In [1]:
```
pip install pandas matplotlib seaborn scikit-learn
```

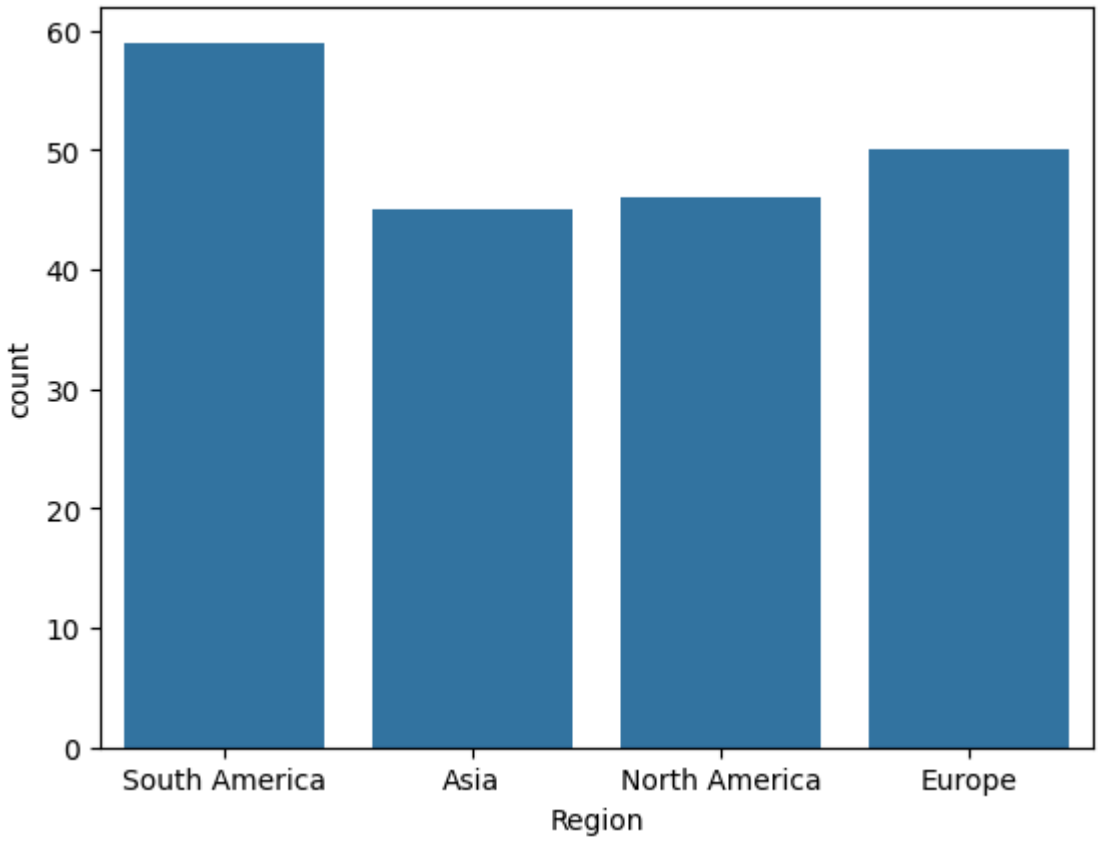
```
Requirement already satisfied: pandas in c:\users\isha\appdata\local\programs\pyth
on\python310\lib\site-packages (2.2.2)
Requirement already satisfied: matplotlib in c:\users\isha\appdata\local\programs
\python\python310\lib\site-packages (3.9.0)
Requirement already satisfied: seaborn in c:\users\isha\appdata\local\programs\py
thon\python310\lib\site-packages (0.13.2)
Requirement already satisfied: scikit-learn in c:\users\isha\appdata\local\progra
ms\python\python310\lib\site-packages (1.5.0)
Requirement already satisfied: numpy>=1.22.4 in c:\users\isha\appdata\local\progr
ams\python\python310\lib\site-packages (from pandas) (2.0.0)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\users\isha\appdata\lo
cal\programs\python\python310\lib\site-packages (from pandas) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\users\isha\appdata\local\progra
ms\python\python310\lib\site-packages (from pandas) (2024.1)
Requirement already satisfied: tzdata>=2022.7 in c:\users\isha\appdata\local\prog
rams\python\python310\lib\site-packages (from pandas) (2024.1)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\isha\appdata\local\pr
ograms\python\python310\lib\site-packages (from matplotlib) (1.2.1)
Requirement already satisfied: cycler>=0.10 in c:\users\isha\appdata\local\progra
ms\python\python310\lib\site-packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\isha\appdata\local\p
rograms\python\python310\lib\site-packages (from matplotlib) (4.53.0)
Requirement already satisfied: kiwisolver>=1.3.1 in c:\users\isha\appdata\local\p
rograms\python\python310\lib\site-packages (from matplotlib) (1.4.5)
Requirement already satisfied: packaging>=20.0 in c:\users\isha\appdata\local\pro
grams\python\python310\lib\site-packages (from matplotlib) (24.0)
Requirement already satisfied: pillow>=8 in c:\users\isha\appdata\local\programs
\python\python310\lib\site-packages (from matplotlib) (10.3.0)
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\isha\appdata\local\pr
ograms\python\python310\lib\site-packages (from matplotlib) (3.1.2)
Requirement already satisfied: scipy>=1.6.0 in c:\users\isha\appdata\local\progra
ms\python\python310\lib\site-packages (from scikit-learn) (1.13.1)
Requirement already satisfied: joblib>=1.2.0 in c:\users\isha\appdata\local\progr
ams\python\python310\lib\site-packages (from scikit-learn) (1.4.2)
Requirement already satisfied: threadpoolctl>=3.1.0 in c:\users\isha\appdata\loca
l\programs\python\python310\lib\site-packages (from scikit-learn) (3.5.0)
Requirement already satisfied: six>=1.5 in c:\users\isha\appdata\local\programs\p
ython\python310\lib\site-packages (from python-dateutil>=2.8.2->pandas) (1.16.0)
Note: you may need to restart the kernel to use updated packages.
```

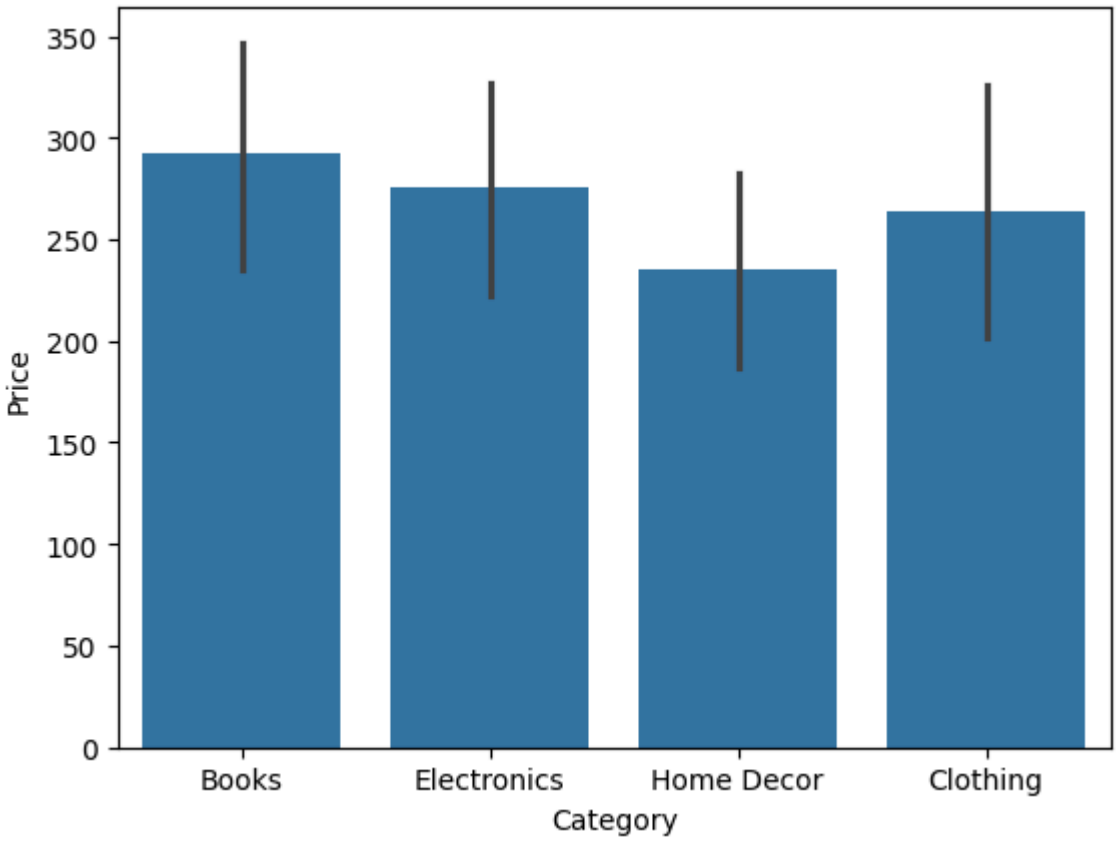
In [2]:
```
import pandas as pd

customers = pd.read_csv('Customers.csv')
products = pd.read_csv('Products.csv')
transactions = pd.read_csv('Transactions.csv')
```

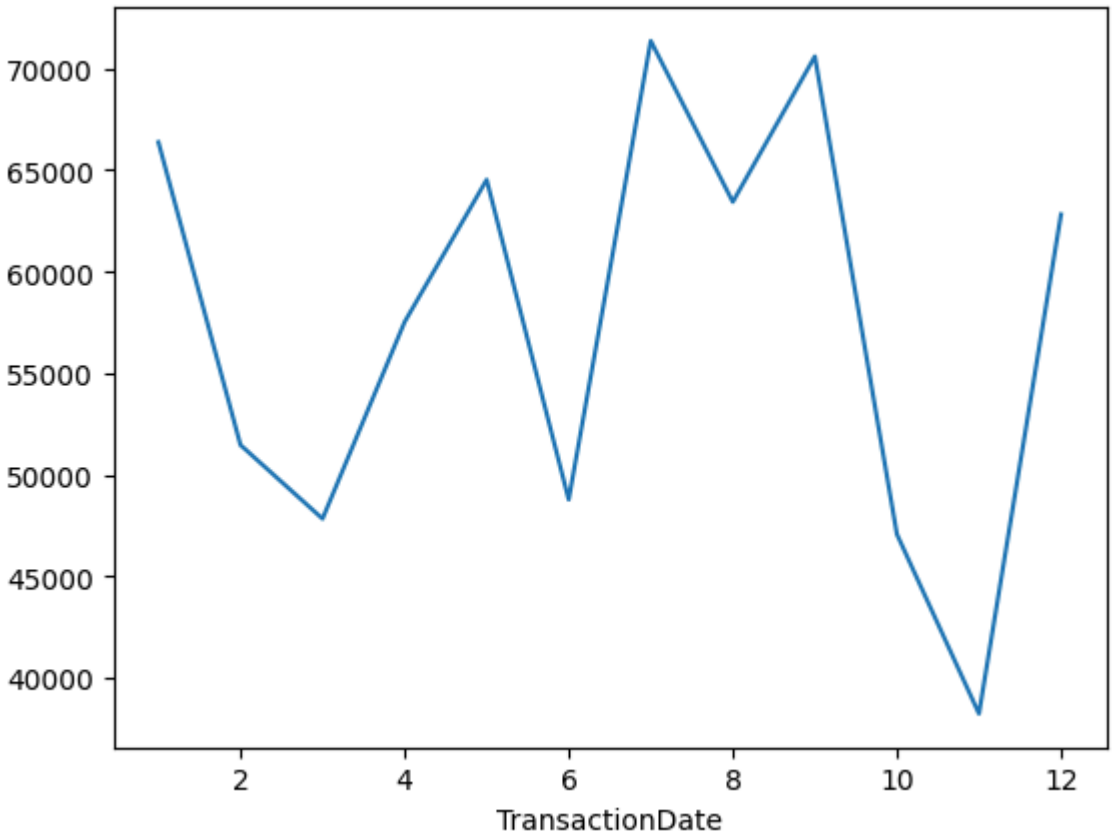
In [3]:
```
print(customers.info())
print(products.describe())
print(transactions.isnull().sum())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 200 entries, 0 to 199
Data columns (total 4 columns):
 #   Column        Non-Null Count  Dtype 
---  ------        --------------  ----- 
 0   CustomerID    200 non-null    object
 1   CustomerName  200 non-null    object
 2   Region        200 non-null    object
 3   SignupDate    200 non-null    object
dtypes: object(4)
memory usage: 6.4+ KB
None
            Price
count  100.000000
mean   267.551700
std    143.219383
min     16.080000
25%    147.767500
50%    292.875000
75%    397.090000
max    497.760000
TransactionID      0
CustomerID         0
ProductID          0
TransactionDate    0
Quantity           0
TotalValue         0
Price              0
dtype: int64
```

In [4]:
```
import seaborn as sns
import matplotlib.pyplot as plt

sns.countplot(x='Region', data=customers)
plt.show()

sns.barplot(x='Category', y='Price', data=products)
plt.show()

transactions['TransactionDate'] = pd.to_datetime(transactions['TransactionDate']
transactions.groupby(transactions['TransactionDate'].dt.month)['TotalValue'].sum
plt.show()
```


60
50
40
30
20
10
0
count
South America
Asia
North America
Europe
Region


350
300
250
200
150
100
50
0
Price
Books
Electronics
Home Decor
Clothing
Category


70000
65000
60000
55000
50000
45000
40000
2
4
6
8
10
12
TransactionDate