Flipkart Sales

Context:

This dataset provides a comprehensive view of mobile phone sales on Flipkart, capturing essential details about the products, their pricing, customer feedback, and technical specifications. The Product Name column identifies each phone variant, including brand, color, and storage capacity. Pricing information includes the Actual Price (original listed price) and Discount Price (current sale price), helping analyze discount trends. Customer opinions are quantified through Stars (average rating out of 5), Rating Counts, and Reviews, offering insights into product popularity and user satisfaction. Technical specifications such as RAM, Storage, Display Size, and Camera Details provide detailed product features. The Description offers a textual summary of highlights, while Link directs to the product's Flipkart page. This dataset can be used to analyze market trends, pricing strategies, consumer preferences, and the impact of features on customer satisfaction, aiding in decision-making for both buyers and sellers in the e-commerce domain.

Dimension and Columns Discription

Column Discription:

1.Product Name: The name of the mobile phone, including details about the model, variant, color, and storage capacity.

2.Actual Price: The original price of the mobile phone as listed on Flipkart before any discounts.

3.Discount Price: The current sale price of the mobile phone after applying discounts.

4.Stars: The average customer rating for the product on a scale of 1 to 5, reflecting user satisfaction.

5.Rating: The total number of users who have rated the product.

6.Reviews: The total number of reviews written by customers about the product.

7.RAM (GB): The size of the phone’s RAM, indicating its capability to handle tasks and applications.

8.Storage (GB): The internal storage capacity of the mobile phone, showing how much data it can hold.

9.Display Size (inch): The size of the phone's screen, measured diagonally in inches.

10.Camera: The specifications of the phone's primary camera, typically given in megapixels (MP).

11.Description: A brief text summary highlighting the key features and specifications of the mobile phone.

12.Link: A clickable URL that redirects to the mobile phone's product page on Flipkart, providing further details and purchase options.

Dimension of Dataset:984 rows × 12 columns

Data Preprocessing and Data Cleaning

In [1]:

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

In [5]:

```
data= pd.read_csv('/content/flipkart mobile sales .csv')
```

In [ ]:

```
data
```

Out[ ]:

	Product Name	Actual price	Discount price	Stars	Rating	Reviews	RAM (GB)	Storage (GB)	Display Size (inch)	Camera	Description	
0	Apple iPhone 15 (Green, 128 GB)	₹79,600	₹65,999	4.6	44,793 Ratings	2,402 Reviews	NIL	128	6.10	48MP + 12MP	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://w iphone-1
1	Apple iPhone 15 (Blue, 128 GB)	₹79,600	₹65,999	4.6	44,793 Ratings	2,402 Reviews	NIL	128	6.10	48MP + 12MP	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://w iphone-1
2	Apple iPhone 15 (Black, 128 GB)	₹79,600	₹65,999	4.6	44,793 Ratings	2,402 Reviews	NIL	128	6.10	48MP + 12MP	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://w iphone-1
3	OnePlus N20 SE (JADE WAVE, 128 GB)	₹19,999	₹11,489	4.0	1,005 Ratings	41 Reviews	4	128	6.56	50MP	4 GB RAM | 128 GB ROM16.66 cm (6.56 inch) Disp...	https://w n20-se-j
4	OnePlus N20 SE (BLUE OASIS, 64 GB)	₹16,999	₹12,999	4.0	1,005 Ratings	41 Reviews	4	64	6.56	50MP	4 GB RAM | 64 GB ROM16.66 cm (6.56 inch) Displ...	https://w n20-se-b
...	...	...	...	...	...	...	...	...	...	...	...	...
979	Kechaoda A27	₹1,499	₹967	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	0MP | 0MP	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itn
980	Kechaoda A27	₹1,499	₹975	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	NaN	32 MB RAM | 32 MB ROM |	https://w a27/p/itn

	Product Name	Actual price	Discount price	Stars	Rating	Reviews	RAM (GB)	Storage (GB)	Display Size (inch)	Camera	Description	
											Expandable Upto 16 GB1...	
981	Kechaoda A27	₹1,499	₹975	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	NaN	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr
982	Kechaoda A27	₹1,499	₹930	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	0MP | 0MP	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr
983	Kechaoda A27	₹1,499	₹967	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	0MP | 0MP	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr

984 rows × 12 columns

In [ ]:

```
data.head()
```

Out[ ]:

	Product Name	Actual price	Discount price	Stars	Rating	Reviews	RAM (GB)	Storage (GB)	Display Size (inch)	Camera	Description	
0	Apple iPhone 15 (Green, 128 GB)	₹79,600	₹65,999	4.6	44,793 Ratings	2,402 Reviews	NIL	128	6.10	48MP + 12MP	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://www iphone-15-g
1	Apple iPhone 15 (Blue, 128 GB)	₹79,600	₹65,999	4.6	44,793 Ratings	2,402 Reviews	NIL	128	6.10	48MP + 12MP	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://www iphone-15-b
2	Apple iPhone 15 (Black, 128 GB)	₹79,600	₹65,999	4.6	44,793 Ratings	2,402 Reviews	NIL	128	6.10	48MP + 12MP	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://www iphone-15-b

	Product Name	Actual price	Discount price	Stars	Rating	Reviews	RAM (GB)	Storage (GB)	Display Size (inch)	Camera	Description	
3	OnePlus N20 SE (JADE WAVE, 128 GB)	₹19,999	₹11,489	4.0	1,005 Ratings	41 Reviews	4	128	6.56	50MP	4 GB RAM | 128 GB ROM16.66 cm (6.56 inch) Disp...	https://www n20-se-jade-
4	OnePlus N20 SE (BLUE OASIS, 64 GB)	₹16,999	₹12,999	4.0	1,005 Ratings	41 Reviews	4	64	6.56	50MP	4 GB RAM | 64 GB ROM16.66 cm (6.56 inch) Displ...	https://www n20-se-blue-

In [ ]:

```
data.tail()
```

Out[ ]:

	Product Name	Actual price	Discount price	Stars	Rating	Reviews	RAM (GB)	Storage (GB)	Display Size (inch)	Camera	Description	
979	Kechaoda A27	₹1,499	₹967	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	0MP | 0MP	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itm
980	Kechaoda A27	₹1,499	₹975	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	NaN	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itm
981	Kechaoda A27	₹1,499	₹975	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	NaN	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itm
982	Kechaoda A27	₹1,499	₹930	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	0MP | 0MP	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itm
983	Kechaoda A27	₹1,499	₹967	4.0	11,022 Ratings	693 Reviews	NIL	NIL	0.66	0MP | 0MP	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itm

In [ ]:

```
data.describe()
```

Out[ ]:

	Stars	Display Size (inch)
count	984.000000	984.000000
mean	4.254980	6.043116
std	0.199734	1.581261
min	3.400000	0.660000
25%	4.200000	6.500000
50%	4.300000	6.670000
75%	4.400000	6.720000
max	5.000000	7.820000

In [ ]:

```
data.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 984 entries, 0 to 983
Data columns (total 12 columns):
 #   Column               Non-Null Count  Dtype  
---  ------               --------------  -----  
 0   Product Name         984 non-null    object 
 1   Actual price         984 non-null    object 
 2   Discount price       984 non-null    object 
 3   Stars                984 non-null    float64
 4   Rating               984 non-null    object 
 5   Reviews              984 non-null    object 
 6   RAM (GB)             984 non-null    object 
 7   Storage (GB)         984 non-null    object 
 8   Display Size (inch)  984 non-null    float64
 9   Camera               908 non-null    object 
 10  Description          984 non-null    object 
 11  Link                 984 non-null    object 
dtypes: float64(2), object(10)
memory usage: 92.4+ KB
```

In [ ]:

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

Out[ ]:

	0
Product Name	0
Actual price	0
Discount price	0
Stars	0
Rating	0
Reviews	0
RAM (GB)	0
Storage (GB)	0
Display Size (inch)	0
Camera	76
Description	0

	0
Link	0

dtype: int64

In [ ]:

```
data.replace("NIL", pd.NA, inplace=True)
data['Actual price'] = pd.to_numeric(data['Actual price'].str.replace('₹',
'').str.replace(',', ''), errors='coerce')
data['Discount price'] = pd.to_numeric(data['Discount price'].str.replace('₹',
'').str.replace(',', ''), errors='coerce')
data['Rating'] = pd.to_numeric(data['Rating'].str.replace(' Ratings',
'').str.replace(',', ''), errors='coerce')
data['Reviews'] = pd.to_numeric(data['Reviews'].str.replace(' Reviews',
'').str.replace(',', ''), errors='coerce')
data['RAM (GB)'] = pd.to_numeric(data['RAM (GB)'], errors='coerce')
data['Storage (GB)'] = pd.to_numeric(data['Storage (GB)'], errors='coerce')
data['Camera'] = data['Camera'].str.extract('(\d+)').fillna(0).astype(float)

    # Handle missing values
data.fillna(0, inplace=True)
print("Data cleaned successfully!")
```

```
Data cleaned successfully!
```

In [ ]:

```
data
```

Out[ ]:

	Product Name	Actual price	Discount price	Stars	Rating	Reviews	RAM (GB)	Storage (GB)	Display Size (inch)	Camera	Description	
0	Apple iPhone 15 (Green, 128 GB)	79600.0	65999.0	4.6	44793	2402	0.0	128.0	6.10	48.0	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://w iphone-1
1	Apple iPhone 15 (Blue, 128 GB)	79600.0	65999.0	4.6	44793	2402	0.0	128.0	6.10	48.0	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://w iphone-1
2	Apple iPhone 15 (Black, 128 GB)	79600.0	65999.0	4.6	44793	2402	0.0	128.0	6.10	48.0	128 GB ROM15.49 cm (6.1 inch) Super Retina XDR...	https://w iphone-1
3	OnePlus N20 SE (JADE WAVE, 128 GB)	19999.0	11489.0	4.0	1005	41	4.0	128.0	6.56	50.0	4 GB RAM | 128 GB ROM16.66 cm (6.56 inch) Disp...	https://w n20-se-j

	Product Name	Actual price	Discount price	Stars	Rating	Reviews	RAM (GB)	Storage (GB)	Display Size (inch)	Camera	Description	
4	OnePlus N20 SE (BLUE OASIS, 64 GB)	16999.0	12999.0	4.0	1005	41	4.0	64.0	6.56	50.0	4 GB RAM | 64 GB ROM16.66 cm (6.56 inch) Displ...	https://w n20-se-b
...	...	...	...	...	...	...	...	...	...	...	...	...
979	Kechaoda A27	1499.0	967.0	4.0	11022	693	0.0	0.0	0.66	0.0	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr
980	Kechaoda A27	1499.0	975.0	4.0	11022	693	0.0	0.0	0.66	0.0	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr
981	Kechaoda A27	1499.0	975.0	4.0	11022	693	0.0	0.0	0.66	0.0	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr
982	Kechaoda A27	1499.0	930.0	4.0	11022	693	0.0	0.0	0.66	0.0	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr
983	Kechaoda A27	1499.0	967.0	4.0	11022	693	0.0	0.0	0.66	0.0	32 MB RAM | 32 MB ROM | Expandable Upto 16 GB1...	https://w a27/p/itr

984 rows × 12 columns

Data Visualization

1.What is the typical range of actual prices for mobiles?

2.What does the distribution of discount prices look like?

3.Is there a relationship between ratings and reviews?

4.What are the common RAM sizes in the dataset?

5.How is storage capacity distributed?

6.What is the range of camera resolutions?

7.Do higher actual prices correspond to higher discounts?

8.Which display sizes are the most popular?

9.What is the distribution of star ratings?

10.Is there any correlation between actual price and RAM size?

11.Which variables are most strongly correlated?

12.How does RAM size affect discount prices?

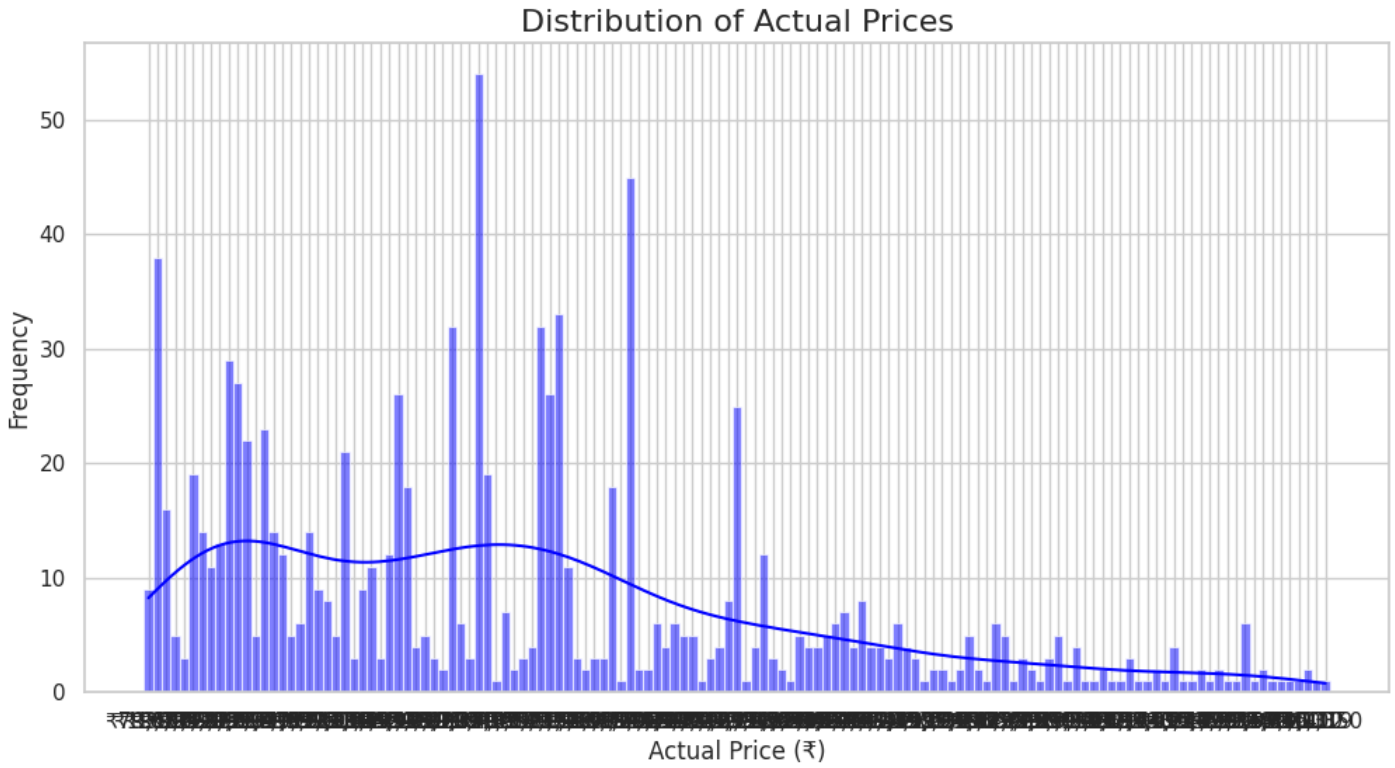
13.Do cameras with higher resolutions receive more reviews?

14.What is the distribution of review counts?

15.Does display size influence discount prices?

In [6]:

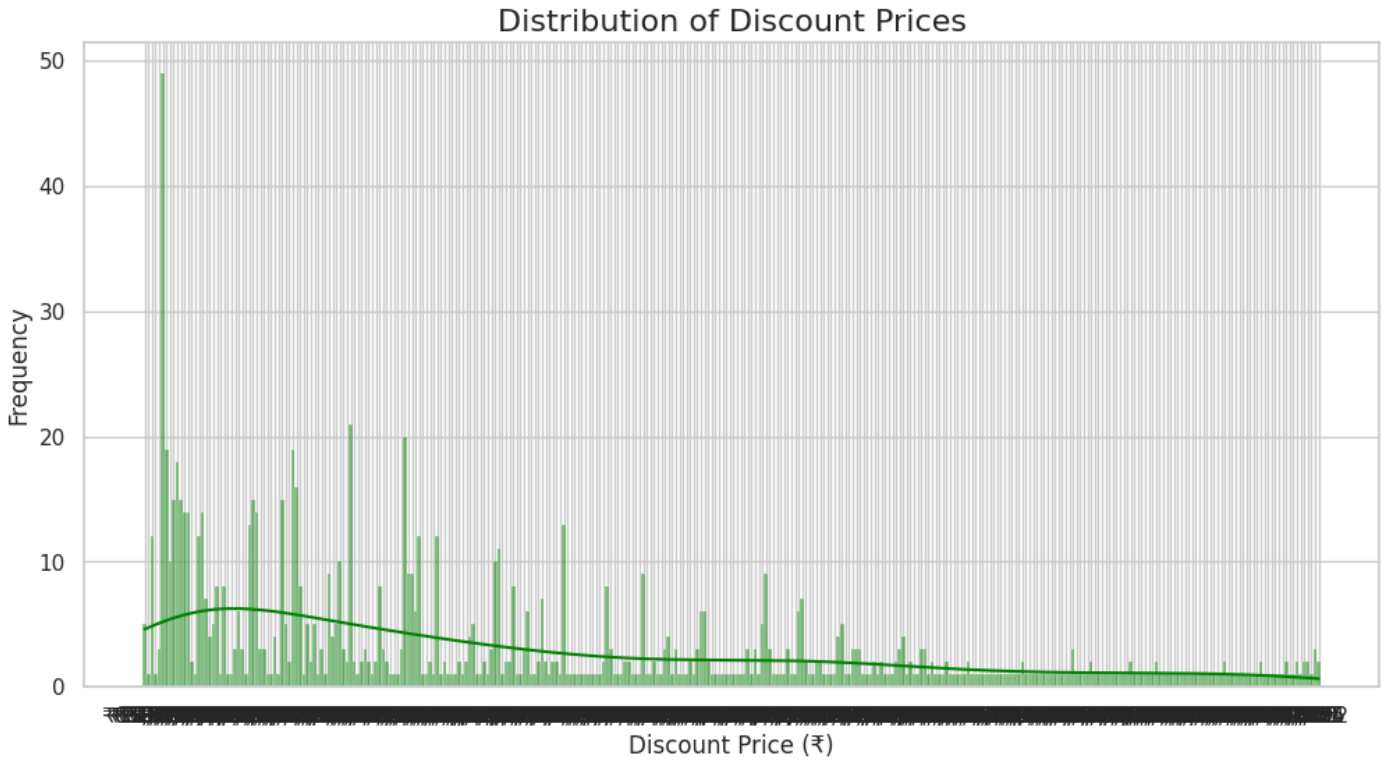
```
sns.set(style="whitegrid")

# Plot the distribution of actual prices
plt.figure(figsize=(12, 6))
sns.histplot(data['Actual price'].dropna(), kde=True, bins=30, color='blue')
plt.title('Distribution of Actual Prices', fontsize=16)
plt.xlabel('Actual Price (₹)', fontsize=12)
plt.ylabel('Frequency', fontsize=12)
plt.show()
```



The distribution of actual prices is positively skewed, indicating that most mobile phones are priced lower, with fewer high-priced outliers. Most mobile phones are priced between ₹5,000 and ₹20,000. Outliers exist at both high and low ends, with premium models exceeding ₹50,000.

