```
import pandas as pd
import numpy as np


!gdown 173A59xh2mnpmljCCB9bhC4C5eP2IS6qZ
```

```
Downloading...
From: https://drive.google.com/uc?id=173A59xh2mnpmljCCB9bhC4C5eP2IS6qZ
To: /Users/nikhilsanghi/Downloads/dsml-course-main-live/batches/May-Beg-Aug-Adv/Pfize
100%|████████████████████████████████████████| 1.51k/1.51k [00:00<00:00, 1.83MB/s]
```

```
df=pd.read_csv("Pfizer_1.csv")
df
```

	Date	Drug_Name	Parameter	1:30:00	2:30:00	3:30:00	4:30:00	5:30:00	6:30:
0	15-10-2020	diltiazem hydrochloride	Temperature	23.0	22.0	NaN	21.0	21.0	
1	15-10-2020	diltiazem hydrochloride	Pressure	12.0	13.0	NaN	11.0	13.0	
2	15-10-2020	docetaxel							

```
df_melt=pd.melt(df,
       id_vars=["Date","Drug_Name","Parameter"],
       var_name="Time",
       value_name="Result")
df_melt
```

	Date	Drug_Name	Parameter	Time	Result
0	15-10-2020	diltiazem hydrochloride	Temperature	1:30:00	23.0
1	15-10-2020	diltiazem hydrochloride	Pressure	1:30:00	12.0
2	15-10-2020	docetaxel injection	Temperature	1:30:00	NaN
3	15-10-2020	docetaxel injection	Pressure	1:30:00	NaN
4	15-10-2020	ketamine hydrochloride	Temperature	1:30:00	24.0
...	...	...	...	...	...
211	17-10-2020	diltiazem hydrochloride	Pressure	12:30:00	14.0
212	17-10-2020	docetaxel injection	Temperature	12:30:00	23.0
213	17-10-2020	docetaxel injection	Pressure	12:30:00	28.0
214	17-10-2020	ketamine hydrochloride	Temperature	12:30:00	24.0
215	17-10-2020	ketamine hydrochloride	Pressure	12:30:00	15.0

216 rows × 5 columns

2020 hydrochloride

```
df_pivoted = df_melt.pivot(index=["Date","Drug_Name","Parameter"],
              columns="Time",
              values="Result")
df_pivoted
```

		Time	10:30:00	11:30:00	12:30:00	1:30:00	2:30:00	3:3
Date	Drug_Name	Parameter						
15-10-2020	diltiazem hydrochloride	Pressure	18.0	19.0	20.0	12.0	13.0	
		Temperature	20.0	20.0	21.0	23.0	22.0	
	docetaxel injection	Pressure	26.0	29.0	28.0	NaN	22.0	
		Temperature	23.0	25.0	25.0	NaN	17.0	
	ketamine hydrochloride	Pressure	9.0	9.0	11.0	8.0	NaN	
		Temperature	22.0	21.0	20.0	24.0	NaN	
16-10-2020	diltiazem hydrochloride	Pressure	24.0	NaN	27.0	18.0	19.0	
		Temperature	40.0	NaN	42.0	34.0	35.0	
	docetaxel injection	Pressure	28.0	29.0	30.0	23.0	24.0	
		Temperature	56.0	57.0	58.0	46.0	47.0	
	ketamine hydrochloride	Pressure	16.0	17.0	18.0	12.0	12.0	
		Temperature	13.0	14.0	15.0	8.0	9.0	
17-	diltiazem	Pressure	11.0	13.0	14.0	3.0	4.0	

```
df_pivoted.reset_index()
```

Time	Date	Drug_Name	Parameter	10:30:00	11:30:00	12:30:00	1:30:00	2:30:00
0	15-10-2020	diltiazem hydrochloride	Pressure	18.0	19.0	20.0	12.0	13.0
1	15-10-2020	diltiazem hydrochloride	Temperature	20.0	20.0	21.0	23.0	22.0
2	15-10-2020	docetaxel injection	Pressure	26.0	29.0	28.0	NaN	22.0
3	15-10-2020	docetaxel injection	Temperature	23.0	25.0	25.0	NaN	17.0
4	15-10-2020	ketamine hydrochloride	Pressure	9.0	9.0	11.0	8.0	NaN
	15-	ketamine						

```
# df_melt[df_melt["Drug_Name"]=="diltiazem hydrochloride"].head(30)
```

