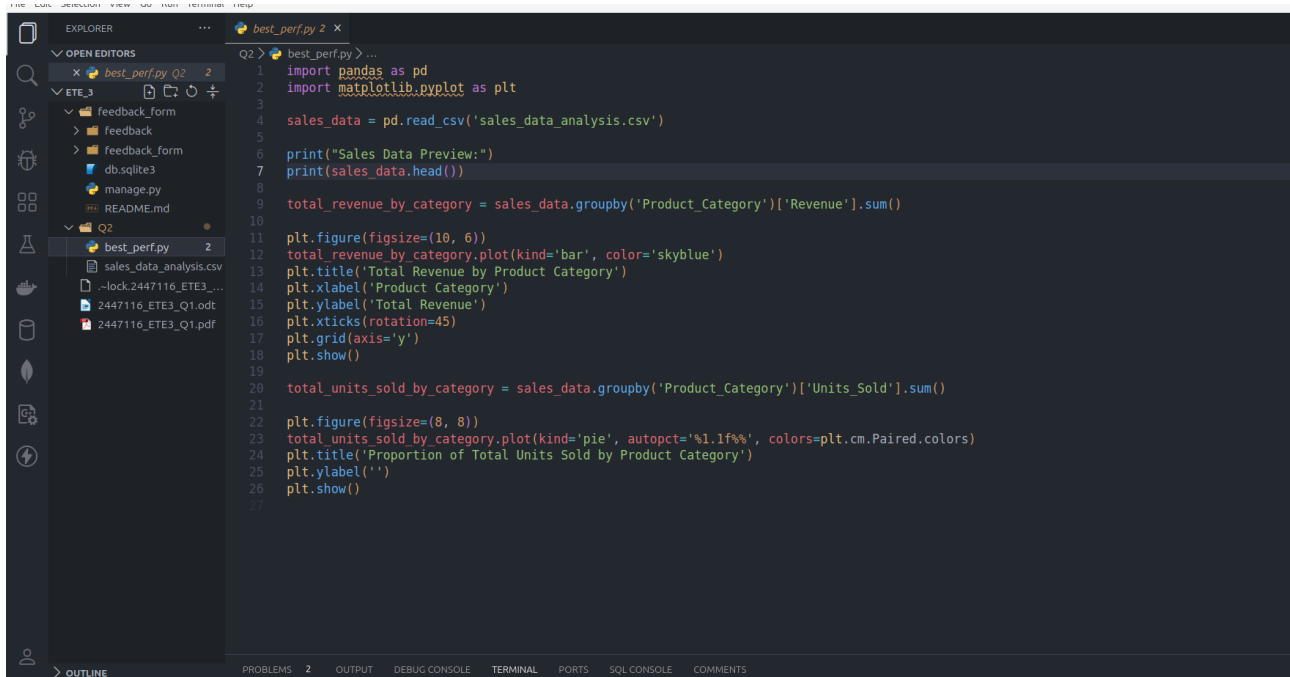


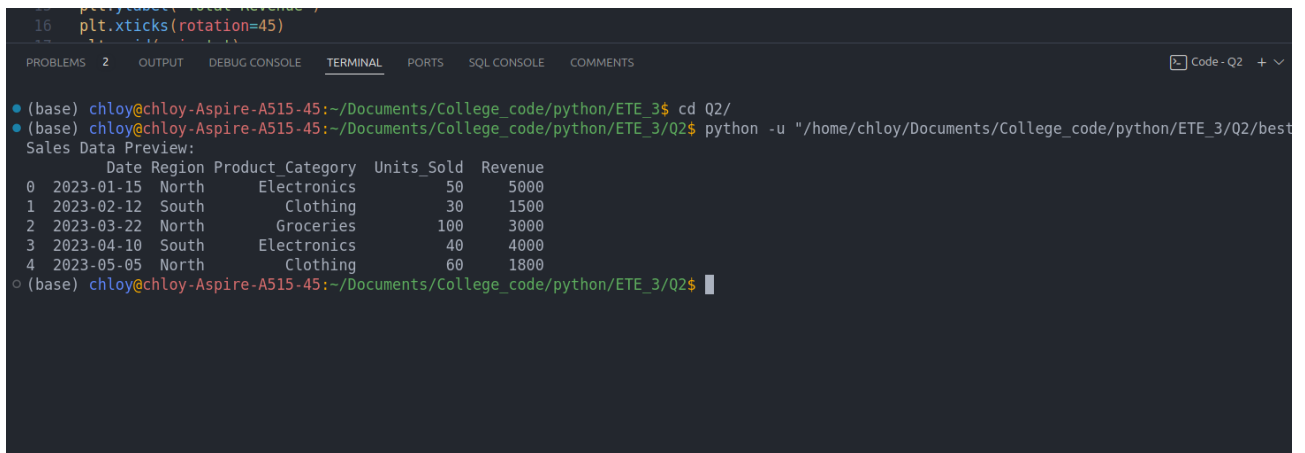
Q2. Plotting graphs

Code:



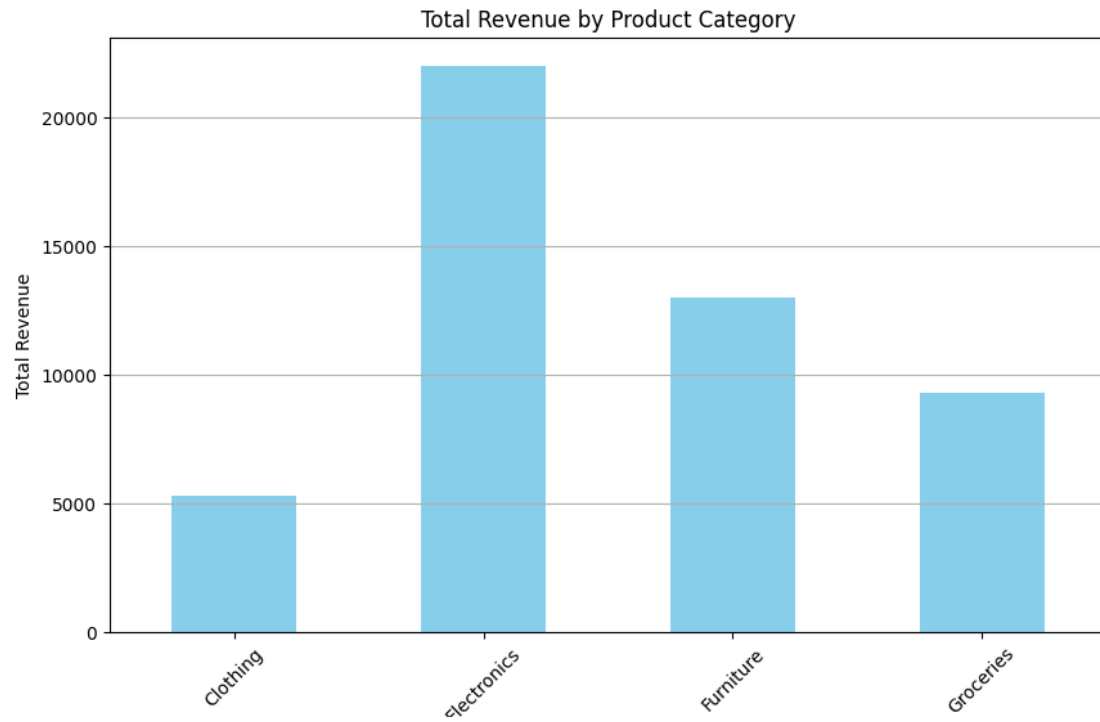
```
1 import pandas as pd
2 import matplotlib.pyplot as plt
3
4 sales_data = pd.read_csv('sales_data_analysis.csv')
5
6 print("Sales Data Preview:")
7 print(sales_data.head())
8
9 total_revenue_by_category = sales_data.groupby('Product_Category')['Revenue'].sum()
10
11 plt.figure(figsize=(10, 6))
12 total_revenue_by_category.plot(kind='bar', color='skyblue')
13 plt.title('Total Revenue by Product Category')
14 plt.xlabel('Product Category')
15 plt.ylabel('Total Revenue')
16 plt.xticks(rotation=45)
17 plt.grid(axis='y')
18 plt.show()
19
20 total_units_sold_by_category = sales_data.groupby('Product_Category')['Units_Sold'].sum()
21
22 plt.figure(figsize=(8, 8))
23 total_units_sold_by_category.plot(kind='pie', autopct='%1.1f%%', colors=plt.cm.Paired.colors)
24 plt.title('Proportion of Total Units Sold by Product Category')
25 plt.ylabel('')
26 plt.show()
27
```

Output:



```
(base) chloy@chloy-Aspire-A515-45:~/Documents/College_code/python/ETE_3$ cd Q2/
(base) chloy@chloy-Aspire-A515-45:~/Documents/College_code/python/ETE_3/Q2$ python -u "/home/chloy/Documents/College_code/python/ETE_3/Q2/best
Sales Data Preview:
   Date Region Product_Category  Units_Sold  Revenue
0  2023-01-15  North      Electronics         50    5000
1  2023-02-12  South        Clothing         30    1500
2  2023-03-22  North      Groceries        100    3000
3  2023-04-10  South      Electronics         40    4000
4  2023-05-05  North        Clothing         60    1800
(base) chloy@chloy-Aspire-A515-45:~/Documents/College_code/python/ETE_3/Q2$
```

Bar graphh showing total revenue for each product category



pie chart displaying the proportion of total units sold for each product category.

