

```
In [3]: # import libraries
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
.
```

In [154]: `x=pd.read_csv(r"C:\Users\user\Downloads\12_mobile_prices_2023 - 12_mobile_pric`

Out[154]:

	Phone Name	Rating ?/5	Number of Ratings	RAM	ROM/Storage	Back/Rare Camera	Front Camera	Battery	Processor	P
0	POCO C50 (Royal Blue, 32 GB)	4.2	33,561	2 GB RAM	32 GB ROM	8MP Dual Camera	5MP Front Camera	5000 mAh	Mediatek Helio A22 Processor, Upto 2.0 GHz Pro...	
1	POCO M4 5G (Cool Blue, 64 GB)	4.2	77,128	4 GB RAM	64 GB ROM	50MP + 2MP	8MP Front Camera	5000 mAh	Mediatek Dimensity 700 Processor	₹
2	POCO C51 (Royal Blue, 64 GB)	4.3	15,175	4 GB RAM	64 GB ROM	8MP Dual Rear Camera	5MP Front Camera	5000 mAh	Helio G36 Processor	
3	POCO C55 (Cool Blue, 64 GB)	4.2	22,621	4 GB RAM	64 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	
4	POCO C51 (Power Black, 64 GB)	4.3	15,175	4 GB RAM	64 GB ROM	8MP Dual Rear Camera	5MP Front Camera	5000 mAh	Helio G36 Processor	
...	
1831	Infinix Note 7 (Forest Green, 64 GB)	4.3	25,582	4 GB RAM	64 GB ROM	48MP + 2MP + 2MP + AI Lens Camera	16MP Front Camera	5000 mAh	MediaTek Helio G70 Processor	₹
1832	Infinix Note 7 (Bolivia Blue, 64 GB)	4.3	25,582	4 GB RAM	64 GB ROM	48MP + 2MP + 2MP + AI Lens Camera	16MP Front Camera	5000 mAh	MediaTek Helio G70 Processor	₹
1833	Infinix Note 7 (Aether Black, 64 GB)	4.3	25,582	4 GB RAM	64 GB ROM	48MP + 2MP + 2MP + AI Lens Camera	16MP Front Camera	5000 mAh	MediaTek Helio G70 Processor	₹
1834	Infinix Zero 8i (Silver Diamond, 128 GB)	4.2	7,117	8 GB RAM	128 GB ROM	48MP + 8MP + 2MP + AI Lens Camera	16MP + 8MP Dual Front Camera	4500 mAh	MediaTek Helio G90T Processor	₹
1835	Infinix S5 (Quetzal Cyan, 64 GB)	4.3	15,701	4 GB RAM	64 GB ROM	16MP + 5MP + 2MP + Low Light Sensor	32MP Front Camera	4000 mAh	Helio P22 (MTK6762) Processor	₹

1836 rows × 11 columns

```
In [155]: x=x.head(10)
```

```
Out[155]:
```

	Phone Name	Rating ?/5	Number of Ratings	RAM	ROM/Storage	Back/Rear Camera	Front Camera	Battery	Processor	Price in INR
0	POCO C50 (Royal Blue, 32 GB)	4.2	33,561	2 GB RAM	32 GB ROM	8MP Dual Camera	5MP Front Camera	5000 mAh	Mediatek Helio A22 Processor, Upto 2.0 GHz Pro...	₹5,649
1	POCO M4 5G (Cool Blue, 64 GB)	4.2	77,128	4 GB RAM	64 GB ROM	50MP + 2MP	8MP Front Camera	5000 mAh	Mediatek Dimensity 700 Processor	₹11,999
2	POCO C51 (Royal Blue, 64 GB)	4.3	15,175	4 GB RAM	64 GB ROM	8MP Dual Rear Camera	5MP Front Camera	5000 mAh	Helio G36 Processor	₹6,999
3	POCO C55 (Cool Blue, 64 GB)	4.2	22,621	4 GB RAM	64 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹7,749
4	POCO C51 (Power Black, 64 GB)	4.3	15,175	4 GB RAM	64 GB ROM	8MP Dual Rear Camera	5MP Front Camera	5000 mAh	Helio G36 Processor	₹6,999
5	POCO M4 5G (Power Black, 64 GB)	4.2	77,128	4 GB RAM	64 GB ROM	50MP + 2MP	8MP Front Camera	5000 mAh	Mediatek Dimensity 700 Processor	₹11,999
6	POCO C55 (Power Black, 64 GB)	4.2	22,621	4 GB RAM	64 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹7,749
7	POCO C55 (Forest Green, 64 GB)	4.2	22,621	4 GB RAM	64 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹7,749
8	POCO C55 (Cool Blue, 128 GB)	4.1	13,647	6 GB RAM	128 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹9,249
9	POCO M4 5G (Yellow, 128 GB)	4.2	40,525	6 GB RAM	128 GB ROM	50MP + 2MP	8MP Front Camera	5000 mAh	Mediatek Dimensity 700 Processor	₹13,999