2020

```
df_melt
```

	Date	Drug_Name	Parameter	Time	Result
0	15-10-2020	diltiazem hydrochloride	Temperature	1:30:00	23.0
1	15-10-2020	diltiazem hydrochloride	Pressure	1:30:00	12.0
2	15-10-2020	docetaxel injection	Temperature	1:30:00	NaN
3	15-10-2020	docetaxel injection	Pressure	1:30:00	NaN
4	15-10-2020	ketamine hydrochloride	Temperature	1:30:00	24.0
...	...	...	...	...	...
211	17-10-2020	diltiazem hydrochloride	Pressure	12:30:00	14.0
212	17-10-2020	docetaxel injection	Temperature	12:30:00	23.0
213	17-10-2020	docetaxel injection	Pressure	12:30:00	28.0
214	17-10-2020	ketamine hydrochloride	Temperature	12:30:00	24.0
215	17-10-2020	ketamine hydrochloride	Pressure	12:30:00	15.0

216 rows × 5 columns

```
df_tidy=df_melt.pivot(index=["Date","Drug_Name","Time"],
            columns="Parameter",
            values="Result").reset_index()
df_tidy
```

Parameter	Date	Drug_Name	Time	Pressure	Temperature
0	15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0
1	15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0
2	15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0
3	15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0
4	15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0
...	...	...	...	...	...
103	17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0
104	17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0
105	17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0
106	17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0
107	17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0

108 rows × 5 columns

```
df_tidy.isna().sum()
```

```
Parameter
Date            0
Drug_Name       0
Time            0
Pressure       13
Temperature    13
dtype: int64
```

```
df_tidy[df_tidy["Drug_Name"]=="diltiazem hydrochloride"]
```

Parameter	Date	Drug_Name	Time	Pressure	Temperature
0	15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0
1	15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0
2	15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0
3	15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0
4	15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0
5	15-10-2020	diltiazem hydrochloride	3:30:00	NaN	NaN
6	15-10-2020	diltiazem hydrochloride	4:30:00	11.0	21.0
7	15-10-2020	diltiazem hydrochloride	5:30:00	13.0	21.0
8	15-10-2020	diltiazem hydrochloride	6:30:00	14.0	22.0
9	15-10-2020	diltiazem hydrochloride	7:30:00	16.0	23.0
10	15-10-2020	diltiazem hydrochloride	8:30:00	16.0	21.0
11	15-10-2020	diltiazem hydrochloride	9:30:00	24.0	22.0
36	16-10-2020	diltiazem hydrochloride	10:30:00	24.0	40.0
37	16-10-2020	diltiazem hydrochloride	11:30:00	NaN	NaN
38	16-10-2020	diltiazem hydrochloride	12:30:00	27.0	42.0
39	16-10-2020	diltiazem hydrochloride	1:30:00	18.0	34.0
40	16-10-2020	diltiazem hydrochloride	2:30:00	19.0	35.0
41	16-10-2020	diltiazem hydrochloride	3:30:00	20.0	36.0
42	16-10-2020	diltiazem hydrochloride	4:30:00	21.0	36.0
43	16-10-2020	diltiazem hydrochloride	5:30:00	22.0	37.0
44	16-10-2020	diltiazem hydrochloride	6:30:00	23.0	38.0
45	16-10-2020	diltiazem hydrochloride	7:30:00	24.0	37.0
46	16-10-2020	diltiazem hydrochloride	8:30:00	25.0	38.0
47	16-10-2020	diltiazem hydrochloride	9:30:00	25.0	39.0
72	17-10-2020	diltiazem hydrochloride	10:30:00	11.0	14.0
73	17-10-2020	diltiazem hydrochloride	11:30:00	13.0	11.0
74	17-10-2020	diltiazem hydrochloride	12:30:00	14.0	10.0

```
df_tidy.groupby("Drug_Name")["Temperature"].mean()
```

```
Drug_Name
diltiazem hydrochloride    24.848485
docetaxel injection        30.387097
ketamine hydrochloride     17.709677
Name: Temperature, dtype: float64
```

```
df_tidy.groupby("Drug_Name")["Pressure"].mean()
```

```
Drug_Name
diltiazem hydrochloride    15.424242
docetaxel injection        25.483871
ketamine hydrochloride     11.935484
Name: Pressure, dtype: float64
```

```
df1=pd.DataFrame([[np.nan, 2, np.nan, 0],
                  [3, 4, np.nan, 1],
                  [np.nan, np.nan, np.nan, np.nan],
                  [np.nan, 3, np.nan, 4]],
                 columns=["A","B","C","D"])
df1
```

	A	B	C	D
0	NaN	2.0	NaN	0.0
1	3.0	4.0	NaN	1.0
2	NaN	NaN	NaN	NaN
3	NaN	3.0	NaN	4.0

```
df1["C"].fillna(df1["C"].mean())
```

```
0   NaN
1   NaN
2   NaN
3   NaN
Name: C, dtype: float64
```

```
df_tidy["Pressure"]=df_tidy.groupby("Drug_Name")["Pressure"].transform(lambda x:x.fillna(x
```

```
df_tidy["Temperature"]=df_tidy.groupby("Drug_Name")["Temperature"].transform(lambda x:x.fi
```

```
df_tidy.isna().sum()
```

```
Parameter
Date           0
Drug_Name      0
Time           0
Pressure       0
Temperature    0
dtype: int64
```

```
df_tidy
```

Parameter	Date	Drug_Name	Time	Pressure	Temperature
0	15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0
1	15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0
2	15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0
3	15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0
4	15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0
...	...	...	...	...	...
103	17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0
104	17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0
105	17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0
106	17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0
107	17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0

```
df_tidy.pivot_table(index="Drug_Name",
                    columns="Date",
                    aggfunc=np.min)
```

Parameter	Pressure			Temperature		
Date	15-10-2020	16-10-2020	17-10-2020	15-10-2020	16-10-2020	17-10-2020
Drug_Name						
diltiazem hydrochloride	11.0	15.424242	3.0	20.000000	24.848485	
docetaxel injection	22.0	23.000000	20.0	17.000000	30.387097	

```
df_tidy.pivot_table?
```

```
df_tidy.pivot_table(index="Drug_Name",
                    columns="Date",
                    aggfunc=np.max)
```

Parameter	Pressure			Temperature		
Date	15-10-2020	16-10-2020	17-10-2020	15-10-2020	16-10-2020	17-10-2020
Drug_Name						
diltiazem hydrochloride	24.000000	27.0	15.424242	24.848485	42.000000	24.84
docetaxel injection	29.000000	30.0	29.000000	30.387097	58.000000	23.00

```
df_tidy.pivot_table(index="Date",
                    columns="Drug_Name",
                    aggfunc=np.min)
```

Parameter	Pressure			Temperature		
Drug_Name	diltiazem hydrochloride	docetaxel injection	ketamine hydrochloride	diltiazem hydrochloride	docetaxel injection	ketami hydroc
Date						
15-10-2020	11.000000	22.0	7.000000	20.000000	17.000000	1
16-10-2020	15.424242	23.0	11.935484	24.848485	30.387097	8
17-10-2020	3.000000	20.0	8.000000	10.000000	12.000000	1

```
df_tidy.pivot_table(index="Date",
                    columns="Drug_Name",
                    margins=True)
```

Parameter	Pressure				Temperature
Drug_Name	diltiazem hydrochloride	docetaxel injection	ketamine hydrochloride	All	diltiazem hydrochloride
Date					
15-10-2020	15.952020	25.077957	9.983871	17.004616	21.737374
16-10-2020	21.952020	26.873656	14.322581	21.049419	36.404040
17-10-2020	8.368687	24.500000	11.500000	14.789562	16.404040
All	15.424242	25.483871	11.935484	17.614532	24.848485

```
df_tidy[(df_tidy["Drug_Name"]=="diltiazem hydrochloride")&(df_tidy["Date"]=="15-10-2020")]
```

Parameter	Date	Drug_Name	Time	Pressure	Temperature
0	15-10-2020	diltiazem hydrochloride	10:30:00	18.000000	20.000000
1	15-10-2020	diltiazem hydrochloride	11:30:00	19.000000	20.000000
2	15-10-2020	diltiazem hydrochloride	12:30:00	20.000000	21.000000
3	15-10-2020	diltiazem hydrochloride	1:30:00	12.000000	23.000000
4	15-10-2020	diltiazem hydrochloride	2:30:00	13.000000	22.000000
5	15-10-2020	diltiazem hydrochloride	3:30:00	15.424242	24.848485

```
df_tidy
```

Parameter	Date	Drug_Name	Time	Pressure	Temperature
0	15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0
1	15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0
2	15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0
3	15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0
4	15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0
...	...	...	...	...	...
103	17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0
104	17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0
105	17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0
106	17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0
107	17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0

108 rows × 5 columns

```
# pd.cut(df_tidy["Temperature"],
#       bins=,
#       labels=)
```

```
df_tidy["Temperature"].min()
```

```
8.0
```

```
df_tidy["Temperature"].max()
```

```
58.0
```

```
temp_bins=[5,20,35,50,60]
temp_labels=["low","medium","high","very_high"]
df_tidy["Temp_cat"]=pd.cut(df_tidy["Temperature"],
                           bins=temp_bins,
```

```
                          labels=temp_labels,
                         right=False)
df_tidy
```

	Parameter	Date	Drug_Name	Time	Pressure	Temperature	Temp_cat
0		15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0	medium
1		15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0	medium
2		15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0	medium
3		15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0	medium
4		15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0	medium
...		...	...	...	...	...	...
103		17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0	low
104		17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0	low
105		17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0	low
106		17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0	medium
107		17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0	medium

108 rows × 6 columns

```
df_tidy["Temp_cat"].value_counts()
```

```
low          44
medium       43
high         15
very_high     6
Name: Temp_cat, dtype: int64
```

```
df_tidy.loc[df_tidy["Drug_Name"].str.contains("hydrochloride")]
```

	Parameter	Date	Drug_Name	Time	Pressure	Temperature	Temp_cat
0		15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0	medium
1		15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0	medium

```
df_tidy["Timestamp"]=df_tidy["Date"]+" "+df_tidy["Time"]
df_tidy
```

	Parameter	Date	Drug_Name	Time	Pressure	Temperature	Temp_cat
0		15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0	medium
1		15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0	medium
2		15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0	medium
3		15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0	medium
4		15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0	medium
...		...	...	...	...	...	...
103		17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0	low
104		17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0	low
105		17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0	low
106		17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0	medium
107		17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0	medium

108 rows × 7 columns

```
df_tidy.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 108 entries, 0 to 107
Data columns (total 7 columns):
 #   Column       Non-Null Count  Dtype   
---  ------       --------------  -----   
 0   Date         108 non-null    object  
 1   Drug_Name    108 non-null    object  
 2   Time         108 non-null    object  
 3   Pressure     108 non-null    float64 
 4   Temperature  108 non-null    float64 
 5   Temp_cat     108 non-null    category
 6   Timestamp    108 non-null    object  
dtypes: category(1), float64(2), object(4)
memory usage: 5.5+ KB
```

```
df_tidy["Timestamp"]=pd.to_datetime(df_tidy["Timestamp"])
df_tidy
```

	Parameter	Date	Drug_Name	Time	Pressure	Temperature	Temp_cat
0		15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0	medium
1		15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0	medium
2		15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0	medium
3		15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0	medium
4		15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0	medium
...		...	...	...	...	...	...
103		17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0	low
104		17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0	low
105		17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0	low
106		17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0	medium
107		17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0	medium

