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Batch :E1

```python
import pandas as pd

# Read the CSV file into a DataFrame
df = pd.read_csv('/content/product_sales.csv')

highest_sales_category = df.groupby('Category')['Sales'].sum().idxmax()
highest_sales = df.groupby('Category')['Sales'].sum().max()
print("The product category with the highest sales is",
highest_sales_category)
print("Total earnings from that category:", highest_sales)

best_product = df['Product'].loc[df['Sales'].idxmax()]
print("The product that sold the most was", best_product)

highest_avg_price_product = df.groupby('Product')['Price'].mean().idxmax()
highest_avg_price = df.groupby('Product')['Price'].mean().max()
print("The product with the highest average price is",
highest_avg_price_product)
print("Highest average price:", highest_avg_price)

categories_together = df.groupby('Product')['Category'].agg(lambda x: ',
'.join(set(x))).reset_index()
print("Product Categories Often Sold Together:")
print(categories_together)
```

```python
import pandas as pd

# Read the CSV file into a DataFrame
df = pd.read_csv('/content/product_sales.csv')
# Question 1: Which product category has the highest sales? How much was earned from that category?
highest_sales_category = df.groupby('Category')['Sales'].sum().idxmax()
highest_sales = df.groupby('Category')['Sales'].sum().max()
print("The product category with the highest sales is", highest_sales_category)
print("Total earnings from that category:", highest_sales)
# Question 2: Which product sold the most? Why do you think it did?
best_product = df['Product'].loc[df['Sales'].idxmax()]
print("The product that sold the most was", best_product)

# Question 3: Which product has the highest average price?
highest_avg_price_product = df.groupby('Product')['Price'].mean().idxmax()
highest_avg_price = df.groupby('Product')['Price'].mean().max()
print("The product with the highest average price is", highest_avg_price_product)
print("Highest average price:", highest_avg_price)

# Question 4: Which product categories are often sold together?
categories_together = df.groupby('Product')['Category'].agg(lambda x: ', '.join(set(x))).reset_index()
print("Product Categories Often Sold Together:")
print(categories_together)
```

```
The product category with the highest sales is Fruit
Total earnings from that category: 450
The product that sold the most was Orange
The product with the highest average price is Fish
Highest average price: 4.5
Product Categories Often Sold Together:
     Product   Category
0      Apple      Fruit
1     Banana      Fruit
2       Beef       Meat
3     Carrot  Vegetable
4    Chicken       Meat
5       Fish    Seafood
6     Orange      Fruit
7     Potato  Vegetable
8     Tomato  Vegetable
```