04/08/2023 (BOOK-26)

In [228]:
```
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
from sklearn.model_selection import train_test_split
```

In [229]:
```
a=pd.read_csv(r"C:\Users\user\Downloads\Book26.csv")
a
```

Out[229]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	C
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	3
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	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	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	2
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	2
...	...	...	...	...	...	...	...	...	...	...	...	...	
105	105	ANDAMAN & NICOBAR ISLANDS	2011	265.9	84.8	272.8	111.4	326.5	383.2	583.2	441.5	757.1	2
106	106	ANDAMAN & NICOBAR ISLANDS	2012	119.9	45.6	30.9	55.8	533.9	458.2	317.3	369.6	868.9	2
107	107	ANDAMAN & NICOBAR ISLANDS	2013	67.1	37.6	43.0	46.3	509.3	777.0	564.8	336.7	473.6	4
108	108	ANDAMAN & NICOBAR ISLANDS	2014	41.9	8.6	0.0	11.1	238.0	416.6	467.6	321.6	412.9	4
109	109	ANDAMAN & NICOBAR ISLANDS	2015	126.8	7.6	3.1	138.2	331.9	346.4	328.9	480.0	523.3	2

110 rows × 20 columns

In [230]:
```
a.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 110 entries, 0 to 109
Data columns (total 20 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   index        110 non-null    int64  
 1   SUBDIVISION  110 non-null    object 
 2   YEAR         110 non-null    int64  
 3   JAN          110 non-null    float64
 4   FEB          110 non-null    float64
 5   MAR          108 non-null    float64
 6   APR          108 non-null    float64
 7   MAY          109 non-null    float64
 8   JUN          108 non-null    float64
 9   JUL          108 non-null    float64
 10  AUG          108 non-null    float64
 11  SEP          107 non-null    float64
 12  OCT          108 non-null    float64
 13  NOV          108 non-null    float64
 14  DEC          107 non-null    float64
 15  ANNUAL       104 non-null    float64
 16  Jan-Feb      110 non-null    float64
 17  Mar-May      107 non-null    float64
 18  Jun-Sep      107 non-null    float64
 19  Oct-Dec      107 non-null    float64
dtypes: float64(17), int64(2), object(1)
memory usage: 17.3+ KB
```

In [231]:
```
b=a.fillna(method='ffill')
b
```

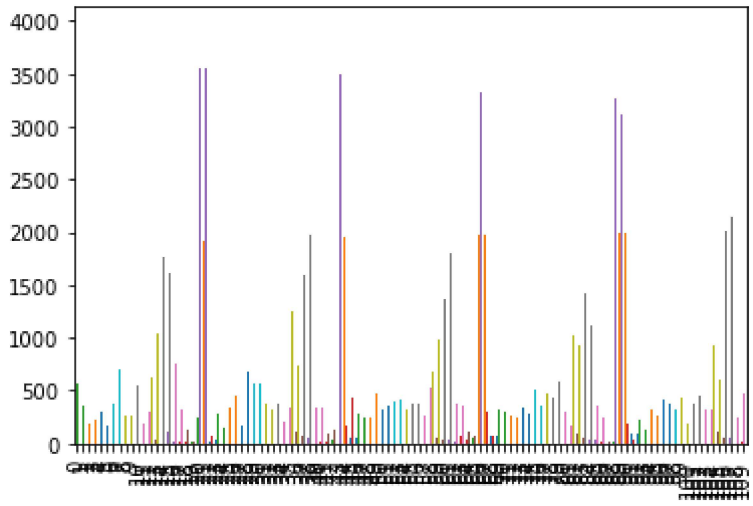
Out[231]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	C
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	3
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	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	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	2
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	2
...	...	...	...	...	...	...	...	...	...	...	...	...	
105	105	ANDAMAN & NICOBAR ISLANDS	2011	265.9	84.8	272.8	111.4	326.5	383.2	583.2	441.5	757.1	2
106	106	ANDAMAN & NICOBAR ISLANDS	2012	119.9	45.6	30.9	55.8	533.9	458.2	317.3	369.6	868.9	2
107	107	ANDAMAN & NICOBAR ISLANDS	2013	67.1	37.6	43.0	46.3	509.3	777.0	564.8	336.7	473.6	4
108	108	ANDAMAN & NICOBAR ISLANDS	2014	41.9	8.6	0.0	11.1	238.0	416.6	467.6	321.6	412.9	4
109	109	ANDAMAN & NICOBAR ISLANDS	2015	126.8	7.6	3.1	138.2	331.9	346.4	328.9	480.0	523.3	2

110 rows × 20 columns

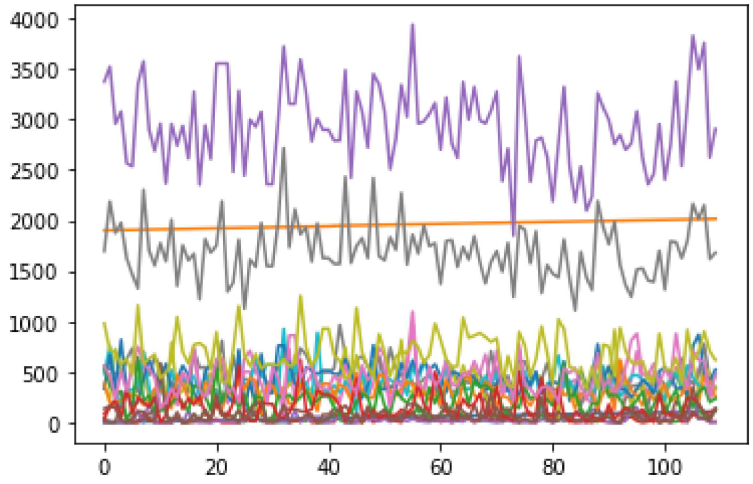
In [232]:
```
b.plot.bar(legend=None)
```

Out[232]: <AxesSubplot:>



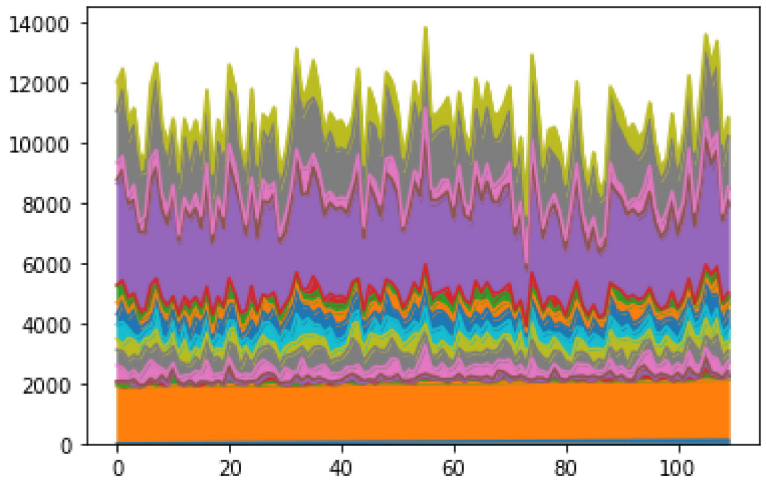
In [233]:
```
b.plot.line(legend=None)
```

Out[233]: <AxesSubplot:>



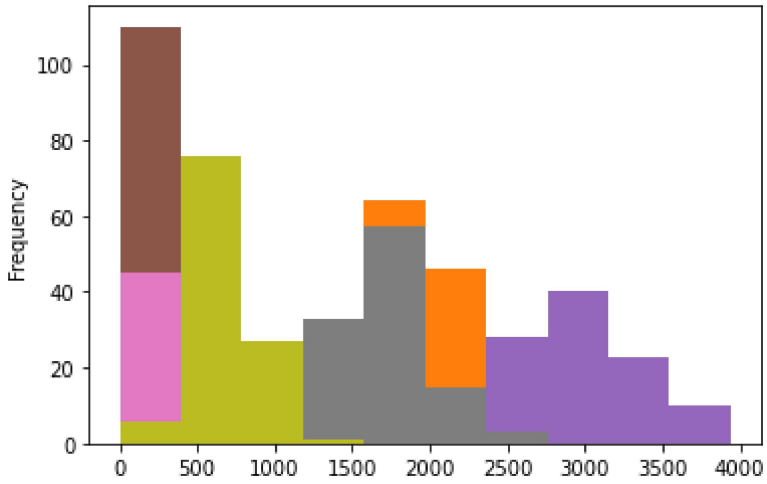
In [234]:
```
b.plot.area(legend=None)
```

Out[234]: <AxesSubplot:>



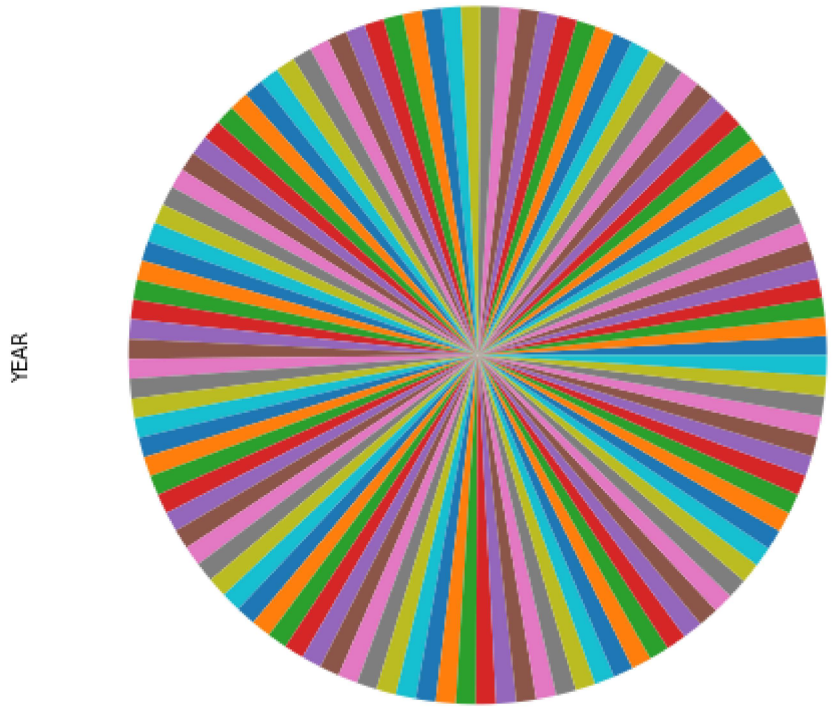
In [235]:
```
b.plot.hist(legend=None)
```

Out[235]: <AxesSubplot:ylabel='Frequency'>



In [236]:
```
b.plot.pie(y='YEAR',figsize=(8,8),labels=None,legend=None)
```

Out[236]:
```
<AxesSubplot:ylabel='YEAR'>
```



In [ ]:
```
```