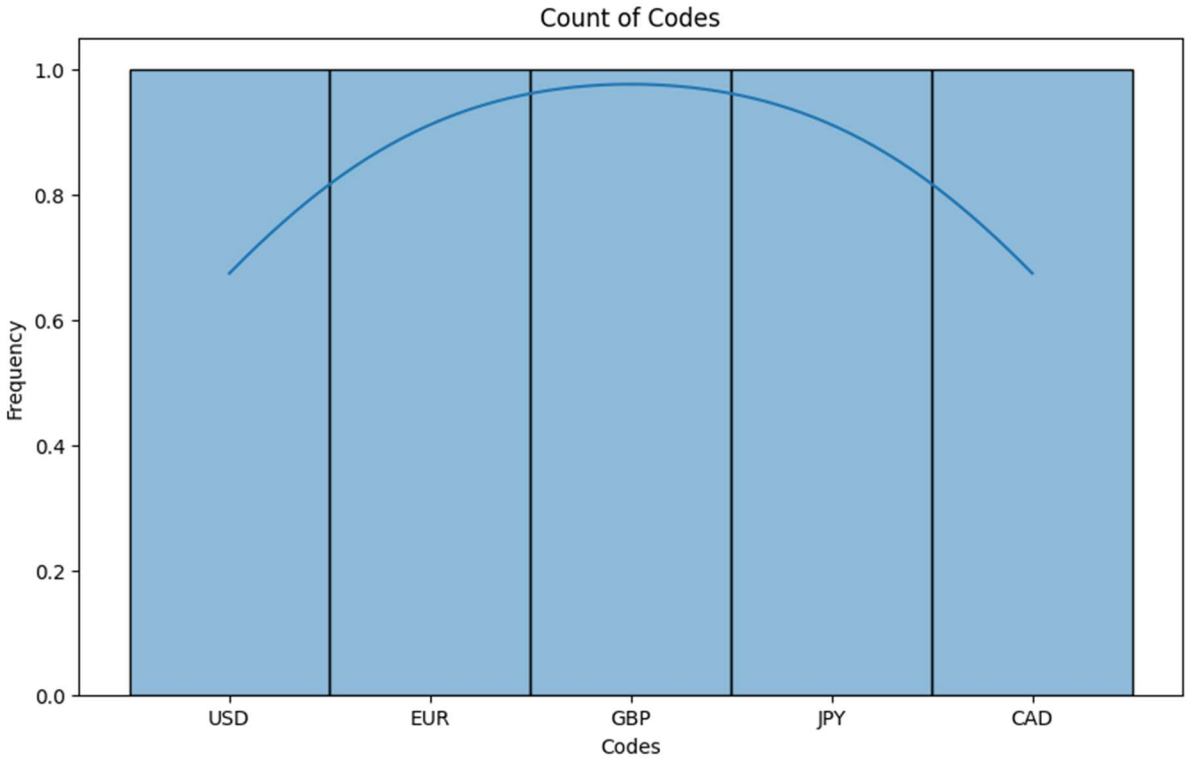
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np

# Sample data
data = {
    'Code': ['USD', 'EUR', 'GBP', 'JPY', 'CAD'],
    'Name': ['US Dollar', 'Euro', 'British Pound', 'Japanese Yen', 'Canadian Dollar'],
    'Symbol': ['$', '€', '£', '¥', 'C$'],
    'ExchangeRate': [1.0, 0.85, 0.72, 109.86, 1.25]
}

df = pd.DataFrame(data)

print(df.head())  # View the first few rows
print(df.info())  # View data types and missing values
print(df.describe())  # Summary statistics

# Handling missing values (not applicable for this sample data)
# Handling duplicates (not applicable for this sample data)

# Example visualizations

# Histogram
plt.figure(figsize=(10, 6))
sns.histplot(df['Code'], bins=5, kde=True)
plt.title('Count of Codes')
plt.xlabel('Codes')
plt.ylabel('Frequency')
plt.show()
```

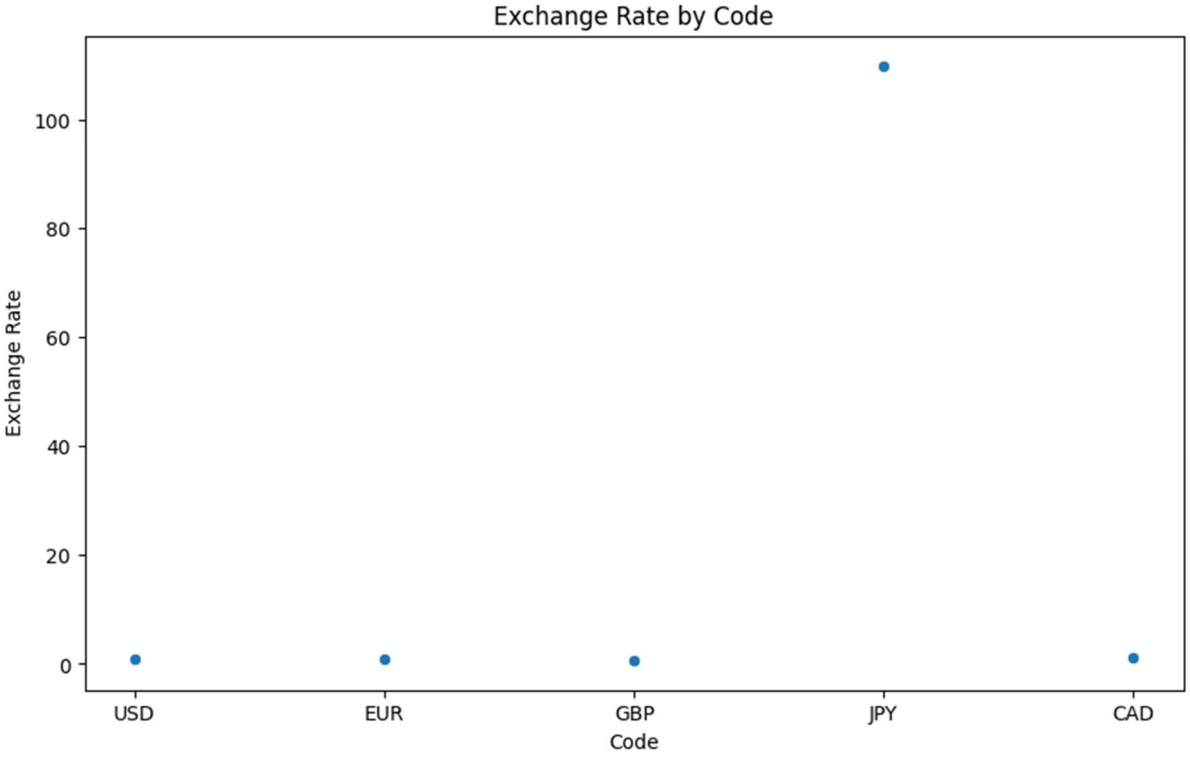
```
# Scatter plot (converting ExchangeRate to numeric for plotting)
df['ExchangeRate'] = pd.to_numeric(df['ExchangeRate'], errors='coerce')

plt.figure(figsize=(10, 6))
sns.scatterplot(x='Code', y='ExchangeRate', data=df)
plt.title('Exchange Rate by Code')
plt.xlabel('Code')
plt.ylabel('Exchange Rate')
plt.show()

# Box plot (not applicable for Symbol in this sample data)
# Box plots are typically used for numerical data, not categorical data like Symbol

# Pairplot
sns.pairplot(df)
plt.show()
```

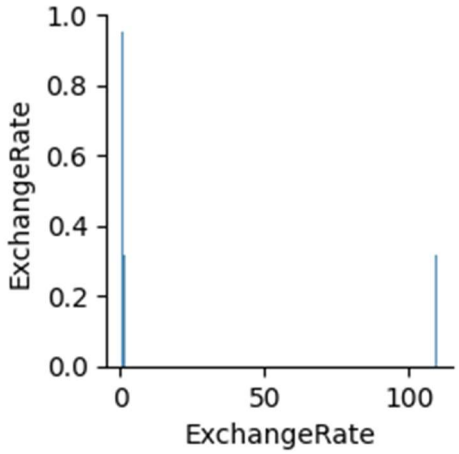
response:

```
  Code             Name Symbol  ExchangeRate
0  USD        US Dollar      $          1.00
1  EUR             Euro      €          0.85
2  GBP    British Pound      £          0.72
3  JPY     Japanese Yen      ¥        109.86
4  CAD  Canadian Dollar     C$          1.25
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 5 entries, 0 to 4
Data columns (total 4 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   Code          5 non-null      object
 1   Name          5 non-null      object
 2   Symbol        5 non-null      object
 3   ExchangeRate  5 non-null      float64
dtypes: float64(1), object(3)
memory usage: 288.0+ bytes
None
```

	ExchangeRate
count	5.000000
mean	22.736000
std	48.704195
min	0.720000
25%	0.850000
50%	1.000000
75%	1.250000
max	109.860000






1.0
0.8
0.6
0.4
0.2
0.0
ExchangeRate
0
50
100
ExchangeRate