

```
import pandas as pd
```

```
tips=pd.read_csv('/content/tips.csv')
```

```
tips
```

	total_bill	tip	sex	smoker	day	time	size	
0	16.99	1.01	Female	No	Sun	Dinner	2	
1	10.34	1.66	Male	No	Sun	Dinner	3	
2	21.01	3.50	Male	No	Sun	Dinner	3	
3	23.68	3.31	Male	No	Sun	Dinner	2	
4	24.59	3.61	Female	No	Sun	Dinner	4	
...	
239	29.03	5.92	Male	No	Sat	Dinner	3	
240	27.18	2.00	Female	Yes	Sat	Dinner	2	
241	22.67	2.00	Male	Yes	Sat	Dinner	2	
242	17.82	1.75	Male	No	Sat	Dinner	2	
243	18.78	3.00	Female	No	Thur	Dinner	2	

244 rows × 7 columns

```
tips.head()
```

	total_bill	tip	sex	smoker	day	time	size	
0	16.99	1.01	Female	No	Sun	Dinner	2	
1	10.34	1.66	Male	No	Sun	Dinner	3	
2	21.01	3.50	Male	No	Sun	Dinner	3	
3	23.68	3.31	Male	No	Sun	Dinner	2	
4	24.59	3.61	Female	No	Sun	Dinner	4	

```
tips['tip']/tips['total_bill']*100
```

```
0    5.944673
1   16.054159
2   16.658734
3   13.978041
4   14.680765
...
239 20.392697
240  7.358352
```

```

241      8.822232
242      9.820426
243     15.974441
Length: 244, dtype: float64

```

```
tip_percentage=tips['tip']/tips['total_bill']*100
```

```
tip_percentage
```

```

0      5.944673
1     16.054159
2     16.658734
3     13.978041
4     14.680765
...
239    20.392697
240     7.358352
241     8.822232
242     9.820426
243    15.974441
Length: 244, dtype: float64

```

```
tips['tip_percentage']=tips['tip']/tips['total_bill']*100
```

```
tips.head()
```

	total_bill	tip	sex	smoker	day	time	size	tip_percentage	tip_percentage
0	16.99	1.01	Female	No	Sun	Dinner	2	5.944673	5.9446
1	10.34	1.66	Male	No	Sun	Dinner	3	16.054159	16.0541
2	21.01	3.50	Male	No	Sun	Dinner	3	16.658734	16.6587
3	23.68	3.31	Male	No	Sun	Dinner	2	13.978041	13.9780
4	24.59	3.61	Female	No	Sun	Dinner	4	14.680765	14.6807

```
tips['tip_percentage']= tips['tip_percentage'].round(1)
```

```
tips.head()
```

	total_bill	tip	sex	smoker	day	time	size	tip_percentage	tip_percentage
0	16.99	1.01	Female	No	Sun	Dinner	2	5.944673	5.9
1	10.34	1.66	Male	No	Sun	Dinner	3	16.054159	16.1
2	21.01	3.50	Male	No	Sun	Dinner	3	16.658734	16.7
3	23.68	3.31	Male	No	Sun	Dinner	2	13.978041	14.0
4	24.59	3.61	Female	No	Sun	Dinner	4	14.680765	14.7

```
tips=tips.drop(['time'],axis=1)
```

```
tips.head()
```

	total_bill	tip	sex	smoker	day	size	tip_percenatage	tip_percentage
0	16.99	1.01	Female	No	Sun	2	5.944673	5.9
1	10.34	1.66	Male	No	Sun	3	16.054159	16.1
2	21.01	3.50	Male	No	Sun	3	16.658734	16.7
3	23.68	3.31	Male	No	Sun	2	13.978041	14.0
4	24.59	3.61	Female	No	Sun	4	14.680765	14.7

```
tips.set_index('size')
```

	total_bill	tip	sex	smoker	day	tip_percenatage	tip_percentage
size							
2	16.99	1.01	Female	No	Sun	5.944673	5.9
3	10.34	1.66	Male	No	Sun	16.054159	16.1
3	21.01	3.50	Male	No	Sun	16.658734	16.7
2	23.68	3.31	Male	No	Sun	13.978041	14.0
4	24.59	3.61	Female	No	Sun	14.680765	14.7
...
3	29.03	5.92	Male	No	Sat	20.392697	20.4
2	27.18	2.00	Female	Yes	Sat	7.358352	7.4
2	22.67	2.00	Male	Yes	Sat	8.822232	8.8
2	17.82	1.75	Male	No	Sat	9.820426	9.8
2	18.78	3.00	Female	No	Thur	15.974441	16.0

244 rows × 7 columns

```
tips.head()
```

```
tips=tips.reset_index()

tips.head()
```

	index	total_bill	tip	sex	smoker	day	size	tip_percenatage	tip_percenta
0	0	16.99	1.01	Female	No	Sun	2	5.944673	5
1	1	10.34	1.66	Male	No	Sun	3	16.054159	16
2	2	21.01	3.50	Male	No	Sun	3	16.658734	16
3	3	23.68	3.31	Male	No	Sun	2	13.978041	14
4	4	24.59	3.61	Female	No	Sun	4	14.680765	14