

```
In [1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.linear_model import LogisticRegression
from sklearn.preprocessing import StandardScaler
import re
from sklearn.datasets import load_digits
```

```
In [2]: a=pd.read_csv(r"C:\Users\user\Downloads\FP2_RainFall\rainfall in india 1901-20
```

Out[2]:

		index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0	0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6
1	1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2
2	2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0
3	3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4
4	4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0
...
4111	4111	LAKSHADWEEP	LAKSHADWEEP	2011	5.1	2.8	3.1	85.9	107.2	153.6	350.2	254.0	255.2
4112	4112	LAKSHADWEEP	LAKSHADWEEP	2012	19.2	0.1	1.6	76.8	21.2	327.0	231.5	381.2	179.8
4113	4113	LAKSHADWEEP	LAKSHADWEEP	2013	26.2	34.4	37.5	5.3	88.3	426.2	296.4	154.4	180.0
4114	4114	LAKSHADWEEP	LAKSHADWEEP	2014	53.2	16.1	4.4	14.9	57.4	244.1	116.1	466.1	132.2
4115	4115	LAKSHADWEEP	LAKSHADWEEP	2015	2.2	0.5	3.7	87.1	133.1	296.6	257.5	146.4	160.4

4116 rows × 20 columns

In [3]:

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4116 entries, 0 to 4115
Data columns (total 20 columns):
 #   Column      Non-Null Count  Dtype  
--- 
 0   index       4116 non-null    int64  
 1   SUBDIVISION 4116 non-null    object  
 2   YEAR        4116 non-null    int64  
 3   JAN         4112 non-null    float64 
 4   FEB         4113 non-null    float64 
 5   MAR         4110 non-null    float64 
 6   APR         4112 non-null    float64 
 7   MAY         4113 non-null    float64 
 8   JUN         4111 non-null    float64 
 9   JUL         4109 non-null    float64 
 10  AUG         4112 non-null    float64 
 11  SEP         4110 non-null    float64 
 12  OCT         4109 non-null    float64 
 13  NOV         4105 non-null    float64 
 14  DEC         4106 non-null    float64 
 15  ANNUAL      4090 non-null    float64 
 16  Jan-Feb     4110 non-null    float64 
 17  Mar-May     4107 non-null    float64 
 18  Jun-Sep     4106 non-null    float64 
 19  Oct-Dec     4103 non-null    float64 
dtypes: float64(17), int64(2), object(1)
memory usage: 643.2+ KB
```

In [4]:

```
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')
```

ORISSA

In [111]: b=a.head(782)

Out[111]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	O
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	38
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	19
2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	18
3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	22
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	26
...
777	777	ORISSA	2011	3.7	16.2	4.9	58.2	75.6	210.1	199.6	358.6	398.7	21
778	778	ORISSA	2012	50.8	3.6	0.9	34.8	21.3	169.6	324.3	417.0	242.4	6
779	779	ORISSA	2013	3.3	7.8	2.1	53.6	57.7	272.6	380.0	254.9	208.1	39
780	780	ORISSA	2014	0.0	17.6	25.1	11.7	111.9	92.2	496.2	386.3	281.1	11
781	781	ORISSA	2015	15.1	3.3	10.5	67.6	32.6	238.6	294.8	264.0	237.0	2

782 rows × 20 columns

In [120]: `c=b.tail(115)`

Out[120]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
667	667	ORISSA	1901	39.5	65.1	16.1	51.6	79.0	78.2	288.4	307.7	185.3	76
668	668	ORISSA	1902	3.4	0.2	14.2	101.1	56.7	108.3	437.4	349.1	202.7	33
669	669	ORISSA	1903	19.7	18.9	10.5	34.6	73.3	154.3	410.4	295.2	265.6	228
670	670	ORISSA	1904	0.2	12.2	20.6	10.1	100.2	342.9	336.7	350.4	227.8	111
671	671	ORISSA	1905	24.3	17.2	66.3	56.9	107.5	92.0	330.1	281.4	344.1	36
...
777	777	ORISSA	2011	3.7	16.2	4.9	58.2	75.6	210.1	199.6	358.6	398.7	20
778	778	ORISSA	2012	50.8	3.6	0.9	34.8	21.3	169.6	324.3	417.0	242.4	66
779	779	ORISSA	2013	3.3	7.8	2.1	53.6	57.7	272.6	380.0	254.9	208.1	391
780	780	ORISSA	2014	0.0	17.6	25.1	11.7	111.9	92.2	496.2	386.3	281.1	111
781	781	ORISSA	2015	15.1	3.3	10.5	67.6	32.6	238.6	294.8	264.0	237.0	24

115 rows × 20 columns

In [113]: `d=c[['YEAR', 'JAN', 'FEB', 'MAR']]`

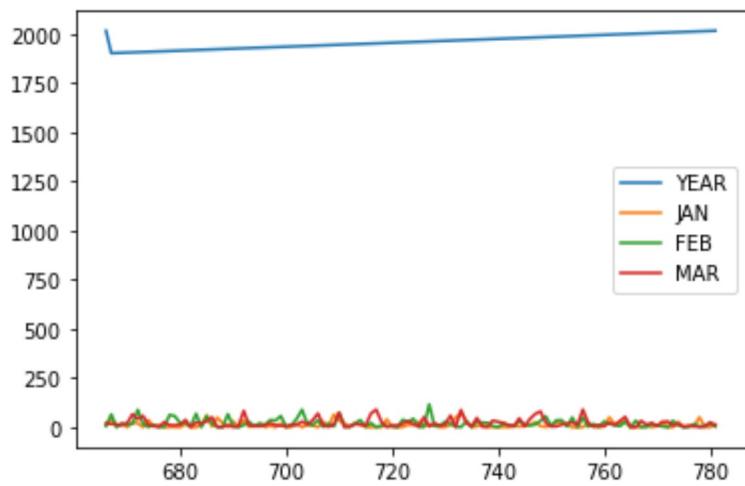
Out[113]:

	YEAR	JAN	FEB	MAR
666	2015	12.9	5.5	19.3
667	1901	39.5	65.1	16.1
668	1902	3.4	0.2	14.2
669	1903	19.7	18.9	10.5
670	1904	0.2	12.2	20.6
...
777	2011	3.7	16.2	4.9
778	2012	50.8	3.6	0.9
779	2013	3.3	7.8	2.1
780	2014	0.0	17.6	25.1
781	2015	15.1	3.3	10.5

116 rows × 4 columns

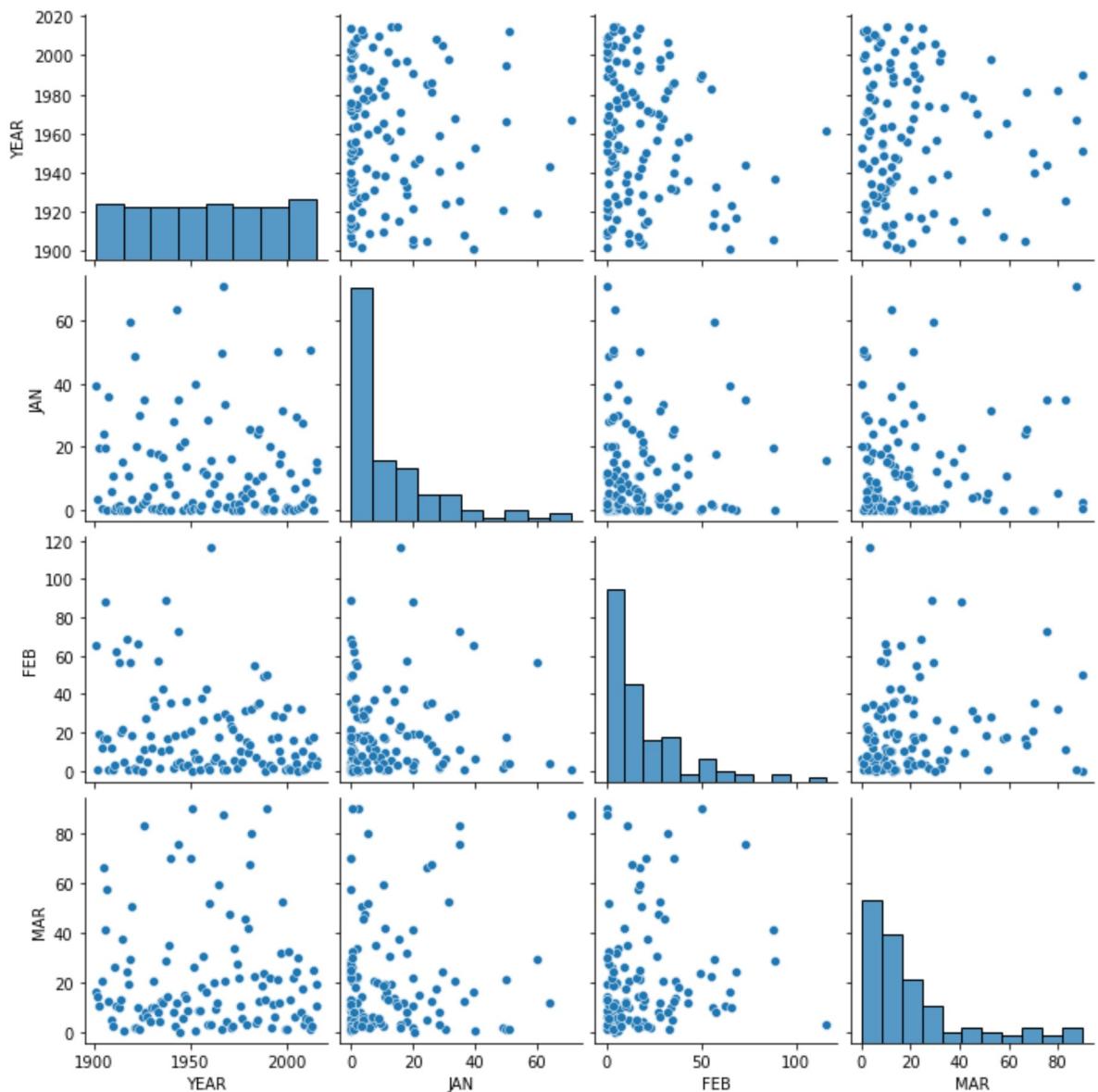
In [114]:

Out[114]: <AxesSubplot:>



In [115]:

Out[115]: <seaborn.axisgrid.PairGrid at 0x227ea4483d0>

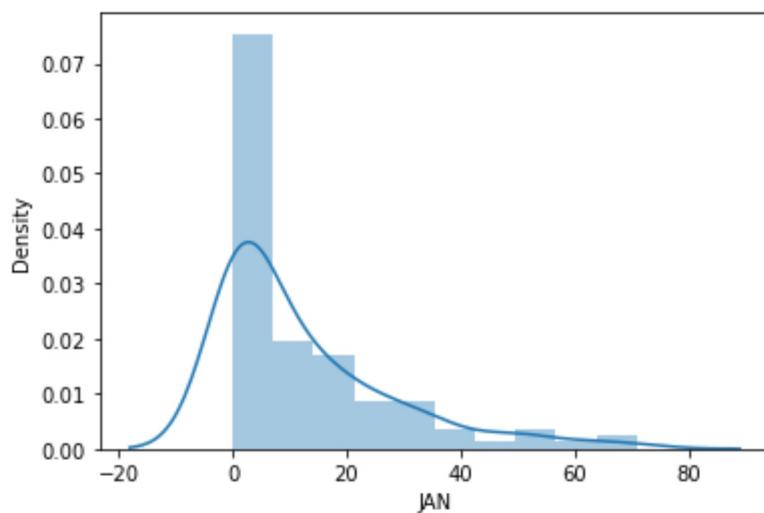


In [116]:

```
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).
```

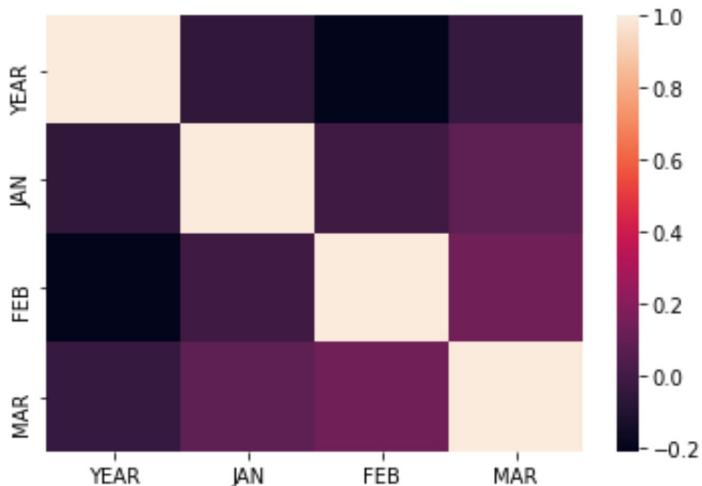
```
    warnings.warn(msg, FutureWarning)
```

Out[116]: <AxesSubplot:xlabel='JAN', ylabel='Density'>



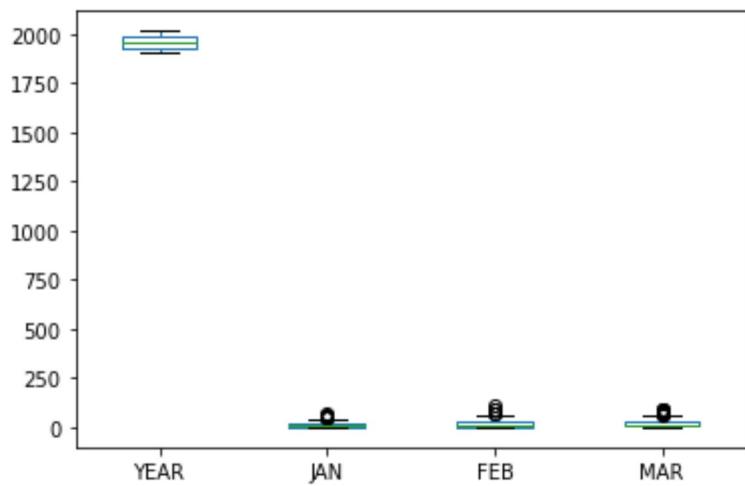
In [117]:

Out[117]: <AxesSubplot:>



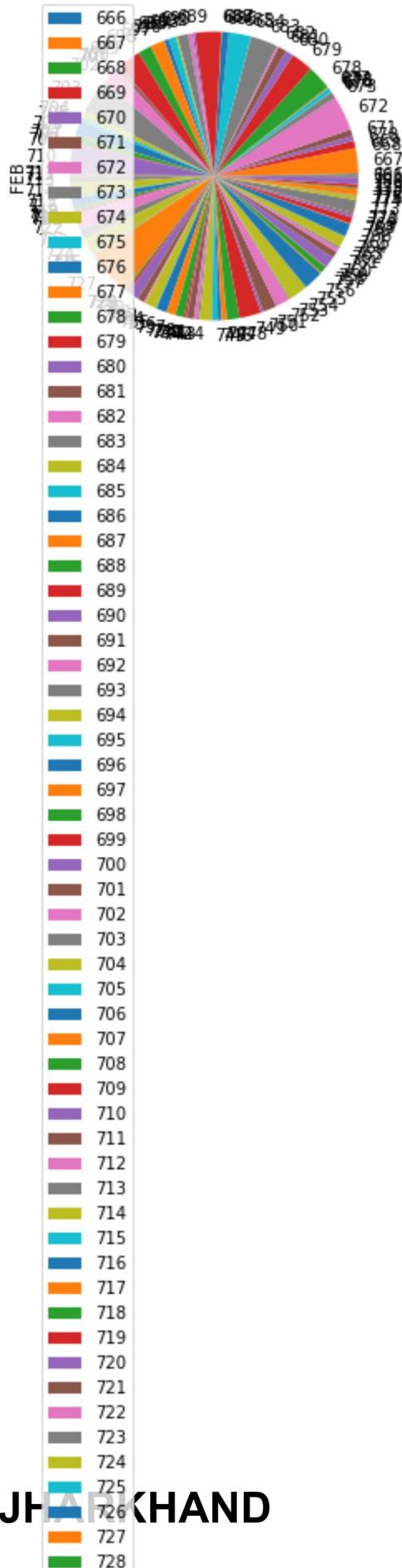
In [118]:

Out[118]: <AxesSubplot:>



In [119]:

Out[119]: <AxesSubplot:ylabel='FEB'>



In [127]: c=a.head(897)

Out[127]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	O
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	38
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	19
2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	18
3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	22
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	26
...
892	892	JHARKHAND	2011	3.3	2.5	6.4	25.4	55.0	349.0	181.8	403.2	324.6	2
893	893	JHARKHAND	2012	34.6	10.3	1.5	9.6	6.6	121.1	287.2	282.4	217.6	3
894	894	JHARKHAND	2013	1.1	17.9	1.6	22.3	85.0	181.5	211.1	278.1	173.8	28
895	895	JHARKHAND	2014	9.9	47.5	22.9	1.9	98.2	139.7	321.3	290.9	178.2	4
896	896	JHARKHAND	2015	12.2	2.6	21.6	55.5	25.5	183.3	429.7	240.7	85.1	2

897 rows × 20 columns

In [128]: `d=c.tail(114)`

Out[128]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
783	783	JHARKHAND	1902	4.2	7.7	13.2	28.5	59.8	89.9	456.1	204.9	306.6	17
784	784	JHARKHAND	1903	25.1	19.5	10.7	32.8	56.4	142.1	206.1	280.8	190.2	210
785	785	JHARKHAND	1904	2.5	17.0	38.1	9.1	116.1	308.9	494.1	336.1	125.6	30
786	786	JHARKHAND	1905	38.4	53.3	61.6	32.9	66.2	41.5	420.3	293.7	322.8	21
787	787	JHARKHAND	1906	45.8	128.5	35.9	1.7	33.9	170.9	355.6	251.6	185.4	96
...
892	892	JHARKHAND	2011	3.3	2.5	6.4	25.4	55.0	349.0	181.8	403.2	324.6	23
893	893	JHARKHAND	2012	34.6	10.3	1.5	9.6	6.6	121.1	287.2	282.4	217.6	37
894	894	JHARKHAND	2013	1.1	17.9	1.6	22.3	85.0	181.5	211.1	278.1	173.8	281
895	895	JHARKHAND	2014	9.9	47.5	22.9	1.9	98.2	139.7	321.3	290.9	178.2	44
896	896	JHARKHAND	2015	12.2	2.6	21.6	55.5	25.5	183.3	429.7	240.7	85.1	22

114 rows × 20 columns

In [129]: `e=d[['JAN', 'FEB', 'MAR']]`

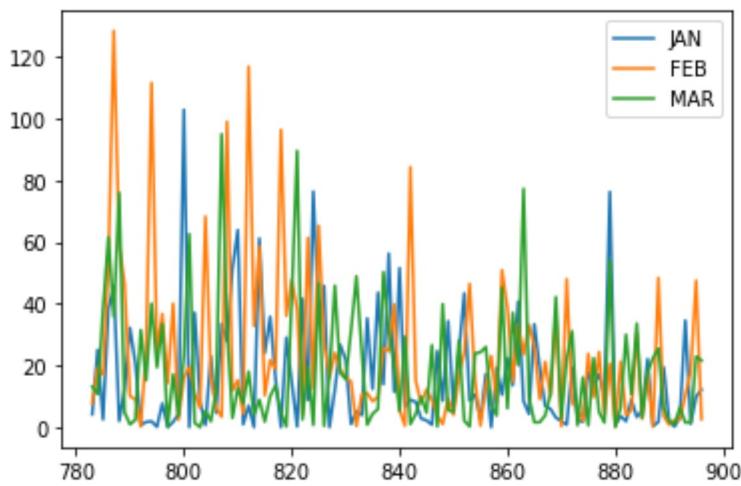
Out[129]:

	JAN	FEB	MAR
783	4.2	7.7	13.2
784	25.1	19.5	10.7
785	2.5	17.0	38.1
786	38.4	53.3	61.6
787	45.8	128.5	35.9
...
892	3.3	2.5	6.4
893	34.6	10.3	1.5
894	1.1	17.9	1.6
895	9.9	47.5	22.9
896	12.2	2.6	21.6

114 rows × 3 columns

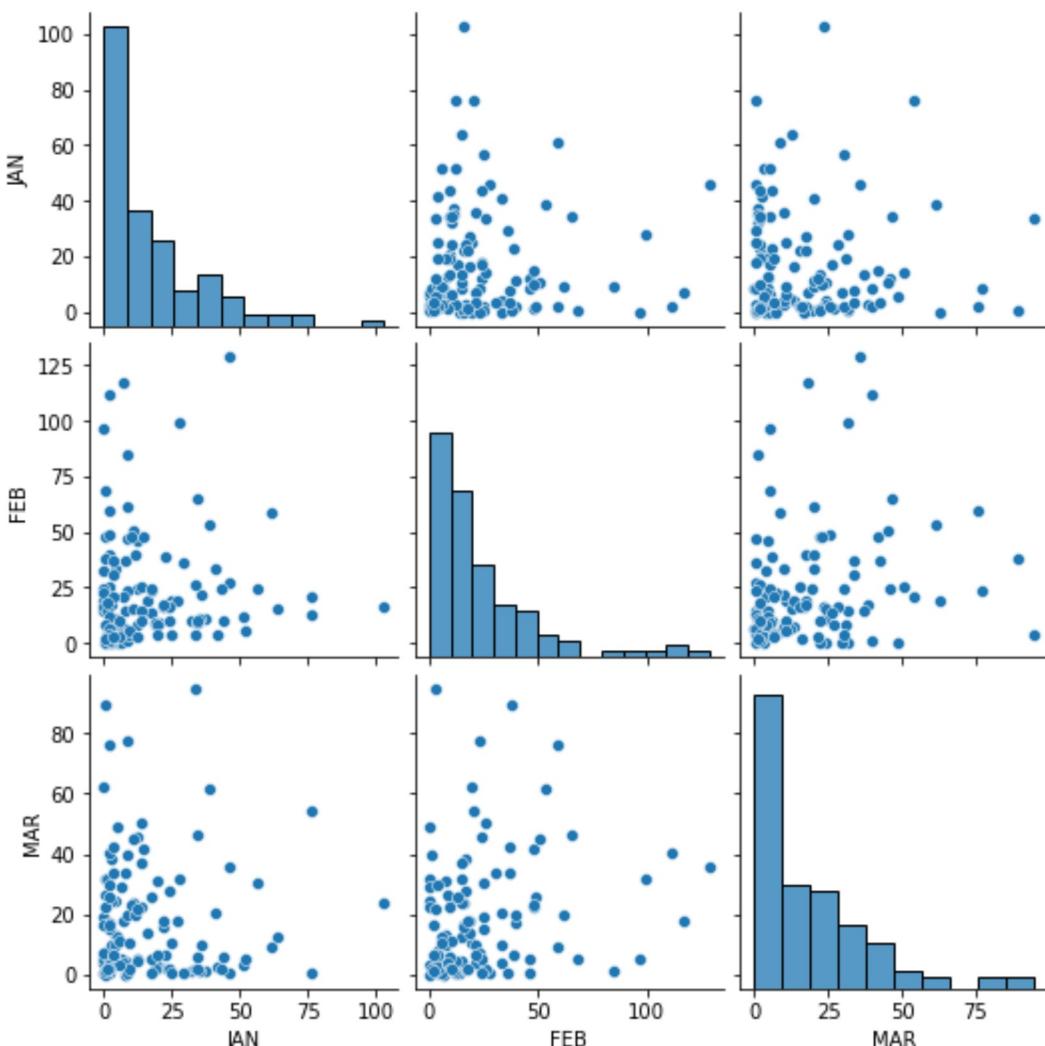
In [130]:

Out[130]: <AxesSubplot:>



In [131]:

Out[131]: <seaborn.axisgrid.PairGrid at 0x227eb023670>

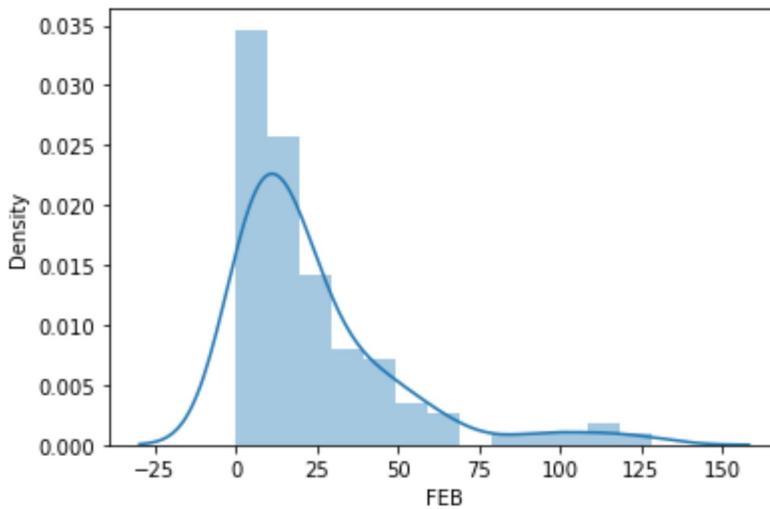


In [132]:

```
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).
```

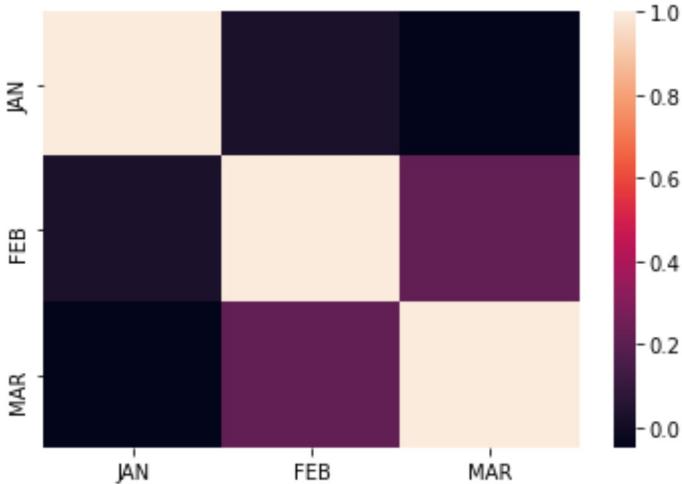
```
    warnings.warn(msg, FutureWarning)
```

Out[132]: <AxesSubplot:xlabel='FEB', ylabel='Density'>



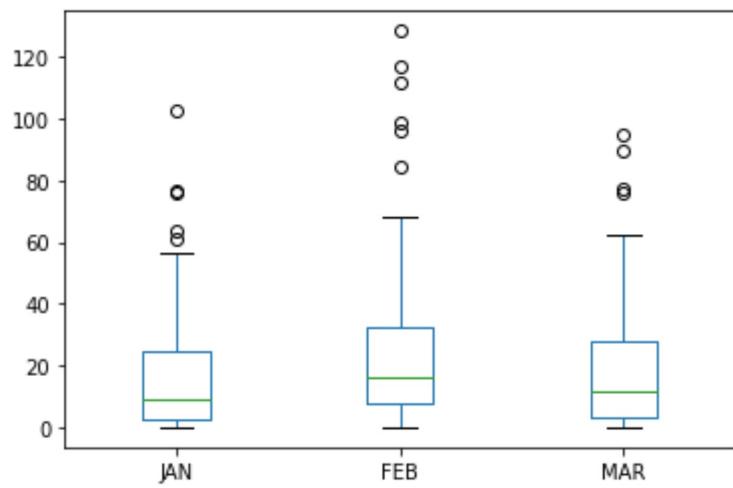
In [133]:

Out[133]: <AxesSubplot:>



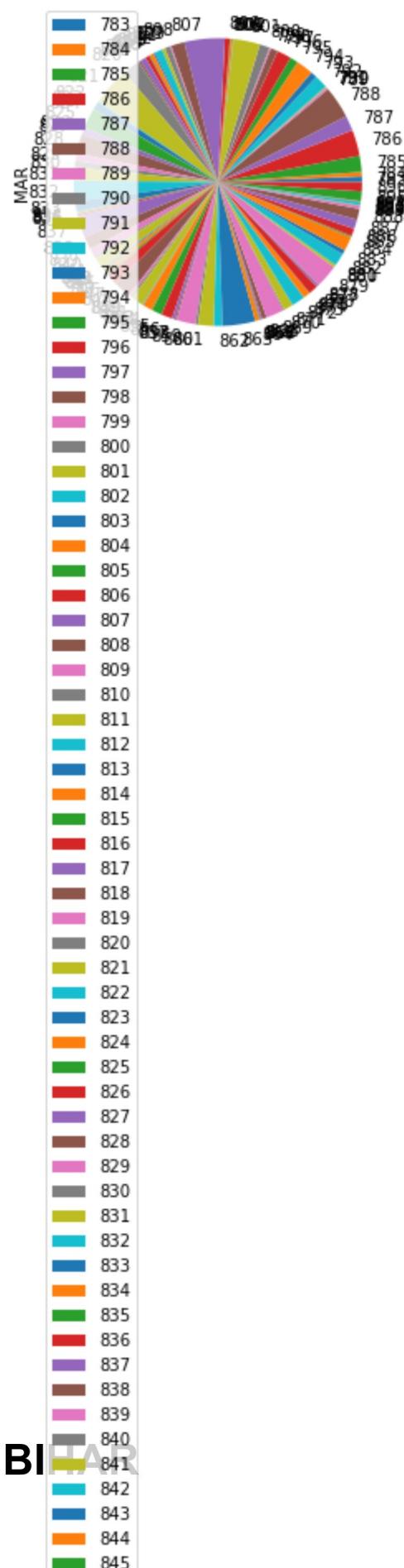
In [134]:

Out[134]: <AxesSubplot:>



In [136]:

Out[136]: <AxesSubplot:ylabel='MAR'>



In [144]: c=a.head(1012)

Out[144]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	311.1	250.0	200.0
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	191.1	191.1	191.1
2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	111.1	111.1	111.1
3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	211.1	211.1	211.1
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	200.0	200.0	200.0
...	
1007	1007	BIHAR	2011	4.2	7.7	9.2	23.9	74.5	211.0	241.1	278.7	234.1	191.1	191.1	191.1
1008	1008	BIHAR	2012	18.1	2.7	7.3	20.4	18.8	96.2	354.0	240.4	233.8	191.1	191.1	191.1
1009	1009	BIHAR	2013	5.1	22.6	0.6	32.3	89.5	183.3	182.0	213.6	143.3	111.1	111.1	111.1
1010	1010	BIHAR	2014	17.0	33.5	8.4	0.7	103.9	115.2	265.4	307.6	160.3	191.1	191.1	191.1
1011	1011	BIHAR	2015	12.8	1.8	27.2	38.7	39.5	122.1	231.5	287.0	101.7	191.1	191.1	191.1

1012 rows × 20 columns

In [145]: `d=c.tail(115)`

Out[145]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
897	897	BIHAR	1901	51.8	19.6	11.9	1.1	65.6	66.3	245.9	319.4	155.1	8
898	898	BIHAR	1902	4.6	0.7	24.3	17.3	66.3	118.2	361.0	225.5	358.7	28
899	899	BIHAR	1903	5.3	4.7	2.0	4.7	28.2	192.9	115.0	342.6	173.9	147
900	900	BIHAR	1904	6.3	1.7	3.5	5.3	118.7	191.6	394.4	351.3	84.4	98
901	901	BIHAR	1905	16.0	30.1	32.6	21.4	77.5	50.5	409.1	495.3	353.9	11
...
1007	1007	BIHAR	2011	4.2	7.7	9.2	23.9	74.5	211.0	241.1	278.7	234.1	10
1008	1008	BIHAR	2012	18.1	2.7	7.3	20.4	18.8	96.2	354.0	240.4	233.8	34
1009	1009	BIHAR	2013	5.1	22.6	0.6	32.3	89.5	183.3	182.0	213.6	143.3	197
1010	1010	BIHAR	2014	17.0	33.5	8.4	0.7	103.9	115.2	265.4	307.6	160.3	47
1011	1011	BIHAR	2015	12.8	1.8	27.2	38.7	39.5	122.1	231.5	287.0	101.7	10

115 rows × 20 columns

In [146]: `e=d[['JAN', 'FEB', 'MAR', 'APR', 'MAY']]`

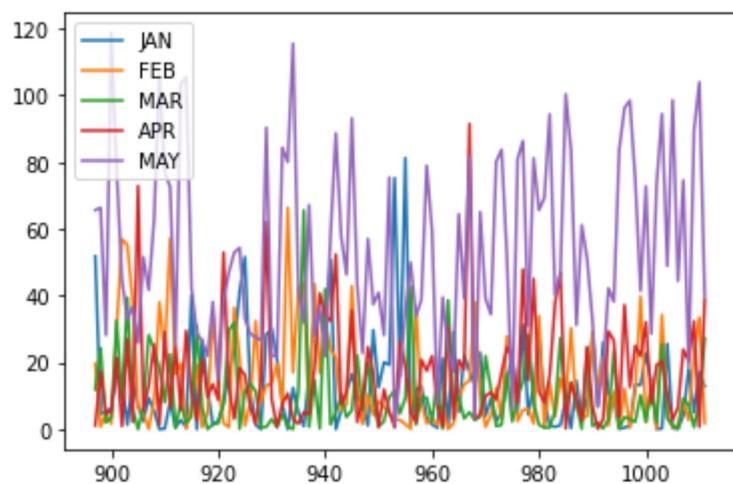
Out[146]:

	JAN	FEB	MAR	APR	MAY
897	51.8	19.6	11.9	1.1	65.6
898	4.6	0.7	24.3	17.3	66.3
899	5.3	4.7	2.0	4.7	28.2
900	6.3	1.7	3.5	5.3	118.7
901	16.0	30.1	32.6	21.4	77.5
...
1007	4.2	7.7	9.2	23.9	74.5
1008	18.1	2.7	7.3	20.4	18.8
1009	5.1	22.6	0.6	32.3	89.5
1010	17.0	33.5	8.4	0.7	103.9
1011	12.8	1.8	27.2	38.7	39.5

115 rows × 5 columns

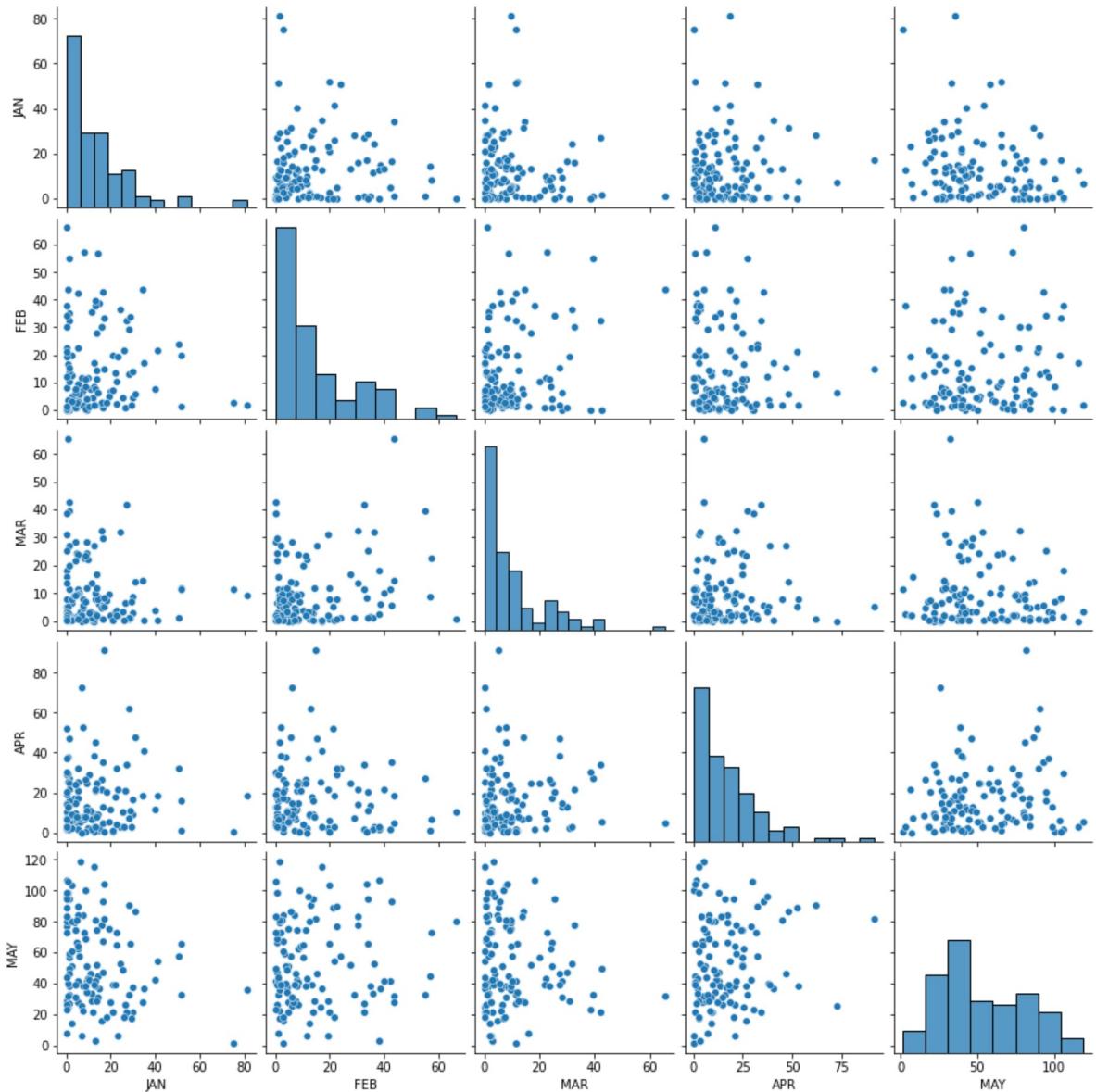
In [147]:

Out[147]: <AxesSubplot:>



In [148]:

Out[148]: <seaborn.axisgrid.PairGrid at 0x227ee5d65e0>

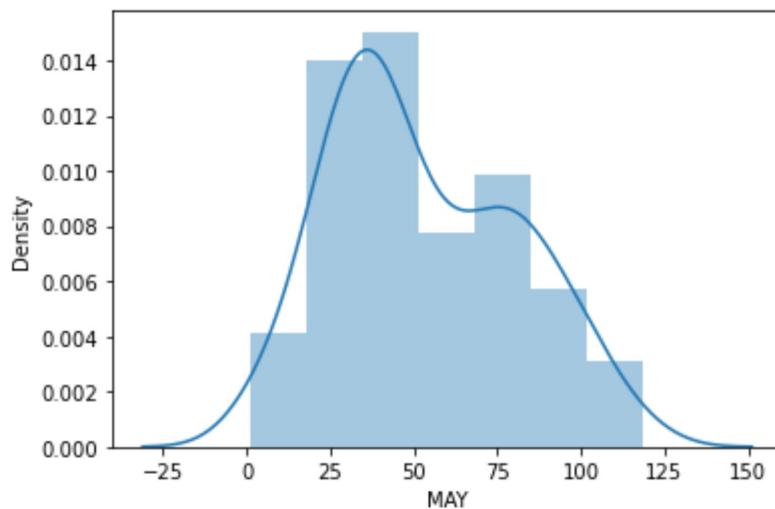


In [149]:

```
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).
```

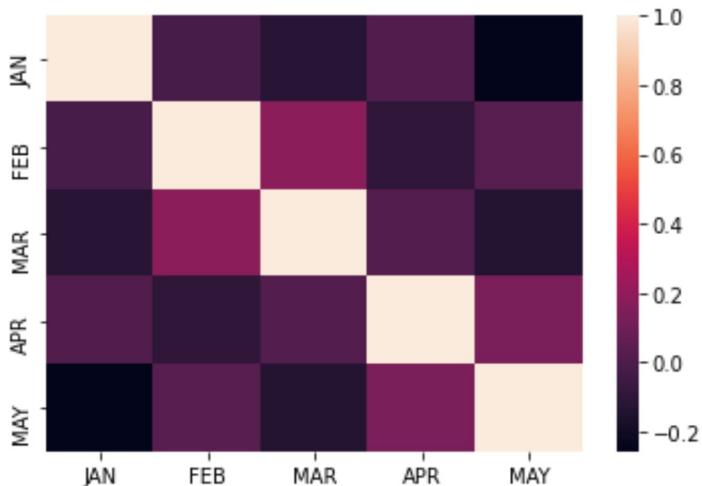
```
    warnings.warn(msg, FutureWarning)
```

Out[149]: <AxesSubplot:xlabel='MAY', ylabel='Density'>



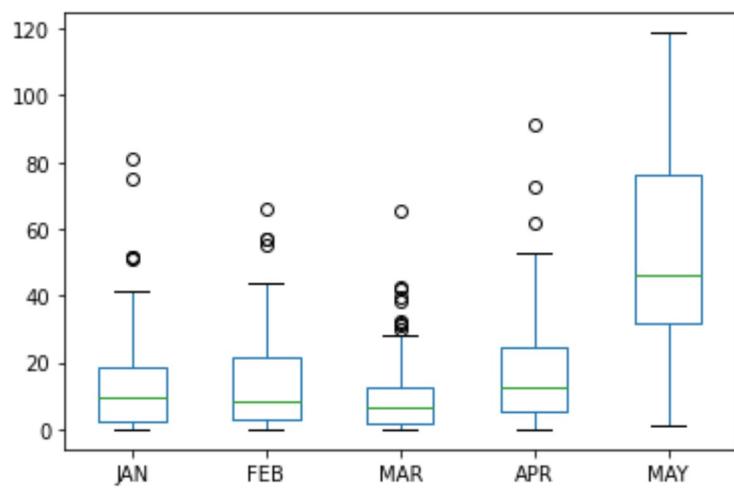
In [150]:

Out[150]: <AxesSubplot:>



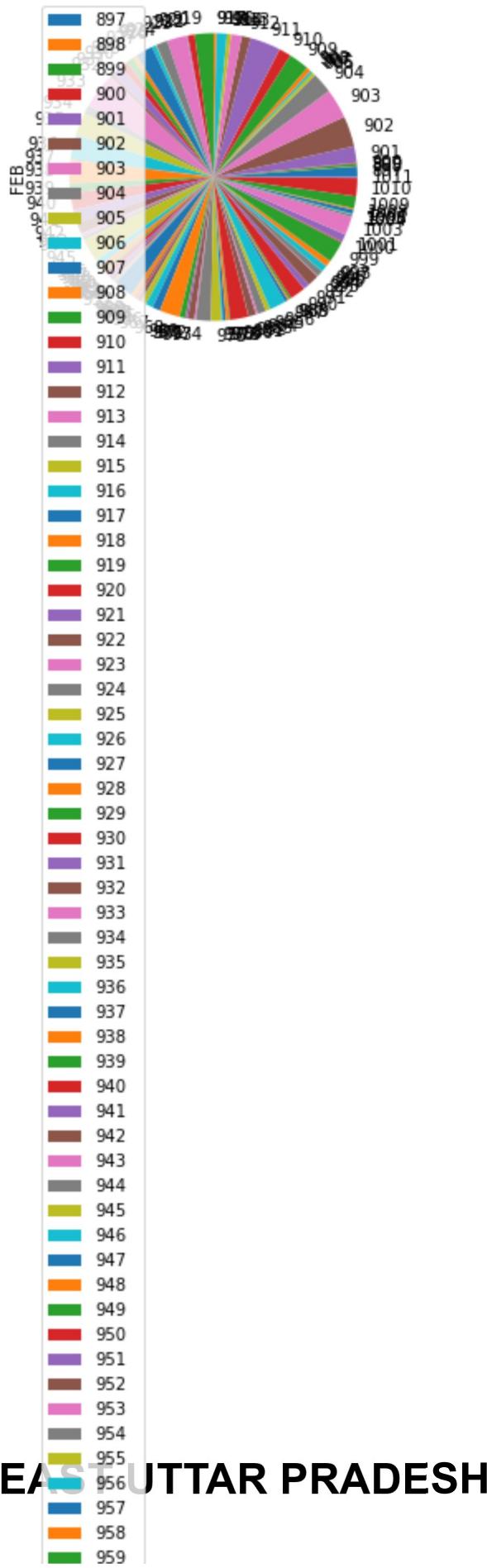
In [151]:

Out[151]: <AxesSubplot:>



In [152]:

Out[152]: <AxesSubplot:ylabel='FEB'>



In [157]: `c=a.head(1127)`

Out[157]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	318.1	290.1	262.1
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	119.1	119.1	119.1
2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	118.1	118.1	118.1
3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	22.1	22.1	22.1
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	21.1	21.1	21.1
...
1122	1122	EAST UTTAR PRADESH	2011	1.0	2.7	1.6	2.9	32.2	163.8	197.9	232.1	146.4	146.4	146.4	146.4
1123	1123	EAST UTTAR PRADESH	2012	20.3	1.2	3.4	2.8	0.2	18.5	234.2	156.0	164.4	164.4	164.4	164.4
1124	1124	EAST UTTAR PRADESH	2013	6.1	59.6	2.7	8.7	1.1	309.7	230.0	246.1	78.2	78.2	78.2	78.2
1125	1125	EAST UTTAR PRADESH	2014	47.4	25.8	15.4	1.7	10.7	47.8	224.5	138.1	106.7	106.7	106.7	106.7
1126	1126	EAST UTTAR PRADESH	2015	30.0	4.1	48.2	23.2	8.6	95.3	179.0	175.8	21.9	21.9	21.9	21.9

1127 rows × 20 columns

In [160]: `d=c.tail(115)`

Out[160]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
1012	1012	EAST UTTAR PRADESH	1901	62.6	31.3	8.2	1.1	13.6	21.8	226.5	285.6	215.4	4.
1013	1013	EAST UTTAR PRADESH	1902	6.1	2.3	2.4	2.0	21.4	32.5	411.5	155.4	257.2	13.
1014	1014	EAST UTTAR PRADESH	1903	8.2	0.4	1.3	0.7	15.3	71.6	115.3	420.2	258.7	324.
1015	1015	EAST UTTAR PRADESH	1904	7.3	1.5	8.3	0.4	28.7	148.0	359.4	328.8	95.0	50.
1016	1016	EAST UTTAR PRADESH	1905	16.8	23.6	20.0	5.4	15.4	17.3	302.4	316.2	169.5	3.
...
1122	1122	EAST UTTAR PRADESH	2011	1.0	2.7	1.6	2.9	32.2	163.8	197.9	232.1	146.4	0.
1123	1123	EAST UTTAR PRADESH	2012	20.3	1.2	3.4	2.8	0.2	18.5	234.2	156.0	164.4	0.
1124	1124	EAST UTTAR PRADESH	2013	6.1	59.6	2.7	8.7	1.1	309.7	230.0	246.1	78.2	97.
1125	1125	EAST UTTAR PRADESH	2014	47.4	25.8	15.4	1.7	10.7	47.8	224.5	138.1	106.7	74.
1126	1126	EAST UTTAR PRADESH	2015	30.0	4.1	48.2	23.2	8.6	95.3	179.0	175.8	21.9	11.

115 rows × 20 columns

In [161]: `e=d[['JAN', 'FEB', 'MAR','APR','MAY']]`

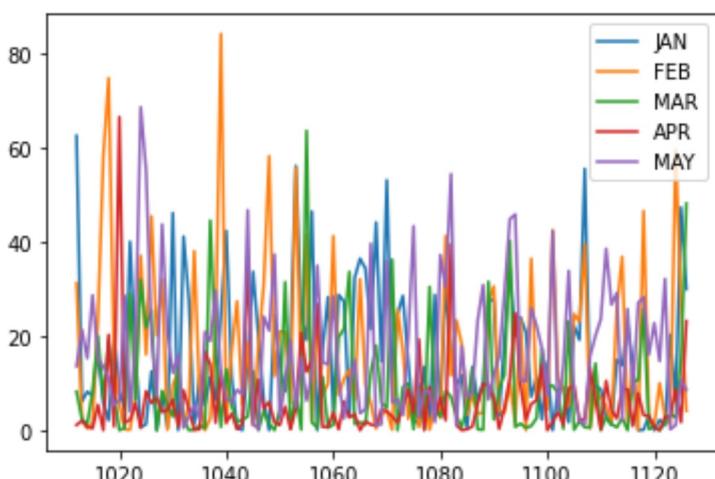
Out[161]:

	JAN	FEB	MAR	APR	MAY
1012	62.6	31.3	8.2	1.1	13.6
1013	6.1	2.3	2.4	2.0	21.4
1014	8.2	0.4	1.3	0.7	15.3
1015	7.3	1.5	8.3	0.4	28.7
1016	16.8	23.6	20.0	5.4	15.4
...
1122	1.0	2.7	1.6	2.9	32.2
1123	20.3	1.2	3.4	2.8	0.2
1124	6.1	59.6	2.7	8.7	1.1
1125	47.4	25.8	15.4	1.7	10.7
1126	30.0	4.1	48.2	23.2	8.6

115 rows × 5 columns

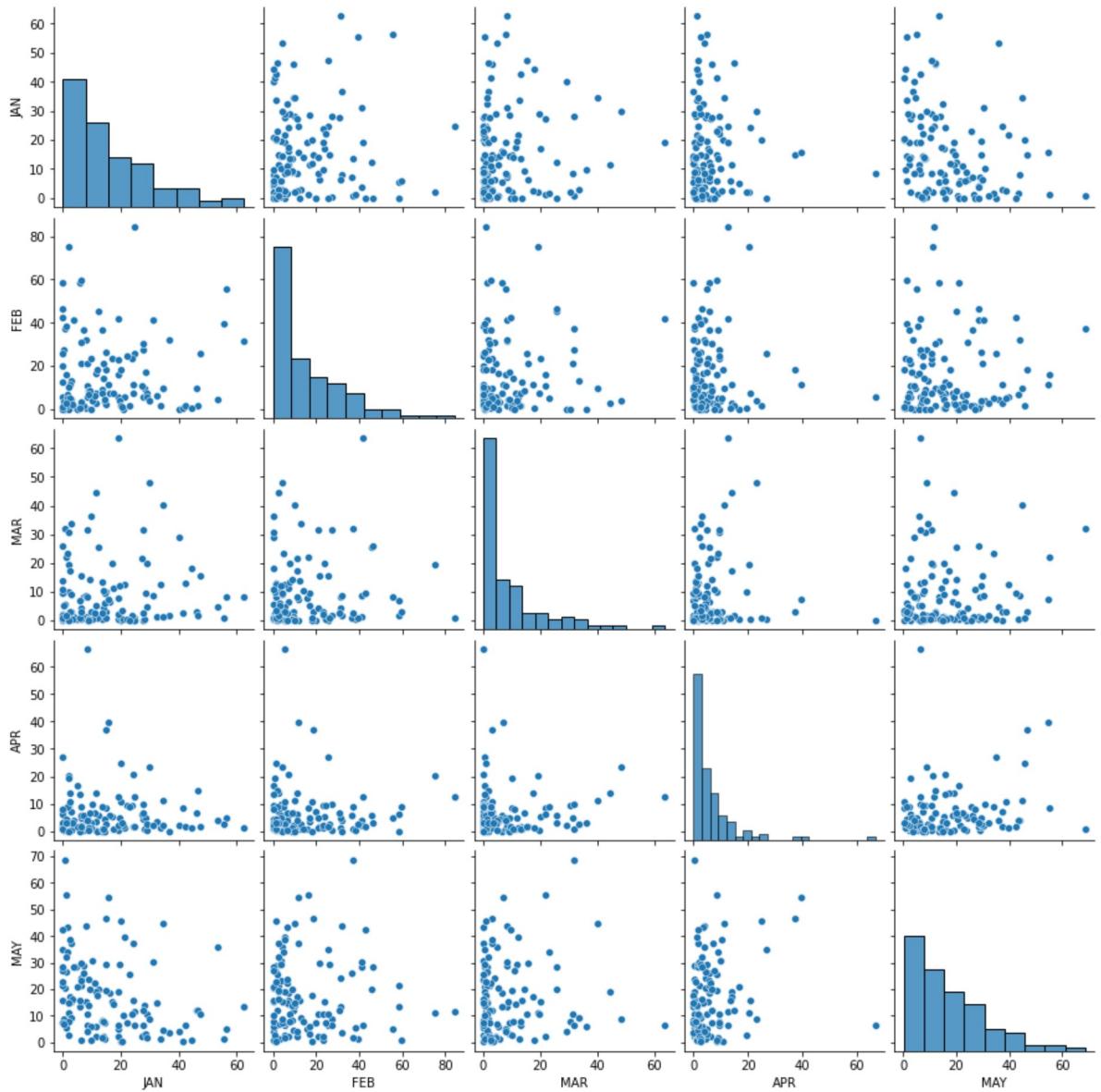
In [162]:

Out[162]: <AxesSubplot:>



In [163]:

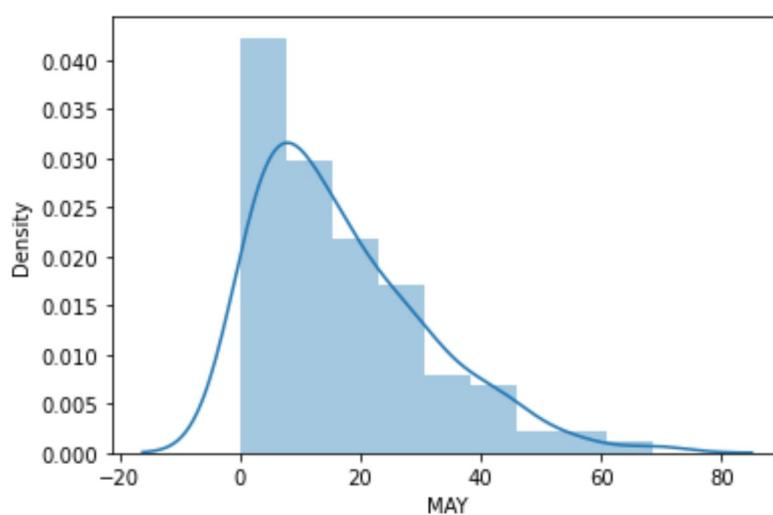
Out[163]: <seaborn.axisgrid.PairGrid at 0x227f1cca040>



In [164]:

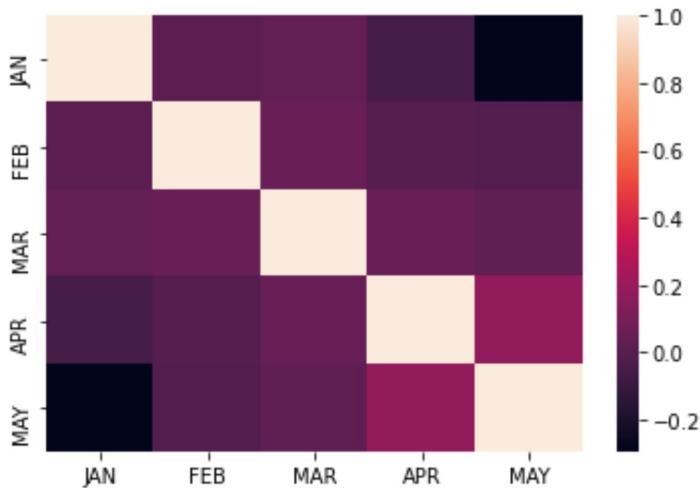
```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated function and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function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

Out[164]: <AxesSubplot:xlabel='MAY', ylabel='Density'>



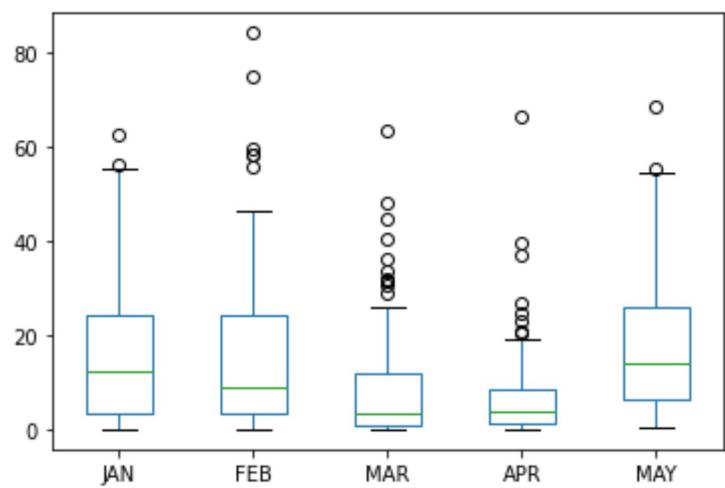
In [165]:

Out[165]: <AxesSubplot:>



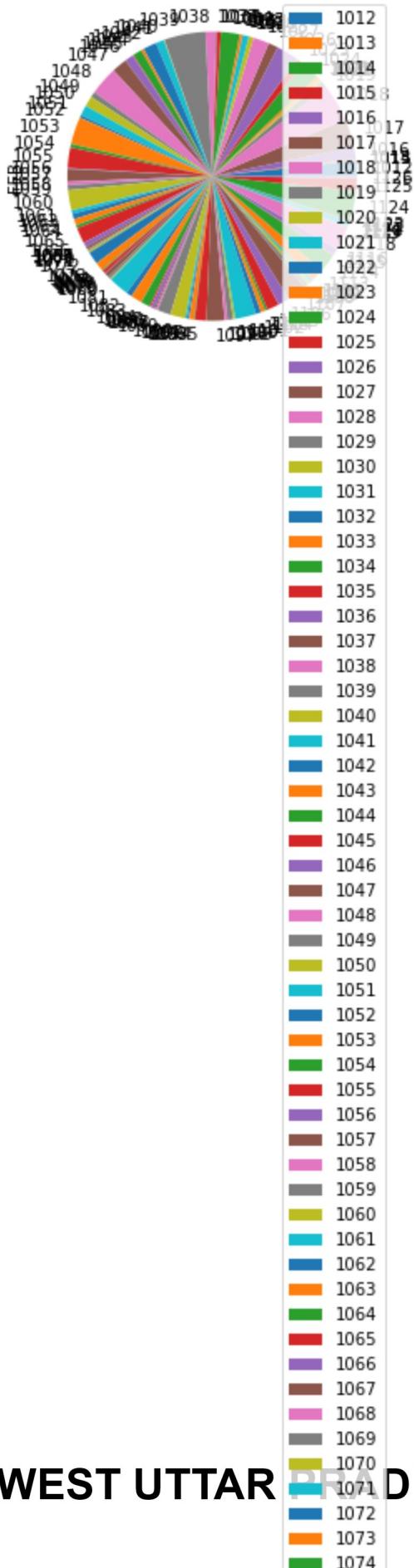
In [166]:

Out[166]: <AxesSubplot:>



In [167]:

Out[167]: <AxesSubplot:ylabel='FEB'>



In [181]: c=a.head(1242)

Out[181]:

		index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	311.1	259.1	210.1
1	1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	119.1	119.1	119.1
2	2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	119.1	119.1	119.1
3	3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	210.1	210.1	210.1
4	4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	210.1	210.1	210.1
...
1237	1237	1237	WEST UTTAR PRADESH	2011	2.1	10.4	3.9	2.8	29.6	175.9	215.9	232.3	101.7	101.7	101.7	101.7
1238	1238	1238	WEST UTTAR PRADESH	2012	14.5	0.1	1.4	4.7	0.3	4.0	145.1	149.1	67.8	67.8	67.8	67.8
1239	1239	1239	WEST UTTAR PRADESH	2013	20.4	69.5	3.5	1.6	2.1	190.6	233.9	287.1	52.2	52.2	52.2	52.2
1240	1240	1240	WEST UTTAR PRADESH	2014	48.3	29.4	22.6	5.3	11.0	22.0	151.6	81.0	84.7	84.7	84.7	84.7
1241	1241	1241	WEST UTTAR PRADESH	2015	31.6	7.2	66.8	21.0	8.1	72.0	194.2	143.5	26.5	26.5	26.5	26.5

1242 rows × 20 columns

In [182]: `d=c.tail(115)`

Out[182]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
1127	1127	WEST UTTAR PRADESH	1901	51.4	25.6	9.5	0.7	5.6	23.8	201.9	374.3	67.7	7.
1128	1128	WEST UTTAR PRADESH	1902	4.6	4.6	0.6	4.8	7.2	54.5	325.9	180.6	143.1	9.
1129	1129	WEST UTTAR PRADESH	1903	13.4	0.4	1.2	0.0	8.2	32.7	145.4	279.1	150.4	177.
1130	1130	WEST UTTAR PRADESH	1904	6.3	2.0	29.7	0.4	24.8	68.5	358.8	311.1	97.1	2.
1131	1131	WEST UTTAR PRADESH	1905	32.3	26.6	14.8	3.6	7.1	18.9	139.8	95.0	92.2	0.
...
1237	1237	WEST UTTAR PRADESH	2011	2.1	10.4	3.9	2.8	29.6	175.9	215.9	232.3	101.7	0.
1238	1238	WEST UTTAR PRADESH	2012	14.5	0.1	1.4	4.7	0.3	4.0	145.1	149.1	67.8	0.
1239	1239	WEST UTTAR PRADESH	2013	20.4	69.5	3.5	1.6	2.1	190.6	233.9	287.1	52.2	61.
1240	1240	WEST UTTAR PRADESH	2014	48.3	29.4	22.6	5.3	11.0	22.0	151.6	81.0	84.7	14.
1241	1241	WEST UTTAR PRADESH	2015	31.6	7.2	66.8	21.0	8.1	72.0	194.2	143.5	26.5	6.

115 rows × 20 columns

In [183]: `e=d[['JAN', 'FEB', 'MAR','APR','MAY']]`

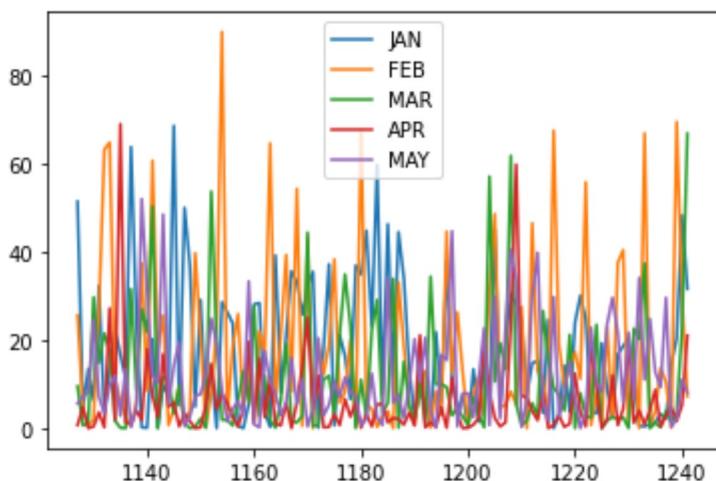
Out[183]:

	JAN	FEB	MAR	APR	MAY
1127	51.4	25.6	9.5	0.7	5.6
1128	4.6	4.6	0.6	4.8	7.2
1129	13.4	0.4	1.2	0.0	8.2
1130	6.3	2.0	29.7	0.4	24.8
1131	32.3	26.6	14.8	3.6	7.1
...
1237	2.1	10.4	3.9	2.8	29.6
1238	14.5	0.1	1.4	4.7	0.3
1239	20.4	69.5	3.5	1.6	2.1
1240	48.3	29.4	22.6	5.3	11.0
1241	31.6	7.2	66.8	21.0	8.1

115 rows × 5 columns

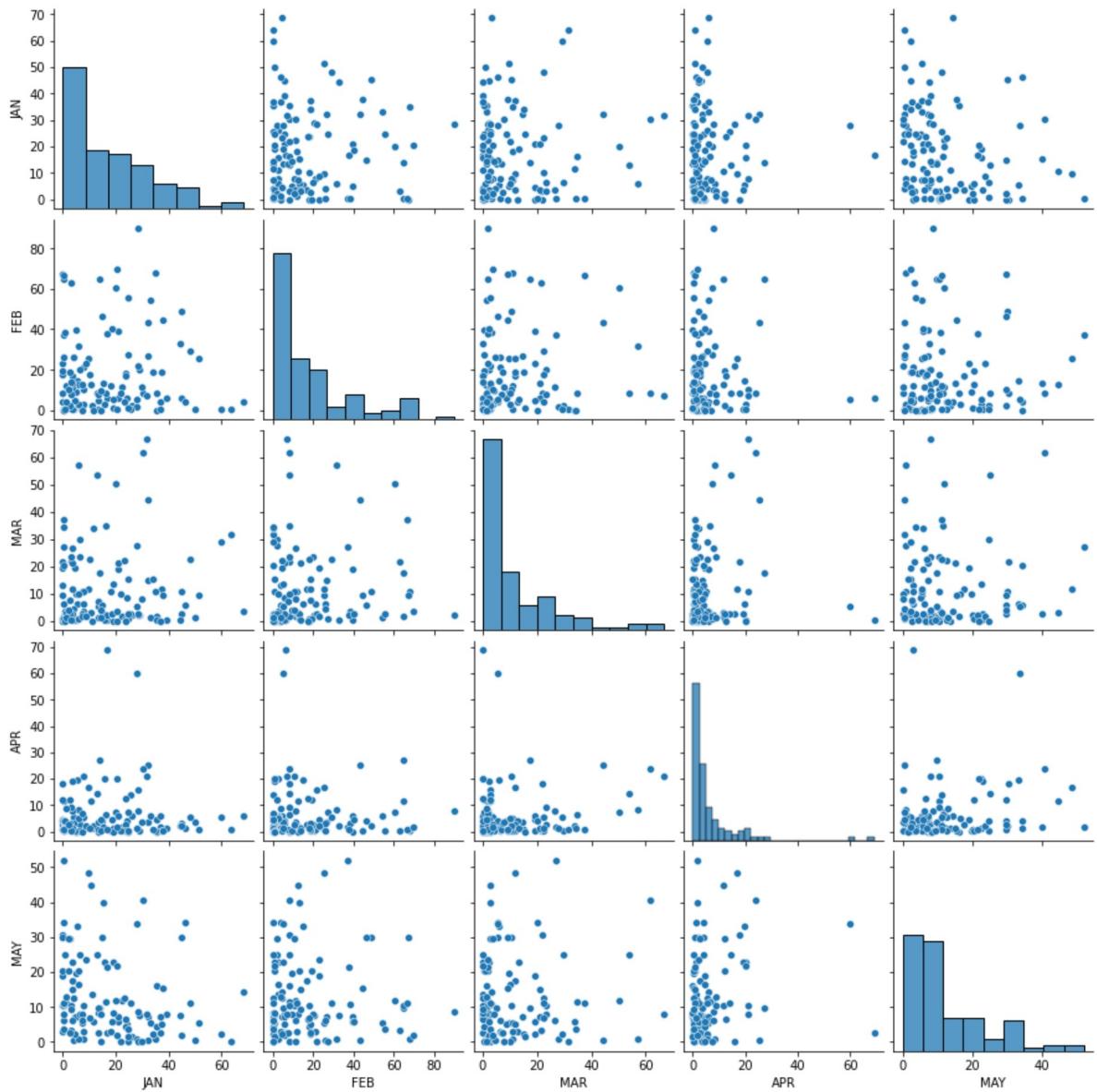
In [184]:

Out[184]: <AxesSubplot:>



In [185]:

Out[185]: <seaborn.axisgrid.PairGrid at 0x227f5689af0>

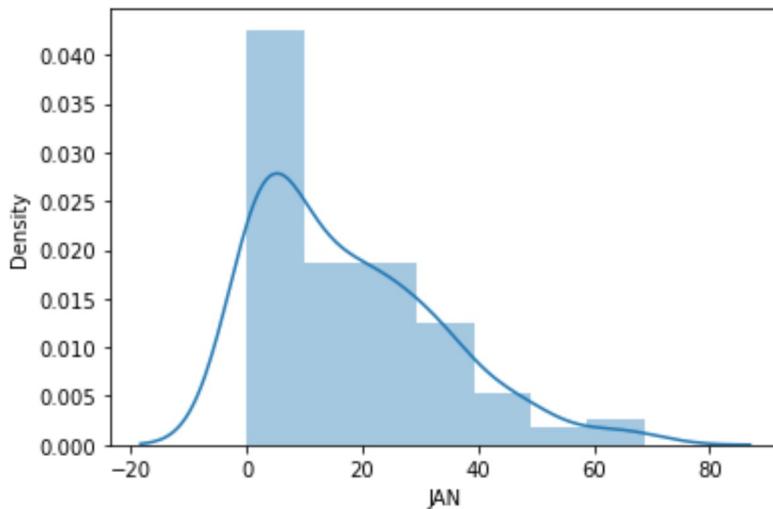


In [186]:

```
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).
```

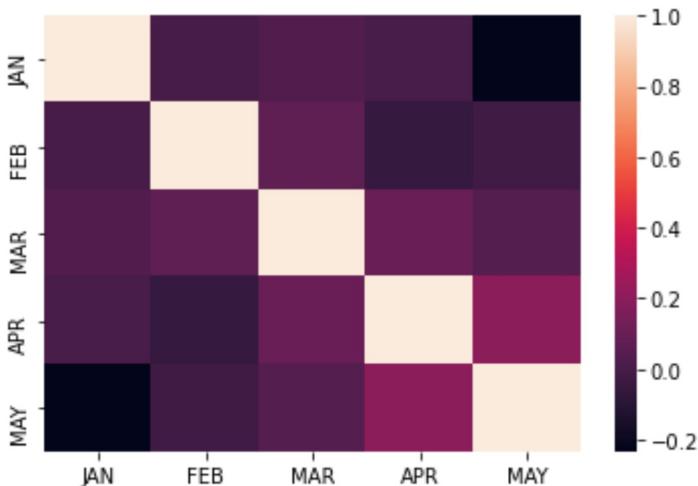
```
    warnings.warn(msg, FutureWarning)
```

Out[186]: <AxesSubplot:xlabel='JAN', ylabel='Density'>



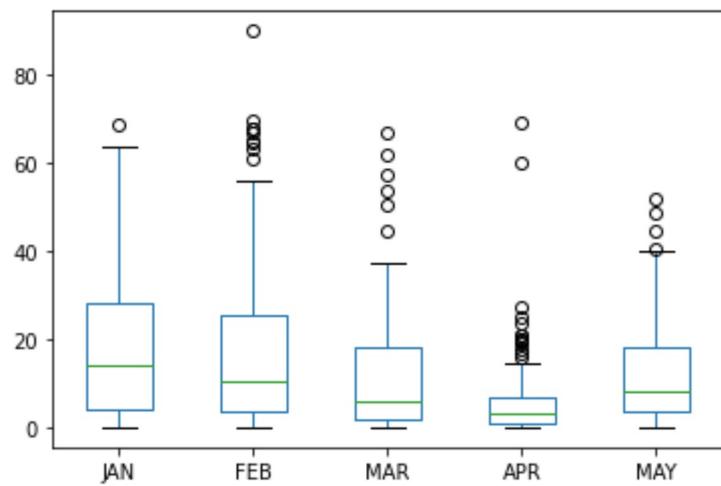
In [187]:

Out[187]: <AxesSubplot:>



In [188]:

Out[188]: <AxesSubplot:>



In [189]:

Out[189]: <AxesSubplot:ylabel='FEB'>



In [192]: c=a.head(1357)

Out[192]:

		index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0	0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6
1	1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2
2	2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0
3	3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4
4	4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0
...
1352	1352	UTTARAKHAND	2011	30.9	65.2	18.0	30.9	84.2	223.1	433.3	523.7	148.4	
1353	1353	UTTARAKHAND	2012	38.8	11.9	28.1	39.2	9.1	46.0	387.1	419.5	220.6	
1354	1354	UTTARAKHAND	2013	73.0	188.3	22.0	24.7	18.2	488.9	413.4	359.4	111.3	
1355	1355	UTTARAKHAND	2014	45.9	99.9	68.4	37.6	52.9	62.9	462.7	264.2	107.9	
1356	1356	UTTARAKHAND	2015	54.5	62.6	127.3	57.3	38.0	186.6	337.0	305.3	52.6	

1357 rows × 20 columns

In [194]: `d=c.tail(115)`

Out[194]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1242	1242	UTTARAKHAND	1901	134.5	81.4	44.5	5.9	60.8	33.6	381.1	612.3	167.1
1243	1243	UTTARAKHAND	1902	0.0	17.0	52.2	63.7	52.1	113.1	444.1	327.5	220.4
1244	1244	UTTARAKHAND	1903	68.0	7.9	87.6	10.3	37.5	83.0	251.6	442.7	249.3
1245	1245	UTTARAKHAND	1904	40.0	5.2	78.3	13.6	61.1	180.1	449.6	417.2	174.1
1246	1246	UTTARAKHAND	1905	115.4	80.7	99.8	26.1	70.3	111.5	299.9	349.5	129.5
...
1352	1352	UTTARAKHAND	2011	30.9	65.2	18.0	30.9	84.2	223.1	433.3	523.7	148.4
1353	1353	UTTARAKHAND	2012	38.8	11.9	28.1	39.2	9.1	46.0	387.1	419.5	220.6
1354	1354	UTTARAKHAND	2013	73.0	188.3	22.0	24.7	18.2	488.9	413.4	359.4	111.3
1355	1355	UTTARAKHAND	2014	45.9	99.9	68.4	37.6	52.9	62.9	462.7	264.2	107.9
1356	1356	UTTARAKHAND	2015	54.5	62.6	127.3	57.3	38.0	186.6	337.0	305.3	52.6

115 rows × 20 columns

In [195]: `e=d[['JAN', 'FEB', 'MAR', 'APR', 'MAY']]`

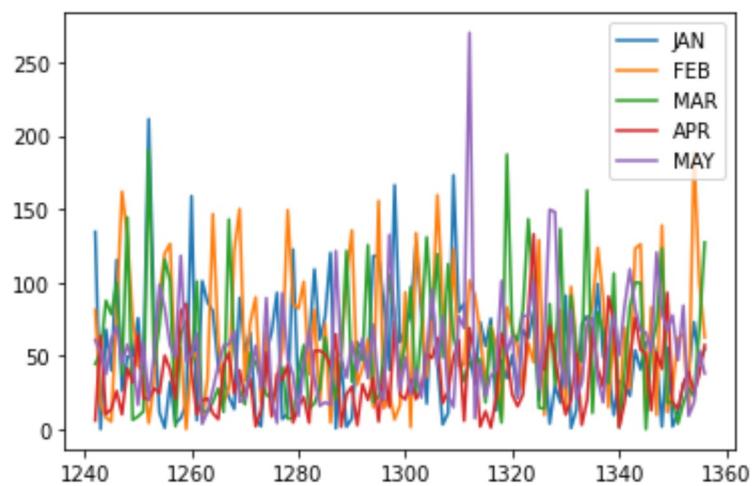
Out[195]:

	JAN	FEB	MAR	APR	MAY
1242	134.5	81.4	44.5	5.9	60.8
1243	0.0	17.0	52.2	63.7	52.1
1244	68.0	7.9	87.6	10.3	37.5
1245	40.0	5.2	78.3	13.6	61.1
1246	115.4	80.7	99.8	26.1	70.3
...
1352	30.9	65.2	18.0	30.9	84.2
1353	38.8	11.9	28.1	39.2	9.1
1354	73.0	188.3	22.0	24.7	18.2
1355	45.9	99.9	68.4	37.6	52.9
1356	54.5	62.6	127.3	57.3	38.0

115 rows × 5 columns

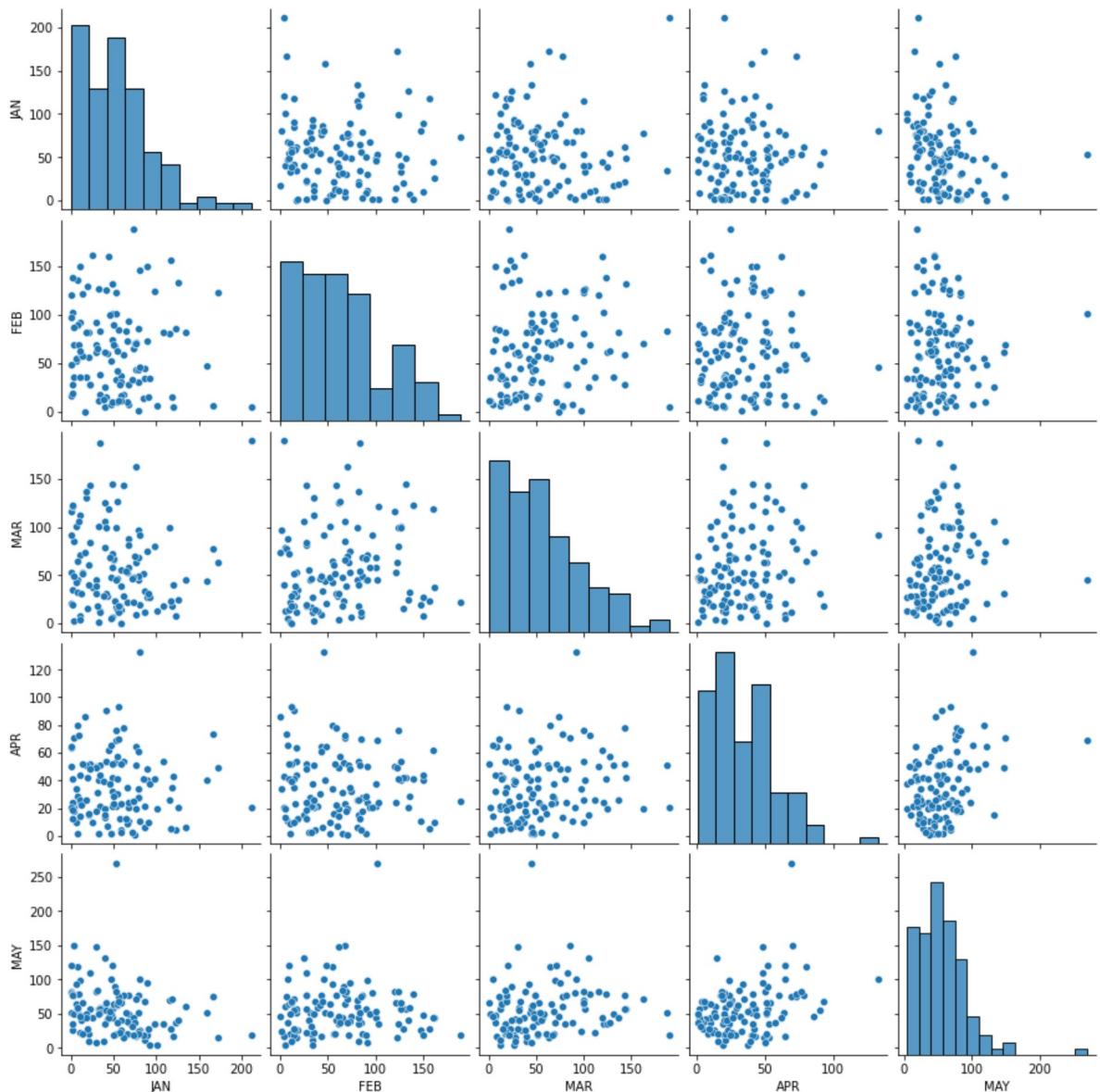
In [196]:

Out[196]: <AxesSubplot:>



In [197]:

Out[197]: <seaborn.axisgrid.PairGrid at 0x227f80e02b0>

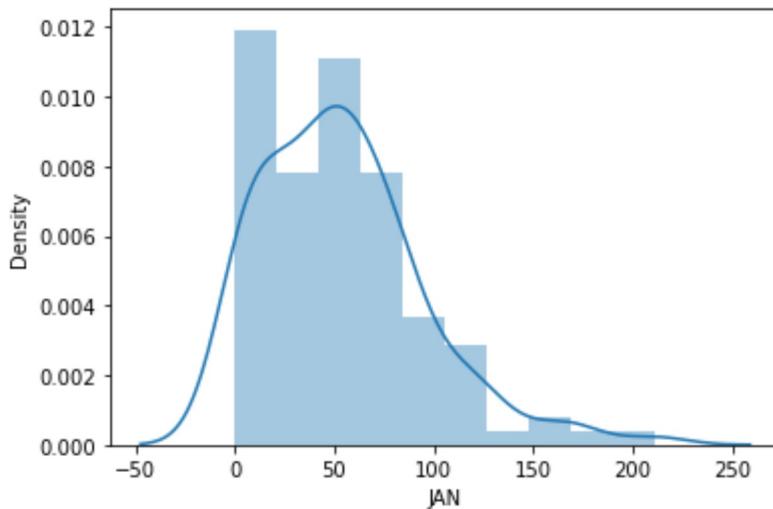


In [198]:

```
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).
```

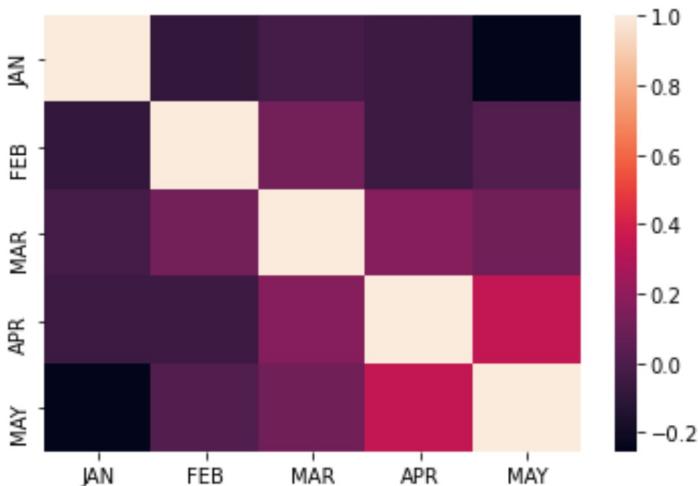
```
    warnings.warn(msg, FutureWarning)
```

Out[198]: <AxesSubplot:xlabel='JAN', ylabel='Density'>



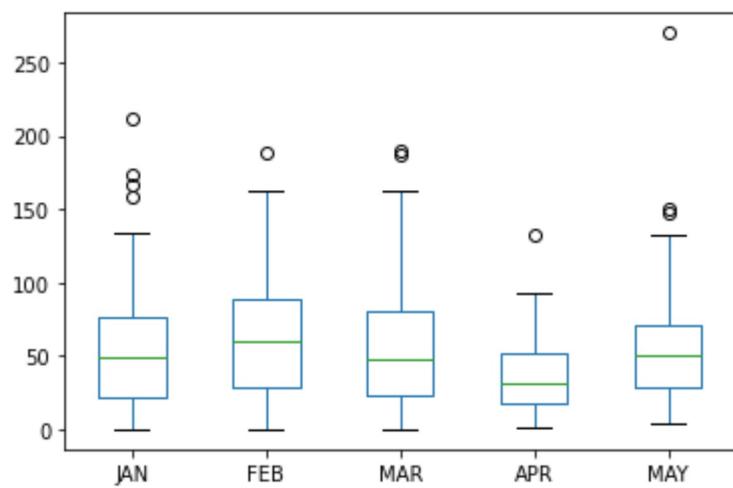
In [199]:

Out[199]: <AxesSubplot:>



In [200]:

Out[200]: <AxesSubplot:>



In [201]:

Out[201]: <AxesSubplot:ylabel='FEB'>

