

```
#importing required python libraries
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt

#importing pandas csv files to read from copied path and passing through the dataframe
import pandas as pd
df=pd.read_csv('/content/bh.csv')
df1=pd.DataFrame(df)
print(df1)
```

	Item	type	selling_price	original_price	discount_perc	rating	Total_ratings	Delivery by	Delivery_time
0	4 PCS Magic Practice Copybook For Kids, Englis...	Paperback, Generic	179	599.0	70.0	4.2	2450.0	Free delivery	Hot Deal
1	Math Concept King - All Formulas And Theorems ...	Perfect Binding, Gagan Pratap Sir	189	200.0	5.0	4.4	26148.0	Free delivery	NaN
2	SSC Reasoning 7200 TCS MCQ Chapter Wise 4th Ed...	Paperback, Pinnacle Publications	499	770.0	35.0	4.5	1816.0	Free delivery by	Today
3	SSC General Studies 6500 TCS MCQ Chapter Wise ...	Paperback, Pinnacle Publications	499	650.0	23.0	4.6	1934.0	Free delivery by	Today
4	SSC Maths 6800 TCS MCQ Chapter Wise I 4th Edit...	Paperback, Pinnacle Publications	499	770.0	35.0	4.5	2100.0	Free delivery by	Today
...
1190	The Indian Contract Act, 1872 EDITION - 2023	Paperback, LEXIS NEXIS	110	NaN	NaN	4.8	4.0	Lowest price since launch	NaN
1191	Junior Teacher Contractual (JTC) For Primary T...	Paperback, Odia, i care panel	920	1150.0	20.0	4.2	155.0	Free delivery	NaN
1192	Delhi Police Constable Maths 3000 TCS MCQ Chap...	Paperback, Hindi, Pinnacle Publications	330	470.0	29.0	4.5	145.0	Free delivery by	Today
1193	UP Police Constable General Studies Chapter Wi...	Paperback, Hindi, Pinnacle Publications	150	160.0	6.0	4.4	26.0	Free delivery by	Today
1194	Heat & Mass Transfer Data Book	Paperback, Cp Kothandaraman, S Subramanayan	234	250.0	6.0	4.0	129.0	Free delivery by	Today

[1195 rows x 9 columns]

Start coding or generate with AI.

```
#displaying first five heads
df1.head()
```

	Item	type	selling_price	original_price	discount_perc	rating	Total_ratings	Delivery by	Delivery_time
0	4 PCS Magic Practice Copybook For Kids, Englis...	Paperback, Generic	179	599.0	70.0	4.2	2450.0	Free delivery	Hot Deal
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```
#displaying last five tails
df1.tail()
```

	Item	type	selling_price	original_price	discount_perc	rating	Total_ratings	Delivery by	Delivery_time
1190	The Indian Contract Act, 1872 EDITION - 2023	Paperback, LEXIS NEXIS	110	NaN	NaN	4.8	4.0	Lowest price since launch	NaN
1191	Junior Teacher Contractual (JTC) For Primary T...	Paperback, Odia, i care panel	920	1150.0	20.0	4.2	155.0	Free delivery	NaN
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```
#displaying the shape as rows and columns
df1.shape
```

(1195, 9)

```
#displaying null value
df1.isnull().sum()
```

```
Item      0
type      0
selling_price  0
original_price  88
discount_perc  88
rating     1
Total_ratings  1
Delivery by  15
Delivery_time 253
dtype: int64
```

```
#displaying not null value
df1.notnull().sum()
```

```
Item      1195
type      1195
selling_price  1195
original_price  1107
discount_perc  1107
rating     1194
Total_ratings  1194
Delivery by  1180
Delivery_time  942
dtype: int64
```

```
#The describe method returns description of the data in the DataFrame.
df1.describe()
```

	original_price	discount_perc	rating	Total_ratings
count	1107.000000	1107.000000	1194.000000	1194.000000
mean	767.317977	29.522132	4.405779	2194.666667
std	1396.214035	18.243486	0.157490	7061.285688
min	160.000000	2.000000	4.000000	4.000000
25%	315.000000	15.000000	4.300000	78.000000
50%	500.000000	28.000000	4.400000	531.000000
75%	760.000000	35.000000	4.500000	1679.000000
max	11999.000000	88.000000	4.800000	56305.000000

```
#information of dataset
df1.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1195 entries, 0 to 1194
Data columns (total 9 columns):
#   Column              Non-Null Count  Dtype
---  -
0   Item                 1195 non-null  object
1   type                 1195 non-null  object
2   selling_price        1195 non-null  object
3   original_price       1107 non-null  float64
4   discount_perc        1107 non-null  float64
5   rating               1194 non-null  float64
6   Total_ratings        1194 non-null  float64
7   Delivery by          1180 non-null  object
8   Delivery_time        942 non-null   object
dtypes: float64(4), object(5)
memory usage: 84.1+ KB
```

```
#sorting the function
m=df1.sort_values("Item",ascending=False)
m.head(2)
```

	Item	type	selling_price	original_price	discount_perc	rating	Total_ratings	Delivery by	Delivery_time
361	Word Power Made Easy	Paperback, NORMAN LEWIS	168	193.0	12.0	4.4	2812.0	Free delivery	NaN
441	Word Power Made Easy	Paperback, NORMAN LEWIS	168	193.0	12.0	4.4	2812.0	Free delivery	NaN

```
#dropping the function
df1.drop(['original_price'],axis=1)
```

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```
#displaying the columns
df1.columns

In [ ]: Index(['Item', 'type', 'selling_price', 'original_price', 'discount_perc',
              'rating', 'Total_ratings', 'Delivery by', 'Delivery_time'],
              dtype='object')

#there are 82 number of unique books
len(df1.Item.value_counts())

In [ ]: 82
```

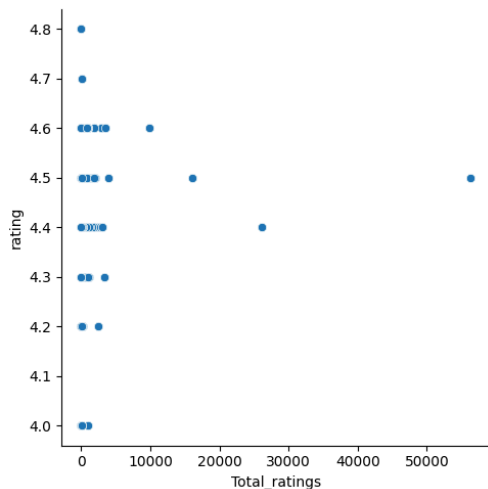
```
#displaying the filtering function
print(df1.iloc[0:4,1:7])

In [ ]:
      type selling_price original_price \
0      Paperback, Generic          179      599.0
1  Perfect Binding, Gagan Pratap Sir          189      200.0
2  Paperback, Pinnacle Publications          499      770.0
3  Paperback, Pinnacle Publications          499      650.0

      discount_perc rating Total_ratings
0           70.0     4.2       2450.0
1            5.0     4.4      26148.0
2           35.0     4.5      1816.0
3           23.0     4.6      1934.0
```

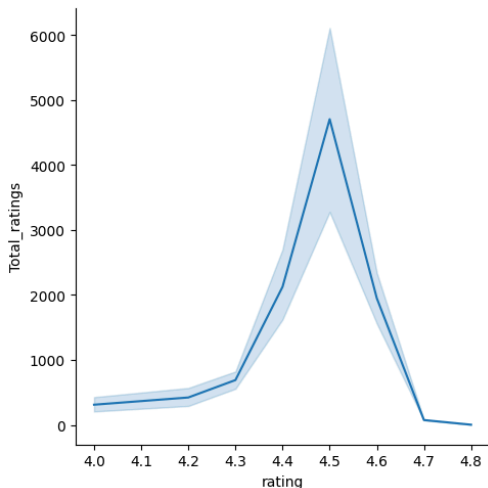
```
#displaying the seaborn relation plot
sns.relplot(x="Total_ratings",y="rating",data=df1)

