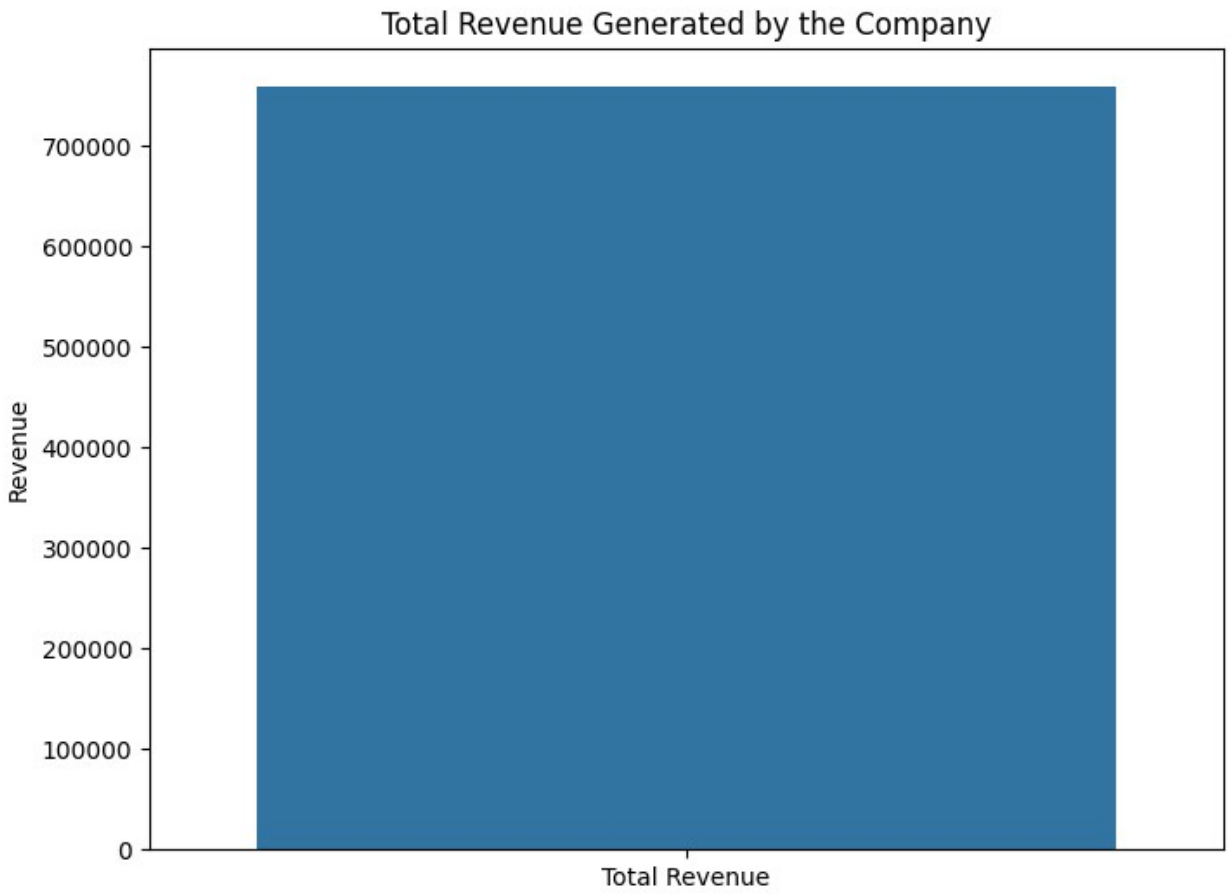
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Load your data into a DataFrame
data = pd.read_csv("sales_data.csv")  # Replace 'your_data.csv' with
the actual file path


# Question 1: Total revenue generated by the company
total_revenue = data['revenue'].sum()
print("1. Total revenue generated by the company:", total_revenue)

# Visualization for Question 1
plt.figure(figsize=(8, 6))
plt.title('Total Revenue Generated by the Company')
sns.barplot(x=['Total Revenue'], y=[total_revenue])
plt.ylabel('Revenue')
plt.show()
```

```
1. Total revenue generated by the company: 758330.0
```



```
# Question 2: Product with the highest revenue and its amount
highest_revenue_product = data.loc[data['revenue'].idxmax()]
print("2. Product with the highest revenue:",
highest_revenue_product['product'])
print("   Revenue generated by the highest revenue product:",
highest_revenue_product['revenue'])
```

```
2. Product with the highest revenue: Smartphone
   Revenue generated by the highest revenue product: 7200.0
```

```
# Question 3: Average price of a product sold by the company
average_price = data['price'].mean()
print("3. Average price of a product sold by the company:",
average_price)
```

```
3. Average price of a product sold by the company: 211.22615803814713
```

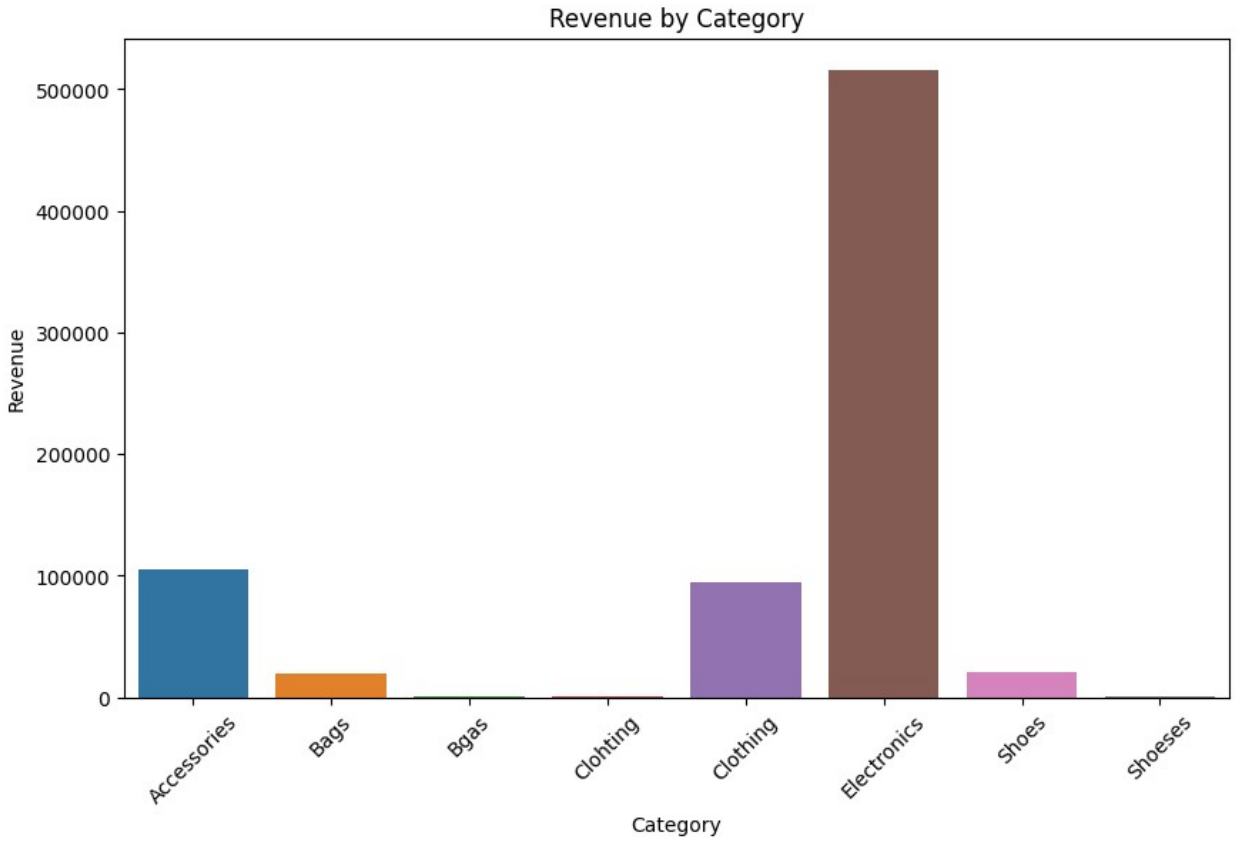
```
# Question 4: Total quantity of products sold by the company
total_quantity = data['quantity'].sum()
print("4. Total quantity of products sold by the company:",
total_quantity)
```

```
4. Total quantity of products sold by the company: 5360.0
```

```
# Question 5: Category with the highest revenue and its amount
category_revenue_data = data.groupby('category')
['revenue'].sum().reset_index()
category_highest_revenue =
category_revenue_data.loc[category_revenue_data['revenue'].idxmax()]
print("5. Category with the highest revenue:",
category_highest_revenue['category'])
print("   Revenue generated by the highest revenue category:",
category_highest_revenue['revenue'])

# Visualization for Question 5
plt.figure(figsize=(10, 6))
plt.title('Revenue by Category')
sns.barplot(x='category', y='revenue', data=category_revenue_data)
plt.xlabel('Category')
plt.ylabel('Revenue')
plt.xticks(rotation=45)
plt.show()
```

```
5. Category with the highest revenue: Electronics
   Revenue generated by the highest revenue category: 516080.0
```




```
# Question 6: Average revenue per sale
average_revenue_per_sale = data['revenue'].mean()
print("6. Average revenue per sale:", average_revenue_per_sale)
```

```
6. Average revenue per sale: 2060.679347826087
```

```
# Question 7: Total revenue generated in each quarter
data['date'] = pd.to_datetime(data['date'])
data['quarter'] = data['date'].dt.quarter
total_revenue_by_quarter = data.groupby('quarter')['revenue'].sum()
print("7. Total revenue generated in each quarter of the year:")
print(total_revenue_by_quarter)

# Visualization for Question 7
plt.figure(figsize=(8, 6))
plt.title('Total Revenue by Quarter')
sns.barplot(x=total_revenue_by_quarter.index,
y=total_revenue_by_quarter.values)
plt.xlabel('Quarter')
plt.ylabel('Total Revenue')
plt.show()
```

```
7. Total revenue generated in each quarter of the year:
quarter
1    182100.0
2    183970.0
3    197680.0
4    194580.0
Name: revenue, dtype: float64
```