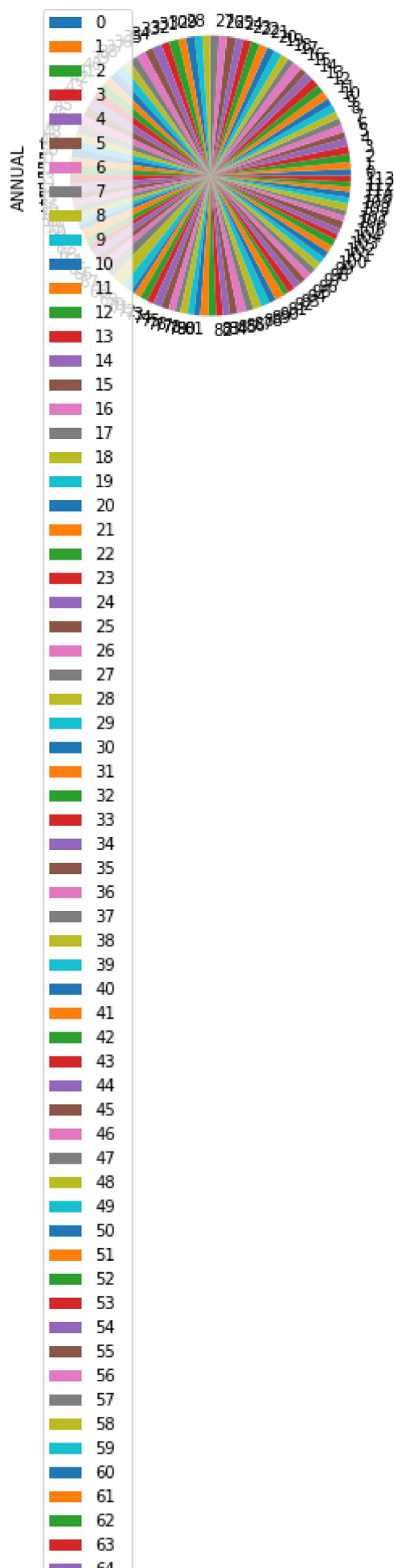
```
In [11]: df.plot.box()
```

```
Out[11]: <AxesSubplot:>
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```
In [12]: df.plot.pie(y='ANNUAL')
```

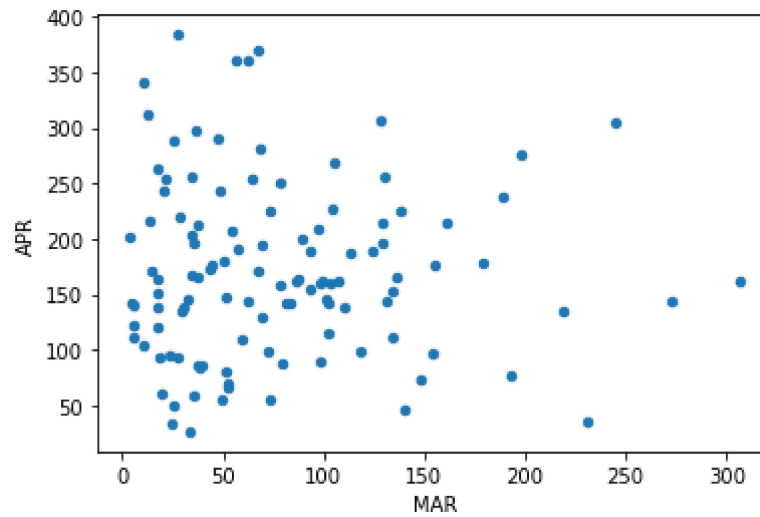
```
Out[12]: <AxesSubplot:ylabel='ANNUAL'>
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```
In [13]: df.plot.scatter(x='MAR',y='APR')
```

```
Out[13]: <AxesSubplot:xlabel='MAR', ylabel='APR'>
```



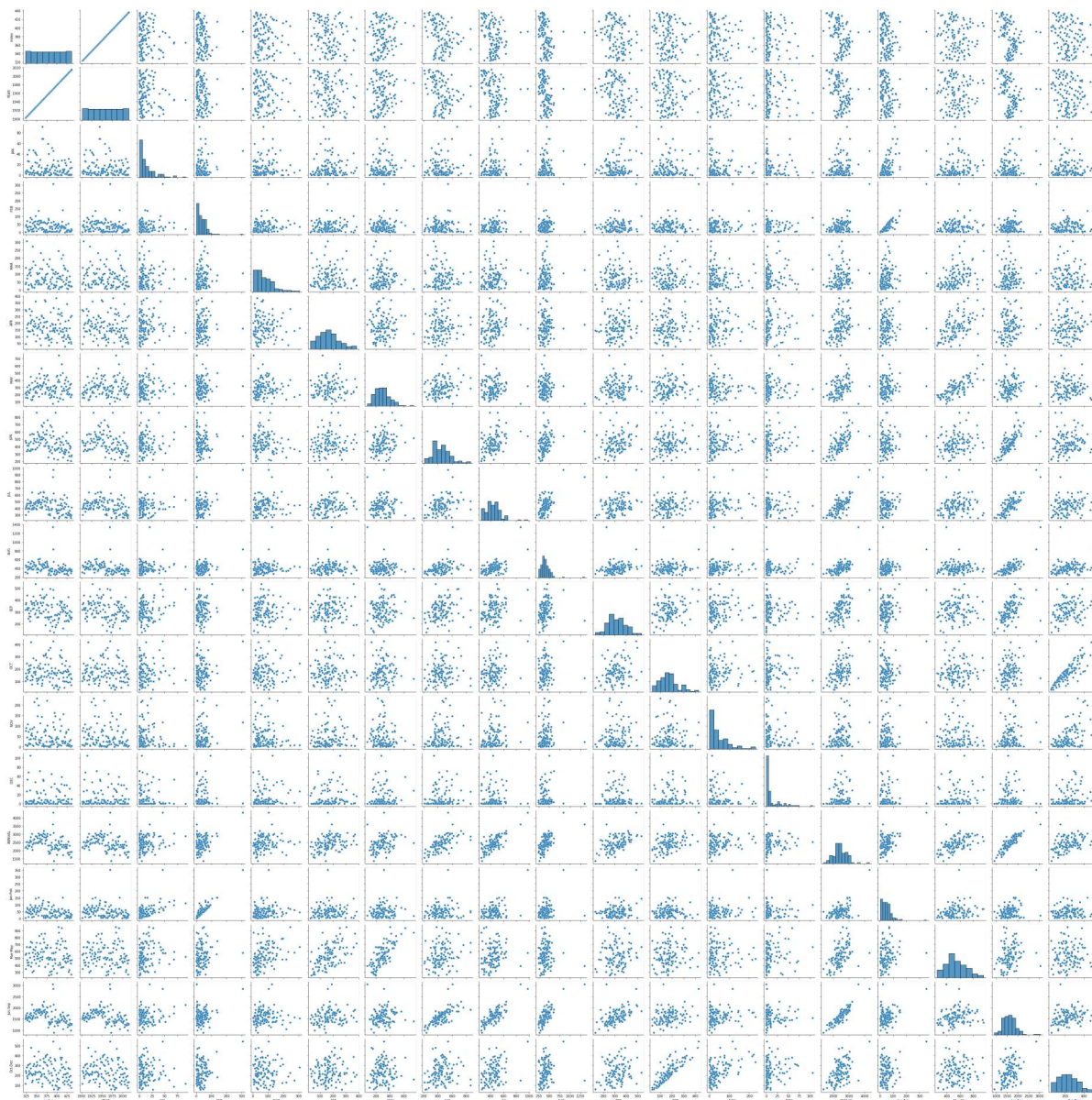
```
In [14]: df.describe()
```

```
Out[14]:
```

	index	YEAR	JAN	FEB	MAR	APR	MAY	
count	114.000000	114.000000	114.000000	114.000000	114.000000	114.000000	114.000000	114
mean	379.500000	1958.500000	14.045614	36.814912	77.618421	170.421930	292.302632	445
std	33.052988	33.052988	16.699717	37.903151	60.756869	78.834683	112.069767	124
min	323.000000	1902.000000	0.000000	0.000000	3.100000	26.300000	73.500000	206
25%	351.250000	1930.250000	3.075000	11.600000	32.975000	112.875000	211.275000	361
50%	379.500000	1958.500000	7.800000	30.050000	63.400000	161.600000	279.550000	440
75%	407.750000	1986.750000	18.525000	53.450000	105.275000	214.050000	352.350000	512
max	436.000000	2015.000000	91.400000	306.300000	306.500000	383.800000	743.000000	861

```
In [15]: sns.pairplot(df)
```

```
Out[15]: <seaborn.axisgrid.PairGrid at 0x1e05eb3e580>
```

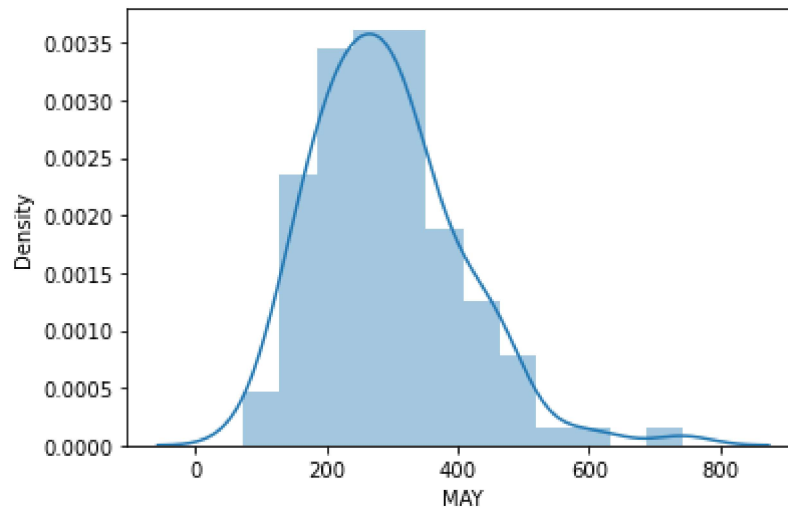


```
In [16]: sns.distplot(df['MAY'])
```

C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated function and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).

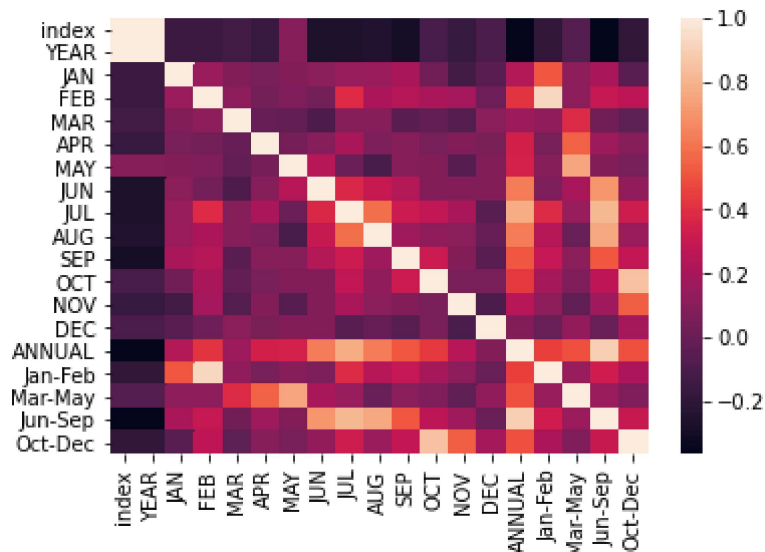
```
warnings.warn(msg, FutureWarning)
```

```
Out[16]: <AxesSubplot:xlabel='MAY', ylabel='Density'>
```



```
In [17]: sns.heatmap(df.corr())
```

```
Out[17]: <AxesSubplot:>
```



```
In [ ]:
```