In [156]:

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 11 columns):
#   Column                Non-Null Count  Dtype
---  -
0   Phone Name            10 non-null    object
1   Rating ?/5           10 non-null    float64
2   Number of Ratings     10 non-null    object
3   RAM                   10 non-null    object
4   ROM/Storage           10 non-null    object
5   Back/Rare Camera      10 non-null    object
6   Front Camera          10 non-null    object
7   Battery               10 non-null    object
8   Processor             10 non-null    object
9   Price in INR          10 non-null    object
10  Date of Scraping      10 non-null    object
dtypes: float64(1), object(10)
memory usage: 1008.0+ bytes
```

In [157]:

```
Out[157]: Index(['Phone Name', 'Rating ?/5', 'Number of Ratings', 'RAM', 'ROM/Storage',
                'Back/Rare Camera', 'Front Camera', 'Battery', 'Processor',
                'Price in INR', 'Date of Scraping'],
                dtype='object')
```

```
In [158]: d=x[['Phone Name', 'Rating ?/5', 'Number of Ratings', 'RAM', 'ROM/Storage',
               'Back/Rare Camera', 'Front Camera', 'Battery', 'Processor',
               'Price in INR']]
```

Out[158]:

	Phone Name	Rating ?/5	Number of Ratings	RAM	ROM/Storage	Back/Rare Camera	Front Camera	Battery	Processor	Price in INR
0	POCO C50 (Royal Blue, 32 GB)	4.2	33,561	2 GB RAM	32 GB ROM	8MP Dual Camera	5MP Front Camera	5000 mAh	Mediatek Helio A22 Processor, Upto 2.0 GHz Pro...	₹5,649
1	POCO M4 5G (Cool Blue, 64 GB)	4.2	77,128	4 GB RAM	64 GB ROM	50MP + 2MP	8MP Front Camera	5000 mAh	Mediatek Dimensity 700 Processor	₹11,999
2	POCO C51 (Royal Blue, 64 GB)	4.3	15,175	4 GB RAM	64 GB ROM	8MP Dual Rear Camera	5MP Front Camera	5000 mAh	Helio G36 Processor	₹6,999
3	POCO C55 (Cool Blue, 64 GB)	4.2	22,621	4 GB RAM	64 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹7,749
4	POCO C51 (Power Black, 64 GB)	4.3	15,175	4 GB RAM	64 GB ROM	8MP Dual Rear Camera	5MP Front Camera	5000 mAh	Helio G36 Processor	₹6,999
5	POCO M4 5G (Power Black, 64 GB)	4.2	77,128	4 GB RAM	64 GB ROM	50MP + 2MP	8MP Front Camera	5000 mAh	Mediatek Dimensity 700 Processor	₹11,999
6	POCO C55 (Power Black, 64 GB)	4.2	22,621	4 GB RAM	64 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹7,749
7	POCO C55 (Forest Green, 64 GB)	4.2	22,621	4 GB RAM	64 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹7,749
8	POCO C55 (Cool Blue, 128 GB)	4.1	13,647	6 GB RAM	128 GB ROM	50MP Dual Rear Camera	5MP Front Camera	5000 mAh	Mediatek Helio G85 Processor	₹9,249

