

```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import numpy as np
```

```
data=pd.read_csv('BigBasket.csv')
```

```
data
```

	ProductName	Brand	Price	DiscountPrice	Image_Url	Quantity	Category	SubCategory
0	Onion (Loose)	Fresho	69.75	52.0	https://www.bigbasket.com/media/uploads/p/l/40...	2 kg	Fruits & Vegetables	Potato, Onion & Tomato
1	Onion	Fresho	174.35	130.0	https://www.bigbasket.com/media/uploads/p/l/12...	5 kg	Fruits & Vegetables	Potato, Onion & Tomato
2	Onion (Loose)	Fresho	34.87	26.0	https://www.bigbasket.com/media/uploads/p/l/10...	1 kg	Fruits & Vegetables	Potato, Onion & Tomato
3	Onion	Fresho	69.74	52.0	https://www.bigbasket.com/media/uploads/p/l/12...	2 kg	Fruits & Vegetables	Potato, Onion & Tomato
4	Onion (Loose)	Fresho	174.37	129.0	https://www.bigbasket.com/media/uploads/p/l/10...	5 kg	Fruits & Vegetables	Potato, Onion & Tomato
...	...	...	...	...	...	...	...	...
8203	Foil Alphabet Balloon - Letter V, Party Decor,...	Bvishal	49.00	25.0	https://www.bigbasket.com/media/uploads/p/l/40...	1 pc	Cleaning & Household	Caps, Balloons & Candles
8204	Decoration Balls - Used For Parties, Unique De...	Bvishal	399.00	249.0	https://www.bigbasket.com/media/uploads/p/l/40...	6 pcs	Cleaning & Household	Decorations
8205	Foundation Blending	PAC	465.00	232.5	https://www.bigbasket.com/media/uploads/p/l/40...	1 pc	Beauty &	Makeup

```
data.head()
```

	ProductName	Brand	Price	DiscountPrice	Image_Url	Quantity	Category	SubCategory
0	Onion (Loose)	Fresho	69.75	52.0	https://www.bigbasket.com/media/uploads/p/l/40...	2 kg	Fruits & Vegetables	Potato, Onion & Tomato
1	Onion	Fresho	174.35	130.0	https://www.bigbasket.com/media/uploads/p/l/12...	5 kg	Fruits & Vegetables	Potato, Onion & Tomato
...	Onion	...	...	...	...	...	Fruits &	Potato, https...

```
data.tail()
```

	ProductName	Brand	Price	DiscountPrice	Image_Url	Quantity	Category	SubCategory
8203	Foil Alphabet Balloon - Letter V, Party Decor,...	Bvishal	49.0	25.0	https://www.bigbasket.com/media/uploads/p/l/40...	1 pc	Cleaning & Household	Caps, Balloons & Candles
8204	Decoration Balls - Used For Parties, Unique De...	Bvishal	399.0	249.0	https://www.bigbasket.com/media/uploads/p/l/40...	6 pcs	Cleaning & Household	Decorations
8205	Foundation Blending Brush - 230	PAC	465.0	232.5	https://www.bigbasket.com/media/uploads/p/l/40...	1 pc	Beauty & Hygiene	Makeup Accessories
...	One Week	The	...	...	...	...	Beauty &	Supplements

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8208 entries, 0 to 8207
Data columns (total 9 columns):
#   Column              Non-Null Count  Dtype
---  ---
0   ProductName         8208 non-null   object
1   Brand               8208 non-null   object
2   Price               8208 non-null   float64
3   DiscountPrice       8208 non-null   float64
4   Image_Url           8208 non-null   object
5   Quantity            8208 non-null   object
6   Category            8208 non-null   object
7   SubCategory         8208 non-null   object
8   Absolute_Url        8208 non-null   object
dtypes: float64(2), object(7)
memory usage: 577.3+ KB
```

```
data.shape
```

(8208, 9)

```
data.sample()
```

	ProductName	Brand	Price	DiscountPrice	Image_Url	Quantity	Category	SubCategory	
5150	Japanese Cypress	Born	4500	3305.4	http://www.ikea.com/da/images/products/japanese-cypress-plant-100x100x100-cm-09285150.jpg?scale=100&col=1&row=1&imageId=09285150	1	Cleaning	Detergent	http://www.ikea.com/da/images/products/japanese-cypress-plant-100x100x100-cm-09285150.jpg?scale=100&col=1&row=1&imageId=09285150

