UNIVARIATE ANALYSIS

[49]:
```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt

file_path = 'C:\\Users\\DELL\\Desktop\\Data Analytics\\DataSets\\Cleaned - Assignment.xlsx'
Data = pd.read_excel(file_path)
print(Data)
```

```
    Company Name                          Model  Battery Power (Mah)  \
0        Micromax  BOLT S301 3G Without Charger                 1200
1         Karbonn                      A52 plus                 1300
2         Karbonn                      A52 plus                 1300
3         Karbonn                    A40 Indian                 1400
4            Lava                   Iris Atom X                 1400
..            ...                           ...                  ...
979       Samsung                    Galaxy M21                 6000
980       Samsung                    Galaxy M31                 6000
981       Samsung                    Galaxy M21                 6000
982          Asus                  ROG Phone II                 6000
983          Asus                   ROG Phone 3                 6000

        Battery Type Battery Performance  Rear Camera Type Front Camera Type  \
0             Normal                 Low     Single Camera     Not Available
1        lithium-ion                 Low     Single Camera     Not Available
2        lithium-ion                 Low     Single Camera     Not Available
3             Normal                 Low     Single Camera     Single Camera
4        lithium-ion                 Low     Single Camera     Single Camera
..               ...                 ...               ...               ...
979           Normal      Extremely High  Multiple Cameras     Single Camera
980           Normal      Extremely High  Multiple Cameras     Single Camera
981           Normal      Extremely High  Multiple Cameras     Single Camera
982           Normal      Extremely High  Multiple Cameras     Single Camera
983  lithium-polymer      Extremely High  Multiple Cameras     Single Camera

     Display in Cms. Display Type          RAM          ROM Expandable Upto  \
0               8.89         FWVGA  512 MB RAM      4 GB ROM  Not Expandable
1               8.89          HVGA  512 MB RAM      4 GB ROM           32 GB
2               8.89          HVGA  512 MB RAM      4 GB ROM           32 GB
3              10.16        NORMAL    1 GB RAM      8 GB ROM           32 GB
4              10.16          WVGA  256 MB RAM    512 MB ROM           32 GB
```

[50]:
```
Data.head()
```

[50]:

	Company Name	Model	Battery Power (Mah)	Battery Type	Battery Performance	Rear Camera Type	Front Camera Type	Display in Cms.	Display Type	RAM	ROM	Expandable Upto	Colour	Price	Ratings	Reviews	Warranty Available
0	Micromax	BOLT S301 3G Without Charger	1200	Normal	Low	Single Camera	Not Available	8.89	FWVGA	512 MB RAM	4 GB ROM	Not Expandable	black	2399	2.9	27	Warranty Available
1	Karbonn	A52 plus	1300	lithium-ion	Low	Single Camera	Not Available	8.89	HVGA	512 MB RAM	4 GB ROM	32 GB	black & gold	3290	3.6	555	Warranty Available
2	Karbonn	A52 plus	1300	lithium-ion	Low	Single Camera	Not Available	8.89	HVGA	512 MB RAM	4 GB ROM	32 GB	white & silver	2741	3.6	555	Warranty Available
3	Karbonn	A40 Indian	1400	Normal	Low	Single Camera	Single Camera	10.16	NORMAL	1 GB RAM	8 GB ROM	32 GB	black	2499	3.6	183	Warranty Available
4	Lava	Iris Atom X	1400	lithium-ion	Low	Single Camera	Single Camera	10.16	WVGA	256 MB RAM	512 MB ROM	32 GB	black	1999	3.2	252	Warranty Available

[51]:
```
Data.tail()
```

[51]:

	Company Name	Model	Battery Power (Mah)	Battery Type	Battery Performance	Rear Camera Type	Front Camera Type	Display in Cms.	Display Type	RAM	ROM	Expandable Upto	Colour	Price	Ratings	Reviews	Warranty Available
979	Samsung	Galaxy M21	6000	Normal	Extremely High	Multiple Cameras	Single Camera	16.26	FULL HD+	6 GB RAM	128 GB ROM	512 GB	raven black	17987	4.3	11	Warranty Available
980	Samsung	Galaxy M31	6000	Normal	Extremely High	Multiple Cameras	Single Camera	16.26	FULL HD+	6 GB RAM	128 GB ROM	512 GB	ocean blue	19948	4.4	78	Warranty Available
981	Samsung	Galaxy M21	6000	Normal	Extremely High	Multiple Cameras	Single Camera	16.26	FULL HD+	6 GB RAM	128 GB ROM	512 GB	midnight blue	17986	4.3	11	Warranty Available
982	Asus	ROG Phone II	6000	Normal	Extremely High	Multiple Cameras	Single Camera	16.74	FULL HD+	8 GB RAM	128 GB ROM	Not Expandable	black	39999	4.6	1918	Warranty Available
983	Asus	ROG Phone 3	6000	lithium-polymer	Extremely High	Multiple Cameras	Single Camera	16.74	FULL HD+	8 GB RAM	128 GB ROM	Not Expandable	black	49999	4.5	205	Warranty Available

