

# JUPYTER IS BEST FOR DATA ANALYSIS

```
In [1]: import numpy as np
import pandas as pd
csv1=pd.read_csv("C:\\Users\\Asus\\Downloads\\IPL.csv")
csv1
```

```
Out[1]:
```

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	Hyderabad	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0
5	6	Hyderabad	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

```
In [2]: csv1.shape
```

```
Out[2]: (10, 9)
```

```
In [3]: csv1.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 9 columns):
#   Column          Non-Null Count  Dtype
---  ---
0   id              10 non-null    int64
1   city            10 non-null    object
2   team1           10 non-null    object
3   team2           10 non-null    object
4   toss_winner     10 non-null    object
5   toss_decision   10 non-null    object
6   winner          10 non-null    object
7   win_by_runs     10 non-null    int64
8   win_by_wickets  10 non-null    int64
dtypes: int64(3), object(6)
memory usage: 848.0+ bytes
```

In [4]:

▶ csv1.head() *#few rows from top*

Out[4]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	Hyderabad	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0

In [5]:

▶ csv1.head().shape

Out[5]: (5, 9)

In [6]:

▶ csv1.head(3) *#3 rows from top*

Out[6]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	Hyderabad	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10

In [7]:

▶ csv1.tail() *#few rows from bottom*

Out[7]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
5	6	Hyderabad	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

In [8]:

▶ csv1.tail(3) *#3 rows from bottom*

Out[8]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

```
In [9]: csv1.describe() # statistical values for numeric values column
```

```
Out[9]:
```

	id	win_by_runs	win_by_wickets
count	10.000000	10.000000	10.000000
mean	5.500000	14.700000	4.800000
std	3.02765	31.087868	3.823901
min	1.000000	0.000000	0.000000
25%	3.250000	0.000000	1.000000
50%	5.500000	0.000000	5.000000
75%	7.750000	11.250000	7.750000
max	10.000000	97.000000	10.000000

```
In [10]: csv1['city'] #show a perticular column
```

```
Out[10]: 0    Hyderabad
1         Pune
2         Rajkot
3         Indore
4    Bangalore
5    Hyderabad
6         Mumbai
7         Indore
8         Pune
9         Mumbai
Name: city, dtype: object
```

```
In [11]: csv1['city'][5] #show a perticular column with perticular row
```

```
Out[11]: 'Hyderabad'
```

```
In [12]: csv1['city'][5]=0 #change a perticular column & perticular row's value with warning.original file wont be
```

C:\Users\Asus\AppData\Local\Temp\ipykernel\_11592\569454076.py:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

csv1['city'][5]=0 #change a perticular column & perticular row's value with warning.original file wont be changed

```
In [13]: csv1
```

Out[13]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	Hyderabad	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

```
In [14]: csv1.to_csv('matches_1.csv') #create a new file with changed data
```

```
In [15]: csv1.index #info about indexes
```

Out[15]: RangeIndex(start=0, stop=10, step=1)

```
In [16]: csv1.columns
```

Out[16]: Index(['id', 'city', 'team1', 'team2', 'toss\_winner', 'toss\_decision', 'winner', 'win\_by\_runs', 'win\_by\_wickets'], dtype='object')

```
In [17]: csv1.T #rows and columns will get exchanged
```

Out[17]:

	0	1	2	3	4	5	6	7	8	9
id	1	2	3	4	5	6	7	8	9	10
city	Hyderabad	Pune	Rajkot	Indore	Bangalore	0	Mumbai	Indore	Pune	Mumbai
team1	Sunrisers Hyderabad	Mumbai Indians	Gujarat Lions	Rising Pune Supergiant	Royal Challengers Bangalore	Gujarat Lions	Kolkata Knight Riders	Royal Challengers Bangalore	Delhi Daredevils	Sunrisers Hyderabad
team2	Royal Challengers Bangalore	Rising Pune Supergiant	Kolkata Knight Riders	Kings XI Punjab	Delhi Daredevils	Sunrisers Hyderabad	Mumbai Indians	Kings XI Punjab	Rising Pune Supergiant	Mumbai Indians
toss_winner	Royal Challengers Bangalore	Rising Pune Supergiant	Kolkata Knight Riders	Kings XI Punjab	Royal Challengers Bangalore	Sunrisers Hyderabad	Mumbai Indians	Royal Challengers Bangalore	Rising Pune Supergiant	Mumbai Indians
toss_decision	field	field	field	field	bat	field	field	bat	field	field
winner	Sunrisers Hyderabad	Rising Pune Supergiant	Kolkata Knight Riders	Kings XI Punjab	Royal Challengers Bangalore	Sunrisers Hyderabad	Mumbai Indians	Kings XI Punjab	Delhi Daredevils	Mumbai Indians
win_by_runs	35	0	0	0	15	0	0	0	97	0
win_by_wickets	0	7	10	6	0	9	4	8	0	4

In [18]: `csv1.head()`

Out[18]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	Hyderabad	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0

In [19]: `csv1.sort_index(axis=0,ascending = False) #reverse order index axix=0 is row and axis=1 is column`

Out[19]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
0	1	Hyderabad	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0

```
In [20]: csv1.sort_index(axis=1,ascending = False) #reverse order column
```

Out[20]:

	winner	win_by_wickets	win_by_runs	toss_winner	toss_decision	team2	team1	id	city
0	Sunrisers Hyderabad	0	35	Royal Challengers Bangalore	field	Royal Challengers Bangalore	Sunrisers Hyderabad	1	Hyderabad
1	Rising Pune Supergiant	7	0	Rising Pune Supergiant	field	Rising Pune Supergiant	Mumbai Indians	2	Pune
2	Kolkata Knight Riders	10	0	Kolkata Knight Riders	field	Kolkata Knight Riders	Gujarat Lions	3	Rajkot
3	Kings XI Punjab	6	0	Kings XI Punjab	field	Kings XI Punjab	Rising Pune Supergiant	4	Indore
4	Royal Challengers Bangalore	0	15	Royal Challengers Bangalore	bat	Delhi Daredevils	Royal Challengers Bangalore	5	Bangalore
5	Sunrisers Hyderabad	9	0	Sunrisers Hyderabad	field	Sunrisers Hyderabad	Gujarat Lions	6	0
6	Mumbai Indians	4	0	Mumbai Indians	field	Mumbai Indians	Kolkata Knight Riders	7	Mumbai
7	Kings XI Punjab	8	0	Royal Challengers Bangalore	bat	Kings XI Punjab	Royal Challengers Bangalore	8	Indore
8	Delhi Daredevils	0	97	Rising Pune Supergiant	field	Rising Pune Supergiant	Delhi Daredevils	9	Pune
9	Mumbai Indians	4	0	Mumbai Indians	field	Mumbai Indians	Sunrisers Hyderabad	10	Mumbai

```
In [21]: csv2=csv1
#its a view mode so csv2 will basically point at csv1's memory location.
#Any changes made in csv2 will be reflected in csv1 as well.
```

```
In [22]: csv2['city'][0]="prayagraj"
```

C:\Users\Asus\AppData\Local\Temp\ipykernel\_11592\1436405055.py:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))  
csv2['city'][0]="prayagraj"

```
In [23]: csv2.head()
```

Out[23]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0

In [24]: `csv1.head()`

Out[24]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0

In [25]: `csv3=csv1.copy() # Its a copy mode in which a copy of csv1 will be copied in csv3  
#and any changes made in csv3 will not be reflected in csv1`

In [26]: `csv3['city'][1]='GreNo'`

C:\Users\Asus\AppData\Local\Temp\ipykernel\_11592\3909947299.py:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))  
`csv3['city'][1]='GreNo'`

In [27]: `csv1.head() #no change in original file csv1`

Out[27]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0

In [28]: `csv3.head() #only changes are made in csv3`

Out[28]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	GreNo	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	Indore	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0

In [29]:

▶ csv2.loc[3,'city']='nainital' #no error will show.

In [30]:

▶ csv2

Out[30]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

In [31]:

▶ csv2[0]='pooja'

In [32]:

▶ csv2

Out[32]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0	pooja
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7	pooja
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10	pooja
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6	pooja
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0	pooja
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9	pooja
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8	pooja
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0	pooja
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja



In [33]:

csv2.drop(5) *#dropped the 5th row*

Out[33]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0	pooja
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7	pooja
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10	pooja
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6	pooja
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0	pooja
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8	pooja
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0	pooja
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja

In [34]:

csv2.drop(0,axis=1) *#dropped the column named 0.*

Out[34]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

In [35]:

csv2.loc[[3,4],['city','winner']]

Out[35]:

	city	winner
3	nainital	Kings XI Punjab
4	Bangalore	Royal Challengers Bangalore

In [36]: `csv2.head()`

Out[36]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0	pooja
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7	pooja
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10	pooja
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6	pooja
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0	pooja

In [37]: `csv2.loc[:,['city','winner']]`

Out[37]:

	city	winner
0	prayagraj	Sunrisers Hyderabad
1	Pune	Rising Pune Supergiant
2	Rajkot	Kolkata Knight Riders
3	nainital	Kings XI Punjab
4	Bangalore	Royal Challengers Bangalore
5	0	Sunrisers Hyderabad
6	Mumbai	Mumbai Indians
7	Indore	Kings XI Punjab
8	Pune	Delhi Daredevils
9	Mumbai	Mumbai Indians

In [38]: `csv2.loc[[3,4],:]`

Out[38]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6	pooja
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0	pooja

In [39]: `csv2.loc[(csv2['toss_decision'] == 'field')]`

Out[39]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0	pooja
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7	pooja
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10	pooja
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6	pooja
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9	pooja
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0	pooja
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja

```
In [40]: csv2.loc[(csv2['toss_decision'] == 'field') & (csv2['city'] == 'Mumbai' )]
```

```
Out[40]:
```

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja

```
In [41]: csv2.iloc[0,6] #show 0th row and 6th column value
```

```
Out[41]: 'Sunrisers Hyderabad'
```

```
In [42]: csv2.iloc[[0,6],[2,5]]
```

```
Out[42]:
```

	team1	toss_decision
0	Sunrisers Hyderabad	field
6	Kolkata Knight Riders	field

```
In [43]: csv2.head(3)
```

```
Out[43]:
```

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0	pooja
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7	pooja
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10	pooja

```
In [44]: csv2.drop([1]) #delete row 1
```

```
Out[44]:
```

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0	pooja
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10	pooja
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6	pooja
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0	pooja
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9	pooja
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8	pooja
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0	pooja
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja

In [45]: `csv2.drop([0],axis=1) #delete column named 0`

Out[45]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

In [46]: `csv2 #column 0 is not deleted from original data`

Out[46]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets	0
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0	pooja
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7	pooja
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10	pooja
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6	pooja
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0	pooja
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9	pooja
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8	pooja
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0	pooja
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4	pooja

In [47]: `#csv2=csv2.drop([0],axis=1) # column 0 get deleted permanently from original file. (1st method)`  
`csv2.drop([0],axis=1,inplace=True) # column 0 get deleted permanently from original file.(2nd method)`

In [48]:

csv2

Out[48]:

	id	city	team1	team2	toss_winner	toss_decision	winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	Sunrisers Hyderabad	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	Rising Pune Supergiant	0	7
2	3	Rajkot	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	Kolkata Knight Riders	0	10
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	0	6
4	5	Bangalore	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	Royal Challengers Bangalore	15	0
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	bat	Kings XI Punjab	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	field	Delhi Daredevils	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	Mumbai Indians	0	4

In [49]:

csv2.drop(['winner','toss\_decision'],axis=1,inplace=True)

In [50]:

csv2.drop([2,4],axis=0,inplace=True)

In [51]:

csv2 *#row 2 and 4 and colum winner and toss\_decision are deleted from original file permanently*

Out[51]:

	id	city	team1	team2	toss_winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	0	7
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	0	6
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	0	4
7	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	0	8
8	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	97	0
9	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	0	4

In [52]:

csv2.head()

Out[52]:

	id	city	team1	team2	toss_winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	35	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	0	7
3	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	0	6
5	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	0	9
6	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	0	4

```
In [53]: csv2.reset_index() #to reset index but one column index is also there.
```

Out[53]:

```
In [54]: csv2.reset_index(drop=True,inplace=True) #index column will be removed
```

```
In [55]: csv2.head(4)
```

Out[55]:

```
In [56]: csv2['win by runs']=None #make this column value as None
```

```
In [57]: csv2
```

Out[57]:

```
In [58]: csv2.isnull() #return True for Null/None values rest will be False
```

