

Se dispone del archivo datoejercicio12.csv formada por las siguientes columnas (Fecha, Temperatura, Precipitaciones, Velocidad del viento y direccion del viento). Cada fila corresponde a una medicion.

Observaciones: la fecha tiene el siguiente formato: 20201110T0300 (los primeros cuatro caracteres corresponde al ano, los dos siguientes el mes, el siguiente la letra "T" , los dos siguientes caracteres la hora y los dos ultimos los minutos.

El programa debera graficar la Temperatura, Precipitaciones, Velocidad del viento y direccion del viento en funcion del numero de registro.

Indicar la temperatura y precipitaciones maxima del periodo.

La cantidad de horas entre la temperatura maxima y minima para cada dia. Por ejemplo para el dia

11 de noviembre de 2020 la temperatura minima se produce a las 8 hs y la maxima a las 15hs. Es

decir el programa nos debera entregar el valor de la diferencia entre 15 y 8 como asi tambien

graficar esta magnitud en funcion del numero de dia.

· No es necesario realizar el diagrama de flujo.

## . Screenshot

	timestamp	elevation corrected]	Precipitation Total	Speed [10 m]	Direction [10 m]
0	20201110T0000	10.240529	0.0	6.608722	119.357740
1	20201110T0100	9.680529	0.0	6.792466	122.005380
2	20201110T0200	9.490529	0.0	7.100310	120.465546
3	20201110T0300	9.210529	0.0	7.100310	120.465546
4	20201110T0400	8.820529	0.0	7.289445	122.905240
...	...	...	...	...	...
187	20201117T1900	11.590529	0.0	6.696387	126.253840
188	20201117T2000	10.580529	0.0	6.915374	128.659800
189	20201117T2100	9.730529	0.0	6.696387	126.253840
190	20201117T2200	8.860529	0.0	6.989936	124.508514
191	20201117T2300	8.190529	0.0	7.145796	130.914380

192 rows x 5 columns

In [ ]:

In [22]: `velocidadMaxima=df.agg('Basilea Wind Speed [10 m]').max()`

In [23]: `velocidadMaxima`

Out[23]: 28.036118

In [25]: `velocidadMinima=df.agg('Basilea Wind Speed [10 m]').min()`

In [26]: `velocidadMinima`

Out[26]: 0.35999998

In [ ]:

localhost:8000/notebooks/DataSciencePython/Clima.ipynb

jupyter Clima (autosaved) Logout

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Run

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

```
In [2]: df = pd.read_csv('C:/Users/andre/OneDrive/Escritorio/InfAplicadaTP02/Ejercicio12/...
```

```
In [3]: df
```

		elevation corrected]	Total	Speed [10 m]	Direction [10 m]
0	20201110T0000	10.240529	0.0	6.608722	119.357740
1	20201110T0100	9.680529	0.0	6.792466	122.005380
2	20201110T0200	9.490529	0.0	7.100310	120.465546
3	20201110T0300	9.210529	0.0	7.100310	120.465546
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...	...	...	...	...	...
187	20201117T1900	11.590529	0.0	6.696387	126.253840
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191	20201117T2300	8.190529	0.0	7.145796	130.914380

192 rows x 5 columns

```
In [4]: print(df.columns)
```

```
Index(['timestamp', 'Basilea Temperature [2 m elevation corrected]',
      'Basilea Precipitation Total', 'Basilea Wind Speed [10 m]',
      'Basilea Wind Direction [10 m]'],
      dtype='object')
```

• Parte 2: El programa en octave o python (seg



```
In [22]: velocidadMaxima=df.agg('Basilea Wind Speed [10 m]').max()
```

```
In [23]: velocidadMaxima
```

```
Out[23]: 28.036118
```

```
In [25]: velocidadMinima=df.agg('Basilea Wind Speed [10 m]').min()
```

```
In [26]: velocidadMinima
```

```
Out[26]: 0.35999998
```

```
In [ ]:
```

```
In [27]: temperaturaMaxima=df.agg('Basilea Temperature [2 m elevation corrected]').max()
```

```
In [28]: temperaturaMaxima
```

```
Out[28]: 18.13053
```

```
In [29]: temperaturaMinima=df.agg('Basilea Temperature [2 m elevation corrected]').min()
```

```
In [30]: temperaturaMinima
```

```
Out[30]: 5.350528700000001
```

```
In [ ]:
```

```
In [36]: print(df.head(n=50))
```

```
32  20201111T0800    9.700529
33  20201111T0900   10.740529
34  20201111T1000   11.880529
35  20201111T1100   13.120529
```

In [28]: temperaturaMaxima

Out[28]: 18.13053

In [29]: temperaturaMinima=df.agg('Basilea Temperature [2 m elevation corrected]').min()

In [30]: temperaturaMinima

Out[30]: 5.350528700000001

In [ ]:

In [36]: print(df.head(n=50))

```
32 20201111T0800    9.700529
33 20201111T0900   10.740529
34 20201111T1000   11.880529
35 20201111T1100   13.120529
36 20201111T1200   14.130529
37 20201111T1300   13.370529
38 20201111T1400   14.080529
39 20201111T1500   14.210529
40 20201111T1600   13.720529
41 20201111T1700   12.770529
42 20201111T1800   12.050529
43 20201111T1900   10.680529
44 20201111T2000    9.120529
45 20201111T2100    7.880529
46 20201111T2200    7.160529
47 20201111T2300    6.600529
48 20201112T0000    5.640529
49 20201112T0100    5.350529
```

Basilea Precipitation Total Basilea Wind Speed [10 m] \

In [ ]: