Import Libraries

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

Load Dataset

In [2]:
```
df = pd.read_csv('airquality2.csv')
```

In [3]:
```
df.head()
```

Out[3]:

	Unnamed: 0	Ozone	Solar.R	Wind	Temp	Month	Day	Humidity
0	1	41.0	190.0	7.4	67	5	1	High
1	2	36.0	118.0	8.0	72	5	2	High
2	3	12.0	149.0	12.6	74	5	3	NaN
3	4	18.0	313.0	11.5	62	5	4	Medium
4	5	NaN	NaN	14.3	56	5	5	Low

In [4]:
```
df['Ozone'] = df['Ozone'].fillna(37)
df['Solar.R'] = df['Solar.R'].fillna(137)
df.drop('Unnamed: 0',inplace=True,axis=1)
```

In [5]:
```
df.isnull().sum()
```

Out[5]:
```
Ozone       0
Solar.R     0
Wind        0
Temp        0
Month       0
Day         0
Humidity    9
dtype: int64
```

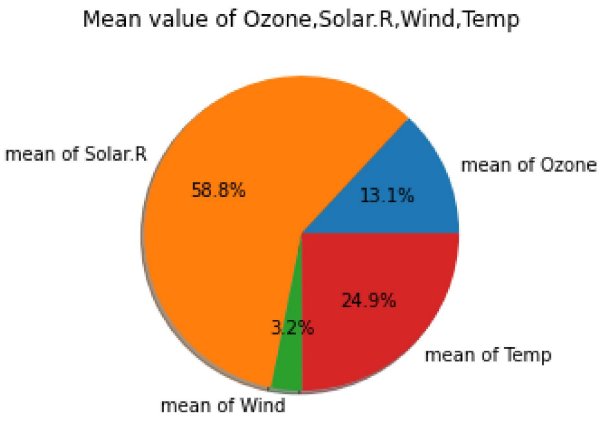
In [6]:
```
p = df['Month'].value_counts()
```

Pie chart

In [7]:
```
mean_of_cols = [df['Ozone'].mean(),df['Solar.R'].mean(),df['Wind'].mean(),df['Temp'].mean
```

In [8]:
```
plt.title('Mean value of Ozone,Solar.R,Wind,Temp')
plt.pie(mean_of_cols,autopct='%1.1f%%',labels=['mean of Ozone','mean of Solar.R','mean o
```

Out[8]:
```
([<matplotlib.patches.Wedge at 0x1684a0dd4b0>,
  <matplotlib.patches.Wedge at 0x1684a0ddd20>,
  <matplotlib.patches.Wedge at 0x1684a0de6b0>,
  <matplotlib.patches.Wedge at 0x1684a0df040>],
 [Text(1.008322228917937, 0.43964335849636527, 'mean of Ozone'),
  Text(-0.9796661082871141, 0.5002542516296894, 'mean of Solar.R'),
  Text(-0.1050476383133018, -1.094972599513247, 'mean of Wind'),
  Text(0.7795598495634211, -0.7760711571426016, 'mean of Temp')],
 [Text(0.5499939430461475, 0.23980546827074467, '13.1%'),
  Text(-0.5343633317929712, 0.272865955434376, '58.8%'),
  Text(-0.05729871180725552, -0.5972577815526802, '3.2%'),
  Text(0.4252144633982296, -0.42331154025960077, '24.9%')])
```



Barplot

Using seaborn

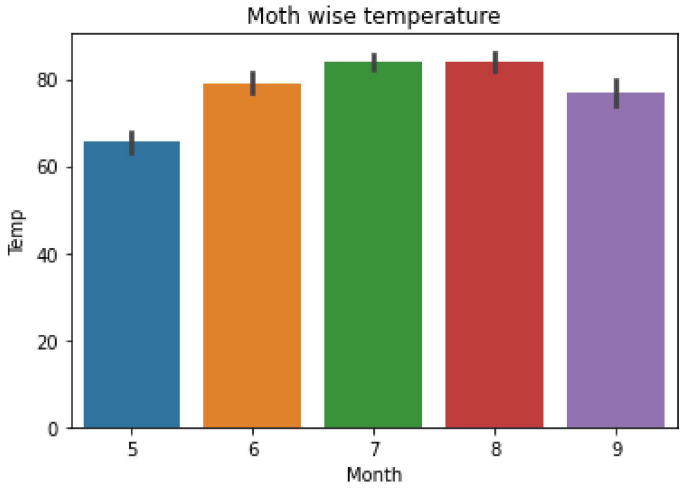
In [9]:
```
df.head()
```

Out[9]:

	Ozone	Solar.R	Wind	Temp	Month	Day	Humidity
0	41.0	190.0	7.4	67	5	1	High
1	36.0	118.0	8.0	72	5	2	High
2	12.0	149.0	12.6	74	5	3	NaN
3	18.0	313.0	11.5	62	5	4	Medium
4	37.0	137.0	14.3	56	5	5	Low

In [10]:
```
plt.title('Moth wise temperature')
sns.barplot(data=df,x='Month',y='Temp')
```

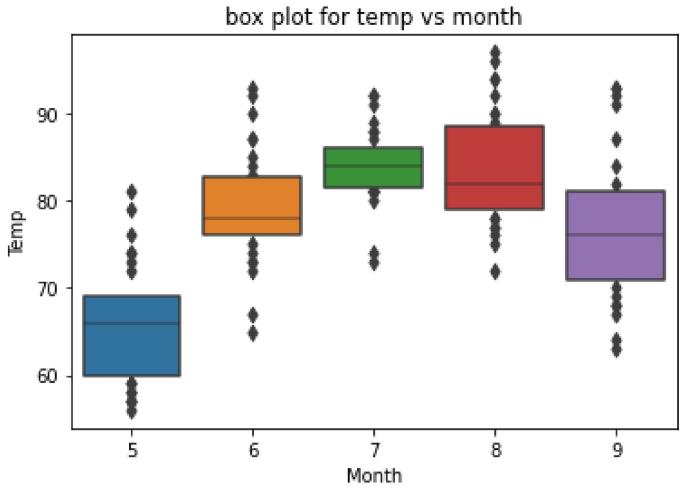
Out[10]:
```
<AxesSubplot:title={'center':'Moth wise temperature'}, xlabel='Month', ylabel='Temp'>
```



Box Plot

In [11]:
```
plt.title('box plot for temp vs month')
sns.boxenplot(data=df,x='Month',y='Temp')
```

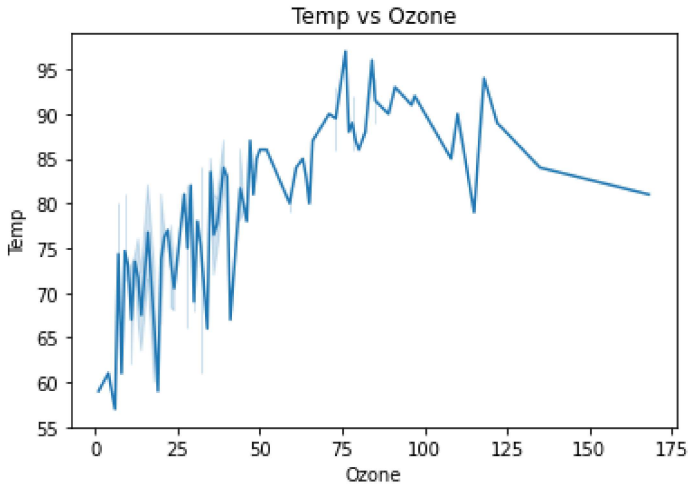
Out[11]:
```
<AxesSubplot:title={'center':'box plot for temp vs month'}, xlabel='Month', ylabel='Tem
p'>
```



line graph

In [12]:
```
plt.title('Temp vs Ozone')
sns.lineplot(data=df,x='Ozone',y='Temp')
```

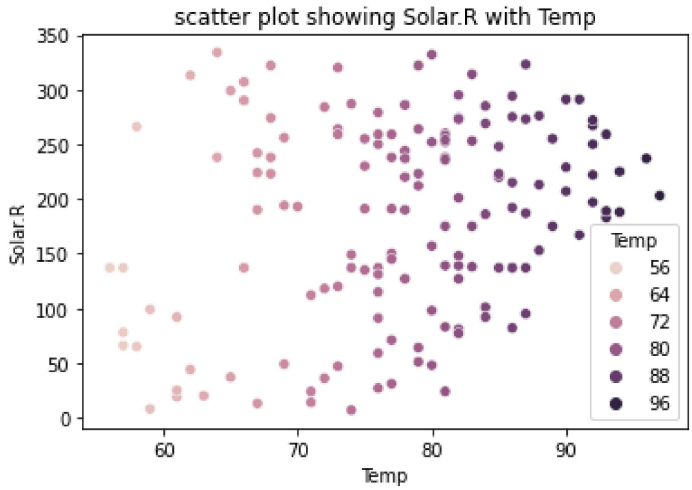
Out[12]:
```
<AxesSubplot:title={'center':'Temp vs Ozone'}, xlabel='Ozone', ylabel='Temp'>
```



scatterplot

In [13]:
```
plt.title('scatter plot showing Solar.R with Temp')
sns.scatterplot(data=df,x='Temp',y='Solar.R',hue='Temp',markers=2)
```

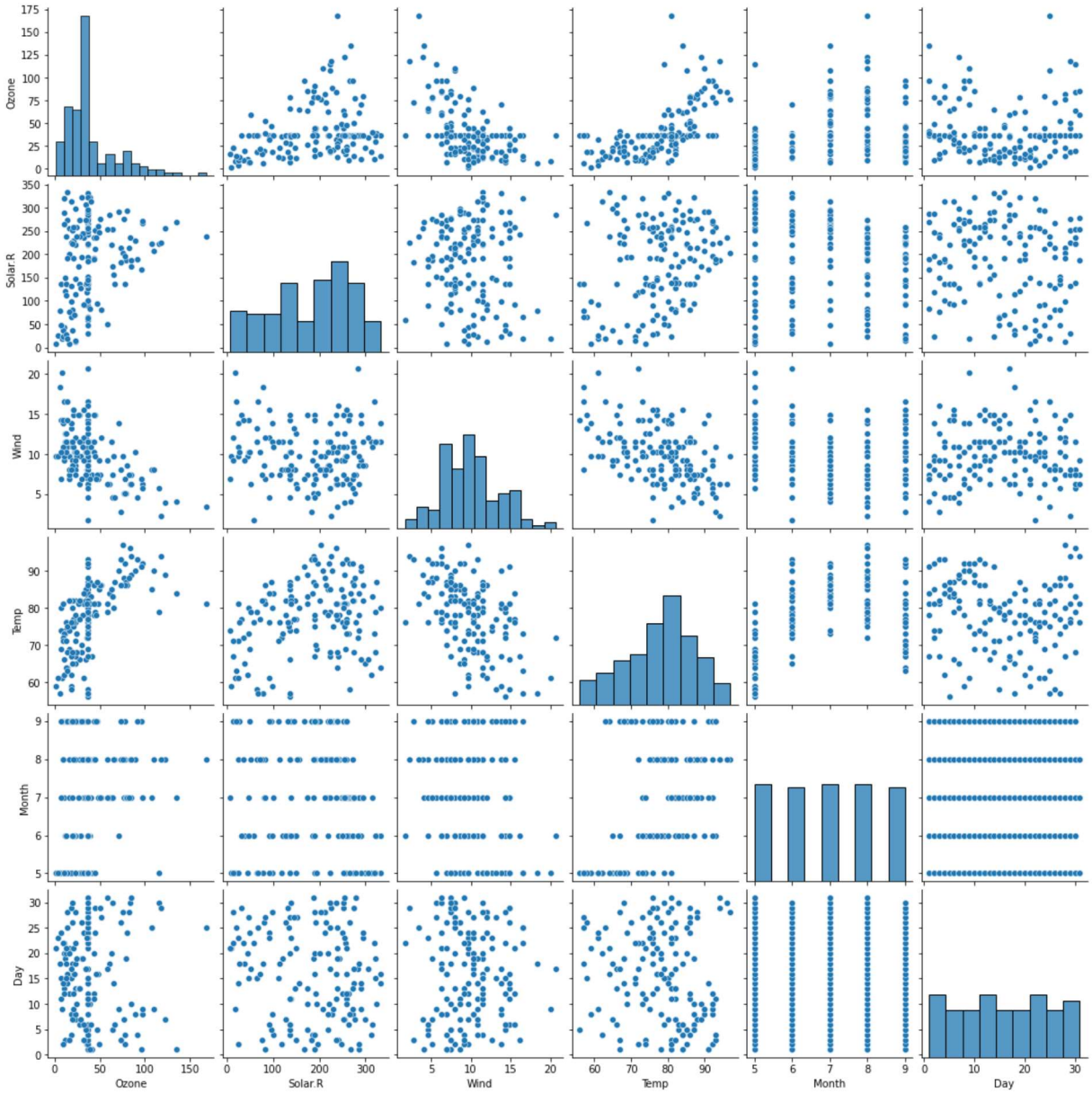
Out[13]:
```
<AxesSubplot:title={'center':'scatter plot showing Solar.R with Temp'}, xlabel='Temp',
ylabel='Solar.R'>
```