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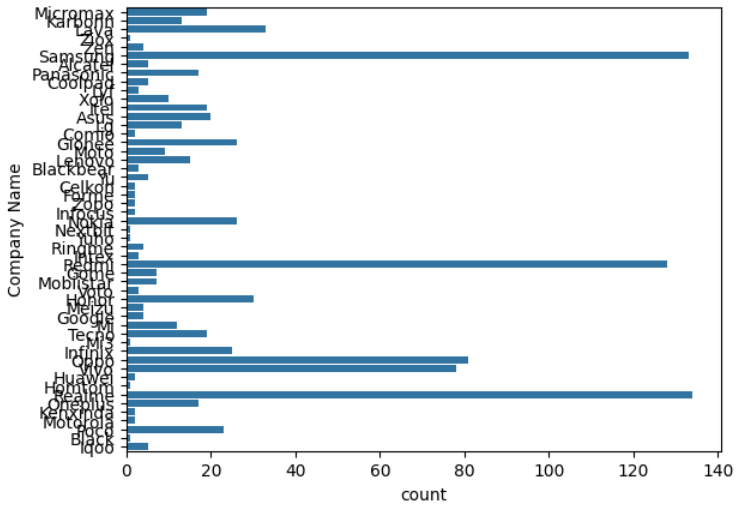
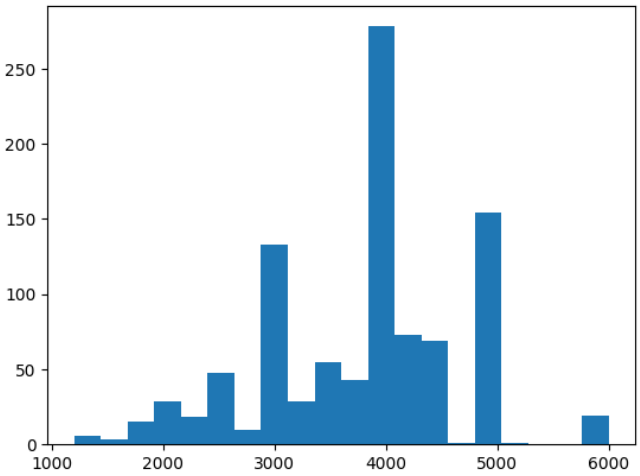
[52]:
```
#Compnay-Wise Count
sns.countplot(Data, y = "Company Name")
```

[52]:
```
<Axes: xlabel='count', ylabel='Company Name'>
```

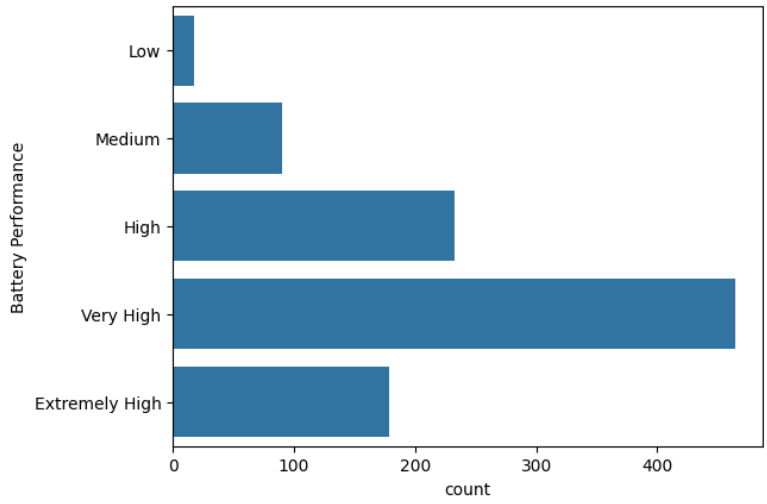


[53]:
```
#Battery Power of Phones
plt.hist(Data['Battery Power (Mah)'], bins = 20)
plt.show()
```



[54]:
```
#Battery Performance
sns.countplot(Data, y = "Battery Performance")
```

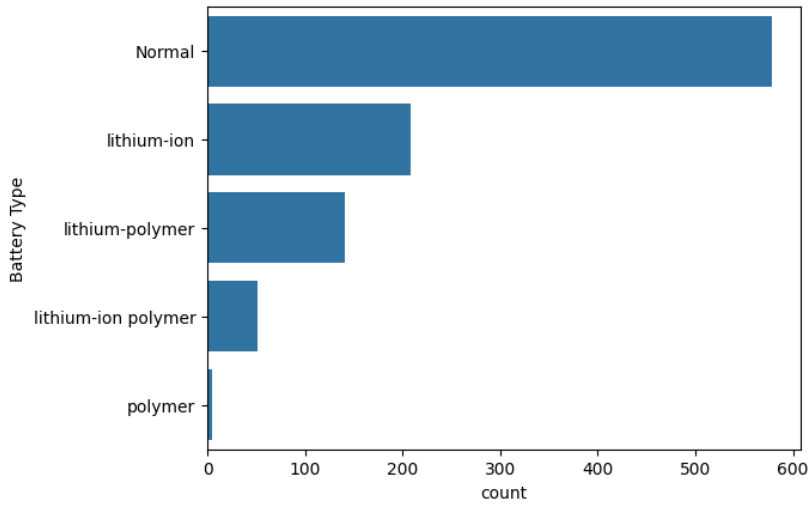
[54]:
```
<Axes: xlabel='count', ylabel='Battery Performance'>
```



UNIVARIATE ANALYSIS

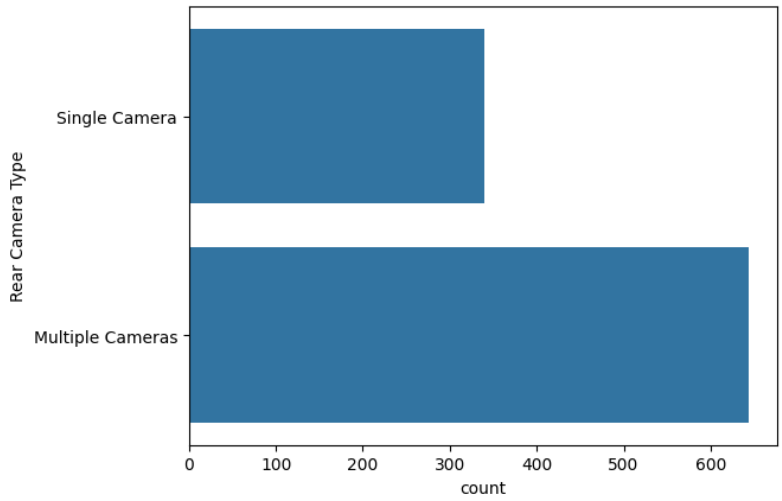
[64]:
```
#Battery Performance
sns.countplot(Data, y = "Battery Type")
```

[64]:
```
<Axes: xlabel='count', ylabel='Battery Type'>
```



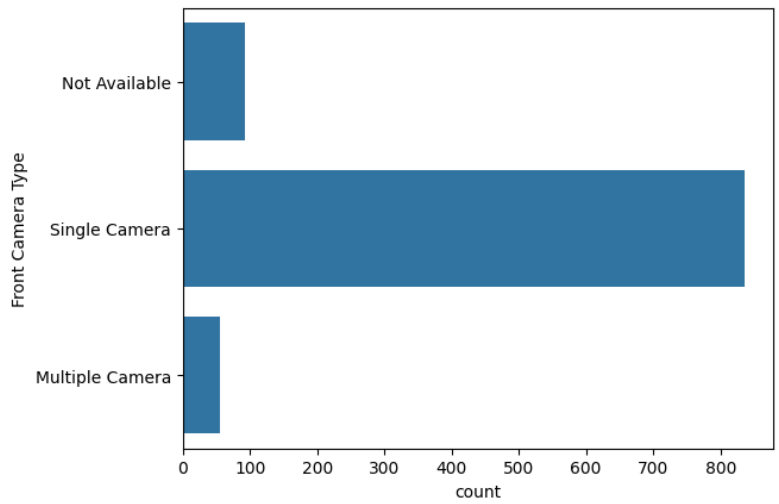
[32]:
```
#Rear Camera Type Phones
sns.countplot(Data, y = "Rear Camera Type")
```