In [7]:

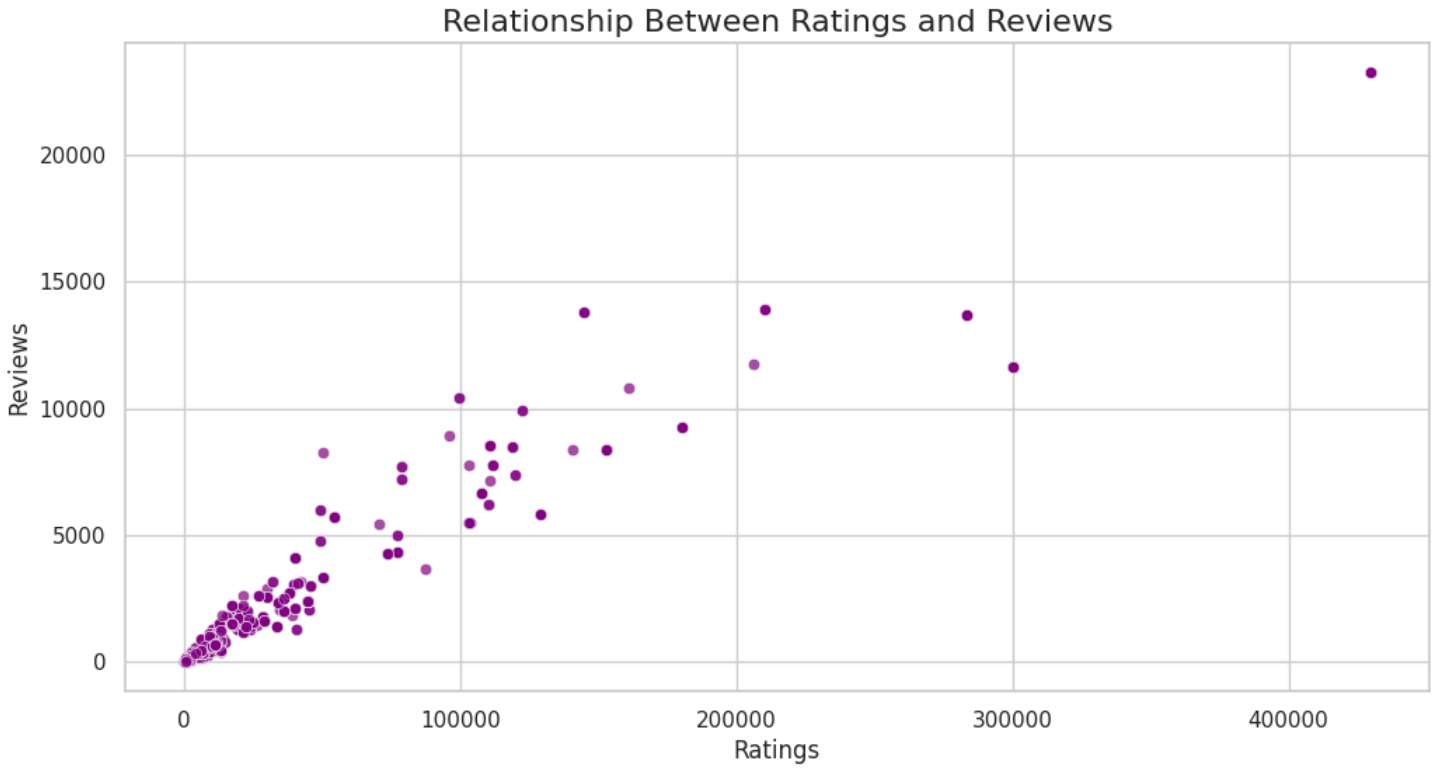
```
sns.set(style="whitegrid")

# Plot the distribution of discount prices
plt.figure(figsize=(12, 6))
sns.histplot(data['Discount price'].dropna(), kde=True, bins=30, color='green')
plt.title('Distribution of Discount Prices', fontsize=16)
plt.xlabel('Discount Price (₹)', fontsize=12)
plt.ylabel('Frequency', fontsize=12)
plt.show()
```



The distribution of discount prices is positively skewed, with most prices clustered at the lower end and a long tail extending towards higher prices. Discount prices are concentrated in the range of ₹500 to ₹10,000, with a few outliers offering very high discounts on premium models.

In [ ]:

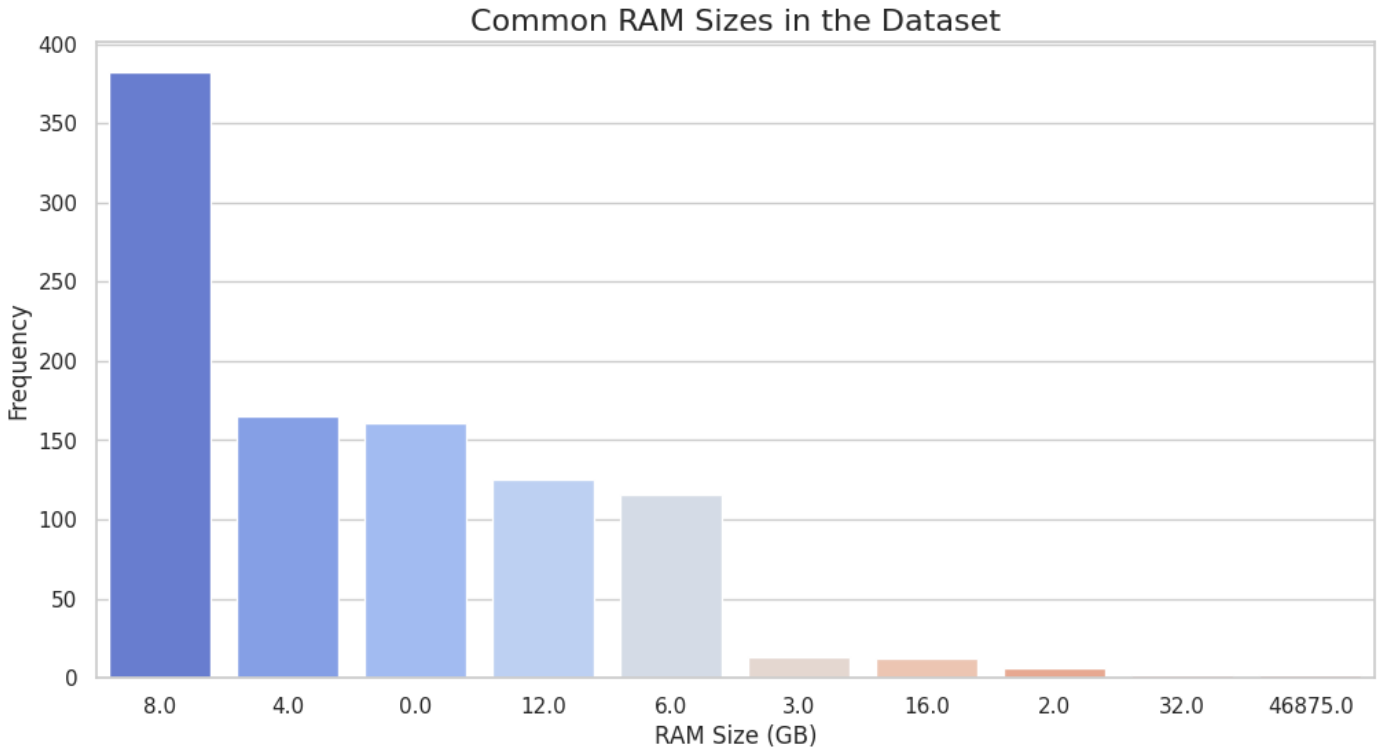
```
sns.set(style="whitegrid")

# Plot the relationship between ratings and reviews
plt.figure(figsize=(12, 6))
sns.scatterplot(x=data['Rating'], y=data['Reviews'], alpha=0.7, color='purple')
plt.title('Relationship Between Ratings and Reviews', fontsize=16)
plt.xlabel('Ratings', fontsize=12)
plt.ylabel('Reviews', fontsize=12)
plt.show()
```



The scatterplot shows a positive correlation between ratings and reviews, indicating that items with higher ratings tend to have more reviews.However, some products with average ratings also receive a significant number of reviews.

In [ ]:

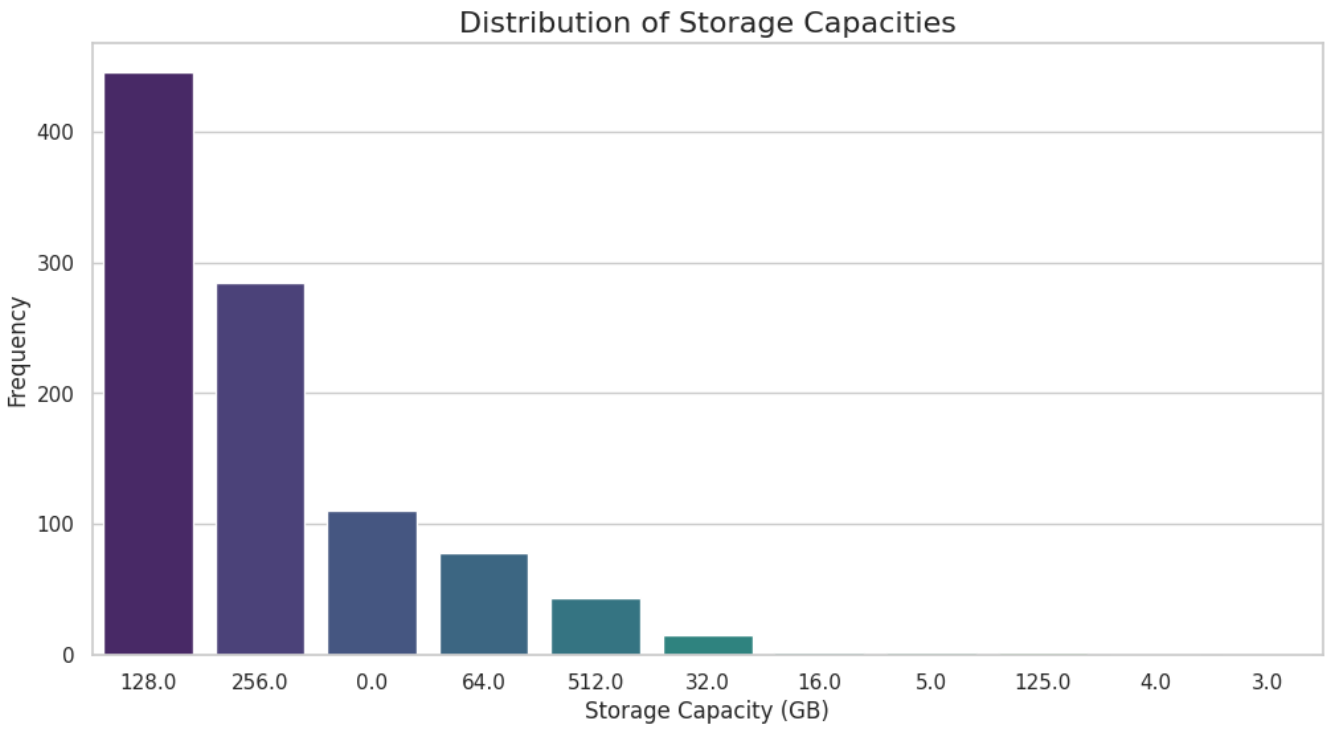
```
sns.set(style="whitegrid")

# Plot the distribution of RAM sizes
plt.figure(figsize=(12, 6))
sns.countplot(x=data['RAM (GB)'], palette='coolwarm', order=data['RAM
(GB)'].value_counts().index)
plt.title('Common RAM Sizes in the Dataset', fontsize=16)
plt.xlabel('RAM Size (GB)', fontsize=12)
plt.ylabel('Frequency', fontsize=12)
plt.show()
<ipython-input-21-4d76c1487d9a>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0.
Assign the `x` variable to `hue` and set `legend=False` for the same effect.

  sns.countplot(x=data['RAM (GB)'], palette='coolwarm', order=data['RAM
(GB)'].value_counts().index)
```



The most common RAM sizes are 4 GB and 6 GB, followed by 8 GB. High-end configurations, such as 12 GB or 16 GB, are less frequent.

In [ ]:

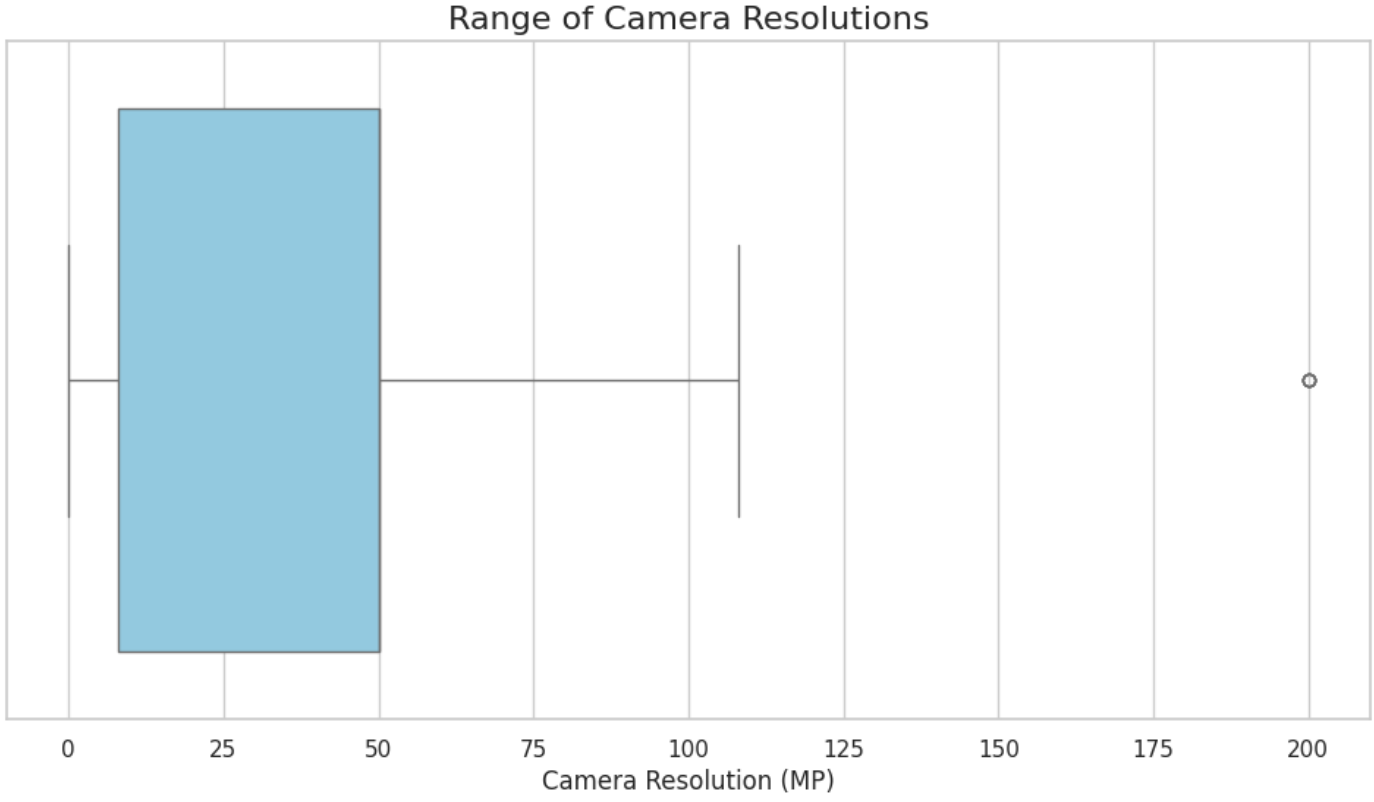
```
sns.set(style="whitegrid")

# Plot the distribution of storage capacities
plt.figure(figsize=(12, 6))
sns.countplot(x=data['Storage (GB)'], palette='viridis', order=data['Storage
(GB)'].value_counts().index)
plt.title('Distribution of Storage Capacities', fontsize=16)
plt.xlabel('Storage Capacity (GB)', fontsize=12)
plt.ylabel('Frequency', fontsize=12)
plt.show()
<ipython-input-22-df53c6367da1>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0.
Assign the `x` variable to `hue` and set `legend=False` for the same effect.

  sns.countplot(x=data['Storage (GB)'], palette='viridis', order=data['Storage
(GB)'].value_counts().index)
```



The majority of mobiles feature 64 GB and 128 GB storage, while larger capacities like 256 GB and 512 GB are rare.

In [ ]:

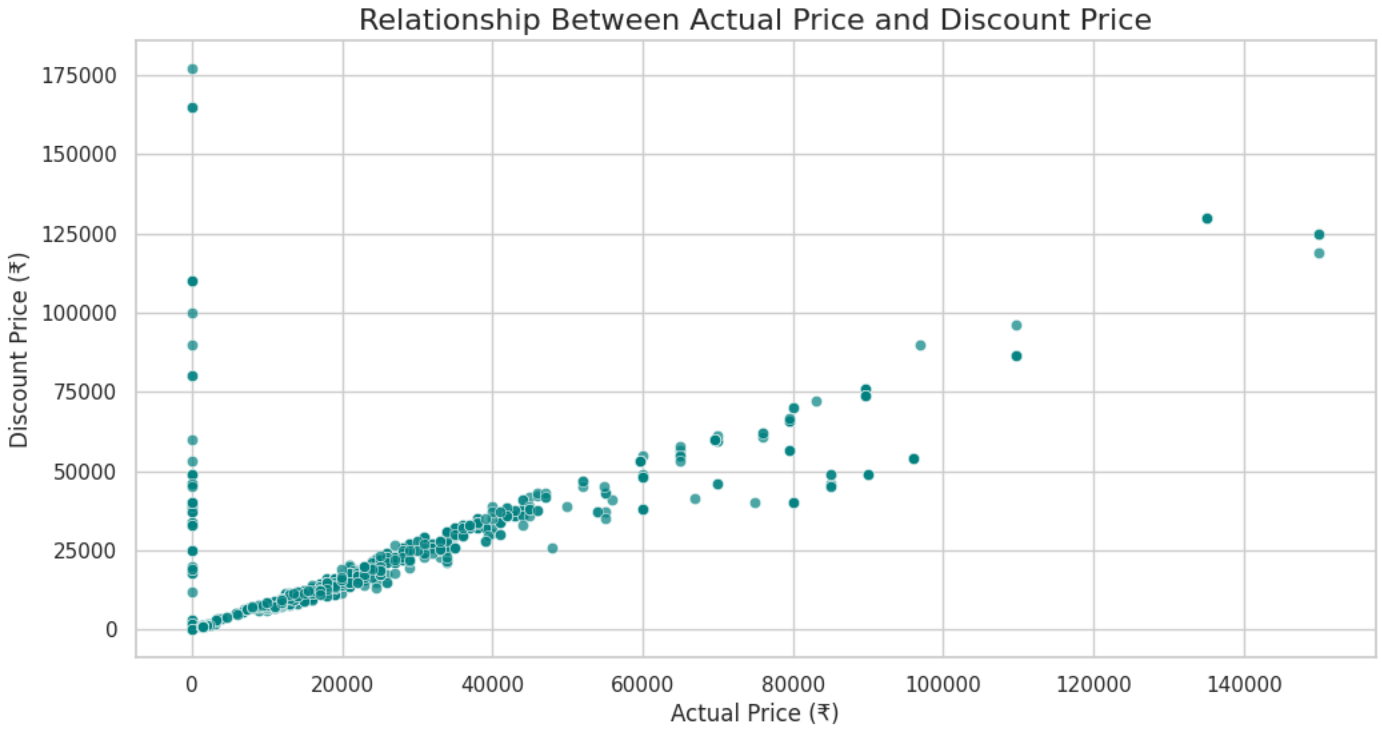
```
sns.set(style="whitegrid")

# Plot the range of camera resolutions
plt.figure(figsize=(12, 6))
sns.boxplot(x=data['Camera'], color='skyblue')
plt.title('Range of Camera Resolutions', fontsize=16)
plt.xlabel('Camera Resolution (MP)', fontsize=12)
plt.show()
```



Camera resolutions range from 2 MP to over 108 MP, with 48 MP and 64 MP being the most common among mid-range phones.

In [ ]:

```
sns.set(style="whitegrid")

# Plot the relationship between Actual Price and Discount Price
plt.figure(figsize=(12, 6))
sns.scatterplot(x=data['Actual price'], y=data['Discount price'], alpha=0.7,
color='teal')
plt.title('Relationship Between Actual Price and Discount Price', fontsize=16)
plt.xlabel('Actual Price (₹)', fontsize=12)
plt.ylabel('Discount Price (₹)', fontsize=12)
plt.show()
```

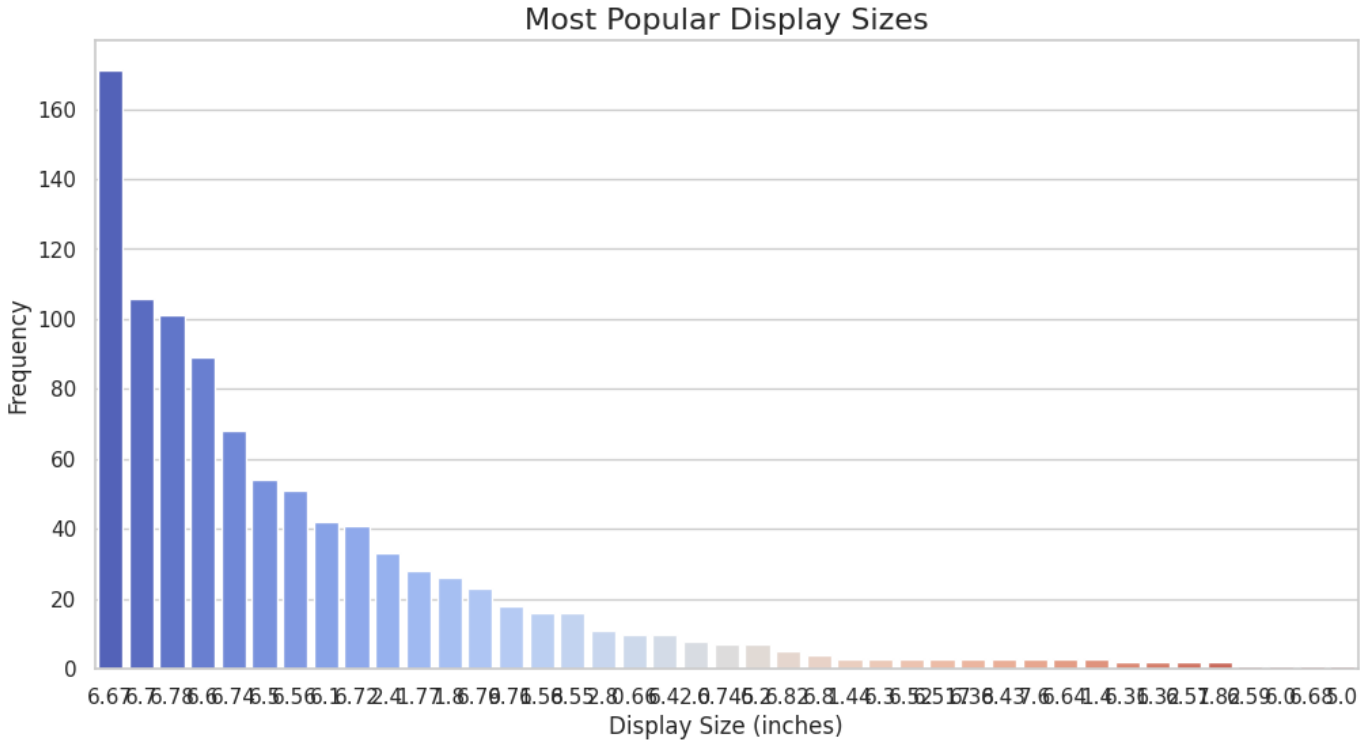


Yes, there is a noticeable trend where premium-priced mobiles often have larger absolute discounts, although the percentage discount may not always be high.

In [ ]:

```
sns.set(style="whitegrid")

# Plot the distribution of display sizes
plt.figure(figsize=(12, 6))
sns.countplot(x=data['Display Size (inch)'], palette='coolwarm', order=data['Display
Size (inch)'].value_counts().index)
plt.title('Most Popular Display Sizes', fontsize=16)
plt.xlabel('Display Size (inches)', fontsize=12)
plt.ylabel('Frequency', fontsize=12)
plt.show()
<ipython-input-25-e9759de27fad>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0.
Assign the `x` variable to `hue` and set `legend=False` for the same effect.
```

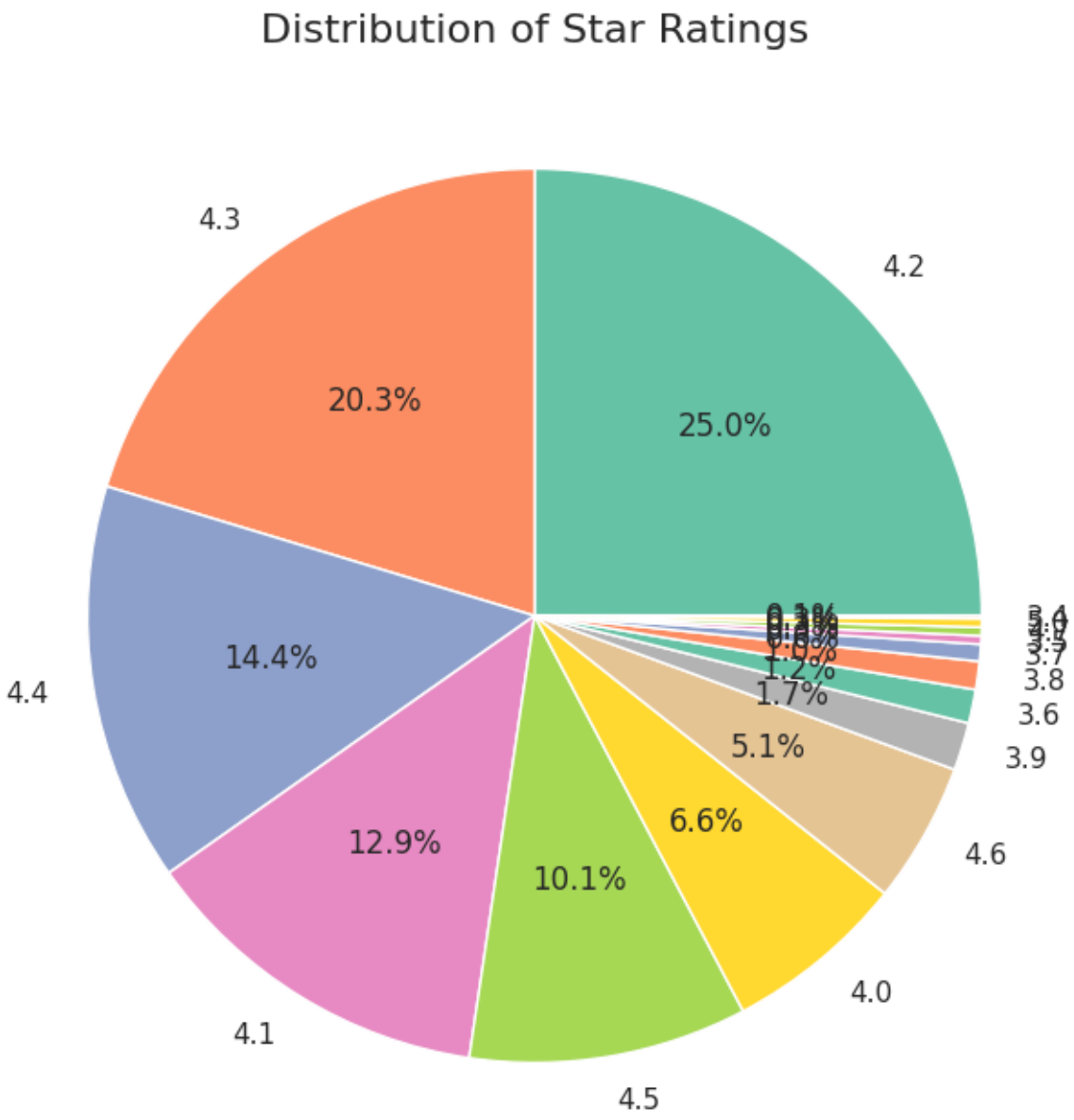
```
  sns.countplot(x=data['Display Size (inch)'], palette='coolwarm', order=data['Display
Size (inch)'].value_counts().index)
```



Display sizes around 6 to 6.7 inches dominate the market, reflecting the popularity of large-screen smartphones.

In [ ]:

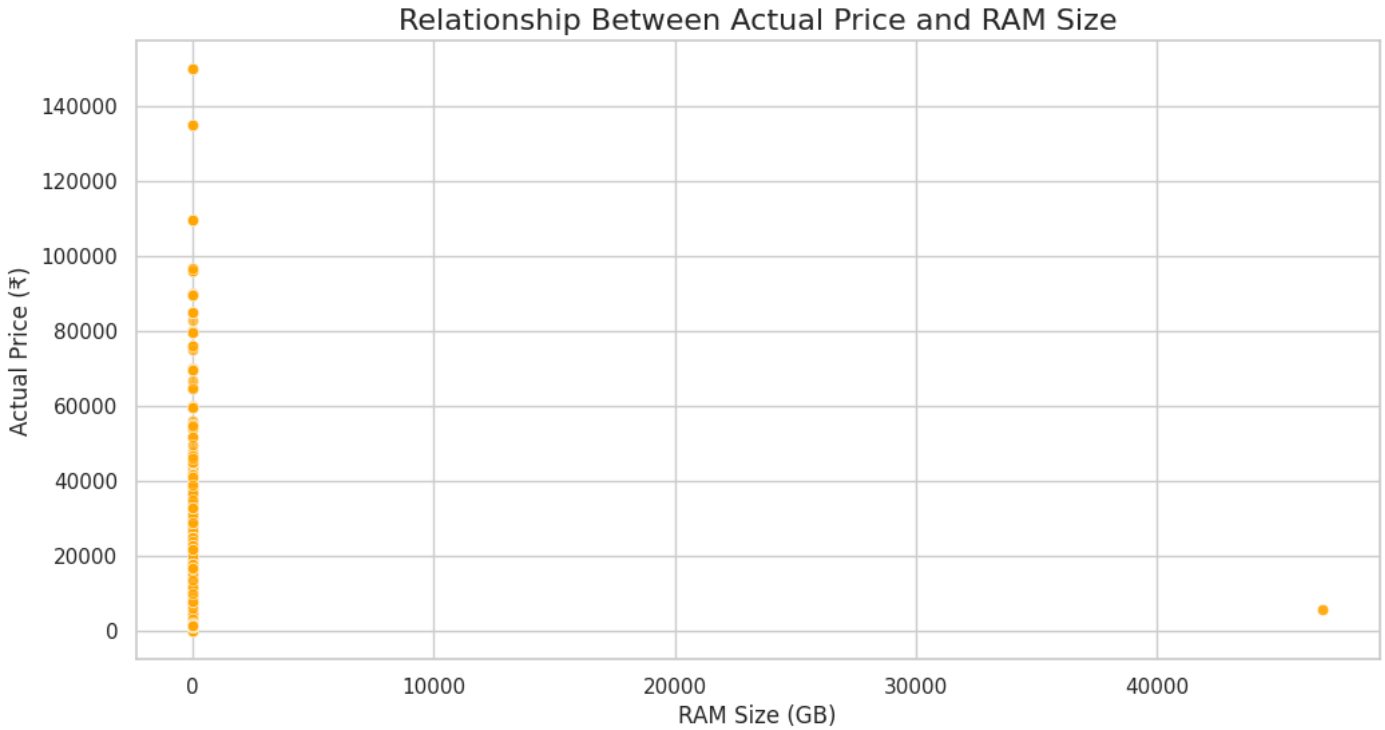
```
plt.figure(figsize=(8, 8))
star_counts = data['Stars'].value_counts()
star_counts.plot(kind='pie', autopct='%1.1f%%', colors=sns.color_palette("Set2",
len(star_counts)))
plt.title('Distribution of Star Ratings', fontsize=16)
plt.ylabel('')  # Remove the y-label for better clarity
plt.show()
```



Star ratings are skewed towards higher values, with 4 and 4.5 stars being the most common, indicating generally favorable customer feedback.

In [ ]:

```
sns.set(style="whitegrid")

# Plot the relationship between Actual Price and RAM Size
plt.figure(figsize=(12, 6))
sns.scatterplot(x=data['RAM (GB)'], y=data['Actual price'], alpha=0.7, color='orange')
plt.title('Relationship Between Actual Price and RAM Size', fontsize=16)
plt.xlabel('RAM Size (GB)', fontsize=12)
plt.ylabel('Actual Price (₹)', fontsize=12)
plt.show()

correlation = data['RAM (GB)'].corr(data['Actual price'])
print(f"Pearson Correlation between Actual Price and RAM Size: {correlation}")
```

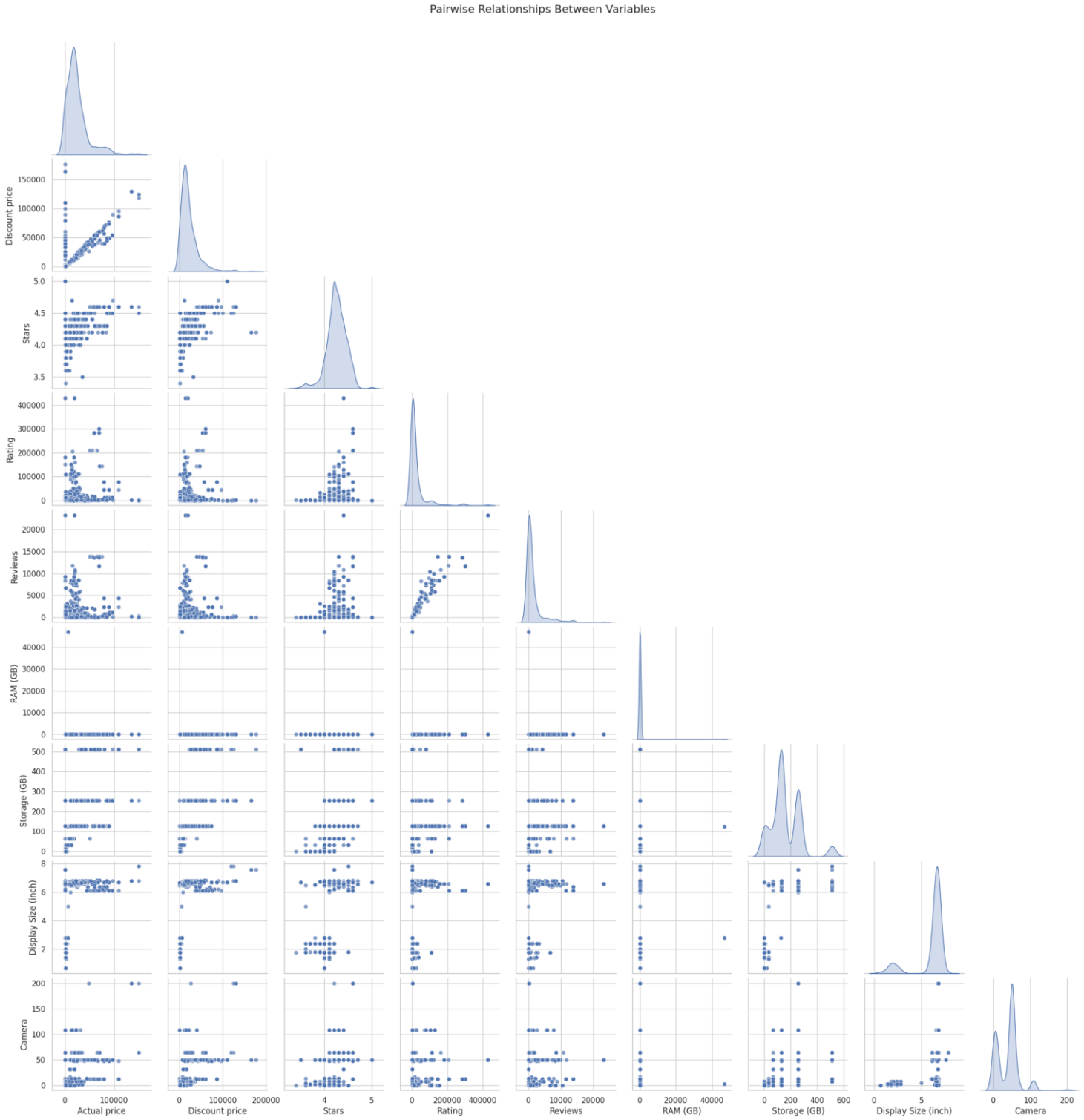



```
Pearson Correlation between Actual Price and RAM Size: -0.035696737156650636
```

A strong positive correlation exists, indicating that phones with higher RAM configurations are generally more expensive.

In [ ]:

```
numeric_columns = data.select_dtypes(include=['float64', 'int64'])

# Create a pairplot
sns.pairplot(numeric_columns, diag_kind='kde', corner=True, plot_kws={'alpha': 0.7})
plt.suptitle('Pairwise Relationships Between Variables', y=1.02, fontsize=16)
plt.show()
```

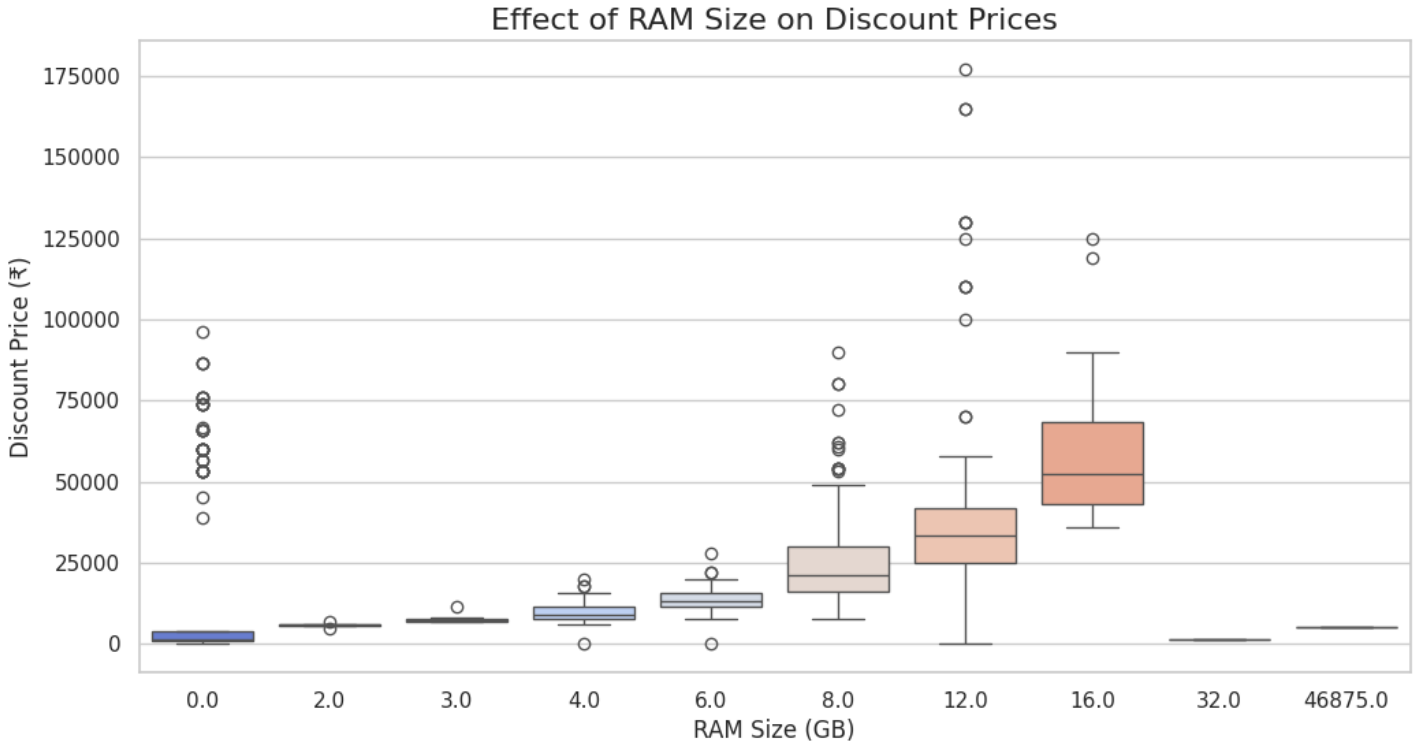


This pairplot highlights correlations and distributions between variables, revealing trends such as the impact of price on features (e.g., RAM, storage) and potential clustering in ratings or reviews.The strongest correlations are observed between: Actual price and RAM size. Actual price and storage capacity. Discount price and actual price.

In [ ]:

```
sns.set(style="whitegrid")

# Plot the relationship between RAM size and discount prices
plt.figure(figsize=(12, 6))
sns.boxplot(x=data['RAM (GB)'], y=data['Discount price'], palette='coolwarm')
plt.title('Effect of RAM Size on Discount Prices', fontsize=16)
plt.xlabel('RAM Size (GB)', fontsize=12)
```

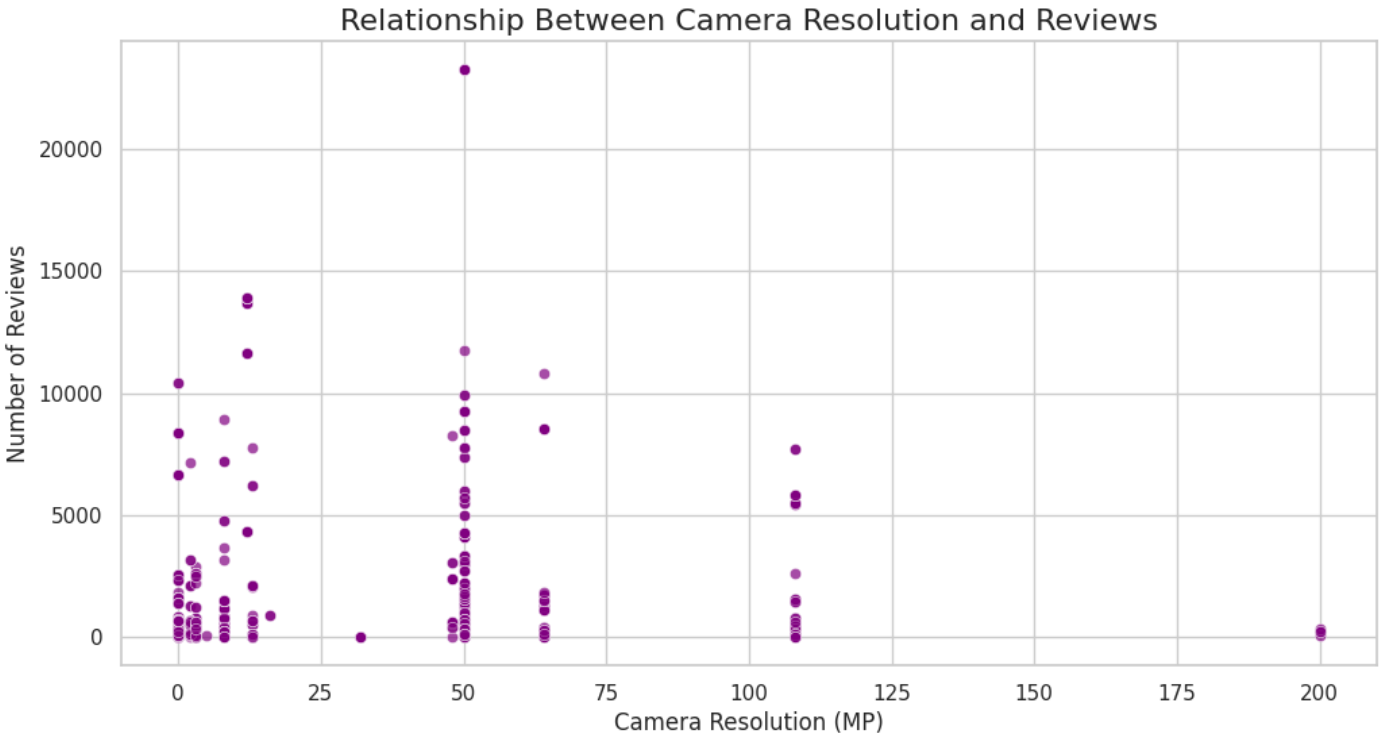
```
plt.ylabel('Discount Price (₹)', fontsize=12)
plt.show()
<ipython-input-39-d2f7677dda30>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0.
Assign the `x` variable to `hue` and set `legend=False` for the same effect.

  sns.boxplot(x=data['RAM (GB)'], y=data['Discount price'], palette='coolwarm')
```



The plot shows a positive relationship between RAM size and discount price, with higher RAM sizes generally having higher median discount prices and greater variability. Higher RAM sizes generally receive larger discounts, especially in absolute terms, although budget models often have smaller discounts.

In [ ]:

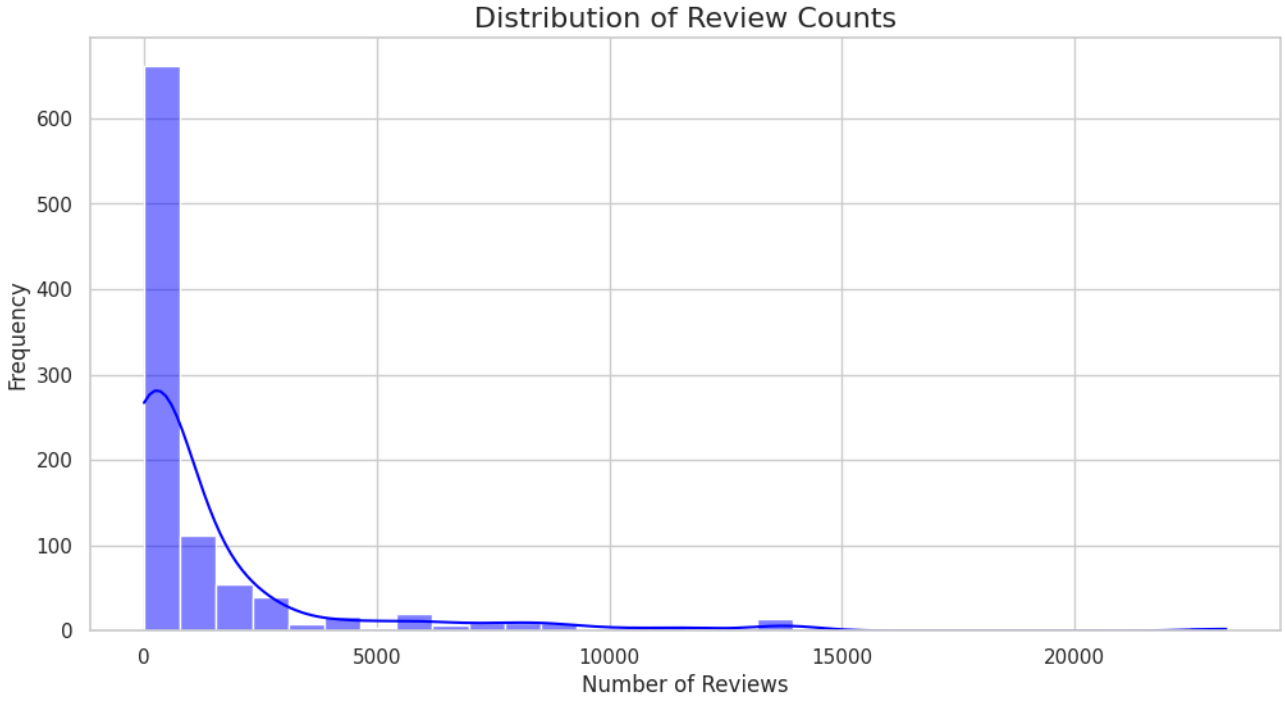
```
sns.set(style="whitegrid")

# Plot the relationship between Camera Resolution and Reviews
plt.figure(figsize=(12, 6))
sns.scatterplot(x=data['Camera'], y=data['Reviews'], alpha=0.7, color='purple')
plt.title('Relationship Between Camera Resolution and Reviews', fontsize=16)
plt.xlabel('Camera Resolution (MP)', fontsize=12)
plt.ylabel('Number of Reviews', fontsize=12)
plt.show()
```



There is a weak positive relationship; mobiles with higher-resolution cameras tend to have more reviews, but exceptions exist.

In [ ]:

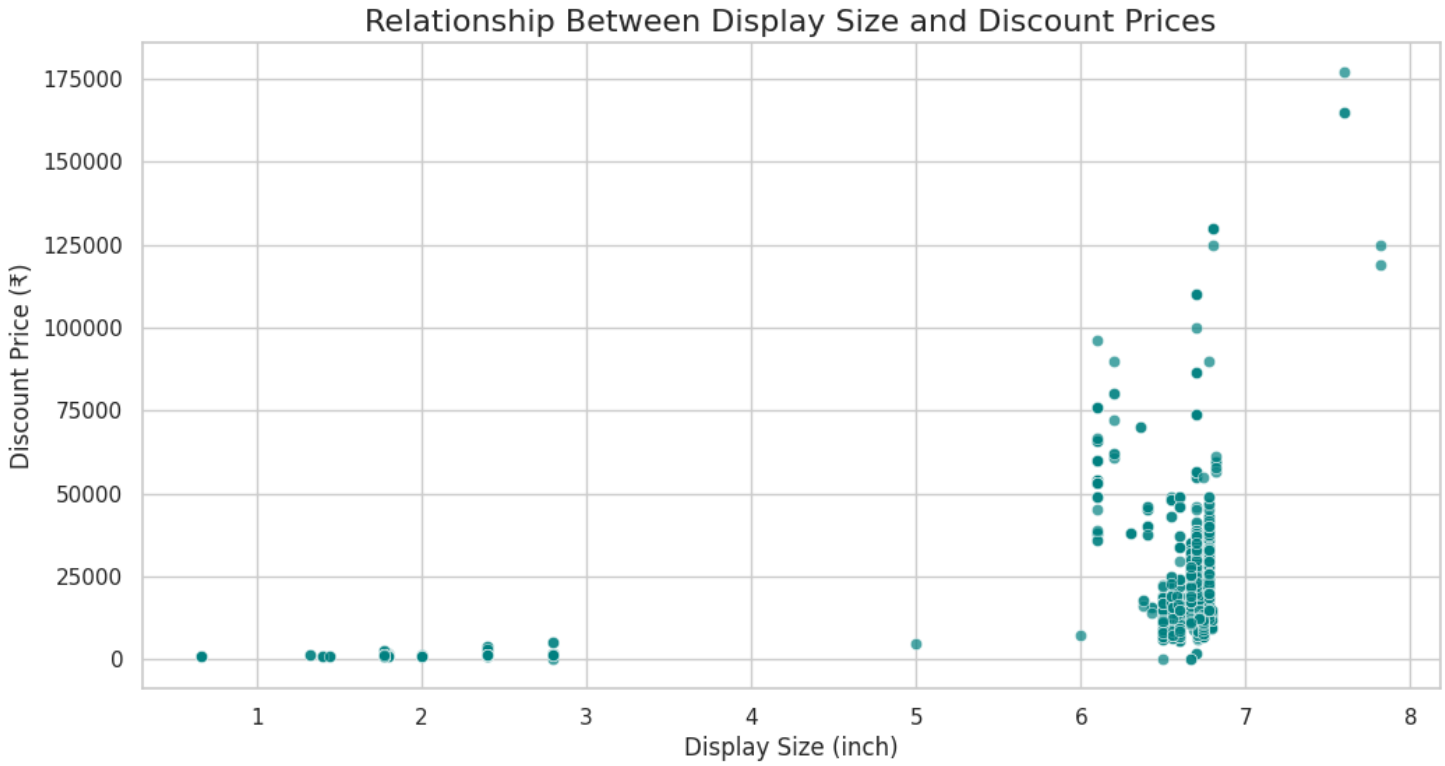
```
sns.set(style="whitegrid")

# Plot the distribution of review counts
plt.figure(figsize=(12, 6))
sns.histplot(data['Reviews'].dropna(), kde=True, bins=30, color='blue')
plt.title('Distribution of Review Counts', fontsize=16)
plt.xlabel('Number of Reviews', fontsize=12)
plt.ylabel('Frequency', fontsize=12)
plt.show()
```



The graph shows a right-skewed distribution, indicating that most items have low review counts, while a few have exceptionally high counts.The number of reviews varies widely, with most phones receiving between 100 to 1,000 reviews, while a few popular models exceed 10,000 reviews.

In [ ]:

```
plt.figure(figsize=(12, 6))
sns.scatterplot(x=data['Display Size (inch)'], y=data['Discount price'], alpha=0.7,
color='teal')
plt.title('Relationship Between Display Size and Discount Prices', fontsize=16)
plt.xlabel('Display Size (inch)', fontsize=12)
plt.ylabel('Discount Price (₹)', fontsize=12)
plt.show()
```



Larger display sizes tend to have slightly higher discounts in absolute terms, but no clear pattern is observed in percentage discounts.

Summary after Visualization

The graphs reveal key insights: mobiles are priced mainly between ₹5,000–₹20,000, with larger discounts on high-priced models. Common configurations include 4–6 GB RAM, 64–128 GB storage, and 48–64 MP cameras. Positive correlations exist between price, RAM, and storage. Reviews and ratings trend upward together, while larger displays show modest discount impacts.