

# Exploratory Data Analysis (EDA)

Code:

```
import pandas as pd

# Load datasets

customers = pd.read_csv("Customers.csv")

products = pd.read_csv("Products.csv")

transactions = pd.read_csv("Transactions.csv")

# Display first few rows

print(customers.head())

print(products.head())

print(transactions.head())


# Check missing values

print(customers.isnull().sum())

print(products.isnull().sum())

print(transactions.isnull().sum())


# Check duplicated values

print(customers.duplicated().sum())

print(products.duplicated().sum())

print(transactions.duplicated().sum())


# Convert to datetime format

customers["SignupDate"] = pd.to_datetime(customers["SignupDate"])

transactions["TransactionDate"] = pd.to_datetime(transactions["TransactionDate"])
```

```
# Summary statistics

print(transactions.describe())

print(customers["Region"].value_counts())
```

Output:

CustomerID	CustomerName	Region	SignupDate	
0	ceeol	Lawrence Carroll	South America	2022-07-10
1	ceoe2	Elizabeth Lutz	Asia	2022-02-13
2	coe03	Michael Rivera	South America	2024-03-07
3	coeoa	Kathleen Rodriguez	South America	2022-10-09
4	coee5	Laura Weber	Asia	2022-08-15

Missing values:

CustomerID	0
CustomerName	0
Region	0
SignupDate	0
Product ID	0
ProductName	0
Category	0
Price	0
...	

Duplicated values:

CustomerID	0
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Product ID	0
TransactionID	0
TransactionDate	0