[32]:
```
<Axes: xlabel='count', ylabel='Rear Camera Type'>
```



[55]:
```
#Front Camera Type Phones
sns.countplot(Data, y = "Front Camera Type")
```

[55]:
```
<Axes: xlabel='count', ylabel='Front Camera Type'>
```



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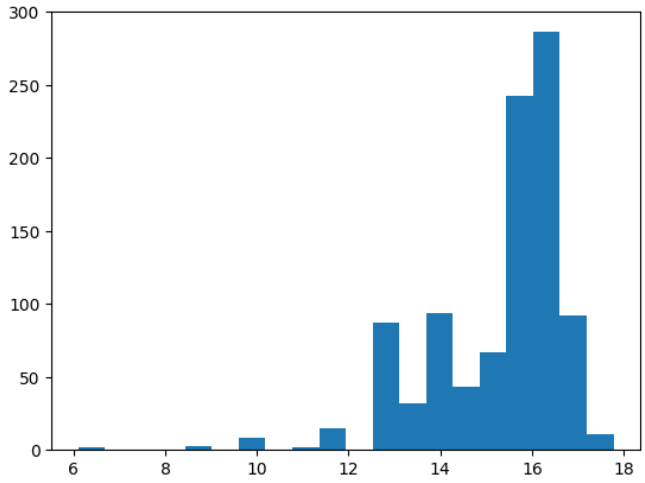
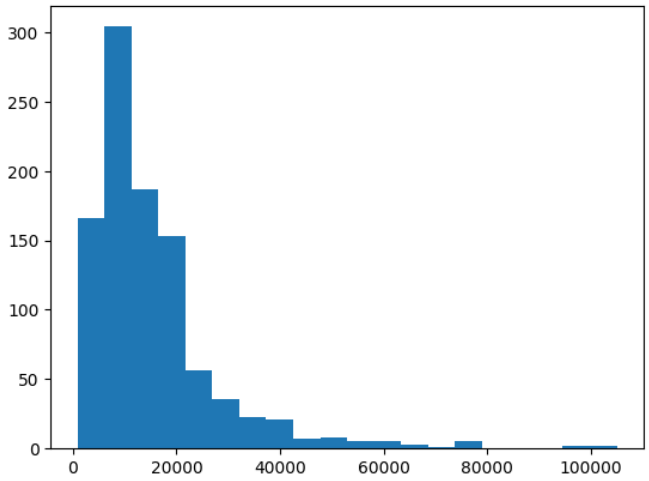
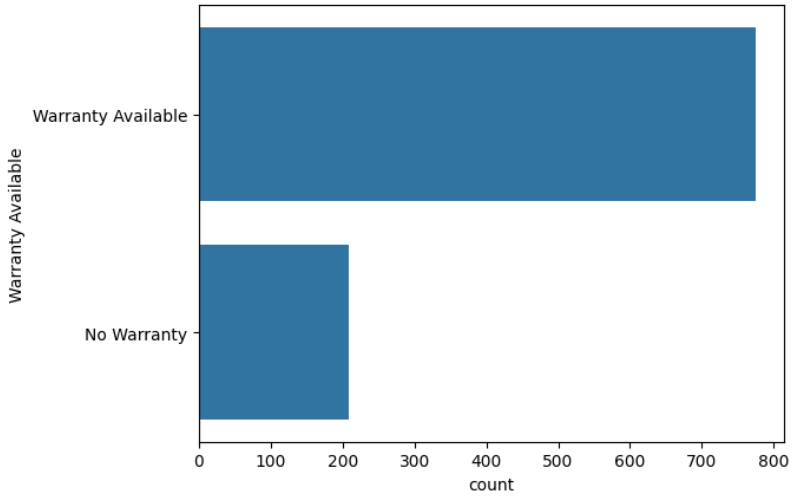
[56]:
```
#Display Size Wise
plt.hist(Data['Display in Cms.'], bins = 20)
plt.show()
```



[57]:
```
#Phones Price-Wise
plt.hist(Data['Price'], bins = 20)
plt.show()
```



[58]:
```
#Count of Warranty
sns.countplot(Data['Warranty Available'])
plt.show()
```



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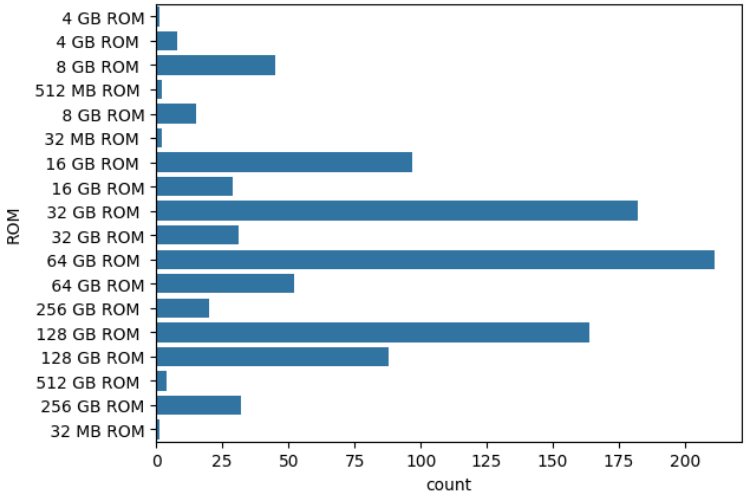
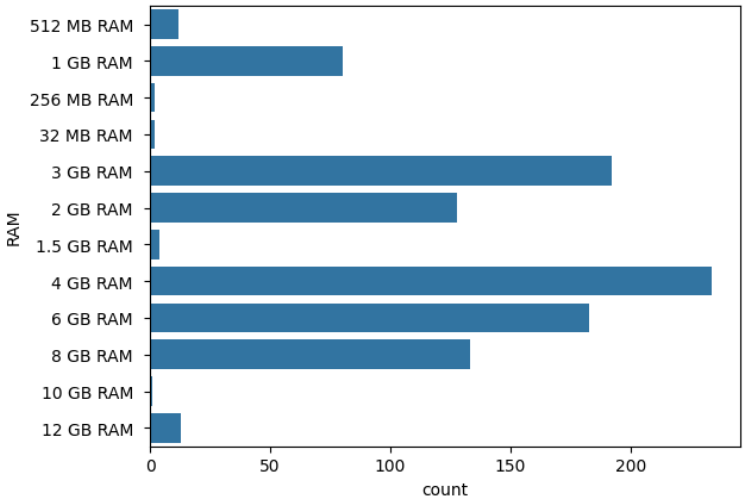
[60]:
```
#ROM Wise COunt of Smartphones
#ROM stands for Read-Only Memory and is the permanent storage space on a phone that stores the operating system, apps, and personal data:
sns.countplot(Data['ROM'])
plt.show()
```



[62]:
```
#RAM Wise Count - Phone memory refers to RAM (Random Access Memory).
#RAM is the part of the phone that is used to store the operating system (OS) and where apps and data currently in use are kept.
sns.countplot(Data['RAM'])
plt.show()
```



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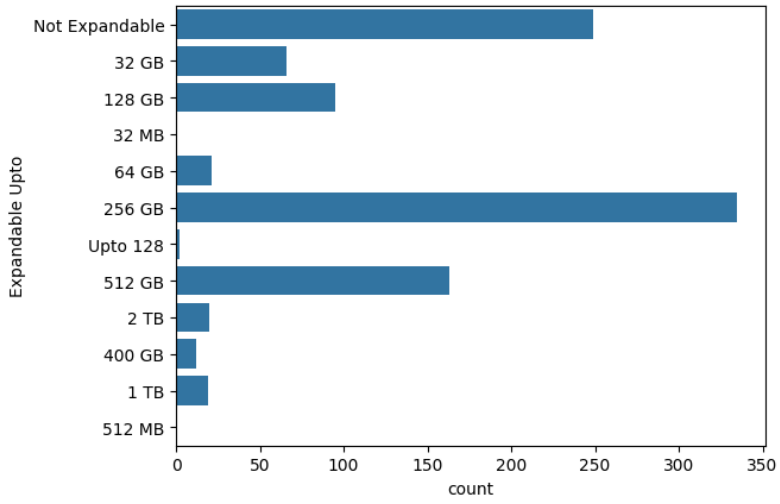
[63]:
```
#SmartPhones with Expandable & Unexpandable Memory
sns.countplot(Data['Expandable Upto'])
plt.show()
```



[ ]: