```python
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

```python
df = pd.read_csv("Telco-Customer-Churn.csv")
```

```python
df.head()
df.info()
df.describe()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7043 entries, 0 to 7042
Data columns (total 22 columns):
 #   Column            Non-Null Count  Dtype
---  ------            --------------  -----
 0   customerID        7043 non-null   object
 1   gender            7043 non-null   object
 2   SeniorCitizen     7043 non-null   int64
 3   Partner           7043 non-null   object
 4   Dependents        7043 non-null   object
 5   tenure            7043 non-null   int64
 6   PhoneService      7043 non-null   object
 7   MultipleLines     7043 non-null   object
 8   InternetService   7043 non-null   object
 9   OnlineSecurity    7043 non-null   object
 10  OnlineBackup      7043 non-null   object
 11  DeviceProtection  7043 non-null   object
 12  TechSupport       7043 non-null   object
 13  StreamingTV       7043 non-null   object
 14  StreamingMovies   7043 non-null   object
 15  Contract          7043 non-null   object
 16  PaperlessBilling  7043 non-null   object
 17  PaymentMethod     7043 non-null   object
 18  MonthlyCharges    7043 non-null   float64
 19  TotalCharges      7043 non-null   object
 20  Churn             7043 non-null   object
 21  Churn Flag        7043 non-null   int64
dtypes: float64(1), int64(3), object(18)
memory usage: 1.2+ MB
```

	SeniorCitizen	tenure	MonthlyCharges	Churn Flag
count	7043.000000	7043.000000	7043.000000	7043.000000
mean	0.162147	32.371149	64.761692	0.265370
std	0.368612	24.559481	30.090047	0.441561
min	0.000000	0.000000	18.250000	0.000000
25%	0.000000	9.000000	35.500000	0.000000
50%	0.000000	29.000000	70.350000	0.000000
75%	0.000000	55.000000	89.850000	1.000000
max	1.000000	72.000000	118.750000	1.000000
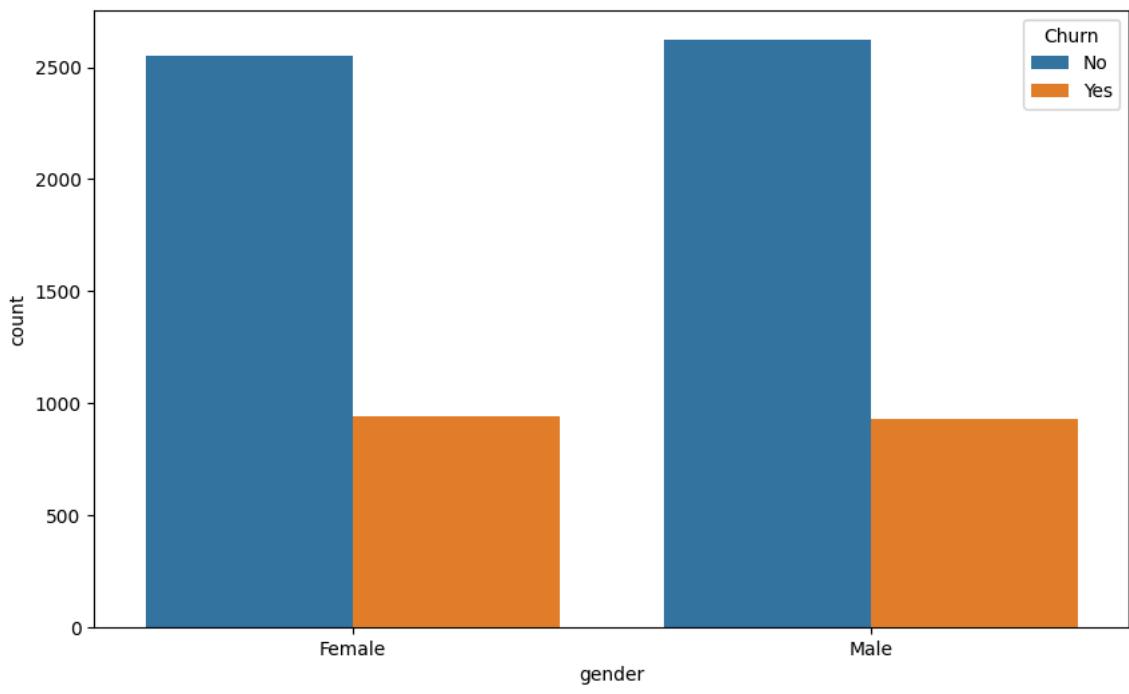
```python
churn_rate = df['Churn'].value_counts(normalize=True) * 100
print(churn_rate)
```

```
Churn
No     73.463013
Yes    26.536987
Name: proportion, dtype: float64
```
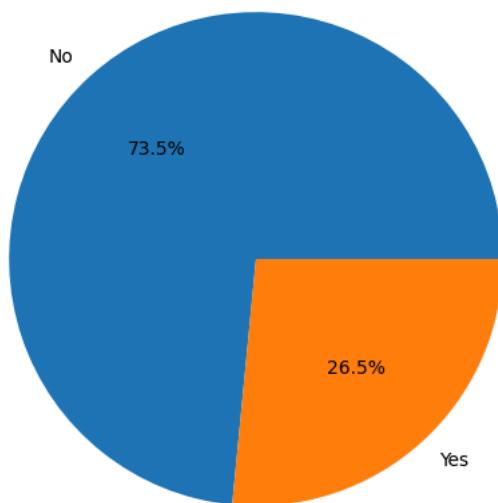
```python
df.groupby('Churn')['tenure'].mean()
df.groupby('Churn')['MonthlyCharges'].mean()
```

	MonthlyCharges
Churn	
No	61.265124
Yes	74.441332

dtype: float64
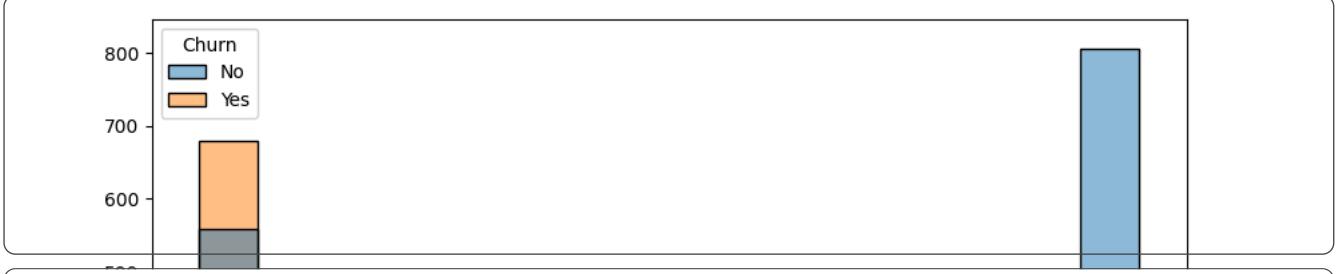
```python
plt.figure(figsize=(10, 6))
sns.countplot(data=df, x='gender', hue='Churn')
plt.show()
```

```
plt.figure(figsize=(10, 6))
plt.pie(churn_rate, labels=churn_rate.index, autopct='%1.1f%%')
plt.show()
```



```
plt.figure(figsize=(10, 6))
sns.histplot(data=df, x='tenure', hue='Churn', kde=True)
plt.show()
```

```python
plt.figure(figsize=(10, 6))
sns.boxplot(data=df, x='Churn', y='MonthlyCharges')
plt.show()
```