

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

```
In [2]: df = pd.read_csv(r"C:\Users\Anshu Shah\Downloads\weatherHistory.csv")
```

In [3]: `print(df)`

	Formatted Date	Summary	Precip	Type	\
0	2006-04-01 00:00:00.000 +0200	Partly Cloudy		rain	
1	2006-04-01 01:00:00.000 +0200	Partly Cloudy		rain	
2	2006-04-01 02:00:00.000 +0200	Mostly Cloudy		rain	
3	2006-04-01 03:00:00.000 +0200	Partly Cloudy		rain	
4	2006-04-01 04:00:00.000 +0200	Mostly Cloudy		rain	
...	...	...		...	
96448	2016-09-09 19:00:00.000 +0200	Partly Cloudy		rain	
96449	2016-09-09 20:00:00.000 +0200	Partly Cloudy		rain	
96450	2016-09-09 21:00:00.000 +0200	Partly Cloudy		rain	
96451	2016-09-09 22:00:00.000 +0200	Partly Cloudy		rain	
96452	2016-09-09 23:00:00.000 +0200	Partly Cloudy		rain	
	Temperature (C)	Apparent Temperature (C)	Humidity	Wind Speed (km/h)	\
0	9.472222	7.388889	0.89	14.1197	
1	9.355556	7.227778	0.86	14.2646	
2	9.377778	9.377778	0.89	3.9284	
3	8.288889	5.944444	0.83	14.1036	
4	8.755556	6.977778	0.83	11.0446	
...	...	...	...	...	
96448	26.016667	26.016667	0.43	10.9963	
96449	24.583333	24.583333	0.48	10.0947	
96450	22.038889	22.038889	0.56	8.9838	
96451	21.522222	21.522222	0.60	10.5294	
96452	20.438889	20.438889	0.61	5.8765	
	Wind Bearing (degrees)	Visibility (km)	Pressure (millibars)	\	
0	251	15.8263	1015.13		
1	259	15.8263	1015.63		
2	204	14.9569	1015.94		
3	269	15.8263	1016.41		
4	259	15.8263	1016.51		
...	...	...	...		
96448	31	16.1000	1014.36		
96449	20	15.5526	1015.16		
96450	30	16.1000	1015.66		
96451	20	16.1000	1015.95		
96452	39	15.5204	1016.16		

## Daily Summary

0	Partly cloudy throughout the day.
1	Partly cloudy throughout the day.
2	Partly cloudy throughout the day.
3	Partly cloudy throughout the day.
4	Partly cloudy throughout the day.
...	...
96448	Partly cloudy starting in the morning.
96449	Partly cloudy starting in the morning.
96450	Partly cloudy starting in the morning.
96451	Partly cloudy starting in the morning.
96452	Partly cloudy starting in the morning.

[96453 rows x 11 columns]

```
In [4]: pd.read_csv(r"C:\Users\Anshu Shah\Downloads\weatherHistory.csv")
```

Out[4]:

	Formatted Date	Summary	Precip Type	Temperature (C)	Apparent Temperature (C)	Humidity	Wind Speed (km/h)	Wind Bearing (degrees)
0	2006-04-01 00:00:00.000 +0200	Partly Cloudy	rain	9.472222	7.388889	0.89	14.1197	251
1	2006-04-01 01:00:00.000 +0200	Partly Cloudy	rain	9.355556	7.227778	0.86	14.2646	259
2	2006-04-01 02:00:00.000 +0200	Mostly Cloudy	rain	9.377778	9.377778	0.89	3.9284	204
3	2006-04-01 03:00:00.000 +0200	Partly Cloudy	rain	8.288889	5.944444	0.83	14.1036	269
4	2006-04-01 04:00:00.000 +0200	Mostly Cloudy	rain	8.755556	6.977778	0.83	11.0446	259
...	...	...	...	...	...	...	...	...
96448	2016-09-09 19:00:00.000 +0200	Partly Cloudy	rain	26.016667	26.016667	0.43	10.9963	31
96449	2016-09-09 20:00:00.000 +0200	Partly Cloudy	rain	24.583333	24.583333	0.48	10.0947	20
96450	2016-09-09 21:00:00.000 +0200	Partly Cloudy	rain	22.038889	22.038889	0.56	8.9838	30
96451	2016-09-09 22:00:00.000 +0200	Partly Cloudy	rain	21.522222	21.522222	0.60	10.5294	20
96452	2016-09-09 23:00:00.000 +0200	Partly Cloudy	rain	20.438889	20.438889	0.61	5.8765	39

96453 rows × 11 columns



```
In [5]: titles_req = ["Formatted Date", "Apparent Temperature (C)", "Humidity"]
df = df[titles_req]
```

```
In [6]: df['Formatted Date'] = pd.to_datetime(df['Formatted Date'], utc=True)
df = df.set_index('Formatted Date')
df = df.resample('MS').mean()
```

```
In [7]: df.head()
```

Out[7]:

Formatted Date	Apparent Temperature (C)	Humidity
2005-12-01 00:00:00+00:00	-4.050000	0.890000
2006-01-01 00:00:00+00:00	-4.173708	0.834610
2006-02-01 00:00:00+00:00	-2.990716	0.843467
2006-03-01 00:00:00+00:00	1.969780	0.778737
2006-04-01 00:00:00+00:00	12.098827	0.728625

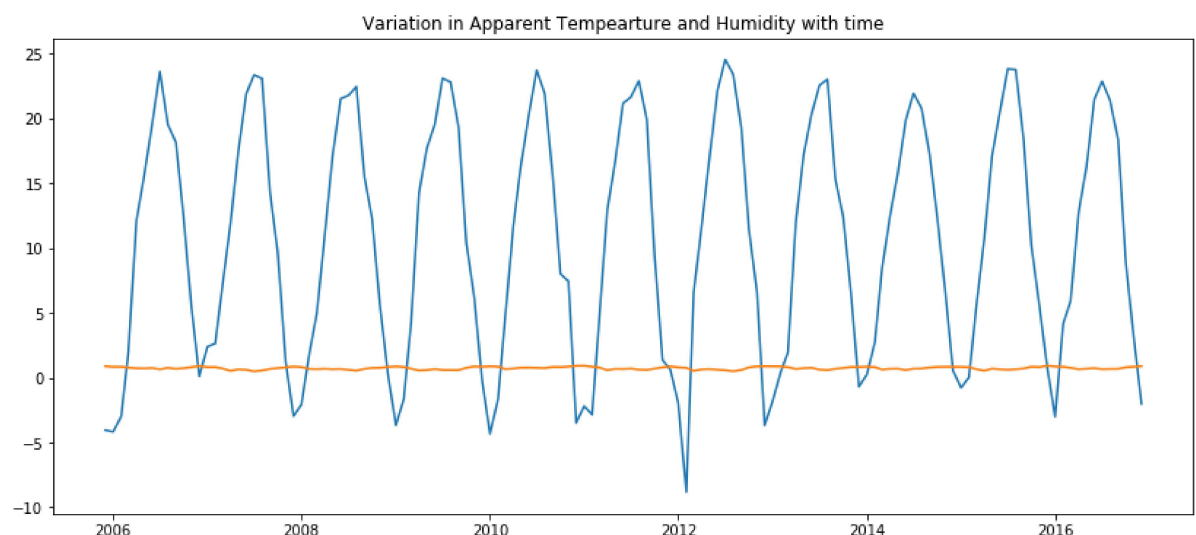
```
In [8]: plt.figure(figsize=(14,6))
plt.title("Variation in Apparent Temperature and Humidity with time")
plt.plot(df)
```

C:\Users\Anshu Shah\Anaconda3\lib\site-packages\pandas\plotting\\_matplotlib\converter.py:103: FutureWarning: Using an implicitly registered datetime converter for a matplotlib plotting method. The converter was registered by pandas on import. Future versions of pandas will require you to explicitly register matplotlib converters.

To register the converters:

```
>>> from pandas.plotting import register_matplotlib_converters
>>> register_matplotlib_converters()
warnings.warn(msg, FutureWarning)
```

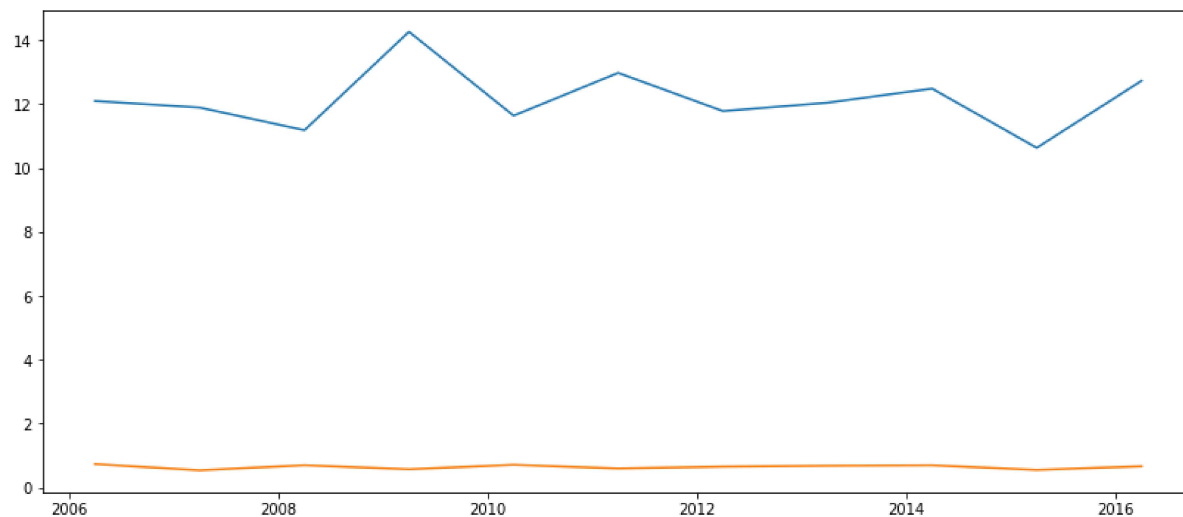
Out[8]: [<matplotlib.lines.Line2D at 0x141c90c4948>]



```
In [9]: df_april = df[df.index.month==4]
```

```
In [10]: plt.figure(figsize=(14,6))  
plt.plot(df_april)
```

```
Out[10]: [<matplotlib.lines.Line2D at 0x141c92f0a08>,  
<matplotlib.lines.Line2D at 0x141c911bc48>]
```



```
In [ ]:
```