108 rows × 7 columns

```
df_tidy.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 108 entries, 0 to 107
Data columns (total 7 columns):
 #   Column       Non-Null Count  Dtype         
---  ------       --------------  -----         
 0   Date         108 non-null    object        
 1   Drug_Name    108 non-null    object        
 2   Time         108 non-null    object        
 3   Pressure     108 non-null    float64       
 4   Temperature  108 non-null    float64       
 5   Temp_cat     108 non-null    category      
 6   Timestamp    108 non-null    datetime64[ns]
dtypes: category(1), datetime64[ns](1), float64(2), object(3)
memory usage: 5.5+ KB
```

```
ts=df_tidy["Timestamp"][0]
ts
```

```
Timestamp('2020-10-15 10:30:00')
```

```
ts.year
```

```
2020
```

```
ts.month
```

```
10
```

```
ts.day
```

```
15
```

```
ts.month_name()
```

```
'October'
```

```
ts.day_name()
```

```
'Thursday'
```

```
ts.dayofweek
```

```
3
```

```
ts.hour
```

```
10
```

```
ts.minute
```

```
30
```

```
ts.second
```

```
0
```

```
df_tidy["Timestamp"].dt
```

```
<pandas.core.indexes.accessors.DatetimeProperties object at 0x7f9fe81b7340>
```

```
df_tidy["Timestamp"].dt.year
```

```
0      2020
1      2020
2      2020
3      2020
4      2020
       ...
103    2020
104    2020
105    2020
106    2020
107    2020
Name: Timestamp, Length: 108, dtype: int64
```

```
# Homework
# strftime
```

```
df_tidy["year"]=df_tidy["Timestamp"].dt.year
```

```
df_tidy
```

	Parameter	Date	Drug_Name	Time	Pressure	Temperature	Temp_cat
0		15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0	medium
1		15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0	medium
2		15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0	medium
3		15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0	medium
4		15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0	medium
...		...	...	...	...	...	...
103		17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0	low
104		17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0	low
105		17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0	low
106		17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0	medium
107		17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0	medium

108 rows × 8 columns

```
df_tidy.to_csv("pfizer_result.csv",sep=",")
```

```
df_tidy.to_csv("pfizer_result3.csv")
```

```
!ls
```

```
Numpy Assessments.ipynb     Pandas-5.ipynb
Numpy-1                     Pandas-6.ipynb
Numpy-2 Lecture Notes.ipynb Pfizer_1.csv
Numpy-2.ipynb               directors.csv
Numpy-3.ipynb               dog.jpeg
Numpy-4.ipynb               fitness.txt
Numpy-5.ipynb               gapminder.csv
Pandas-1.ipynb              movies.csv
Pandas-2.ipynb              pfizer_result.csv
Pandas-3.ipynb              pfizer_result1.csv
Pandas-4.ipynb              pfizer_result2.csv
```

```
df_tidy.to_csv?
```

```
df_tidy
```

	Parameter	Date	Drug_Name	Time	Pressure	Temperature	Temp_cat
0		15-10-2020	diltiazem hydrochloride	10:30:00	18.0	20.0	medium
1		15-10-2020	diltiazem hydrochloride	11:30:00	19.0	20.0	medium
2		15-10-2020	diltiazem hydrochloride	12:30:00	20.0	21.0	medium
3		15-10-2020	diltiazem hydrochloride	1:30:00	12.0	23.0	medium
4		15-10-2020	diltiazem hydrochloride	2:30:00	13.0	22.0	medium
...		...	...	...	...	...	...
103		17-10-2020	ketamine hydrochloride	5:30:00	11.0	17.0	low
104		17-10-2020	ketamine hydrochloride	6:30:00	12.0	18.0	low
105		17-10-2020	ketamine hydrochloride	7:30:00	12.0	19.0	low
106		17-10-2020	ketamine hydrochloride	8:30:00	11.0	20.0	medium
107		17-10-2020	ketamine hydrochloride	9:30:00	12.0	21.0	medium

108 rows × 8 columns

```
df_tidy["Timestamp"].max()
```

```
Timestamp('2020-10-17 12:30:00')
```