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

In [2]: data=pd.read\_csv(r"C:\Users\user\Downloads\rainfall in india 1901-2015.csv")
 data

#### Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2
2	2	ANDAMAN & 2 NICOBAR ISLANDS		12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0
3	3	ANDAMAN & 3 NICOBAR ISLANDS		9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4
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	2011	5.1	2.8	3.1	85.9	107.2	153.6	350.2	254.0	255.2
4112	4112	LAKSHADWEEP	2012	19.2	0.1	1.6	76.8	21.2	327.0	231.5	381.2	179.8
4113	4113	LAKSHADWEEP	2013	26.2	34.4	37.5	5.3	88.3	426.2	296.4	154.4	180.0
4114	4114	LAKSHADWEEP	2014	53.2	16.1	4.4	14.9	57.4	244.1	116.1	466.1	132.2
4115	4115	LAKSHADWEEP	2015	2.2	0.5	3.7	87.1	133.1	296.6	257.5	146.4	160.4
4116 r	ows ×	20 columns										

# **Andaman & Nicobar Islands**

In [3]: df=data.iloc[0:110]
df

## Out[3]:

index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
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	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	1
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	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	2
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	ANDAMAN & NICOBAR ISLANDS	2011	265.9	84.8	272.8	111.4	326.5	383.2	583.2	441.5	757.1	2
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	ANDAMAN & NICOBAR ISLANDS	2013	67.1	37.6	43.0	46.3	509.3	777.0	564.8	336.7	473.6	2
108	ANDAMAN & NICOBAR ISLANDS	2014	41.9	8.6	0.0	11.1	238.0	416.6	467.6	321.6	412.9	۷
109	ANDAMAN & NICOBAR ISLANDS	2015	126.8	7.6	3.1	138.2	331.9	346.4	328.9	480.0	523.3	2
	0 1 2 3 4 105 106 107	ANDAMAN & NICOBAR ISLANDS  ANDAMAN & NICOBAR ISLANDS	ANDAMAN & 1901 ISLANDS  ANDAMAN & 1902 ISLANDS  ANDAMAN & 1902 ISLANDS  ANDAMAN & 1903 ISLANDS  ANDAMAN & 1904 ISLANDS  ANDAMAN & 1905 ISLANDS  ANDAMAN & 1905 ISLANDS  ANDAMAN & 2011 ISLANDS  ANDAMAN & 2011 ISLANDS  ANDAMAN & 2012 ISLANDS  ANDAMAN & 2012 ISLANDS  ANDAMAN & 2013 ISLANDS  ANDAMAN & 2013 ISLANDS  ANDAMAN & 2014 ISLANDS  ANDAMAN & 2014 ISLANDS	ANDAMAN & 1901 49.2  ANDAMAN & 1902 0.0  ANDAMAN & 1902 0.0  ANDAMAN & 1903 12.7  ANDAMAN & 1904 9.4  ISLANDS  ANDAMAN & 1905 1.3  ISLANDS  ANDAMAN & 1905 1.3  ISLANDS  ANDAMAN & 1905 1.3  ISLANDS  ANDAMAN & 2011 265.9  ISLANDS  ANDAMAN & 2012 119.9  ISLANDS  ANDAMAN & 2012 119.9  ISLANDS  ANDAMAN & 2013 67.1  ISLANDS  ANDAMAN & 2014 41.9  ISLANDS  ANDAMAN & 2014 41.9  ISLANDS  ANDAMAN & 2014 41.9  ISLANDS  ANDAMAN & 2015 126.8	ANDAMAN & 1901 49.2 87.1 ISLANDS 1902 0.0 159.8 ISLANDS 1902 0.0 159.8 ISLANDS 1903 12.7 144.0 ISLANDS 1904 9.4 14.7 ISLANDS 1905 1.3 0.0 ISLANDS 105 NICOBAR 1905 1.3 0.0 ISLANDS 105 NICOBAR 2011 265.9 84.8 ISLANDS 106 NICOBAR 2012 119.9 45.6 ISLANDS 107 NICOBAR 2012 119.9 45.6 ISLANDS 108 NICOBAR 2013 67.1 37.6 ISLANDS 108 NICOBAR 2014 41.9 8.6 ISLANDS 109 NICOBAR 2015 126.8 7.6	ANDAMAN & 1901 49.2 87.1 29.2 ISLANDS 1902 0.0 159.8 12.2 ISLANDS 2 NICOBAR 1903 12.7 144.0 0.0 ISLANDS 3 NICOBAR 1904 9.4 14.7 0.0 ISLANDS 4 NICOBAR 1905 1.3 0.0 3.3 ISLANDS 3 NICOBAR 1905 1.3 0.0 3.3 ISLANDS 105 NICOBAR 1905 1.3 0.0 3.3 ISLANDS 2011 265.9 84.8 272.8 ISLANDS 2011 265.9 84.8 272.8 ISLANDS 2012 119.9 45.6 30.9 ISLANDS 2013 67.1 37.6 43.0 ISLANDS 2014 41.9 8.6 0.0 ISLANDS 2014 41.9 8.6 0.0 ISLANDS 2014 41.9 8.6 0.0 ISLANDS 2015 126.8 7.6 3.1	ANDAMAN & 1901 49.2 87.1 29.2 2.3 ISLANDS 1902 0.0 159.8 12.2 0.0 ISLANDS 1903 12.7 144.0 0.0 1.0 ISLANDS 1903 12.7 144.0 0.0 1.0 ANDAMAN & 1904 9.4 14.7 0.0 202.4 ISLANDS 1905 1.3 0.0 3.3 26.9 ISLANDS 1905 1905 1905 1905 1905 1905 1905 1905	ANDAMAN & NICOBAR ISLANDS  ANDAMAN & NICOBAR ISL	ANDAMAN & NICOBAR ISLANDS  ANDAMAN & NICOBAR ISL	ANDAMAN & NICOBAR ISLANDS   1901   49.2   87.1   29.2   2.3   528.8   517.5   365.1	ANDAMAN & NICOBAR ISLANDS  ANDAMAN & NICOBAR 2014 41.9 8.6 0.0 11.1 238.0 416.6 467.6 321.6 ISLANDS  ANDAMAN & NICOBAR 2015 126.8 7.6 3.1 138.2 331.9 346.4 328.9 480.0	ANDAMAN & 1901 49.2 87.1 29.2 2.3 528.8 517.5 365.1 481.1 332.6 1   ANDAMAN & 1902 0.0 159.8 12.2 0.0 446.1 537.1 228.9 753.7 666.2   ANDAMAN & NICOBAR 1903 12.7 144.0 0.0 1.0 235.1 479.9 728.4 326.7 339.0   ISLANDS