Out[58]:

```
In [59]: ▶ csv2['win_by_runs'].isnull() #return True for Null/None values
```

```
Out[59]: 0    True
          1    True
          2    True
          3    True
          4    True
          5    True
          6    True
          7    True
          Name: win_by_runs, dtype: bool
```

```
In [60]: ▶ csv2['win_by_runs']=99 #make this column value as 99
```

```
In [61]: ▶ csv2
```

```
Out[61]:
```

	id	city	team1	team2	toss_winner	win_by_runs	win_by_wickets
0	1	prayagraj	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	99	0
1	2	Pune	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	99	7
2	4	nainital	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	99	6
3	6	0	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	99	9
4	7	Mumbai	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	99	4
5	8	Indore	Royal Challengers Bangalore	Kings XI Punjab	Royal Challengers Bangalore	99	8
6	9	Pune	Delhi Daredevils	Rising Pune Supergiant	Rising Pune Supergiant	99	0
7	10	Mumbai	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	99	4

```
In [62]: ▶ df = pd.DataFrame({"name": ['Alfred', 'Batman', 'Catwoman'],
                                "toy": [np.nan, 'Batmobile', 'Bullwhip'],
                                "born": [pd.NaT, pd.Timestamp("1940-04-25"),
                                           pd.NaT]})
```

```
In [63]: ▶ df
```

```
Out[63]:
```

	name	toy	born
0	Alfred	NaN	NaT
1	Batman	Batmobile	1940-04-25
2	Catwoman	Bullwhip	NaT

```
In [64]: ▶ df.dropna() #drop rows and column having values NA
```

```
Out[64]:
```

	name	toy	born
1	Batman	Batmobile	1940-04-25

```
In [65]: ▶ df.dropna(how='all') #wont drop till all values of row or column is NA
```

```
Out[65]:
```

	name	toy	born
0	Alfred	NaN	NaT
1	Batman	Batmobile	1940-04-25
2	Catwoman	Bullwhip	NaT

```
In [66]: df1 = pd.DataFrame({"name": ['Alfred', 'Batman', 'Catwoman'],
                             "toy": [np.nan, np.nan, np.nan],
                             "born": [pd.NaT, pd.Timestamp("1940-04-25"),
                                      pd.NaT]})
```

```
In [67]: df1
```

Out[67]:

	name	toy	born
0	Alfred	NaN	NaT
1	Batman	NaN	1940-04-25
2	Catwoman	NaN	NaT

```
In [68]: df1.dropna(how='all',axis=1)
```

Out[68]:

	name	born
0	Alfred	NaT
1	Batman	1940-04-25
2	Catwoman	NaT

```
In [69]: df1
```

Out[69]:

	name	toy	born
0	Alfred	NaN	NaT
1	Batman	NaN	1940-04-25
2	Catwoman	NaN	NaT

```
In [70]: df2 = pd.DataFrame({"name": [np.nan, 'Batman', 'Catwoman'],
                             "toy": [np.nan, 'Batmobile', 'Bullwhip'],
                             "born": [pd.NaT, pd.Timestamp("1940-04-25"),
                                      pd.NaT]})
```

```
In [71]: df2
```

Out[71]:

	name	toy	born
0	NaN	NaN	NaT
1	Batman	Batmobile	1940-04-25
2	Catwoman	Bullwhip	NaT

```
In [72]: df2.dropna(how='all')
```

Out[72]:

	name	toy	born
1	Batman	Batmobile	1940-04-25
2	Catwoman	Bullwhip	NaT

```
In [73]: df2
```

Out[73]:

	name	toy	born
0	NaN	NaN	NaT
1	Batman	Batmobile	1940-04-25
2	Catwoman	Bullwhip	NaT



```
In [74]: df3 = pd.DataFrame({"name": ['Alfred', 'Batman', 'Alfred'],
                             "toy": [np.nan, 'Batmobile', 'Bullwhip'],
                             "born": [pd.NaT, pd.Timestamp("1940-04-25"),
                                      pd.NaT]})
```

```
In [75]: df3
```

```
Out[75]:
```

	name	toy	born
0	Alfred	NaN	NaT
1	Batman	Batmobile	1940-04-25
2	Alfred	Bullwhip	NaT

```
In [76]: df3.drop_duplicates(subset=['name']) #drop the row having duplicate value in column 'name'.Bydefault keep
```

```
Out[76]:
```

	name	toy	born
0	Alfred	NaN	NaT
1	Batman	Batmobile	1940-04-25

```
In [77]: df3.drop_duplicates(subset=['name'],keep='last') #dropped duplicate value.Keeps second value
```

```
Out[77]:
```

	name	toy	born
1	Batman	Batmobile	1940-04-25
2	Alfred	Bullwhip	NaT

```
In [78]: df3.drop_duplicates(subset=['name'],keep=False) #dropped all duplicate value from file.
```

```
Out[78]:
```

