

# MOBILE PHONE PRICE COMPARISON

## SOURCE CODE

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

def read_data():
    """Loads the mobile price data from a CSV file."""
    try:
        df=pd.read_csv(r'C:\Users\velayudhanshree\OneDrive\Desktop\Book1.csv')
        return df
    except FileNotFoundError:
        print(f'Error: file not found. Please make sure the file is in the correct directory.')
        return None

def display_data(df):
    #displaying the data's
    print(df)

def visualize_price_brand(df):
    brand_avg_price=df.groupby('BRAND')['PRICE'].mean()
    print("\nAverage Price By BRAND:")
    print(brand_avg_price)
    # Bar graph for average price by Battery
    plt.figure(figsize=(10, 6))
    brand_avg_price.plot.pie(autopct='%1.1f%%',figsize=(6,6))
```

```
plt.title('Price Distribution by Brand')
plt.xlabel('Brands')
plt.ylabel('Average Price (₹)')
plt.xticks(rotation=45)
plt.show()
```

```
def visualize_price_ram(df):
    ram_price=df.groupby('RAM')['PRICE'].mean()
    print("\nAverage price by RAM:")
    print(ram_price)
    # Price distribution with RAM
    plt.figure(figsize=(10, 6))
    sns.scatterplot(data=df, x='RAM', y='PRICE', hue='BRAND')
    plt.title('Price vs. RAM')
    plt.xlabel('RAM')
    plt.ylabel('PRICE')
    plt.grid(True)
    plt.show()
    #ram_price.plot.pie(autopct='%1.1f%%', figsize=(6, 6))
    #plt.title('Price Distribution by RAM')
    #plt.ylabel("") # Remove ylabel for better visualization
    #plt.show()
```

```
def visualize_price_battery(df):
    battery_price=df.groupby('BATTERY')['PRICE'].mean()
    print("\nAverage price by BATTERY:")
    print(battery_price)
    # Price distribution with Battery
    plt.figure(figsize=(10, 6))
```

```
sns.barplot(x=battery_price.index, y=battery_price.values, palette='viridis')
plt.title('Price Distribution by Battery')
plt.xlabel('Battery Capacity (mAh)')
plt.ylabel('Average Price (₹)')
plt.xticks(rotation=45)
plt.show()
```

```
if __name__ == "__main__":
    mobile_df = read_data()
```

```
while True:
```

```
    print("\Mobile Price Comparision")
    print("1. Display the dataset")+
    print("2. To visualize the data of PRICES with BRAND")
    print("3. To visualize the data of PRICES with RAM")
    print("4. To visualize the data of PRICES with BATTERY")
    print("5. Exit")
```

```
choice = int(input("\nEnter your choice of Operations: "))
```

```
if choice==1:
```

```
    display_data(mobile_df)
```

```
elif choice==2:
```

```
    visualize_price_brand(mobile_df)
```

```
elif choice==3:
```

```
    visualize_price_ram(mobile_df)
```

```
elif choice==4:
```

```
visualize_price_battery(mobile_df)
```

```
elif choice==5:
```

```
    break
```

```
else:
```

```
    print("Incorrect Choice")
```

# OUTPUT

Mobile Phone Price Comparision

1. Display the dataset
2. To visualize the data of PRICES with BRAND
3. To visualize the data of PRICES with RAM
4. To visualize the data of PRICES with BATTERY
5. Exit

Enter your choice of Operations: 1

	BRAND	MODEL	PRICE	RAM	STORAGE	BATTERY \
0	Redmi	Redmi 14	12999	6	128	5000
1	Realme	Realme C65	11999	4	64	5000
2	Samsung	Galaxy M15 5G	14499	4	128	6000
3	Oppo	Oppo A2m 5G	13990	6	128	5000
4	Vivo	Vivo Y18e	11499	4	64	5000
5	Moto	Moto G Power (2025)	15999	6	128	6000
6	Realme	Realme Narzo 70i	10999	4	64	5000
7	Samsung	Galaxy A06	10499	4	64	5000
8	Vivo	Vivo Y03	9999	4	64	5000
9	Oppo	Oppo A1X	12490	4	128	5000
10	Redmi	Redmi Note 13 Pro 5G	24999	8	128	5000
11	Realme	Realme 12 Pro 5G	25999	8	128	5000
12	Samsung	Galaxy A16 5G	21999	6	128	5000
13	Oppo	Oppo A3 Pro 5G	22990	8	128	5000
14	Vivo	Vivo Y200 5G	23999	8	128	4800
15	OnePlus	Nord N30 SE	26999	8	128	5000
16	Moto	Moto G84 5G	28999	8	128	5000
17	iQOO	iQOO Z9 5G	29990	8	128	5000
18	Redmi	Redmi Note 13 5G	21999	8	256	5000

18	Redmi	Redmi Note 12 5G	21999	8	256	5000
19	Realme	Realme 11 Pro 5G	23999	8	128	5000
20	Samsung	Galaxy A25 5G	26999	8	128	5000
21	Oppo	Oppo F27 Pro+ 5G	27990	8	128	5000
22	Vivo	Vivo T3 5G	22999	8	128	5000
23	OnePlus	Nord CE3 Lite 5G (If avail.)	20999	8	128	5000
24	Moto	Moto G73 5G (If avail.)	21999	8	128	5000
25	iQOO	iQOO Z7 Pro 5G (If avail.)	23990	8	128	4600
26	Redmi	Redmi Note 12 Pro+ 5G (If avail.)	25999	8	256	5000
27	Realme	Realme 10 Pro+ 5G (If avail.)	22999	6	128	5000
28	Samsung	Galaxy M34 5G (If avail.)	20999	6	128	6000

#### CHARGER SPEED

0	18
1	15
2	25
3	33
4	15
5	15
6	10
7	15
8	10
9	10
10	67
11	67
12	25
13	67
14	44
15	33
16	30
17	44

19	67
20	25
21	67
22	44
23	67
24	30
25	66
26	120
27	67
28	25

#### Mobile Phone Price Comparision

1. Display the dataset
2. To visualize the data of PRICES with BRAND
3. To visualize the data of PRICES with RAM
4. To visualize the data of PRICES with BATTERY
5. Exit

Enter your choice of Operations: 2

#### Average Price By BRAND:

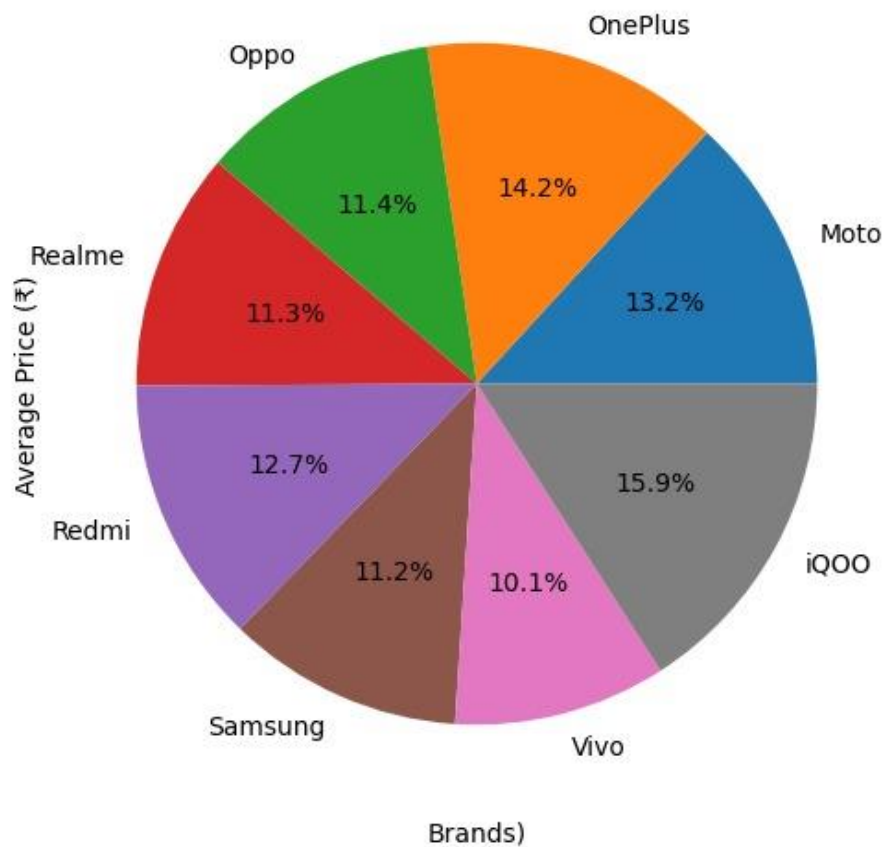
BRAND

Moto	22332.333333
OnePlus	23999.000000
Oppo	19365.000000
Realme	19199.000000
Redmi	21499.000000
Samsung	18999.000000
Vivo	17124.000000
iQOO	26990.000000

Name: PRICE, dtype: float64

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### Price Distribution by Brand



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### Mobile Phone Price Comparison

1. Display the dataset
2. To visualize the data of PRICES with BRAND
3. To visualize the data of PRICES with RAM
4. To visualize the data of PRICES with BATTERY
5. Exit

Enter your choice of Operations: 3

Average price by RAM:

RAM

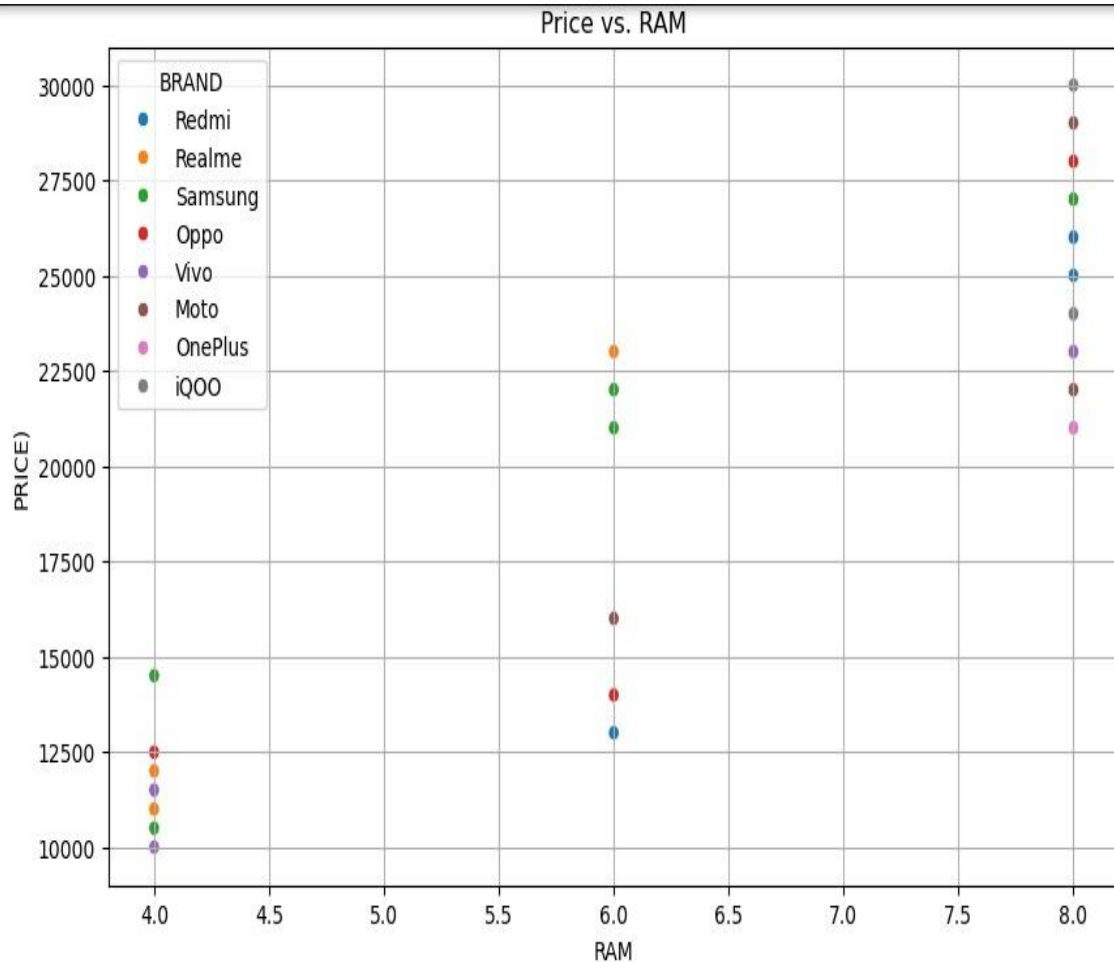
4 11712.000000

6 18164.166667

8 25059.250000

Name: PRICE, dtype: float64





### Mobile Phone Price Comparision

1. Display the dataset
2. To visualize the data of PRICES with BRAND
3. To visualize the data of PRICES with RAM
4. To visualize the data of PRICES with BATTERY
5. Exit

Enter your choice of Operations: 4

Average price by BATTERY:

BATTERY

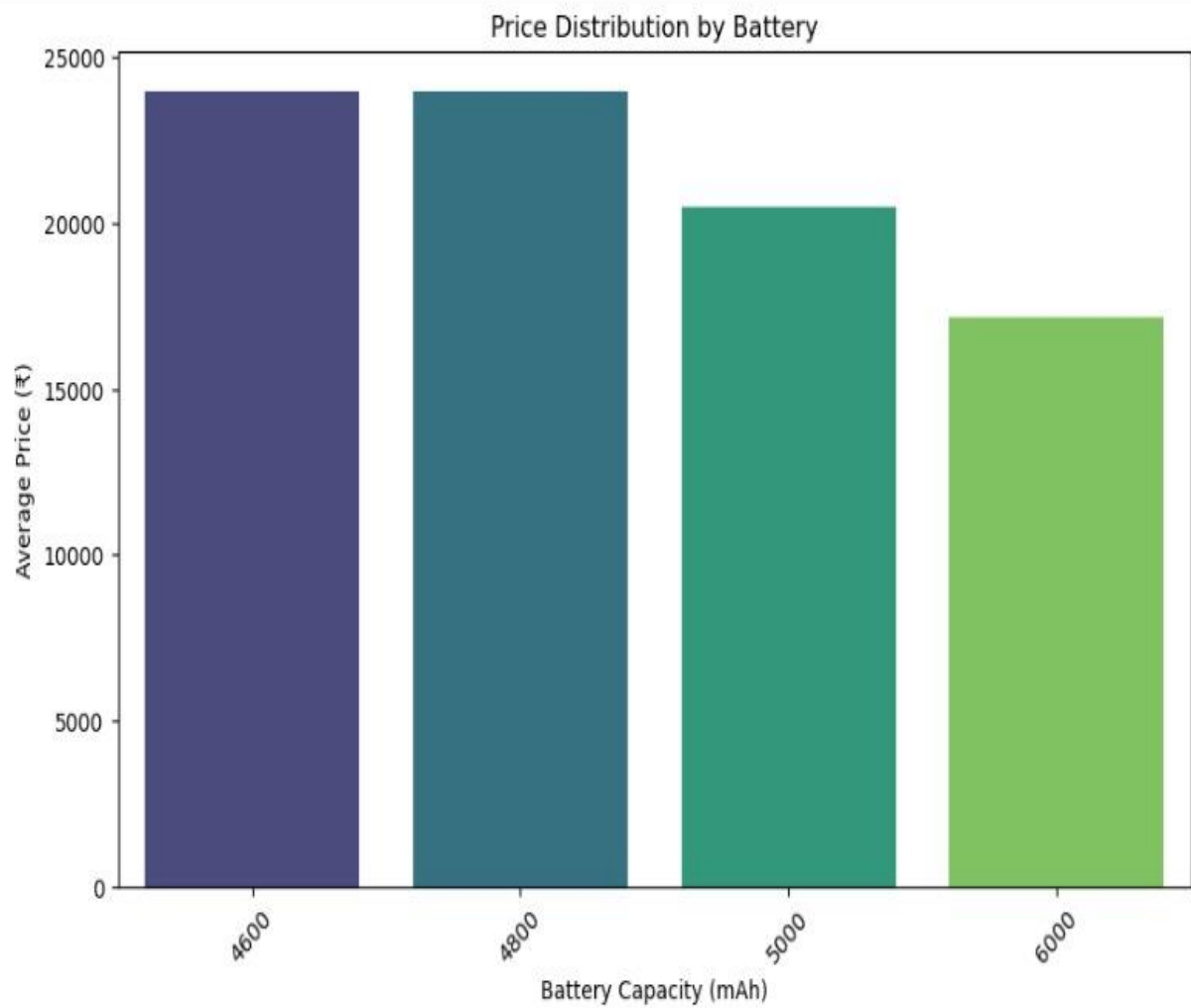
4600 23990.000000

4800 23999.000000

5000 20517.958333

6000 17165.666667

Name: PRICE, dtype: float64



#### Mobile Phone Price Comparision

1. Display the dataset
2. To visualize the data of PRICES with BRAND
3. To visualize the data of PRICES with RAM
4. To visualize the data of PRICES with BATTERY
5. Exit

Enter your choice of Operations: 5