```
data.isnull().sum()
```

	0
ProductName	0
Brand	0
Price	0
DiscountPrice	0
Image_Url	0
Quantity	0
Category	0
SubCategory	0
Absolute_Url	0

dtype: int64

```
data.nunique()
```

	0
ProductName	6769
Brand	842
Price	1043
DiscountPrice	2180
Image_Url	8202
Quantity	781
Category	11
SubCategory	334
Absolute_Url	8208

dtype: int64

```
data.notnull()
```

	ProductName	Brand	Price	DiscountPrice	Image_Url	Quantity	Category	SubCategory	Absolute_Url
0		True	True	True	True	True	True	True	True
1		True	True	True	True	True	True	True	True
2		True	True	True	True	True	True	True	True
3		True	True	True	True	True	True	True	True
4		True	True	True	True	True	True	True	True
...	...	...	...	...	...	...	...	...	...
8203		True	True	True	True	True	True	True	True
8204		True	True	True	True	True	True	True	True
8205		True	True	True	True	True	True	True	True
8206		True	True	True	True	True	True	True	True
8207		True	True	True	True	True	True	True	True

8208 rows × 9 columns

data.drop\_duplicates()

	ProductName	Brand	Price	DiscountPrice	Image_Url	Quantity	Category	SubCategory
0	Onion (Loose)	Fresho	69.75	52.0	https://www.bigbasket.com/media/uploads/p/l/40...	2 kg	Fruits & Vegetables	Potato, Onion & Tomato
1	Onion	Fresho	174.35	130.0	https://www.bigbasket.com/media/uploads/p/l/12...	5 kg	Fruits & Vegetables	Potato, Onion & Tomato
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4	Onion (Loose)	Fresho	174.37	129.0	https://www.bigbasket.com/media/uploads/p/l/10...	5 kg	Fruits & Vegetables	Potato, Onion & Tomato
...	...	...	...	...	...	...	...	...
8203	Foil Alphabet Balloon - Letter V, Party Decor,...	Bvishal	49.00	25.0	https://www.bigbasket.com/media/uploads/p/l/40...	1 pc	Cleaning & Household	Caps, Balloons & Candles
8204	Decoration Balls - Used For Parties, Unique De...	Bvishal	399.00	249.0	https://www.bigbasket.com/media/uploads/p/l/40...	6 pcs	Cleaning & Household	Decorations
8205	Foundation Blending	DAC	465.00	232.5	https://www.bigbasket.com/media/uploads/p/l/40...	1 pc	Beauty &	Makeup

data['Category'].value\_counts()

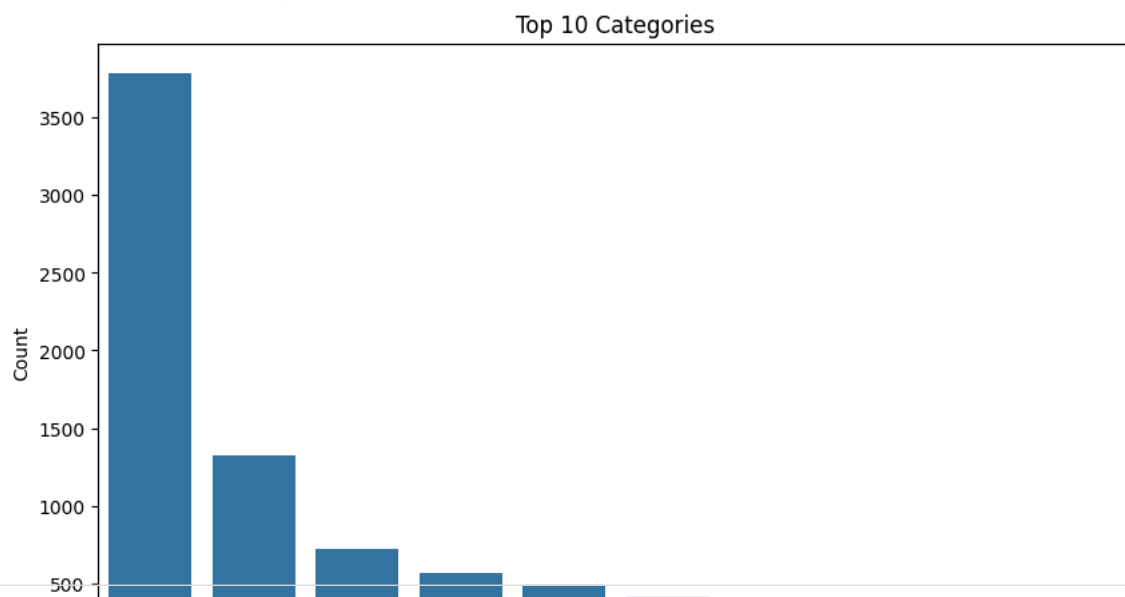
	count
Category	
Beauty & Hygiene	3789
Kitchen, Garden & Pets	1321
Foodgrains, Oil & Masala	718
Cleaning & Household	562
Gourmet & World Food	490
Snacks & Branded Foods	408
Eggs, Meat & Fish	360
Bakery, Cakes & Dairy	169
Beverages	147
Baby Care	127
Fruits & Vegetables	117

dtype: int64

```
top_categories = data['Category'].value_counts().head(10)
```

```
plt.figure(figsize=(10, 6))
sns.barplot(x=top_categories.index, y=top_categories.values)
plt.xlabel('Category')
plt.ylabel('Count')
plt.title('Top 10 Categories')
```

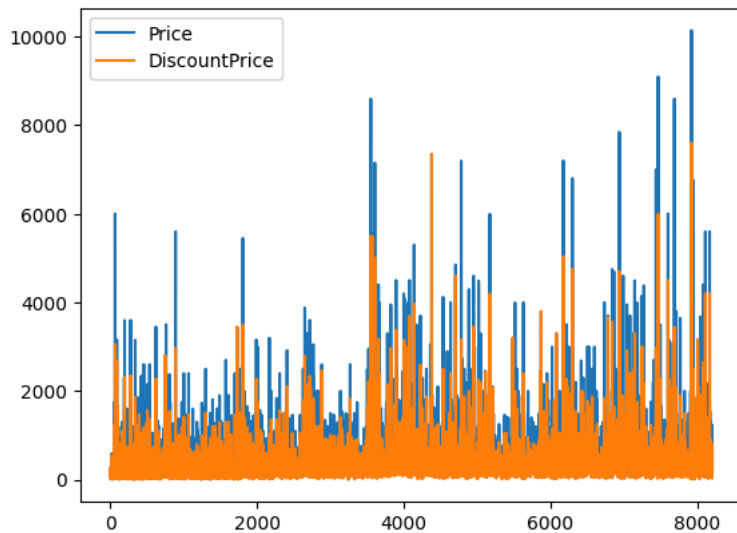
Text(0.5, 1.0, 'Top 10 Categories')



```
avg_price_by_category = data.groupby('Category')['Price'].mean()
```

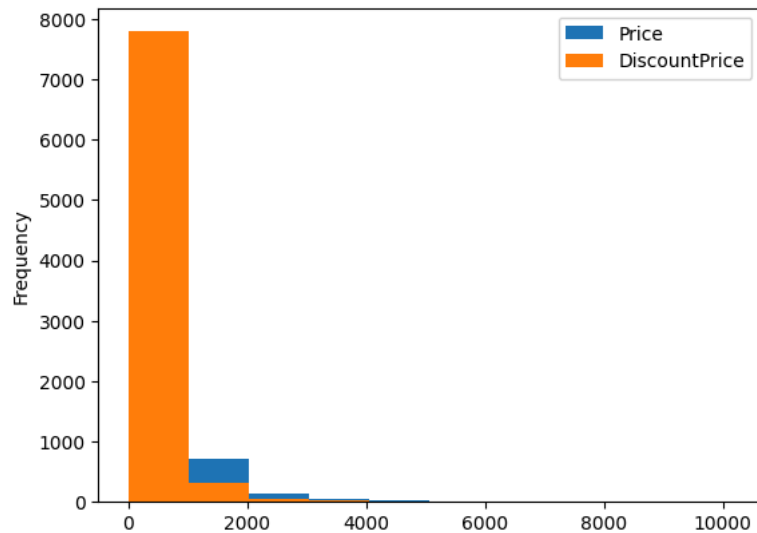
```
data.plot(kind='line')
```

&lt;Axes: &gt;



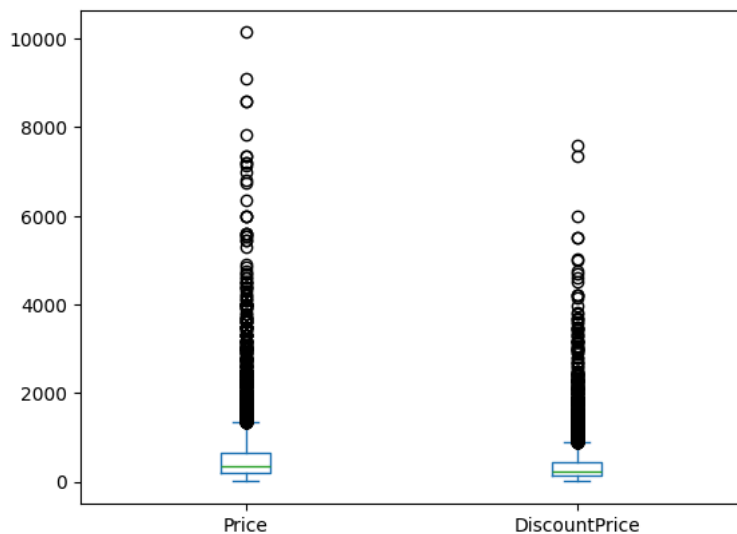
```
data.plot(kind='hist')
```

&lt;Axes: ylabel='Frequency'&gt;



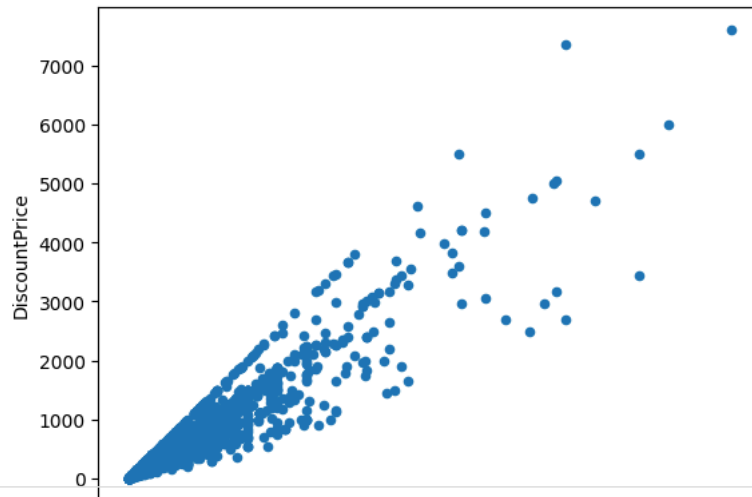
```
data.plot(kind='box')
```

&lt;Axes: &gt;



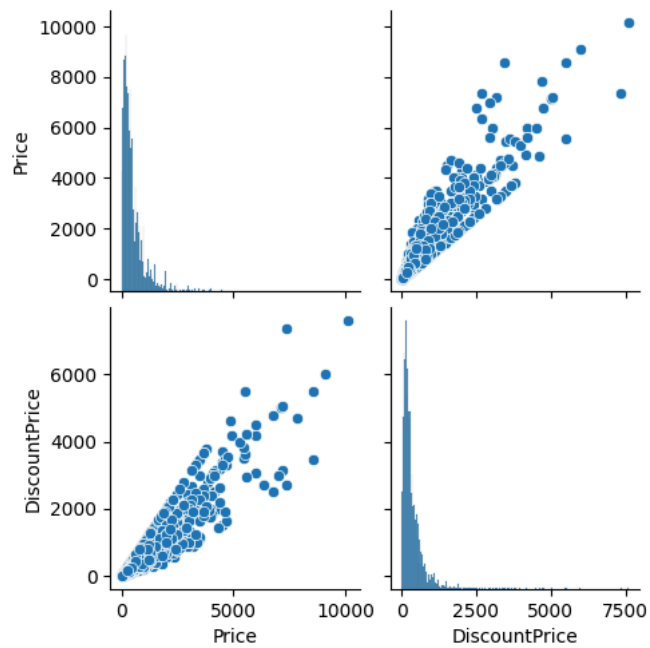
```
data.plot(x='Price',y='DiscountPrice',kind='scatter')
```

```
<Axes: xlabel='Price', ylabel='DiscountPrice'>
```



```
sns.pairplot(data)
```

```
<seaborn.axisgrid.PairGrid at 0x7b014b849880>
```



```
sns.barplot(data=data, x='Category', y='Price')
```

```
<Axes: xlabel='Category', ylabel='Price'>
```

