```
!pip install streamlit
```

```
Requirement already satisfied: streamlit in /usr/local/lib/python3.10/dist-packages (1.24.1)
Requirement already satisfied: altair<6,>=4.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (4.2.2)
Requirement already satisfied: blinker<2,>=1.0.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (1.6.2)
Requirement already satisfied: cachetools<6,>=4.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (5.3.1)
Requirement already satisfied: click<9,>=7.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (8.1.3)
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Requirement already satisfied: numpy<2,>=1 in /usr/local/lib/python3.10/dist-packages (from streamlit) (1.22.4)
Requirement already satisfied: packaging<24,>=14.1 in /usr/local/lib/python3.10/dist-packages (from streamlit) (23.1)
Requirement already satisfied: pandas<3,>=0.25 in /usr/local/lib/python3.10/dist-packages (from streamlit) (1.5.3)
Requirement already satisfied: pillow<10,>=6.2.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (8.4.0)
Requirement already satisfied: protobuf<5,>=3.20 in /usr/local/lib/python3.10/dist-packages (from streamlit) (3.20.3)
Requirement already satisfied: pyarrow>=4.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (9.0.0)
Requirement already satisfied: pympler<2,>=0.9 in /usr/local/lib/python3.10/dist-packages (from streamlit) (1.0.1)
Requirement already satisfied: python-dateutil<3,>=2 in /usr/local/lib/python3.10/dist-packages (from streamlit) (2.8.2)
Requirement already satisfied: requests<3,>=2.4 in /usr/local/lib/python3.10/dist-packages (from streamlit) (2.27.1)
Requirement already satisfied: rich<14,>=10.11.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (13.4.2)
Requirement already satisfied: tenacity<9,>=8.0.0 in /usr/local/lib/python3.10/dist-packages (from streamlit) (8.2.2)
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Requirement already satisfied: tornado<7,>=6.0.3 in /usr/local/lib/python3.10/dist-packages (from streamlit) (6.3.1)
Requirement already satisfied: watchdog in /usr/local/lib/python3.10/dist-packages (from streamlit) (3.0.0)
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Requirement already satisfied: attrs>=17.4.0 in /usr/local/lib/python3.10/dist-packages (from jsonschema>=3.0->altair<6,>
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Requirement already satisfied: mdurl~=0.1 in /usr/local/lib/python3.10/dist-packages (from markdown-it-py>=2.2.0->rich<14
Requirement already satisfied: tzdata in /usr/local/lib/python3.10/dist-packages (from pytz-deprecation-shim->tzlocal<5,>
```

```python
import pandas as pd
import streamlit as st
import matplotlib.pyplot as plt
import io
```

```python
from google.colab import files
uploaded = files.upload()
```

```
Choose files   data.csv
  • data.csv(text/csv) - 45580638 bytes, last modified: 20/09/2019 - 100% done
  Saving data.csv to data (3).csv
```

```python
data = pd.read_csv("data.csv", encoding='latin-1')
```

```python
print(data.head())
```

```
   InvoiceNo StockCode                          Description  Quantity  \
0     536365    85123A   WHITE HANGING HEART T-LIGHT HOLDER         6
1     536365     71053                  WHITE METAL LANTERN         6
2     536365    84406B       CREAM CUPID HEARTS COAT HANGER         8
3     536365    84029G  KNITTED UNION FLAG HOT WATER BOTTLE         6
4     536365    84029E       RED WOOLLY HOTTIE WHITE HEART.         6

       InvoiceDate  UnitPrice  CustomerID         Country
0  12/1/2010 8:26       2.55     17850.0  United Kingdom
1  12/1/2010 8:26       3.39     17850.0  United Kingdom
2  12/1/2010 8:26       2.75     17850.0  United Kingdom
3  12/1/2010 8:26       3.39     17850.0  United Kingdom
4  12/1/2010 8:26       3.39     17850.0  United Kingdom
```

```
# Drop rows with missing values
data.dropna(inplace=True)
```

```
# Convert the InvoiceDate column to datetime format
data['InvoiceDate'] = pd.to_datetime(data['InvoiceDate'])
```

```
#Calculate the total sales for each transaction
data['TotalSales'] = data['Quantity'] * data['UnitPrice']
```

```
# Group by CustomerID and calculate the sum of total sales
customer_sales = data.groupby('CustomerID')['TotalSales'].sum().reset_index()
```

```
# Sort customers by total sales value in descending order
customer_sales = customer_sales.sort_values('TotalSales', ascending=False)
```

```
# Create streamlit app
st.title('Top Customers by Total Sales')
# Display the data in a table
st.dataframe(customer_sales)
```

```
    DeltaGenerator()
```

```
# Create a bar chart to visualize the total sales
plt.figure(figsize=(10, 6))
plt.bar(customer_sales['CustomerID'], customer_sales['TotalSales'])
plt.xlabel('Customer ID')
plt.ylabel('Total Sales')
plt.title('Top Customers by Total Sales')
plt.xticks(rotation=90)
plt.tight_layout()
```

```
# Convert the Matplotlib plot to an image
buffer = io.BytesIO()
plt.savefig(buffer, format='png')
buffer.seek(0)
```

```
    0
```

```
# Display the image in Streamlit
st.image(buffer, use_column_width=True)
```

```
    DeltaGenerator()
```

From the above graphs and data we got to know the the top customers based on their total sales value is with the customerid 14646 from Netherlands

```
# Create streamlit app
st.title('Top Customers by Total Sales')
st.dataframe(customer_sales)
```

```
    DeltaGenerator()
```

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