In [ ]: <seaborn.axisgrid.FacetGrid at 0x7a49a1d81210>
```



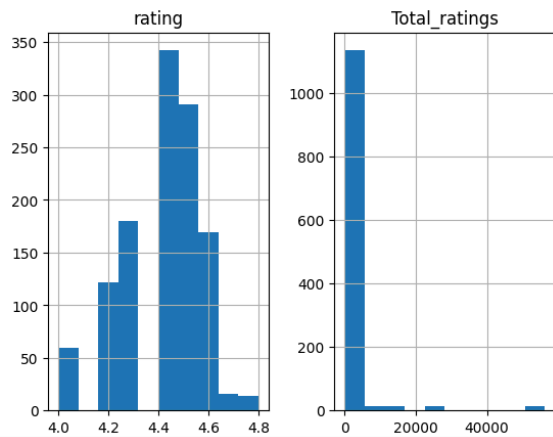
```
#displaying the seaborn relation plot line
sns.relplot(x="rating",y="Total_ratings",kind='line',data=df1)

In [ ]: <seaborn.axisgrid.FacetGrid at 0x7e7683775930>
```



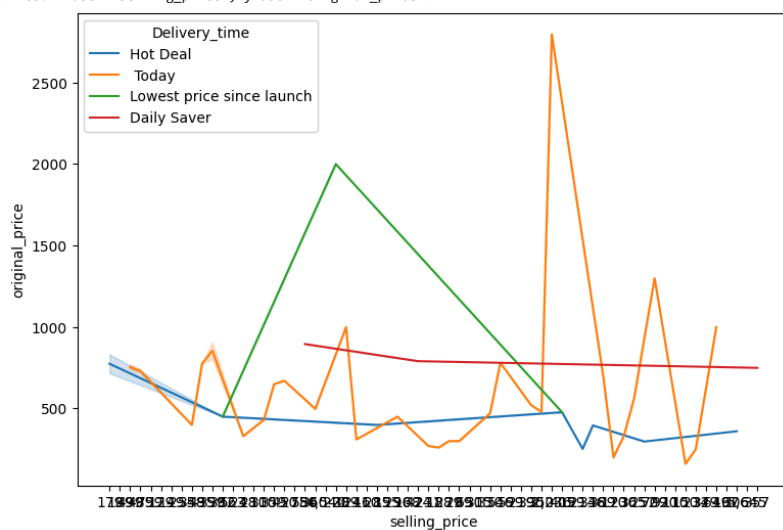
```
#displaying the rating and total ratings by using hist graph
df[['rating','Total_ratings']].hist()
```

```
array([[<Axes: title={'center': 'rating'}>,<Axes: title={'center': 'Total_ratings'}>]], dtype=object)
```



```
#displaying the selling_price and orginal_price by using seaborns lineplot chart
plt.figure(figsize=(9,6))
sns.lineplot(x="selling_price",y="original_price",data=df1,hue="Delivery_time")
```

```
<Axes: xlabel='selling_price', ylabel='original_price'>
```



```
#displaying the rating equal to 4
x=df1[df1["rating"]==4.5]
x.head(2)
```

	Item	type	selling_price	original_price	discount_perc	rating	Total_ratings	Delivery by	Delivery_time
2	SSC Reasoning 7200 TCS MCQ Chapter Wise 4th Ed...	Paperback, Pinnacle Publications	499	770.0	35.0	4.5	1816.0	Free delivery by	Today

```
#displaying the bar graph by using countplot
sns.set(rc={'figure.figsize':(8,3)})
ax=sns.countplot(data=df1,x="Delivery by",hue="Delivery_time")
```

```
for bars in ax.containers:
    ax.bar_label(bars)
```



```
#displaying the pie chart using matplotlib
import matplotlib.pyplot as plt
plt.figure(figsize=(10,6))
labels='book'
df1['Delivery by'].value_counts().plot.pie(autopct="%1.1f%%")
```

<Axes: ylabel='Delivery by'>