Pairplot

In [14]:
```
sns.pairplot(data=df)
```

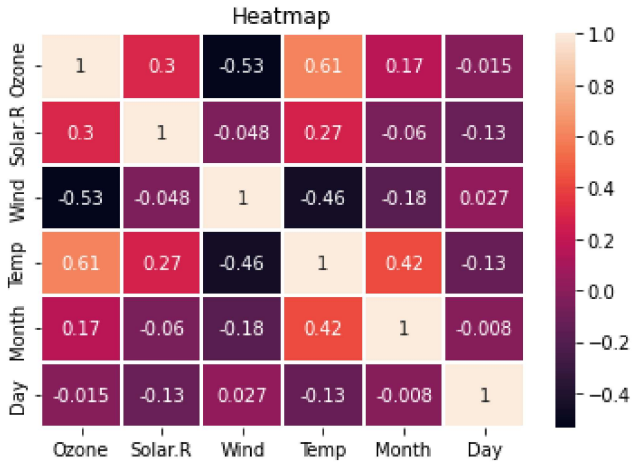
Out[14]:
```
<seaborn.axisgrid.PairGrid at 0x1684c3585b0>
```



Heatmap

In [15]:
```
plt.title('Heatmap')
sns.heatmap(df.corr(),linecolor='white',linewidths=2,annot=True)
```

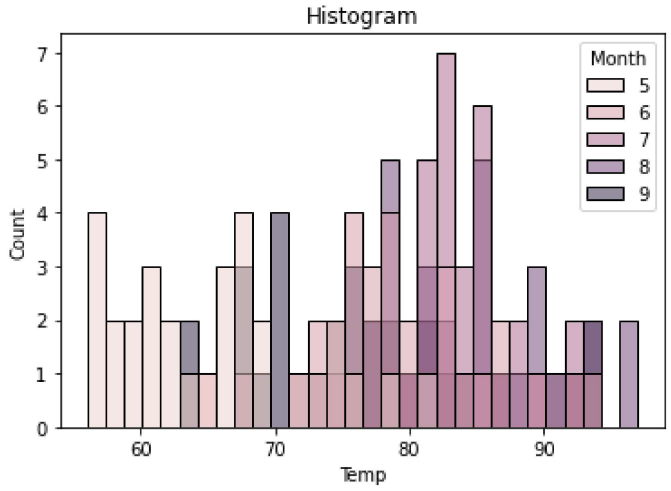
Out[15]: <AxesSubplot:title={'center':'Heatmap'}>



Histogram

In [16]:
```
plt.title('Histogram')
sns.histplot(data=df,x='Temp',bins=30,hue='Month')
```

Out[16]: <AxesSubplot:title={'center':'Histogram'}, xlabel='Temp', ylabel='Count'>



In [17]:
```
!pip install wordcloud
```

```
Requirement already satisfied: wordcloud in c:\users\admin\appdata\local\programs\pytho
n\python310\lib\site-packages (1.8.2.2)
Requirement already satisfied: matplotlib in c:\users\admin\appdata\local\programs\pyth
on\python310\lib\site-packages (from wordcloud) (3.5.2)
Requirement already satisfied: numpy>=1.6.1 in c:\users\admin\appdata\local\programs\py
thon\python310\lib\site-packages (from wordcloud) (1.22.4)
Requirement already satisfied: pillow in c:\users\admin\appdata\local\programs\python\p
ython310\lib\site-packages (from wordcloud) (9.1.1)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\admin\appdata\local\progra
ms\python\python310\lib\site-packages (from matplotlib->wordcloud) (1.4.2)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\admin\appdata\local\pro
grams\python\python310\lib\site-packages (from matplotlib->wordcloud) (2.8.2)
Requirement already satisfied: cycler>=0.10 in c:\users\admin\appdata\local\programs\py
thon\python310\lib\site-packages (from matplotlib->wordcloud) (0.11.0)
Requirement already satisfied: packaging>=20.0 in c:\users\admin\appdata\local\programs
\python\python310\lib\site-packages (from matplotlib->wordcloud) (21.3)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\admin\appdata\local\progra
ms\python\python310\lib\site-packages (from matplotlib->wordcloud) (4.33.3)
Requirement already satisfied: pyparsing>=2.2.1 in c:\users\admin\appdata\local\program
s\python\python310\lib\site-packages (from matplotlib->wordcloud) (3.0.9)
Requirement already satisfied: six>=1.5 in c:\users\admin\appdata\local\programs\python
\python310\lib\site-packages (from python-dateutil>=2.7->matplotlib->wordcloud) (1.16.
0)


[notice] A new release of pip is available: 23.0 -> 23.1.1
[notice] To update, run: python.exe -m pip install --upgrade pip
```

In [18]:
```
from worldclo
```

```
  Input In [18]
    from worldclo
                 ^
SyntaxError: invalid syntax
```

In [ ]:
```
!pip install worldcloud
```

In [ ]:
```
!pip install wordcloud
```

In [ ]:
```
from word_cloud_txt.
```

In [ ]:
```
!pip install wordcloud
```

In [ ]:
```

```