	name	toy	born
1	Batman	Batmobile	1940-04-25

```
In [79]: df3.shape # no. of rows and columns
```

```
Out[79]: (3, 3)
```

```
In [80]: df3.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 3 entries, 0 to 2
Data columns (total 3 columns):
#   Column  Non-Null Count  Dtype
---  -
0    name    3 non-null        object
1    toy      2 non-null        object
2    born     1 non-null        datetime64[ns]
dtypes: datetime64[ns](1), object(2)
memory usage: 200.0+ bytes
```

```
In [81]: da=pd.read_excel('C:\\Users\\Asus\\Downloads\\DUTY CHART MTE March 2024.xlsx',sheet_name='sheet1')
#read excel file sheet wise
```

In [82]: ▶ da

Out[82]:

	Sr.No	Emp ID	Emp Name	Designation	Dept.	School	2024-03-14 00:00:00	2024-03-15 00:00:00	2024-03-16 00:00:00	2024-03-19 00:00:00	2024-03-21 00:00:00
0	1	GUSMAS201927445	Dr. Ambreen Fatima	Assistant Professor	Physiotherapy	SMAS	D	D	D	D	D
1	2	GUSMAS202332413	Dr. Chandan kumar	Professor	Physiotherapy	SMAS	NaN	D	D	NaN	NaN
2	3	GUSMAS202131425	Dr. Tanya Gujral	Assistant Professor	Physiotherapy	SMAS	D	NaN	NaN	D	D
3	4	GUSMAS202332538	Dr. Aksh chahal	Professor	Physiotherapy	SMAS	NaN	NaN	NaN	D	NaN
4	5	GUSMAS201827355	Dr. Shahiduz Zafar	Professor	Physiotherapy	SMAS	NaN	NaN	NaN	D	D
5	6	GUSMAS201827351	Dr. Sajjad Alam	Professor	Physiotherapy	SMAS	NaN	D	NaN	D	NaN
6	7	GUSMAS202332791	Dr. Nitesh	Assistant Professor	CVT	SMAS	D	NaN	NaN	NaN	NaN
7	8	GUSMAS202232232	Dr. Gaurav	Assistant Professor	CVT	SMAS	D	NaN	NaN	NaN	D
8	9	GUSMAS201927476	Ms. Awaneet Kaur	Assistant Professor	Pharmacy	SMAS	NaN	NaN	D	D	NaN
9	10	GUSMAS201927587	Ms. Neha Sharma	Assistant Professor	Pharmacy	SMAS	NaN	NaN	D	NaN	NaN
10	11	GUSMAS202031019	Ms. Sonali Sundram	Assistant Professor	Pharmacy	SMAS	NaN	NaN	D	NaN	NaN
11	12	GUSMAS202031036	Mr. Rakesh Sahu	Assistant Professor	Pharmacy	SMAS	D	NaN	NaN	D	NaN
12	13	GUSMAS202131070	Ms. Shikha Chaudhary	Assistant Professor	Pharmacy	SMAS	NaN	D	D	NaN	NaN
13	14	GUSMAS202131226	Ms. Pratibha Kumari	Assistant Professor	Pharmacy	SMAS	NaN	NaN	D	NaN	NaN
14	15	GUSMAS202131396	Mr. Bahadur Singh	Assistant Professor	Pharmacy	SMAS	D	D	D	NaN	NaN
15	16	GUSMAS202131394	Mr. Satendra Kumar	Assistant Professor	Pharmacy	SMAS	NaN	D	D	NaN	NaN
16	17	GUSMAS202231780	Ms. Manjeet Kaur	Assistant Professor	Pharmacy	SMAS	D	D	D	D	NaN
17	18	GUSMAS202131673	Ms. Deepika Sharma	Assistant Professor	Pharmacy	SMAS	NaN	D	D	D	NaN
18	19	GUSMAS202131704	Mr. Shriyansh Srivastava	Assistant Professor	Pharmacy	SMAS	D	NaN	NaN	NaN	NaN
19	20	GUSMAS202231850	Mr. Nishant Kumar Sharma	Assistant Professor	Pharmacy	SMAS	D	D	D	NaN	NaN

In [83]: ▶ #da['Emp Name']='pooja vajpayee'

In [84]: ▶ #da

In [85]: ▶ #da.to\_excel('C:\\Users\\Asus\\Downloads\\DUTY CHART MTE March 2024.xlsx',sheet\_name='Sheet3')

In [86]: ▶ #da

In [ ]: ▶