110 rows × 20 columns

4

In [4]: df.head()

Out[4]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	388.
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	197.2
2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	181.2
3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	222.2
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	260.7
4													•

In [5]: df.tail()

Out[5]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	C
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	20
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 <u>ŧ</u>
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!
4													•

In [6]: df.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
dtyp	es: float64(1	7), int64(2), ob	ject(1)

memory usage: 17.3+ KB

localhost:8888/notebooks/Andaman and Nicobar.ipynb

In [8]: df1=data.fillna(0)
df1

## Out[8]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2
2	2	ANDAMAN & 2 NICOBAR ISLANDS		12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0
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	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	2011	5.1	2.8	3.1	85.9	107.2	153.6	350.2	254.0	255.2
4112	4112	LAKSHADWEEP	2012	19.2	0.1	1.6	76.8	21.2	327.0	231.5	381.2	179.8
4113	4113	LAKSHADWEEP	2013	26.2	34.4	37.5	5.3	88.3	426.2	296.4	154.4	180.0
4114	4114	LAKSHADWEEP	2014	53.2	16.1	4.4	14.9	57.4	244.1	116.1	466.1	132.2
4115	4115	LAKSHADWEEP	2015	2.2	0.5	3.7	87.1	133.1	296.6	257.5	146.4	160.4

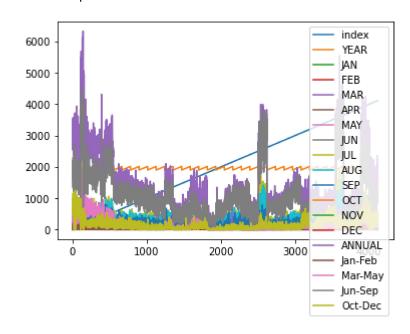
4116 rows × 20 columns

In [9]: df1.describe()

## Out[9]:

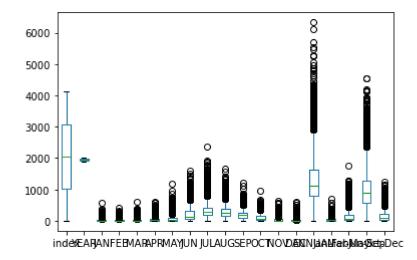
	index	YEAR	JAN	FEB	MAR	APR	MA
count	4116.000000	4116.000000	4116.000000	4116.000000	4116.000000	4116.000000	4116.00000
mean	2057.500000	1958.218659	18.938897	21.789431	27.319315	43.085520	85.68292
std	1188.331183	33.140898	33.574242	35.901220	46.936787	67.811512	123.2117 <sup>-</sup>
min	0.000000	1901.000000	0.000000	0.000000	0.000000	0.000000	0.00000
25%	1028.750000	1930.000000	0.600000	0.600000	1.000000	3.000000	8.60000
50%	2057.500000	1958.000000	6.000000	6.700000	7.800000	15.600000	36.40000
75%	3086.250000	1987.000000	22.125000	26.800000	31.225000	49.825000	96.82500
max	4115.000000	2015.000000	583.700000	403.500000	605.600000	595.100000	1168.60000
4							•

Out[11]: <AxesSubplot:>



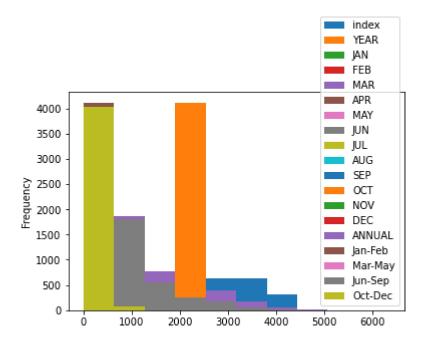


#### Out[12]: <AxesSubplot:>



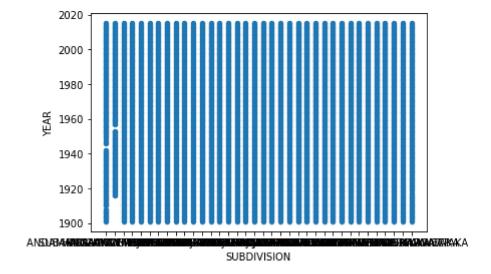
In [13]: df1.plot.hist()

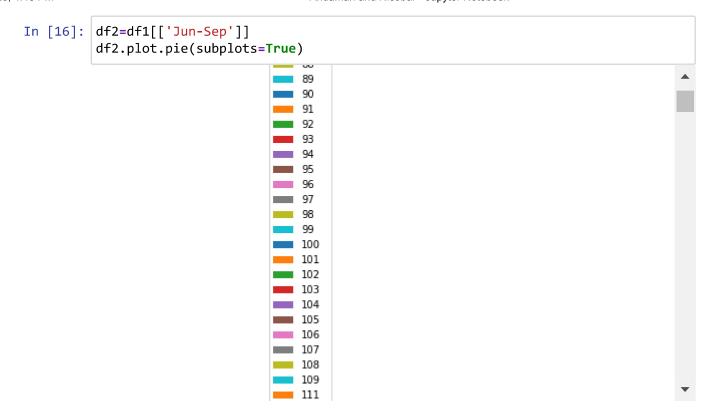
Out[13]: <AxesSubplot:ylabel='Frequency'>



In [14]: df1.plot.scatter(x="SUBDIVISION",y="YEAR")

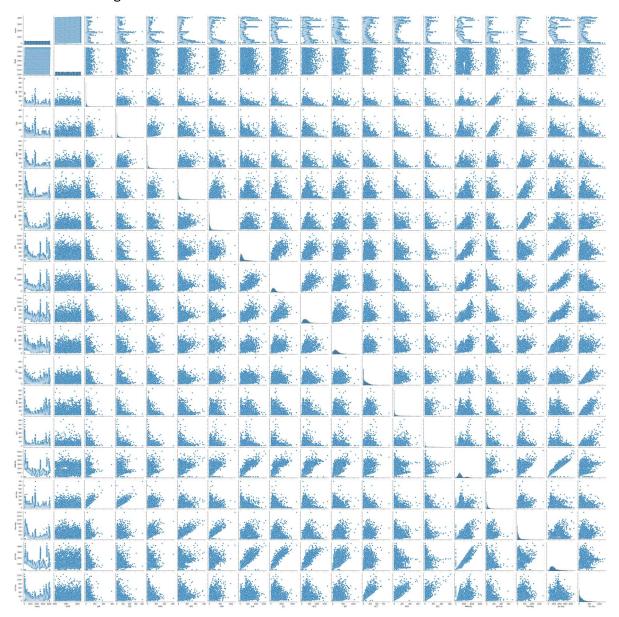
Out[14]: <AxesSubplot:xlabel='SUBDIVISION', ylabel='YEAR'>





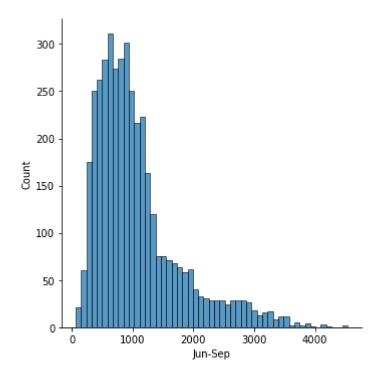
In [17]: sns.pairplot(df1)

Out[17]: <seaborn.axisgrid.PairGrid at 0x29ed3ff48e0>



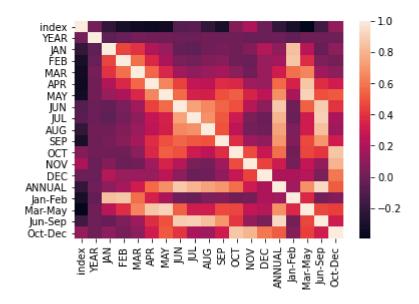
In [18]: sns.displot(data["Jun-Sep"])

Out[18]: <seaborn.axisgrid.FacetGrid at 0x29ede169520>



In [19]: | sns.heatmap(df1.corr())

#### Out[19]: <AxesSubplot:>



```
In [ ]:
```