```
Phone    Rating    Number    Back/Para    Front    Price in
```

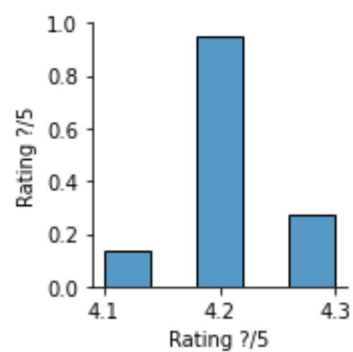
In [159]:

Out[159]:

	Rating ?/5
count	10.000000
mean	4.210000
std	0.056765
min	4.100000
25%	4.200000
50%	4.200000
75%	4.200000
max	4.300000

In [160]:

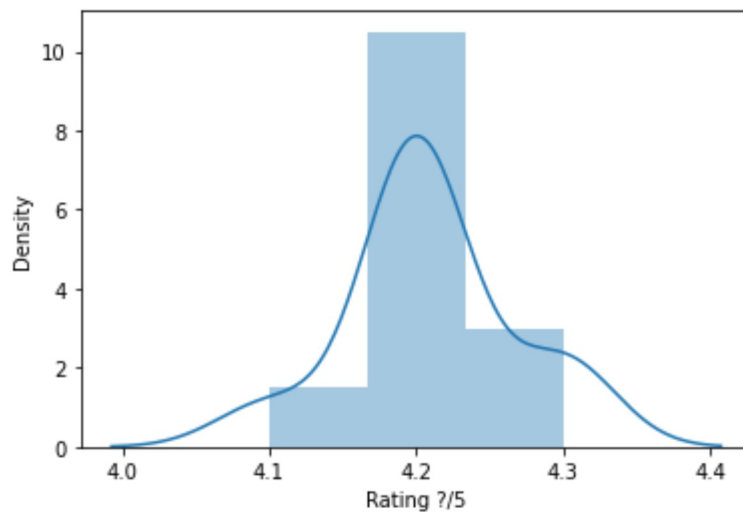
Out[160]: <seaborn.axisgrid.PairGrid at 0x1e662ec8ca0>



In [163]:

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated function and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

Out[163]: <AxesSubplot:xlabel='Rating ?/5', ylabel='Density'>



```
In [164]: x1=x[['Phone Name', 'Rating ?/5', 'Number of Ratings', 'RAM', 'ROM/Storage',
               'Back/Rare Camera', 'Front Camera', 'Battery', 'Processor',
               'Price', 'Brand']]
```

In [165]:

Out[165]: <AxesSubplot:>



In [170]: x=x1[['Rating ?/5']]

In [171]: *# to split my dataset into training and test data*

```
from sklearn.model_selection import train_test_split
```

In [172]: **from** sklearn.linear_model **import** LinearRegression

```
lr=LinearRegression()
```

Out[172]: LinearRegression()

In [173]:

```
0.0
```

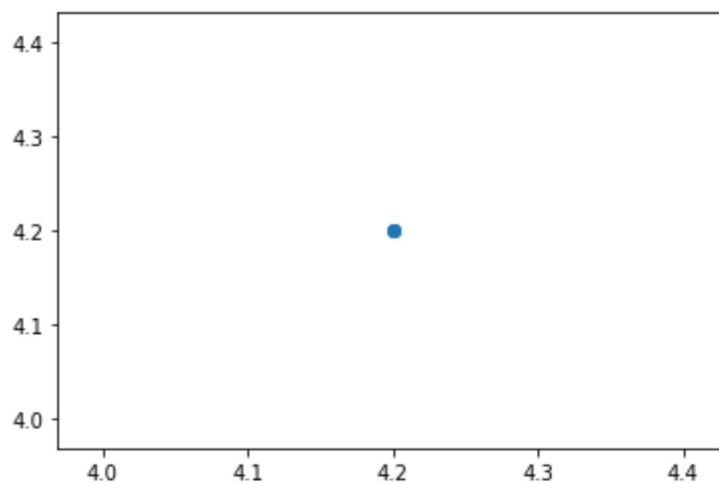
In [174]: `coeff=pd.DataFrame(lr.coef_,x.columns,columns=['Co-efficient'])`

Out[174]:

	Co-efficient
Rating ?/5	1.0

In [175]: `prediction=lr.predict(x_test)`

Out[175]: <matplotlib.collections.PathCollection at 0x1e6640b8370>



In [176]:

Out[176]: 1.0

In [177]:

Out[177]: 1.0

In [178]:

```
In [179]: rr=Ridge(alpha=10)
          rr.fit(x_train,y_train)
```

```
Out[179]: 0.0
```

```
In [180]: la=Lasso(alpha=10)
```

```
Out[180]: Lasso(alpha=10)
```

```
In [181]:
```

```
Out[181]: 0.0
```

```
In [ ]:
```