In [2]:
```
# Import Liberaries :

import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

Seaborn Liberary

In [ ]:
```
# 1.lineplot
# 2.distplot and histplot
# 3.pairplot
# 4.heatmap.
```

In [ ]:
```
Lineplot--------------
```

In [3]:
```
file_path=r"C:\Users\DIT\Downloads\seattle-weather.csv"
df=pd.read_csv(file_path)
df
```

Out[3]:

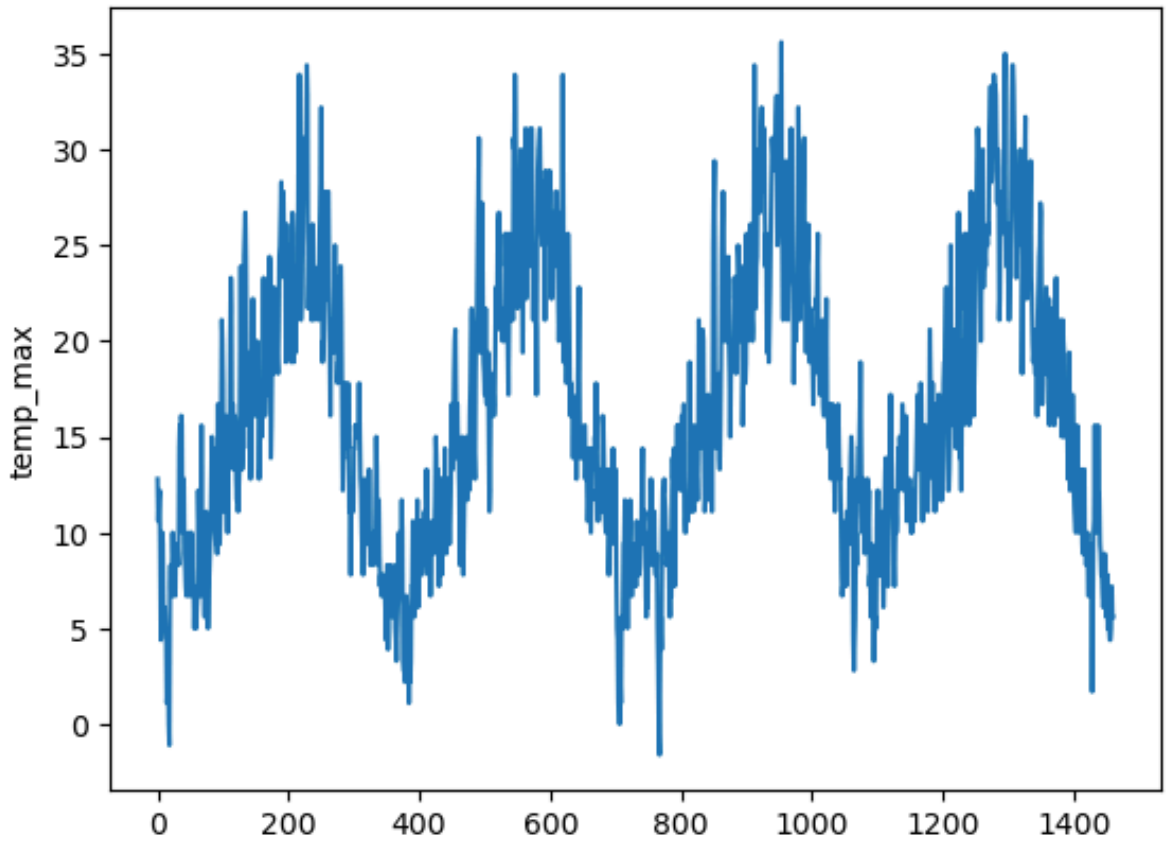
	date	precipitation	temp_max	temp_min	wind	weather
0	2012-01-01	0.0	12.8	5.0	4.7	drizzle
1	2012-01-02	10.9	10.6	2.8	4.5	rain
2	2012-01-03	0.8	11.7	7.2	2.3	rain
3	2012-01-04	20.3	12.2	5.6	4.7	rain
4	2012-01-05	1.3	8.9	2.8	6.1	rain
...	...	...	...	...	...	...
1456	2015-12-27	8.6	4.4	1.7	2.9	rain
1457	2015-12-28	1.5	5.0	1.7	1.3	rain
1458	2015-12-29	0.0	7.2	0.6	2.6	fog
1459	2015-12-30	0.0	5.6	-1.0	3.4	sun
1460	2015-12-31	0.0	5.6	-2.1	3.5	sun

1461 rows × 6 columns

In [4]:
```
sns.lineplot(df["temp_max"])
```

```
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

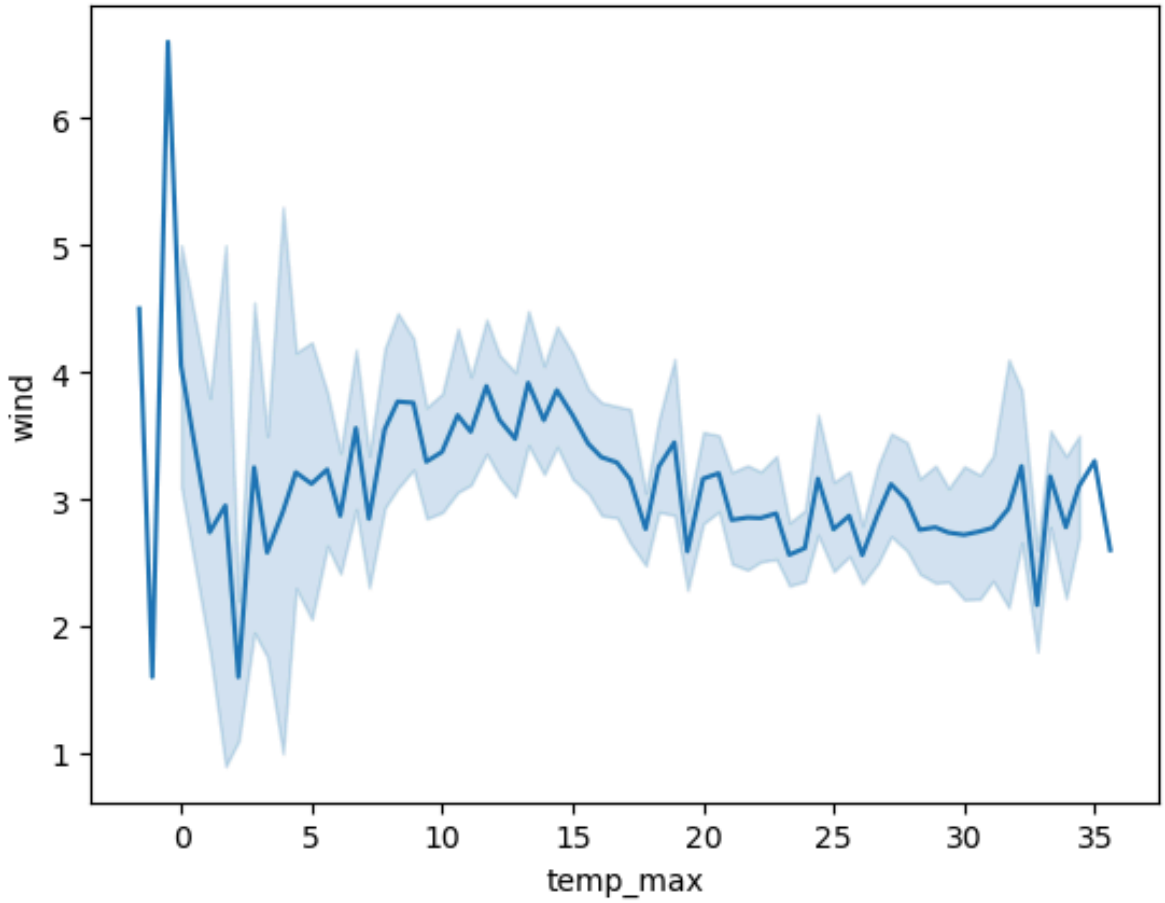
Out[4]: <Axes: ylabel='temp_max'>



In [5]:
```
sns.lineplot(x=df["temp_max"],y=df["wind"])
```

```
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

Out[5]: <Axes: xlabel='temp_max', ylabel='wind'>

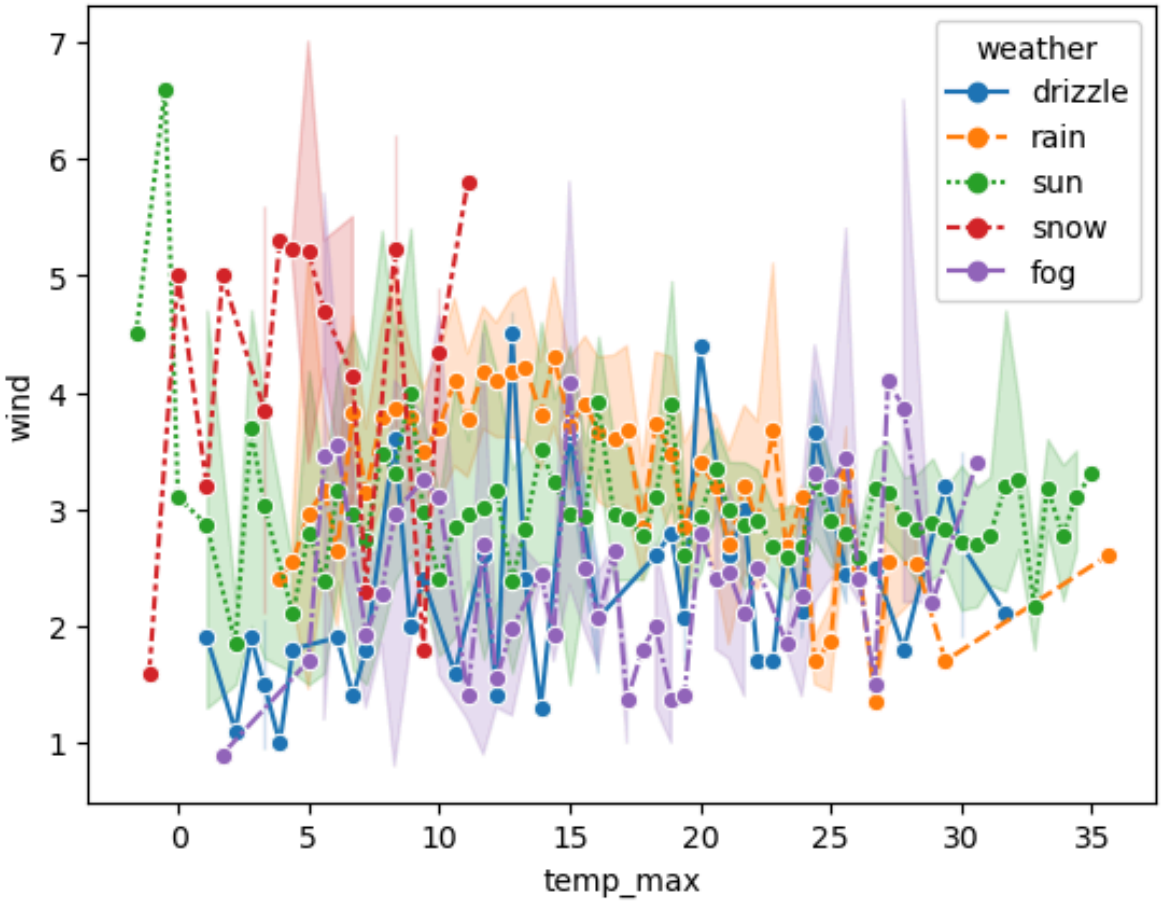


In [6]:
```
# x : x - axis
# y : y - axis
# data : dataset_name
# hue : data classified
```

In [7]:
```
sns.lineplot(x=df["temp_max"],y=df["wind"],data=df,markers="o",style="wea
```

```
C:\Users\DIT\AppData\Local\Temp\ipykernel_16776\1805873539.py:1: UserWarni
ng:
The markers list has fewer values (1) than needed (5) and will cycle, whic
h may produce an uninterpretable plot.
  sns.lineplot(x=df["temp_max"],y=df["wind"],data=df,markers="o",style="we
ather",hue="weather")
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

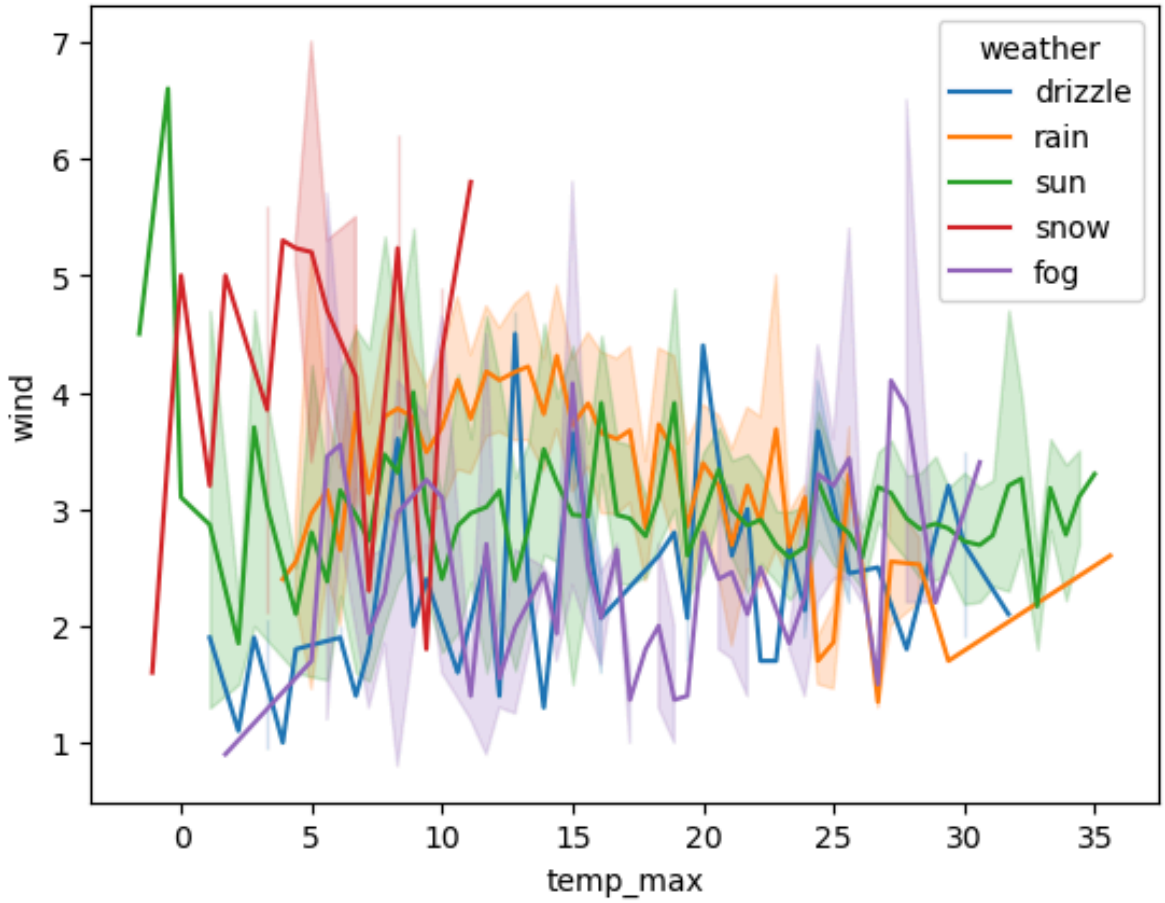
Out[7]:
```
<Axes: xlabel='temp_max', ylabel='wind'>
```



In [8]:
```
sns.lineplot(x=df["temp_max"],y=df["wind"],data=df,style="weather",hue="w
```

```
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

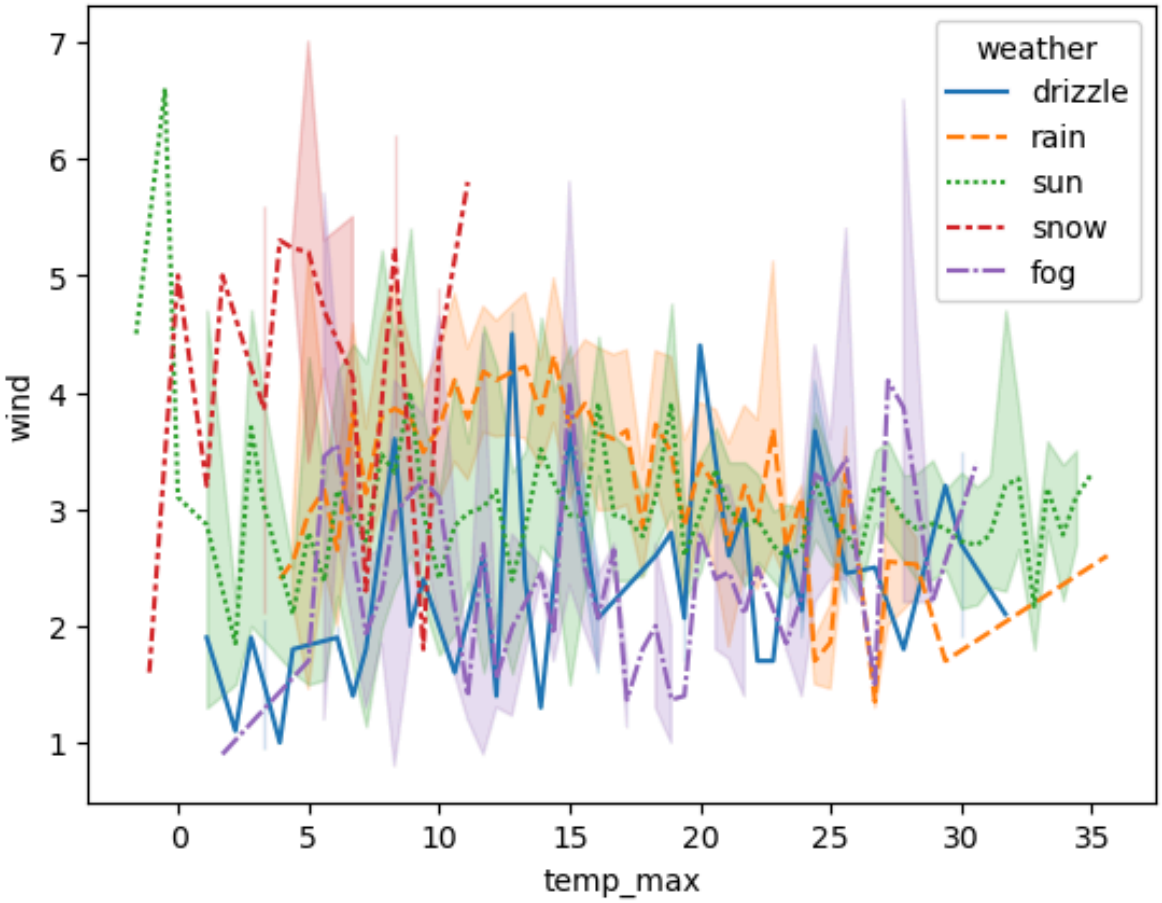
Out[8]: <Axes: xlabel='temp_max', ylabel='wind'>



In [9]:
```
sns.lineplot(x=df["temp_max"],y=df["wind"],data=df,style="weather",hue="w
```

```
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

Out[9]: <Axes: xlabel='temp_max', ylabel='wind'>



In [10]:
```
dt=df[df["weather"]=="drizzle"]
dt1=df[df["weather"]=="rain"]
dt2=df[df["weather"]=="sun"]
dt3=df[df["weather"]=="snow"]
dt4=df[df["weather"]=="fog"]
dt
```

Out[10]:

	date	precipitation	temp_max	temp_min	wind	weather
0	2012-01-01	0.0	12.8	5.0	4.7	drizzle
26	2012-01-27	0.0	6.7	-2.2	1.4	drizzle
45	2012-02-15	0.0	7.2	0.6	1.8	drizzle
85	2012-03-26	0.0	12.8	6.1	4.3	drizzle
103	2012-04-13	0.0	15.0	3.9	4.0	drizzle
118	2012-04-28	0.0	16.1	8.3	2.5	drizzle
135	2012-05-15	0.0	24.4	9.4	4.1	drizzle
175	2012-06-24	0.0	19.4	9.4	2.0	drizzle
186	2012-07-05	0.0	24.4	10.6	3.1	drizzle
191	2012-07-10	0.0	23.9	11.1	2.3	drizzle
193	2012-07-12	0.0	25.6	13.3	2.7	drizzle
207	2012-07-26	0.0	25.6	12.8	2.2	drizzle
208	2012-07-27	0.0	18.9	13.9	2.8	drizzle
209	2012-07-28	0.0	22.2	13.3	1.7	drizzle
213	2012-08-01	0.0	23.9	13.3	2.2	drizzle
219	2012-08-07	0.0	21.1	15.0	2.6	drizzle
221	2012-08-09	0.0	24.4	14.4	3.8	drizzle
230	2012-08-18	0.0	21.7	14.4	3.0	drizzle
231	2012-08-19	0.0	23.3	15.0	2.7	drizzle
262	2012-09-19	0.0	23.9	11.7	1.9	drizzle
263	2012-09-20	0.0	19.4	10.0	2.5	drizzle
264	2012-09-21	0.0	16.1	12.8	2.1	drizzle
269	2012-09-26	0.0	19.4	9.4	1.7	drizzle
270	2012-09-27	0.0	22.8	10.0	1.7	drizzle
282	2012-10-09	0.0	16.1	8.9	1.6	drizzle
283	2012-10-10	0.0	12.2	8.3	1.4	drizzle
284	2012-10-11	0.0	13.9	7.2	1.3	drizzle
319	2012-11-15	0.0	9.4	2.8	2.4	drizzle
329	2012-11-25	0.0	8.3	1.1	3.6	drizzle
364	2012-12-30	0.0	4.4	0.0	1.8	drizzle

	date	precipitation	temp_max	temp_min	wind	weather
365	2012-12-31	0.0	3.3	-1.1	2.0	drizzle
376	2013-01-11	0.0	2.8	-2.8	1.9	drizzle
381	2013-01-16	0.0	6.1	-3.9	1.8	drizzle
382	2013-01-17	0.0	3.9	-2.8	1.0	drizzle
383	2013-01-18	0.0	3.3	-1.1	1.3	drizzle
384	2013-01-19	0.0	1.1	-0.6	1.9	drizzle
385	2013-01-20	0.0	3.3	-0.6	2.1	drizzle
386	2013-01-21	0.0	2.2	-1.7	1.1	drizzle
387	2013-01-22	0.0	3.3	-1.7	0.6	drizzle
398	2013-02-02	0.0	6.1	2.8	2.0	drizzle
406	2013-02-10	0.0	8.9	1.7	2.0	drizzle
411	2013-02-15	0.0	13.3	5.0	2.4	drizzle
432	2013-03-08	0.0	11.7	2.2	2.6	drizzle
454	2013-03-30	0.0	20.0	5.6	4.4	drizzle
472	2013-04-17	0.0	15.0	3.9	3.3	drizzle
673	2013-11-04	0.0	10.6	3.9	1.6	drizzle
1261	2015-06-15	0.0	30.0	16.1	3.5	drizzle
1282	2015-07-06	0.0	29.4	15.6	3.2	drizzle
1284	2015-07-08	0.0	30.0	14.4	1.9	drizzle
1326	2015-08-19	0.0	31.7	16.1	2.1	drizzle
1329	2015-08-22	0.0	26.7	12.2	2.5	drizzle
1330	2015-08-23	0.0	27.8	13.9	1.8	drizzle
1374	2015-10-06	0.0	18.3	10.0	2.6	drizzle

In [11]:
```
dt1
```

Out[11]:

	date	precipitation	temp_max	temp_min	wind	weather
1	2012-01-02	10.9	10.6	2.8	4.5	rain
2	2012-01-03	0.8	11.7	7.2	2.3	rain
3	2012-01-04	20.3	12.2	5.6	4.7	rain
4	2012-01-05	1.3	8.9	2.8	6.1	rain
5	2012-01-06	2.5	4.4	2.2	2.2	rain
...	...	...	...	...	...	...
1452	2015-12-23	6.1	5.0	2.8	7.6	rain
1453	2015-12-24	2.5	5.6	2.2	4.3	rain
1454	2015-12-25	5.8	5.0	2.2	1.5	rain
1456	2015-12-27	8.6	4.4	1.7	2.9	rain
1457	2015-12-28	1.5	5.0	1.7	1.3	rain

641 rows × 6 columns

In [12]:
```
dt2
```

Out[12]:

	date	precipitation	temp_max	temp_min	wind	weather
7	2012-01-08	0.0	10.0	2.8	2.0	sun
10	2012-01-11	0.0	6.1	-1.1	5.1	sun
11	2012-01-12	0.0	6.1	-1.7	1.9	sun
12	2012-01-13	0.0	5.0	-2.8	1.3	sun
32	2012-02-02	0.0	8.3	1.7	2.6	sun
...	...	...	...	...	...	...
1427	2015-11-28	0.0	7.2	-2.7	1.0	sun
1443	2015-12-14	0.0	7.8	1.7	1.7	sun
1455	2015-12-26	0.0	4.4	0.0	2.5	sun
1459	2015-12-30	0.0	5.6	-1.0	3.4	sun
1460	2015-12-31	0.0	5.6	-2.1	3.5	sun

640 rows × 6 columns

In [13]:
```
dt3
```

Out[13]:

	date	precipitation	temp_max	temp_min	wind	weather
13	2012-01-14	4.1	4.4	0.6	5.3	snow
14	2012-01-15	5.3	1.1	-3.3	3.2	snow
15	2012-01-16	2.5	1.7	-2.8	5.0	snow
16	2012-01-17	8.1	3.3	0.0	5.6	snow
17	2012-01-18	19.8	0.0	-2.8	5.0	snow
18	2012-01-19	15.2	-1.1	-2.8	1.6	snow
19	2012-01-20	13.5	7.2	-1.1	2.3	snow
56	2012-02-26	1.3	5.0	-1.1	3.4	snow
58	2012-02-28	3.6	6.7	-0.6	4.2	snow
59	2012-02-29	0.8	5.0	1.1	7.0	snow
65	2012-03-06	0.5	6.7	0.0	2.7	snow
71	2012-03-12	19.3	8.3	0.6	6.2	snow
72	2012-03-13	9.4	5.6	0.6	5.3	snow
74	2012-03-15	23.9	11.1	5.6	5.8	snow
76	2012-03-17	9.4	10.0	0.6	3.8	snow
95	2012-04-05	4.6	9.4	2.8	1.8	snow
349	2012-12-15	5.3	4.4	0.6	5.1	snow
350	2012-12-16	22.6	6.7	3.3	5.5	snow
352	2012-12-18	3.3	3.9	0.6	5.3	snow
353	2012-12-19	13.7	8.3	1.7	5.8	snow
359	2012-12-25	13.5	5.6	2.8	4.2	snow
375	2013-01-10	0.3	3.3	-0.6	2.1	snow
445	2013-03-21	8.1	10.0	2.2	4.9	snow
719	2013-12-20	5.6	8.3	0.6	3.7	snow
769	2014-02-08	5.1	5.6	-0.5	4.6	snow
1063	2014-11-29	3.6	4.4	-4.3	5.3	snow

In [14]:
```
dt4
```

Out[14]:

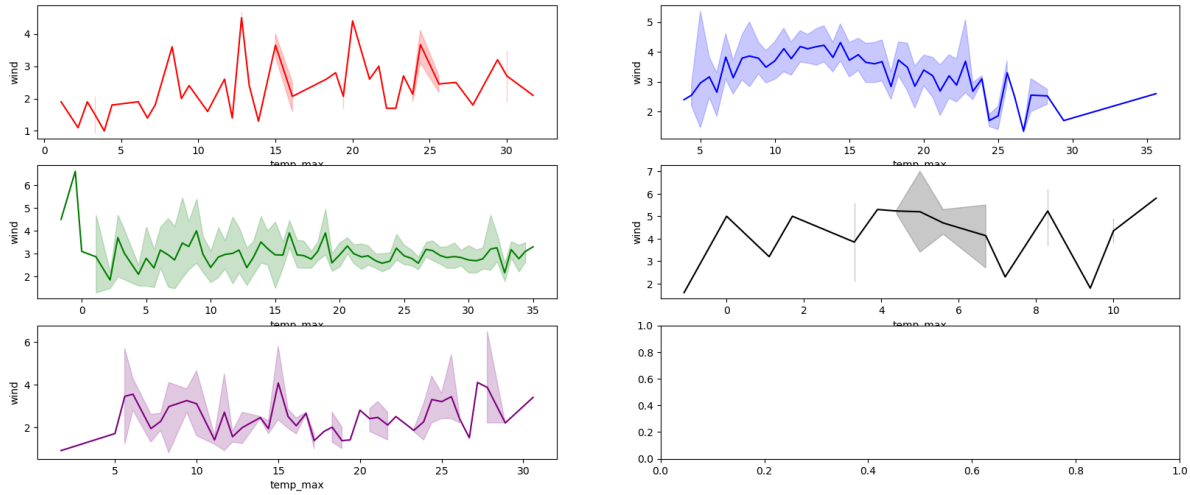
	date	precipitation	temp_max	temp_min	wind	weather
192	2012-07-11	0.0	27.8	13.3	2.9	fog
260	2012-09-17	0.0	27.8	11.7	2.2	fog
266	2012-09-23	0.0	19.4	10.0	1.4	fog
267	2012-09-24	0.0	21.1	10.0	1.8	fog
330	2012-11-26	0.0	9.4	1.7	3.8	fog
...	...	...	...	...	...	...
1419	2015-11-20	0.0	8.3	0.6	4.0	fog
1421	2015-11-22	0.0	10.0	1.7	3.1	fog
1428	2015-11-29	0.0	1.7	-2.1	0.9	fog
1448	2015-12-19	0.0	8.3	2.8	4.1	fog
1458	2015-12-29	0.0	7.2	0.6	2.6	fog

101 rows × 6 columns

In [15]:
```
# Subplots :

plt.figure(figsize=[20,8])

fig,axes=plt.subplots(3,2,figsize=[20,8])
sns.lineplot(x=dt["temp_max"],y=dt["wind"],ax=axes[0,0],color="r")
sns.lineplot(x=dt1["temp_max"],y=dt1["wind"],ax=axes[0,1],color="b")
sns.lineplot(x=dt2["temp_max"],y=dt2["wind"],ax=axes[1,0],color="g")
sns.lineplot(x=dt3["temp_max"],y=dt3["wind"],ax=axes[1,1],color="k")
sns.lineplot(x=dt4["temp_max"],y=dt4["wind"],ax=axes[2,0],color="purple")
```

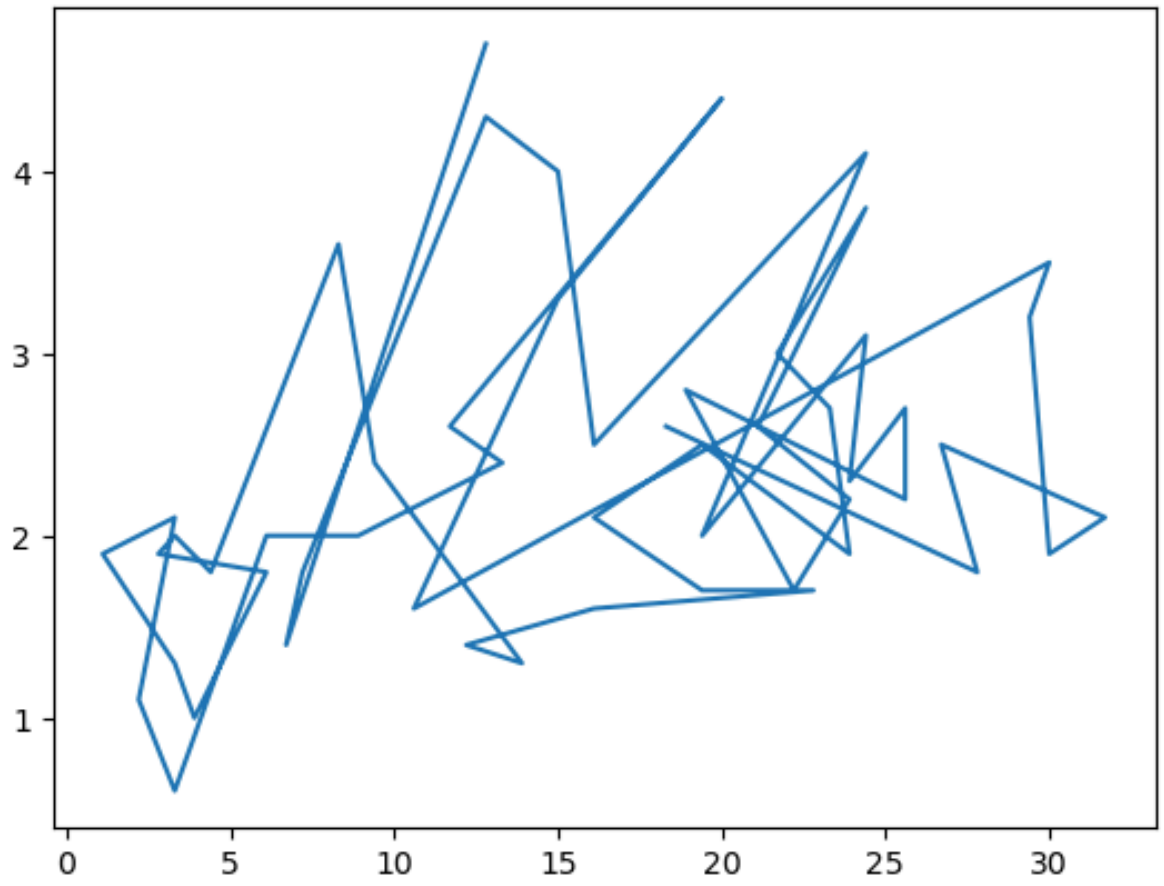
```
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

```
Out[15]: <Axes: xlabel='temp_max', ylabel='wind'>

<Figure size 2000x800 with 0 Axes>
```



In [16]:
```
plt.plot(dt["temp_max"],dt["wind"])
```

Out[16]: [<matplotlib.lines.Line2D at 0x2493fb1bd10>]

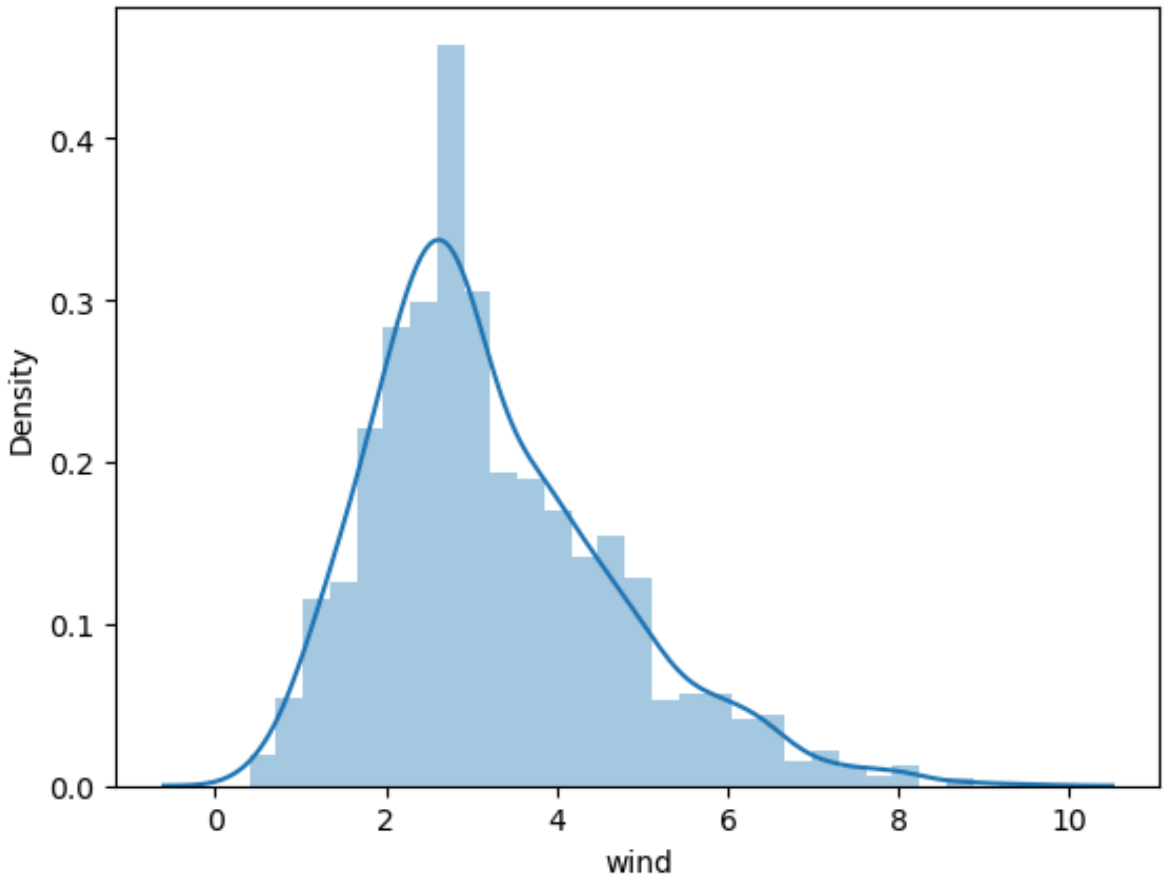


Distplot----------

In [17]:
```
# kde : Line is called kde.
# hist : bars is called hist.

sns.distplot(df["wind"])
```

```
C:\Users\DIT\AppData\Local\Temp\ipykernel_16776\1714289756.py:4: UserWarni
ng:

`distplot` is a deprecated function and will be removed in seaborn v0.14.
0.

Please adapt your code to use either `displot` (a figure-level function wi
th
similar flexibility) or `histplot` (an axes-level function for histogram
s).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751

  sns.distplot(df["wind"])
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

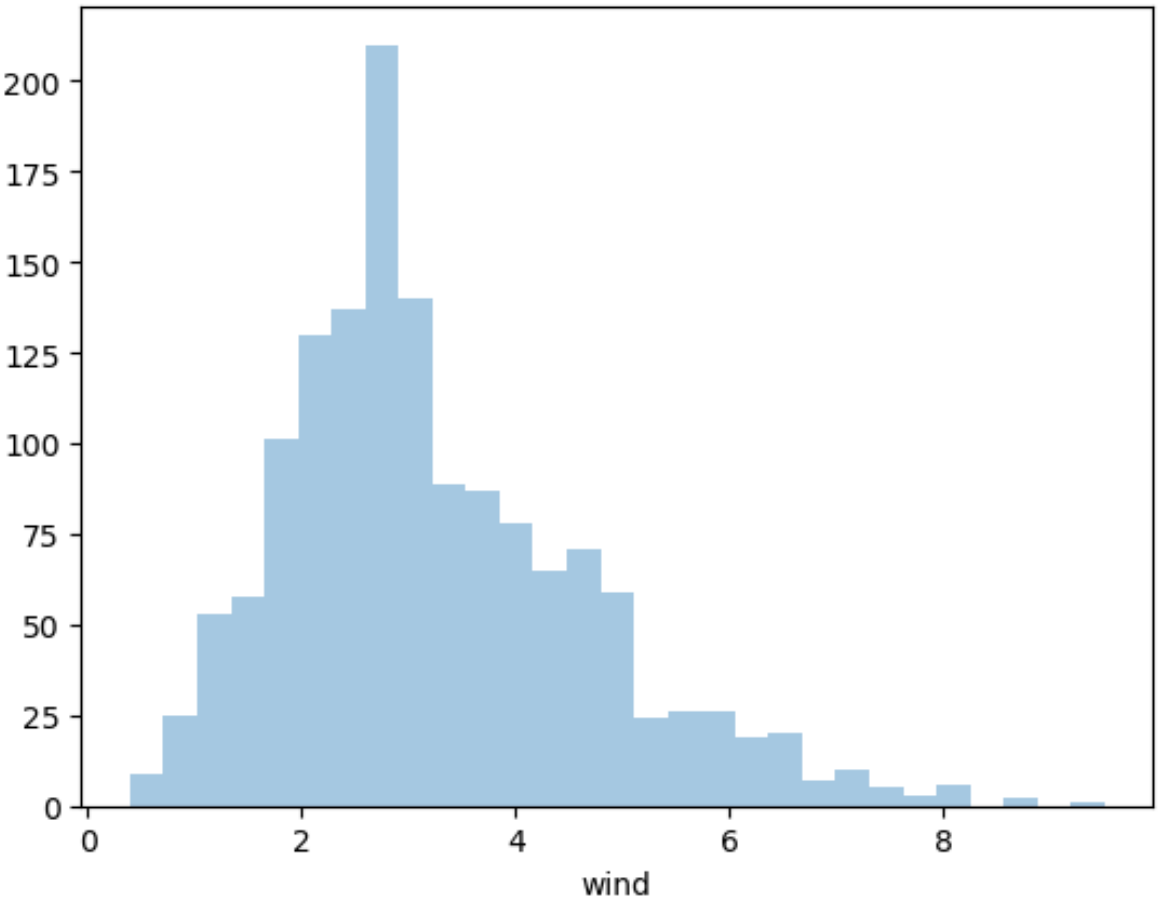
Out[17]: <Axes: xlabel='wind', ylabel='Density'>



In [18]:
```
# kde :
sns.distplot(df["wind"],kde=False)
```

```
C:\Users\DIT\AppData\Local\Temp\ipykernel_16776\2494629666.py:2: UserWarni
ng:

`distplot` is a deprecated function and will be removed in seaborn v0.14.
0.

Please adapt your code to use either `displot` (a figure-level function wi
th
similar flexibility) or `histplot` (an axes-level function for histogram
s).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751

  sns.distplot(df["wind"],kde=False)
```

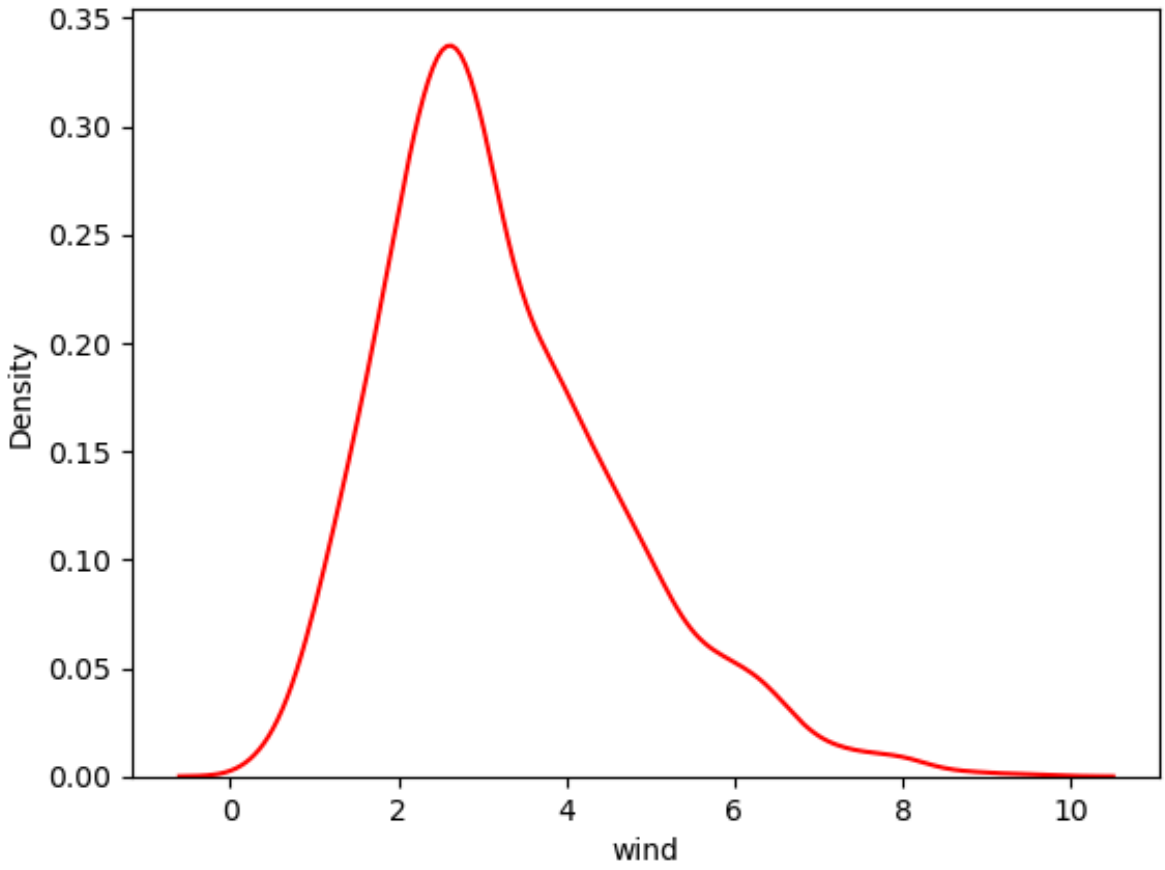
Out[18]: <Axes: xlabel='wind'>



In [19]:
```
# hist :
sns.distplot(df["wind"],hist=False,color="r")
```

```
C:\Users\DIT\AppData\Local\Temp\ipykernel_16776\1430634402.py:2: UserWarni
ng:

`distplot` is a deprecated function and will be removed in seaborn v0.14.
0.

Please adapt your code to use either `displot` (a figure-level function wi
th
similar flexibility) or `kdeplot` (an axes-level function for kernel densi
ty plots).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751

  sns.distplot(df["wind"],hist=False,color="r")
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

Out[19]: <Axes: xlabel='wind', ylabel='Density'>

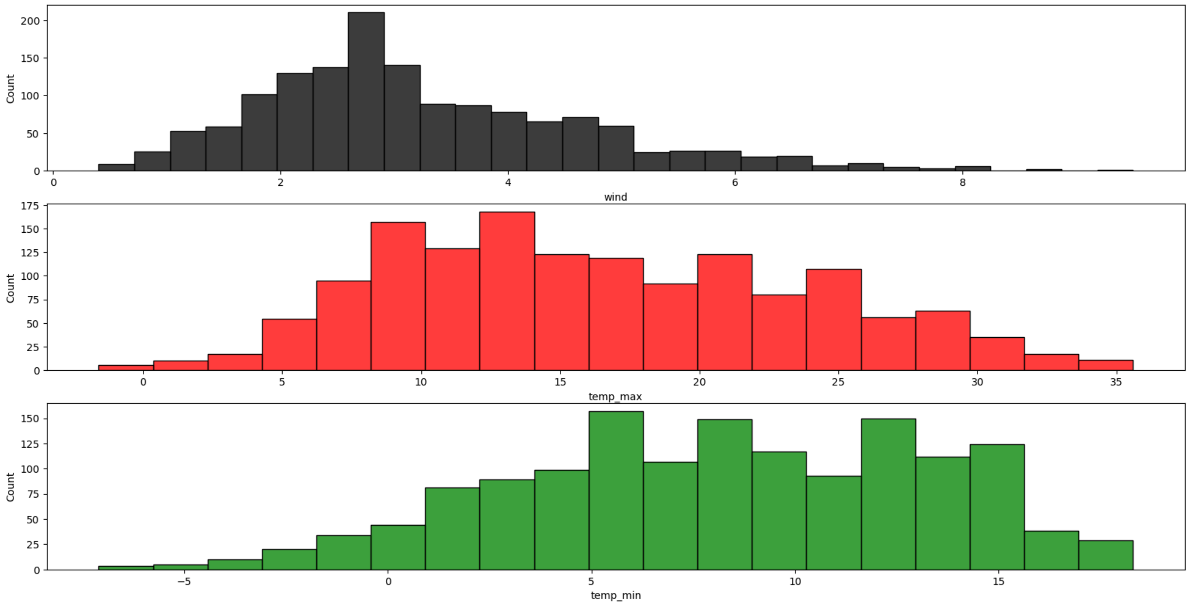


In [ ]:
```
Histplot----------------
```

In [20]:
```
fig,axes=plt.subplots(3,1,figsize=[20,10])
sns.histplot(df["wind"],ax=axes[0],color="black")
sns.histplot(df["temp_max"],ax=axes[1],color="red")
sns.histplot(df["temp_min"],ax=axes[2],color="g")
```

```
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

Out[20]: <Axes: xlabel='temp_min', ylabel='Count'>



Pair-plot----------------

In [21]:
```
file_path=r"C:\Users\DIT\Downloads\seattle-weather.csv"
df=pd.read_csv(file_path)
df
```

Out[21]:

	date	precipitation	temp_max	temp_min	wind	weather
0	2012-01-01	0.0	12.8	5.0	4.7	drizzle
1	2012-01-02	10.9	10.6	2.8	4.5	rain
2	2012-01-03	0.8	11.7	7.2	2.3	rain
3	2012-01-04	20.3	12.2	5.6	4.7	rain
4	2012-01-05	1.3	8.9	2.8	6.1	rain
...	...	...	...	...	...	...
1456	2015-12-27	8.6	4.4	1.7	2.9	rain
1457	2015-12-28	1.5	5.0	1.7	1.3	rain
1458	2015-12-29	0.0	7.2	0.6	2.6	fog
1459	2015-12-30	0.0	5.6	-1.0	3.4	sun
1460	2015-12-31	0.0	5.6	-2.1	3.5	sun

1461 rows × 6 columns

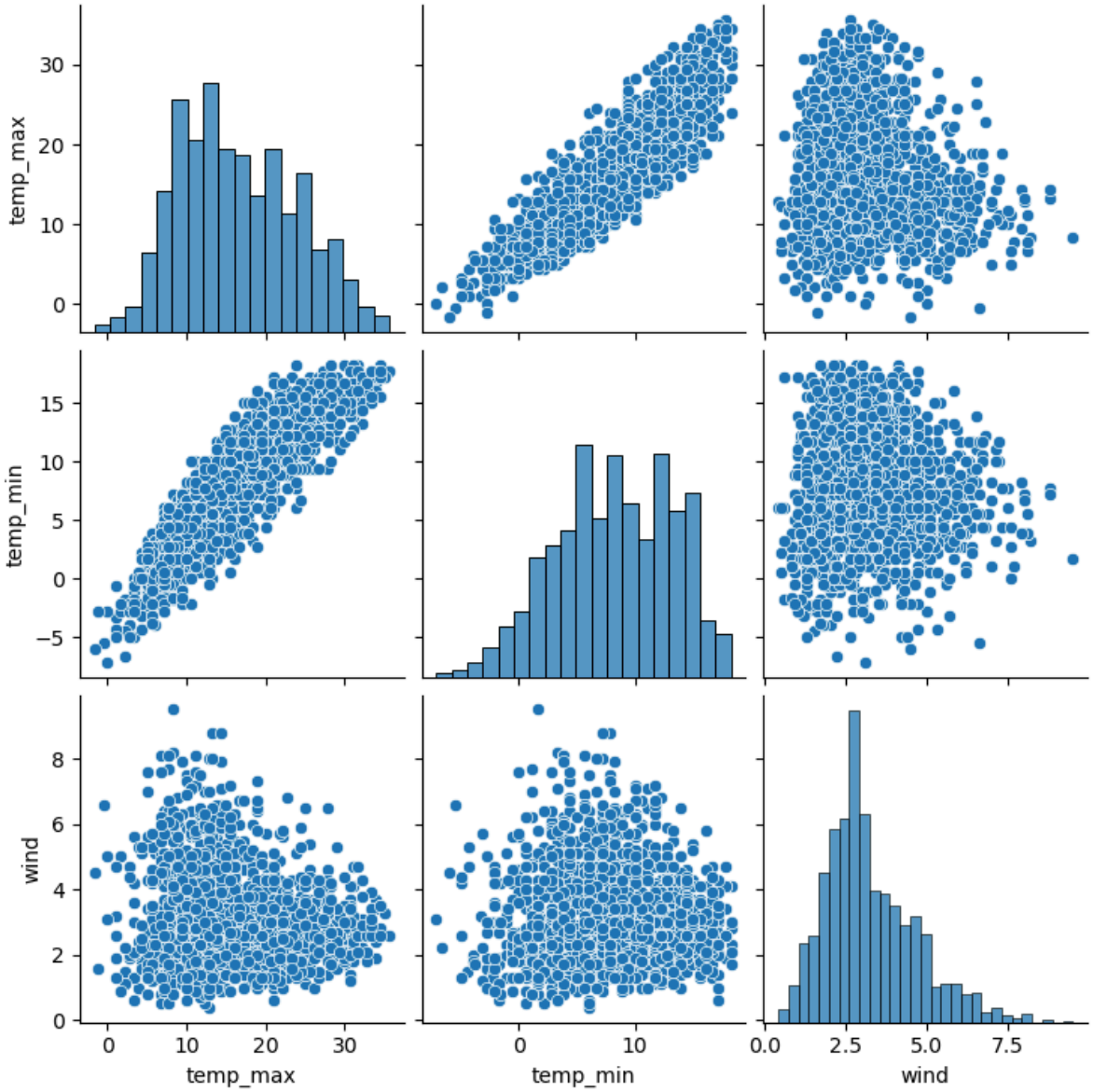
In [22]:

```
plt.figure(figsize=[30,15])
sns.pairplot(df.iloc[:,2:5])
```

```
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\DIT\Anaconda\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWa
rning: use_inf_as_na option is deprecated and will be removed in a future
version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

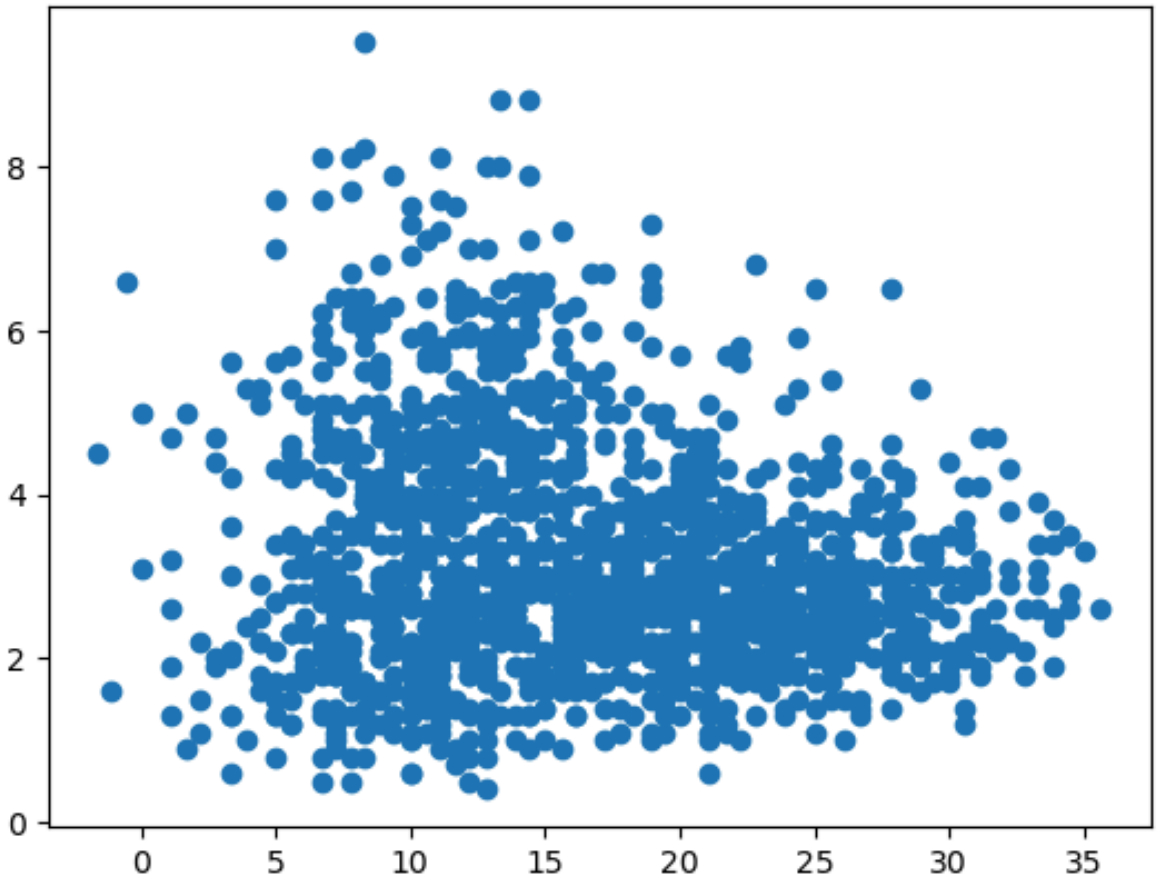
Out[22]:

```
<seaborn.axisgrid.PairGrid at 0x24940e87810>
<Figure size 3000x1500 with 0 Axes>
```



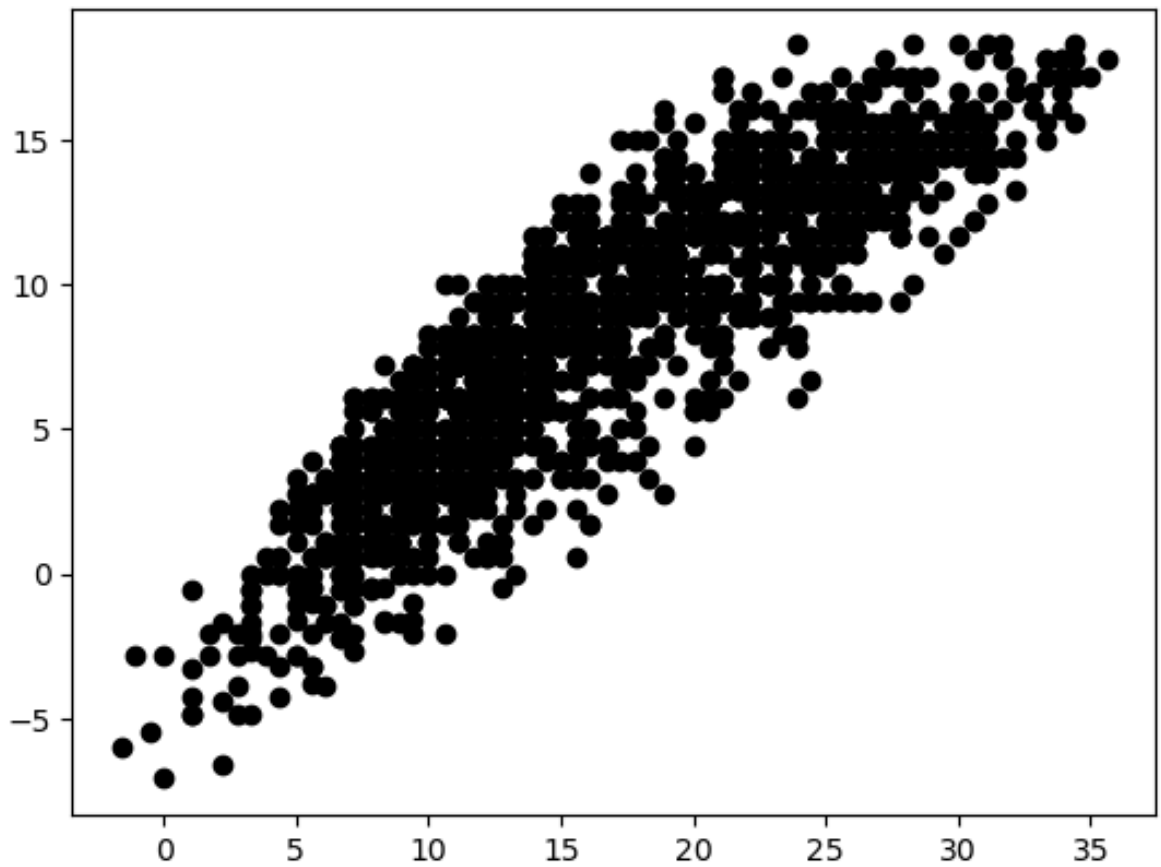
In [23]:
```
plt.scatter(df["temp_max"],df["wind"])
```

Out[23]:
```
<matplotlib.collections.PathCollection at 0x2493ff9fd10>
```



In [24]:
```
plt.scatter(df["temp_max"],df["temp_min"],color="k")
```

Out[24]:
```
<matplotlib.collections.PathCollection at 0x2493ff78d50>
```



In [25]:
```
import plotly.express as px
plt.figure(figsize=[20,8])
print(dir(px))
px.scatter_3d(df,x="weather",y="temp_max",z="wind",)
```

```
['Constant', 'IdentityMap', 'NO_COLOR', 'Range', '__all__', '__builtins_
_', '__cached__', '__doc__', '__file__', '__loader__', '__name__', '__pack
age__', '__path__', '__spec__', '_chart_types', '_core', '_doc', '_imsho
w', '_special_inputs', 'absolute_import', 'area', 'bar', 'bar_polar', 'bo
x', 'choropleth', 'choropleth_mapbox', 'colors', 'data', 'defaults', 'dens
ity_contour', 'density_heatmap', 'density_mapbox', 'ecdf', 'funnel', 'funn
el_area', 'get_trendline_results', 'histogram', 'icicle', 'imshow', 'imsho
w_utils', 'line', 'line_3d', 'line_geo', 'line_mapbox', 'line_polar', 'lin
e_ternary', 'optional_imports', 'parallel_categories', 'parallel_coordinat
es', 'pd', 'pie', 'scatter', 'scatter_3d', 'scatter_geo', 'scatter_mapbo
x', 'scatter_matrix', 'scatter_polar', 'scatter_ternary', 'set_mapbox_acce
ss_token', 'strip', 'sunburst', 'timeline', 'treemap', 'trendline_function
s', 'violin']
```

```
<Figure size 2000x800 with 0 Axes>
```

Heatmap----------

In [26]:
```
# Heatmap : point to point graphics and it is used only for 2-d data set.
# we use this graph to represents points with colors.


file_path=r"C:\Users\DIT\Downloads\seattle-weather.csv"
df=pd.read_csv(file_path)
df
```

Out[26]:

	date	precipitation	temp_max	temp_min	wind	weather
0	2012-01-01	0.0	12.8	5.0	4.7	drizzle
1	2012-01-02	10.9	10.6	2.8	4.5	rain
2	2012-01-03	0.8	11.7	7.2	2.3	rain
3	2012-01-04	20.3	12.2	5.6	4.7	rain
4	2012-01-05	1.3	8.9	2.8	6.1	rain
...	...	...	...	...	...	...
1456	2015-12-27	8.6	4.4	1.7	2.9	rain
1457	2015-12-28	1.5	5.0	1.7	1.3	rain
1458	2015-12-29	0.0	7.2	0.6	2.6	fog
1459	2015-12-30	0.0	5.6	-1.0	3.4	sun
1460	2015-12-31	0.0	5.6	-2.1	3.5	sun

1461 rows × 6 columns

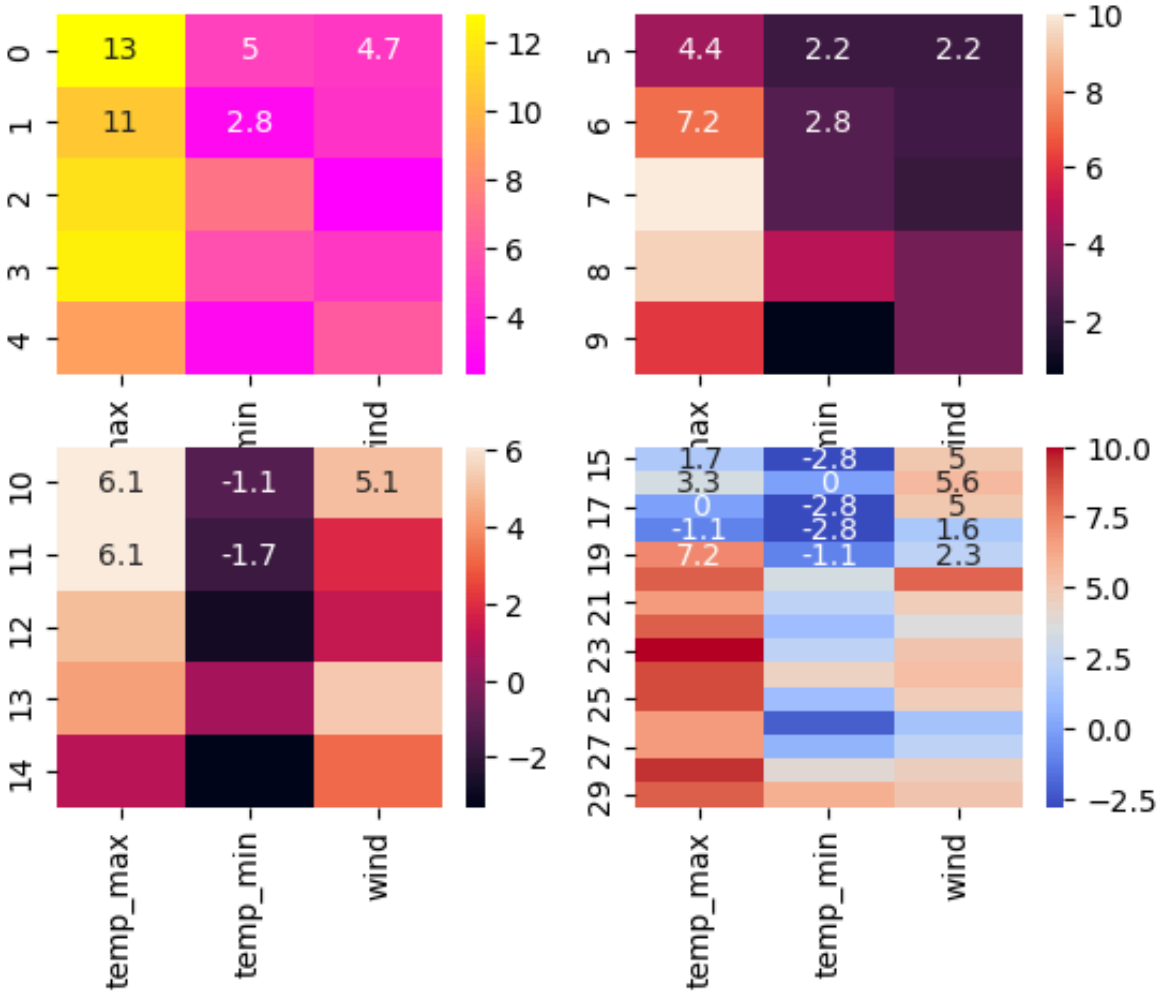
In [27]:
```
df=df.drop(["date","precipitation","weather"],axis=1).head(30)
df
```

Out[27]:

	temp_max	temp_min	wind
0	12.8	5.0	4.7
1	10.6	2.8	4.5
2	11.7	7.2	2.3
3	12.2	5.6	4.7
4	8.9	2.8	6.1
5	4.4	2.2	2.2
6	7.2	2.8	2.3
7	10.0	2.8	2.0
8	9.4	5.0	3.4
9	6.1	0.6	3.4
10	6.1	-1.1	5.1
11	6.1	-1.7	1.9
12	5.0	-2.8	1.3
13	4.4	0.6	5.3
14	1.1	-3.3	3.2
15	1.7	-2.8	5.0
16	3.3	0.0	5.6
17	0.0	-2.8	5.0
18	-1.1	-2.8	1.6
19	7.2	-1.1	2.3
20	8.3	3.3	8.2
21	6.7	2.2	4.8
22	8.3	1.1	3.6
23	10.0	2.2	5.1
24	8.9	4.4	5.4
25	8.9	1.1	4.8
26	6.7	-2.2	1.4
27	6.7	0.6	2.2
28	9.4	3.9	4.5
29	8.3	6.1	5.1

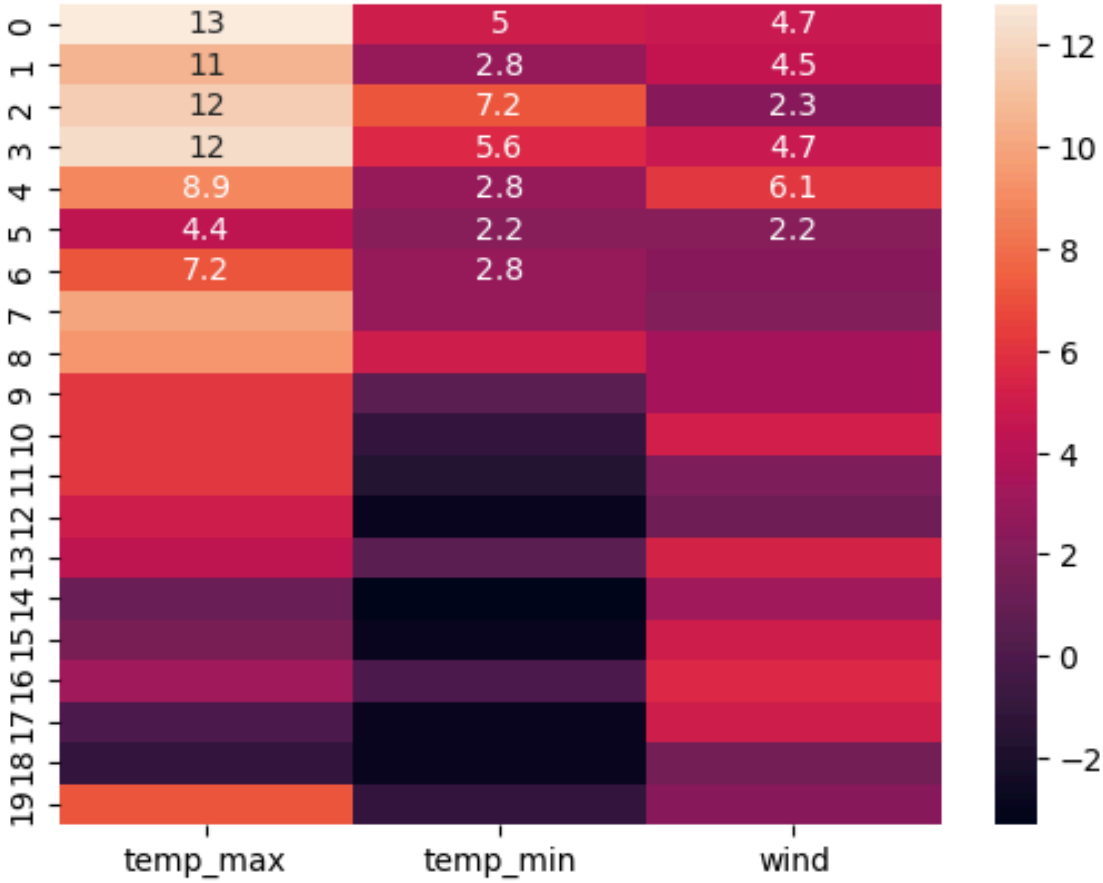
In [28]:
```
fig,axes=plt.subplots(2,2,figure=[20,10])
sns.heatmap(df.head(5),ax=axes[0,0],annot=True,cmap="spring")
sns.heatmap(df.iloc[5:10],ax=axes[0,1],annot=True)
sns.heatmap(df.iloc[10:15],ax=axes[1,0],annot=True)
sns.heatmap(df.iloc[15:],ax=axes[1,1],annot=True,cmap="coolwarm")
```

Out[28]: <Axes: >



In [31]:
```
sns.heatmap(df.head(20),annot=True)
```

Out[31]: <Axes: >


0 13 5 4.7
1 11 2.8 4.5
2 12 7.2 2.3
3 12 5.6 4.7
4 8.9 2.8 6.1
5 4.4 2.2 2.2
6 7.2 2.8
7
8
9
10
11
12
13
14
15
16
17
18
19
temp_max
temp_min
wind
12
10
8
6
4
2
0
−2

In [ ]: