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Batch :E1

```
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)
```

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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

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sales_data.csv

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