In [2]:
```python
# Dependencies and Setup
import pandas as pd

# File to Load (Remember to Change These)
file_to_load = "Resources/purchase_data.csv"

# Read Purchasing File and store into Pandas data frame
purchase_data_df = pd.read_csv(file_to_load)
```

In [3]:
```python
player_count = len(purchase_data_df["SN"].unique())
summary_table1 = pd.DataFrame({"Total Players": [player_count]})
summary_table1
```

Out[3]:

	Total Players
0	576

In [4]:
```python
unique_items_count = len(purchase_data_df["Item ID"].unique())
avg_price = purchase_data_df["Price"].mean()
total_number_purchases = len(purchase_data_df["Purchase ID"])
total_revenue = purchase_data_df["Price"].sum()

summary_table2 = pd.DataFrame({"Total Unique Items": [unique_items_count],
                               "Average Price": [avg_price],
                               "Latest Year": [total_number_purchases],
                               "Total Reviews": [total_revenue]})

summary_table2
```

Out[4]:

	Total Unique Items	Average Price	Latest Year	Total Reviews
0	183	3.050987	780	2379.77

In [5]:
```python
gender_data_df = purchase_data_df.groupby(["Gender"])

total_players = gender_data_df["SN"].nunique()
percentage_players = total_players.groupby(level=0).apply(lambda x: x / (total
_players.sum()/100))

summary_table3 = pd.DataFrame({"Total Count": total_players,
                               "Percentage of Players": percentage_players})

summary_table3
```

Out[5]:

	Total Count	Percentage of Players
Gender		
Female	81	14.062500
Male	484	84.027778
Other / Non-Disclosed	11	1.909722

In [6]:
```python
purchase_count = gender_data_df["SN"].count()
avg_price_gender = gender_data_df["Price"].mean()
total_purchase_price = gender_data_df["Price"].sum()
avg_price_gender_unique = total_purchase_price / total_players

summary_table4 = pd.DataFrame({"Purchase Count": purchase_count,
                               "Average Purchase Price": avg_price_gender,
                               "Total Purchase Value": total_purchase_price,
                               "Avg Total Purchase Price": avg_price_gender_un
ique})
summary_table4
```

Out[6]:

Gender	Purchase Count	Average Purchase Price	Total Purchase Value	Avg Total Purchase Price
Female	113	3.203009	361.94	4.468395
Male	652	3.017853	1967.64	4.065372
Other / Non-Disclosed	15	3.346000	50.19	4.562727

In [7]:
```python
bins = [0, 9, 14, 19, 24, 29, 34, 39, 100]
group_labels = [">10", "10-14", "15-19", "20-24", "25-29", "30-34", "35-39",
"40+"]

pd.cut(purchase_data_df["Age"], bins, labels=group_labels)
purchase_data_df["Age Group"] = pd.cut(purchase_data_df["Age"], bins, labels=g
roup_labels)
age_group_df = purchase_data_df.groupby(["Age Group"])

purchase_count_age = age_group_df["SN"].count()
avg_price_age = age_group_df["Price"].mean()
total_purchase_price_age = age_group_df["Price"].sum()
total_players_age = age_group_df["SN"].nunique()
avg_price_gender_unique_age = total_purchase_price_age / total_players_age


summary_table5 = pd.DataFrame({"Purchase Count": purchase_count_age,
                               "Average Purchase Price": avg_price_age,
                               "Total Purchase Value": total_purchase_price_ag
e,
                               "Avg Total Purchase Price": avg_price_gender_uni
que_age})
summary_table5
```

Out[7]:

Age Group	Purchase Count	Average Purchase Price	Total Purchase Value	Avg Total Purchase Price
>10	23	3.353478	77.13	4.537059
10-14	28	2.956429	82.78	3.762727
15-19	136	3.035956	412.89	3.858785
20-24	365	3.052219	1114.06	4.318062
25-29	101	2.900990	293.00	3.805195
30-34	73	2.931507	214.00	4.115385
35-39	41	3.601707	147.67	4.763548
40+	13	2.941538	38.24	3.186667

In [8]:
```python
big_spenders_df = purchase_data_df.groupby(["SN"])

purchase_count_spend = big_spenders_df["SN"].count()
avg_price_spend = big_spenders_df["Price"].mean()
total_purchase_price_spend = big_spenders_df["Price"].sum()

summary_table6 = pd.DataFrame({"Purchase Count": purchase_count_spend,
                               "Average Purchase Price": avg_price_spend,
                               "Total Purchase Value": total_purchase_price_sp
end})

summary_table6.sort_values(by=["Total Purchase Value"], ascending=False).head(
5)
```

Out[8]:

SN	Purchase Count	Average Purchase Price	Total Purchase Value
Lisosia93	5	3.792000	18.96
Idastidru52	4	3.862500	15.45
Chamjask73	3	4.610000	13.83
Iral74	4	3.405000	13.62
Iskadarya95	3	4.366667	13.10

In [9]:
```python
popular_items_df = purchase_data_df.groupby(["Item ID"])

purchase_count_popular = popular_items_df["Item Name"].count()
item_name = popular_items_df["Item Name"].unique()
item_price_popular = popular_items_df["Price"].unique()
total_purchase_price_popular = popular_items_df["Price"].sum()

summary_table7 = pd.DataFrame({"Item Name": item_name,
                               "Purchase Count": purchase_count_popular,
                               "Item Price": item_price_popular,
                               "Total Purchase Value": total_purchase_price_po
pular})


summary_table7.sort_values(by=["Purchase Count"], ascending=False).head(5)
```

Out[9]:

Item ID	Item Name	Purchase Count	Item Price	Total Purchase Value
178	[Oathbreaker, Last Hope of the Breaking Storm]	12	[4.23]	50.76
145	[Fiery Glass Crusader]	9	[4.58]	41.22
108	[Extraction, Quickblade Of Trembling Hands]	9	[3.53]	31.77
82	[Nirvana]	9	[4.9]	44.10
19	[Pursuit, Cudgel of Necromancy]	8	[1.02]	8.16

In [10]:
```python
summary_table7.sort_values(by=["Total Purchase Value"], ascending=False).head(
5)
```

Out[10]:

Item ID	Item Name	Purchase Count	Item Price	Total Purchase Value
178	[Oathbreaker, Last Hope of the Breaking Storm]	12	[4.23]	50.76
82	[Nirvana]	9	[4.9]	44.10
145	[Fiery Glass Crusader]	9	[4.58]	41.22
92	[Final Critic]	8	[4.88]	39.04
103	[Singed Scalpel]	8	[4.35]	34.80

In [ ]: