```
# Step 2: Load sample sales data from uploaded file
try:
    df = pd.read_excel('Financial Sample.xlsx')
    print("Sample Data:")
    print(df.head())

    print("\nDataset Info:")
    print(df.info())

    # 📌 Step 5: Data cleaning (drop missing or invalid rows)
    df.dropna(inplace=True)

    # Rename columns if needed
    df.columns = df.columns.str.strip().str.title()

    # Assuming 'Sales' or 'Revenue' is the column for sales amount.
    # Adjust column name based on the actual data in 'Financial Sample.xlsx'
    # For example, if the column is named 'Sales', replace 'Revenue' with 'Sales'
    if 'Sales' in df.columns:
        sales_column = 'Sales'
    elif 'Revenue' in df.columns:
        sales_column = 'Revenue'
    else:
        # Handle the case where neither 'Sales' nor 'Revenue' is found
        print("Could not find 'Sales' or 'Revenue' column. Please check the column names in your
        sales_column = None # Or raise an error, depending on desired behavior

    if sales_column:
        #  Step 6: KPI Summary
        total_sales = df[sales_column].sum()
        avg_sales = df[sales_column].mean()
        max_sale = df[sales_column].max()

        print("\n📊 KPI Summary:")
        print(f"Total Sales: ${total_sales:,.0f}")
        print(f"Average Sale Value: ${avg_sales:,.2f}")
        print(f"Highest Single Sale: ${max_sale:,.0f}")

        #  Step 7: Visualization 1 – Sales by Region
        if 'Region' in df.columns:
            plt.figure(figsize=(8,5))
            sns.barplot(data=df, x='Region', y=sales_column, estimator=sum, ci=None, palette='coo
            plt.title("Total Sales by Region", fontsize=14)
            plt.xlabel("Region")
            plt.ylabel("Total Sales ($)")
            plt.show()
        else:
            print("\n'Region' column not found for plotting Sales by Region.")


        #  Step 8: Visualization 2 – Product Sales Distribution
        if 'Product' in df.columns:
            plt.figure(figsize=(8,5))
            df.groupby('Product')[sales_column].sum().plot(kind='pie', autopct='%1.1f%%', startar
            plt.title("Product Sales Share")
            plt.ylabel("")
            plt.show()
        else:
            print("\n'Product' column not found for plotting Product Sales Distribution.")


        # Step 9: Visualization 3 – Monthly Sales Trend
        # Assuming 'OrderDate' or similar is the date column
        date_column = None
        for col in df.columns:
            if 'Date' in col:
                date_column = col
```

```
                    break

        if date_column:
            df[date_column] = pd.to_datetime(df[date_column])
            monthly_sales = df.groupby(df[date_column].dt.to_period('M'))[sales_column].sum()

            plt.figure(figsize=(10,5))
            monthly_sales.plot(marker='o')
            plt.title("Monthly Sales Trend", fontsize=14)
            plt.xlabel("Month")
            plt.ylabel("Revenue ($)")
            plt.grid(True)
            plt.show()
        else:
            print("\nDate column not found for plotting Monthly Sales Trend.")


        # 📌 Step 10: Insights / Storytelling
        print("\n🧭 Story Summary:")
        print(f"- The total revenue generated is ${total_sales:,.0f}.")
        if 'Region' in df.columns:
            print("- The top-performing regions show stronger demand patterns.")
        if 'Product' in df.columns:
            print("- Certain products dominate overall sales share.")
        if date_column:
            print("- Monthly trends show how business performance evolved over time.")

except FileNotFoundError:
    print("Error: 'Financial Sample.xlsx' not found. Please upload the file to the Colab environm
except Exception as e:
    print(f"An error occurred: {e}")
```

```
Sample Data:
      Segment  Country    Product Discount Band  Units Sold  \
0  Government   Canada  Carretera           NaN      1618.5
1  Government  Germany  Carretera           NaN      1321.0
2   Midmarket   France  Carretera           NaN      2178.0
3   Midmarket  Germany  Carretera           NaN       888.0
4   Midmarket   Mexico  Carretera           NaN      2470.0

   Manufacturing Price  Sale Price  Gross Sales  Discounts    Sales     COGS  \
0                    3          20      32370.0        0.0  32370.0  16185.0
1                    3          20      26420.0        0.0  26420.0  13210.0
2                    3          15      32670.0        0.0  32670.0  21780.0
3                    3          15      13320.0        0.0  13320.0   8880.0
4                    3          15      37050.0        0.0  37050.0  24700.0

    Profit       Date  Month Number Month Name  Year
0  16185.0 2014-01-01             1    January  2014
1  13210.0 2014-01-01             1    January  2014
2  10890.0 2014-06-01             6       June  2014
3   4440.0 2014-06-01             6       June  2014
4  12350.0 2014-06-01             6       June  2014

Dataset Info:
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 700 entries, 0 to 699
Data columns (total 16 columns):
 #   Column               Non-Null Count  Dtype
---  ------               --------------  -----
 0   Segment              700 non-null    object
 1   Country              700 non-null    object
 2   Product              700 non-null    object
 3   Discount Band        647 non-null    object
 4   Units Sold           700 non-null    float64
 5   Manufacturing Price  700 non-null    int64
 6   Sale Price           700 non-null    int64
 7   Gross Sales          700 non-null    float64
 8   Discounts            700 non-null    float64
 9    Sales               700 non-null    float64
 10  COGS                 700 non-null    float64
 11  Profit               700 non-null    float64
 12  Date                 700 non-null    datetime64[ns]
 13  Month Number         700 non-null    int64
 14  Month Name           700 non-null    object
 15  Year                 700 non-null    int64
dtypes: datetime64[ns](1), float64(6), int64(4), object(5)
memory usage: 87.6+ KB
None

📊 KPI Summary:
Total Sales: $110,782,696
Average Sale Value: $171,225.19
Highest Single Sale: $1,159,200

'Region' column not found for plotting Sales by Region.
```