

```
In [69]: import pandas as pd
from collections import OrderedDict

file = 'C:/Users/devD/Desktop/smartcode/ShanMukha/weather.dat' # file location

#below mydict contains values with headers in dict form
with open(file) as f:
    headers = f.readline().split()
    mydict = [OrderedDict(zip(headers,d.split())) for d in f.readlines()]

df = pd.DataFrame(mydict[1:]) # creating a dataframe
cols = ['MxT', 'MnT']
for col in cols:
    df[col] = df[col].map(lambda x: str(x).lstrip('*').rstrip('*')).astype(float) #
    removing extra characters from value

df['spread'] = df['MxT'] - df['MnT'] # finding diff between MxT & MnT = spread
# mydict[1:]
minv = df['spread'].min() # getting minimum value in that spread column
df
```

Out [69]:

	Dy	MxT	MnT	AvT	HDDay	AvDP	1HrP	TPcpn	WxType	PDir	AvSp	Dir	MxS	SkyC	MxR	
0	1	88.0	59.0	74	53.8	0.00	F	280	9.6	270	17	1.6	93	23	1004.5	I
1	2	79.0	63.0	71	46.5	0.00	330	8.7	340	23	3.3	70	28	1004.5	NaN	I
2	3	77.0	55.0	66	39.6	0.00	350	5.0	350	9	2.8	59	24	1016.8	NaN	I
3	4	77.0	59.0	68	51.1	0.00	110	9.1	130	12	8.6	62	40	1021.1	NaN	I
4	5	90.0	66.0	78	68.3	0.00	TFH	220	8.3	260	12	6.9	84	55	1014.4	I
5	6	81.0	61.0	71	63.7	0.00	RFH	030	6.2	030	13	9.7	93	60	1012.7	I
6	7	73.0	57.0	65	53.0	0.00	RF	050	9.5	050	17	5.3	90	48	1021.8	I
7	8	75.0	54.0	65	50.0	0.00	FH	160	4.2	150	10	2.6	93	41	1026.3	I
8	9	86.0	32.0	59	6	61.5	0.00	240	7.6	220	12	6.0	78	46	1018.6	I
9	10	84.0	64.0	74	57.5	0.00	F	210	6.6	050	9	3.4	84	40	1019.0	I
10	11	91.0	59.0	75	66.3	0.00	H	250	7.1	230	12	2.5	93	45	1012.6	I
11	12	88.0	73.0	81	68.7	0.00	RTH	250	8.1	270	21	7.9	94	51	1007.0	I
12	13	70.0	59.0	65	55.0	0.00	H	150	3.0	150	8	10.0	83	59	1012.6	I
13	14	61.0	59.0	60	5	55.9	0.00	RF	060	6.7	080	9	10.0	93	87	·
14	15	64.0	55.0	60	5	54.9	0.00	F	040	4.3	200	7	9.6	96	70	·
15	16	79.0	59.0	69	56.7	0.00	F	250	7.6	240	21	7.8	87	44	1007.0	I
16	17	81.0	57.0	69	51.7	0.00	T	260	9.1	270	29*	5.2	90	34	1012.5	I
17	18	82.0	52.0	67	52.6	0.00	230	4.0	190	12	5.0	93	34	1021.3	NaN	I
18	19	81.0	61.0	71	58.9	0.00	H	250	5.2	230	12	5.3	87	44	1028.5	I
19	20	84.0	57.0	71	58.9	0.00	FH	150	6.3	160	13	3.6	90	43	1032.5	I
20	21	86.0	59.0	73	57.7	0.00	F	240	6.1	250	12	1.0	87	35	1030.7	I
21	22	90.0	64.0	77	61.1	0.00	H	250	6.4	230	9	0.2	78	38	1026.4	I
22	23	90.0	68.0	79	63.1	0.00	H	240	8.3	230	12	0.2	68	42	1021.3	I
23	24	90.0	77.0	84	67.5	0.00	H	350	8.5	010	14	6.9	74	48	1018.2	I
24	25	90.0	72.0	81	61.3	0.00	190	4.9	230	9	5.6	81	29	1019.6	NaN	I
25	26	97.0	64.0	81	70.4	0.00	H	050	5.1	200	12	4.0	107	45	1014.9	I
26	27	91.0	72.0	82	69.7	0.00	RTH	250	12.1	230	17	7.1	90	47	1009.0	I
27	28	84.0	68.0	76	65.6	0.00	RTFH	280	7.6	340	16	7.0	100	51	1011.0	I
28	29	88.0	66.0	77	59.7	0.00	040	5.4	020	9	5.3	84	33	1020.6	NaN	I
29	30	90.0	45.0	68	63.6	0.00	H	240	6.0	220	17	4.8	200	41	1022.7	I
30	mo	82.9	60.5	71.7	16	58.8	0.00	6.9	5.3	NaN	NaN	NaN	NaN	NaN	NaN	I

In [73]: `df[['Dy']][df['spread']==minv] # finding the day where spreaf = minv`

Out [73]:

	Dy
13	14