```
import pandas as pd
import numpy as np
import seaborn as sns
```

```
df=pd.read_csv("titanic_dataset.csv")
```

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 12 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   PassengerId  891 non-null    int64  
 1   Survived     891 non-null    int64  
 2   Pclass       891 non-null    int64  
 3   Name         891 non-null    object 
 4   Sex          891 non-null    object 
 5   Age          714 non-null    float64
 6   SibSp        891 non-null    int64  
 7   Parch        891 non-null    int64  
 8   Ticket       891 non-null    object 
 9   Fare         891 non-null    float64
 10  Cabin        204 non-null    object 
 11  Embarked     889 non-null    object 
dtypes: float64(2), int64(5), object(5)
memory usage: 83.7+ KB
```

```
df.head()
```

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th	female	38.0	1	0	PC 17599	71.

```
df.isnull().sum()
```

```
PassengerId      0
Survived         0
Pclass           0
Name             0
Sex              0
```

```
Age            177
SibSp            0
Parch            0
Ticket           0
Fare             0
Cabin          687
Embarked         2
dtype: int64
```

```
df.drop("Cabin",axis=1,inplace=True)
```

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 11 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   PassengerId  891 non-null    int64  
 1   Survived     891 non-null    int64  
 2   Pclass       891 non-null    int64  
 3   Name         891 non-null    object 
 4   Sex          891 non-null    object 
 5   Age          714 non-null    float64
 6   SibSp        891 non-null    int64  
 7   Parch        891 non-null    int64  
 8   Ticket       891 non-null    object 
 9   Fare         891 non-null    float64
 10  Embarked     889 non-null    object 
dtypes: float64(2), int64(5), object(4)
memory usage: 76.7+ KB
```

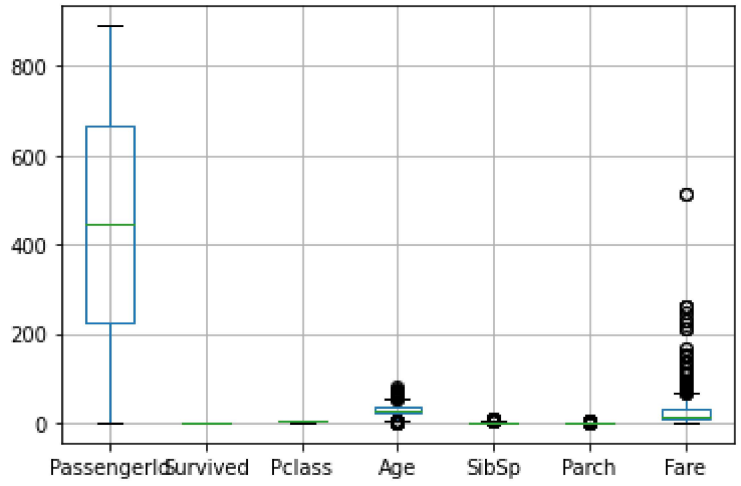
```
df.isnull().sum()
```

```
PassengerId      0
Survived         0
Pclass           0
Name             0
Sex              0
Age            177
SibSp            0
Parch            0
Ticket           0
Fare             0
Embarked         2
dtype: int64
```

```
df["Age"]=df["Age"].fillna(df["Age"].median())
```

```
df.boxplot()
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f597af952d0>
```




```
df.isnull().sum()
```

```
PassengerId    0
Survived       0
Pclass         0
Name           0
Sex            0
Age            0
SibSp          0
Parch          0
Ticket         0
Fare           0
Embarked       2
dtype: int64
```

```
df["Embarked"]=df["Embarked"].fillna(df["Embarked"].mode()[0])
```

```
df["Embarked"].value_counts()
```

```
S    646
C    168
Q     77
Name: Embarked, dtype: int64
```

```
df["Pclass"].value_counts()
```

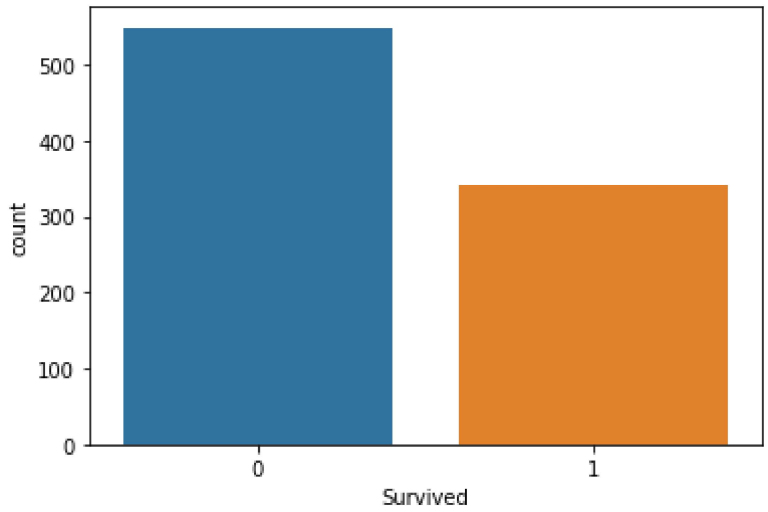
```
3    491
1    216
2    184
Name: Pclass, dtype: int64
```

```
df["Survived"].value_counts()
```

```
0    549
1    342
Name: Survived, dtype: int64
```

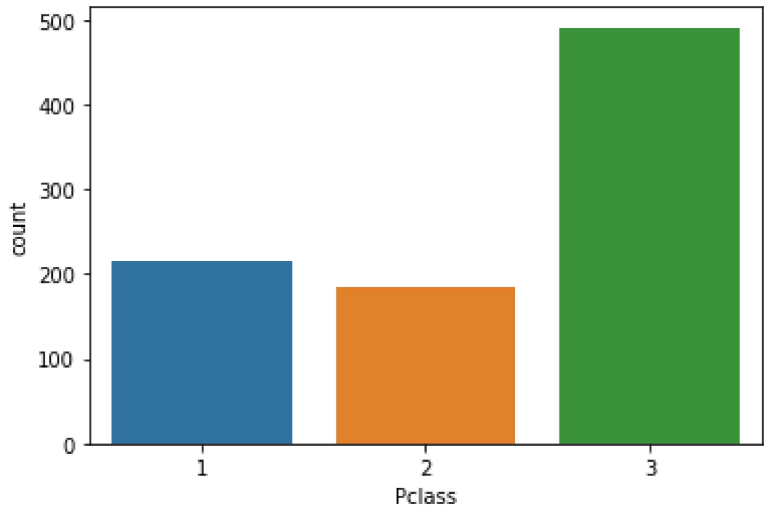
```
sns.countplot(x="Survived",data=df)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f597a97c650>
```



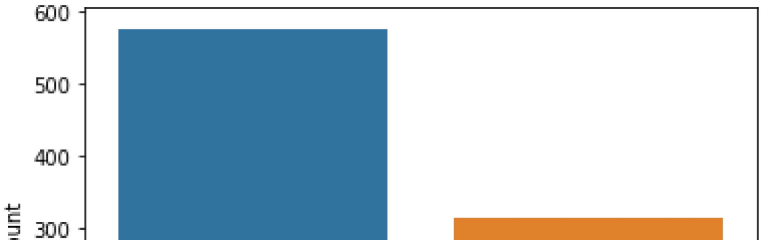

```
sns.countplot(x="Pclass",data=df)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f597a940610>
```




```
sns.countplot(x="Sex",data=df)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f597afd6710>
```

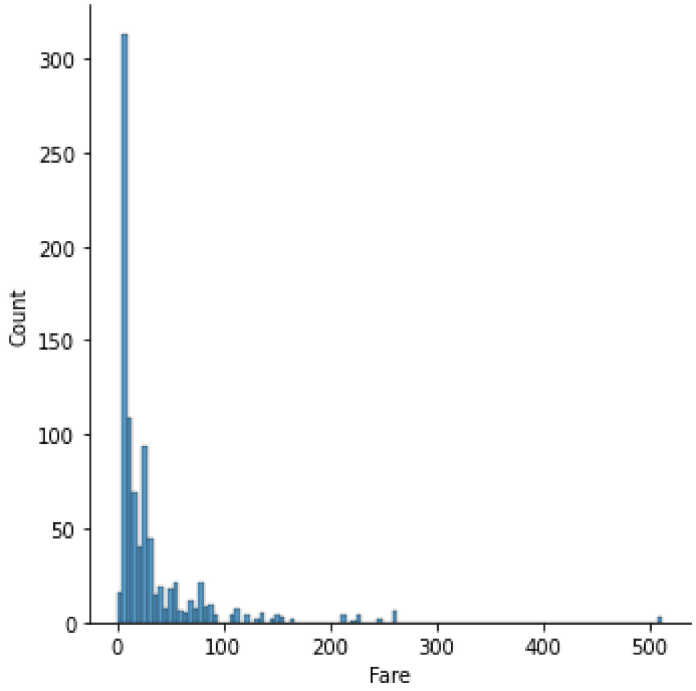



```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 11 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   PassengerId  891 non-null    int64  
 1   Survived     891 non-null    int64  
 2   Pclass       891 non-null    int64  
 3   Name         891 non-null    object 
 4   Sex          891 non-null    object 
 5   Age          891 non-null    float64
 6   SibSp        891 non-null    int64  
 7   Parch        891 non-null    int64  
 8   Ticket       891 non-null    object 
 9   Fare         891 non-null    float64
 10  Embarked     891 non-null    object 
dtypes: float64(2), int64(5), object(4)
memory usage: 76.7+ KB
```

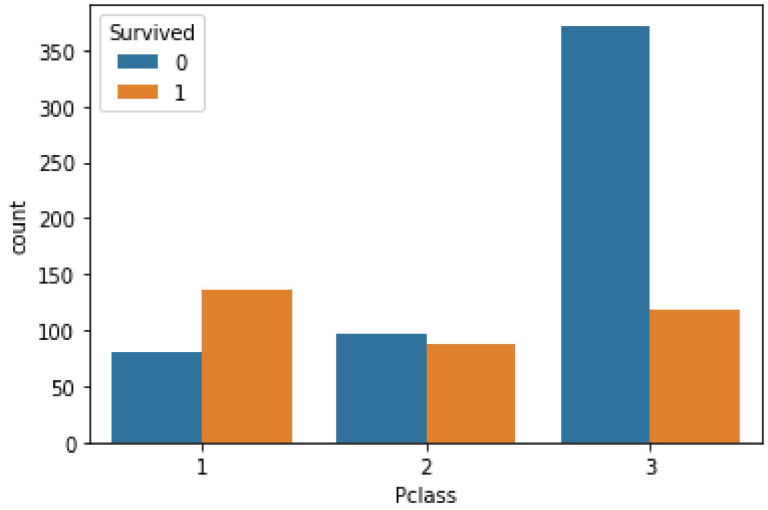
```
sns.displot(df["Fare"])
```

```
<seaborn.axisgrid.FacetGrid at 0x7f597ae074d0>
```



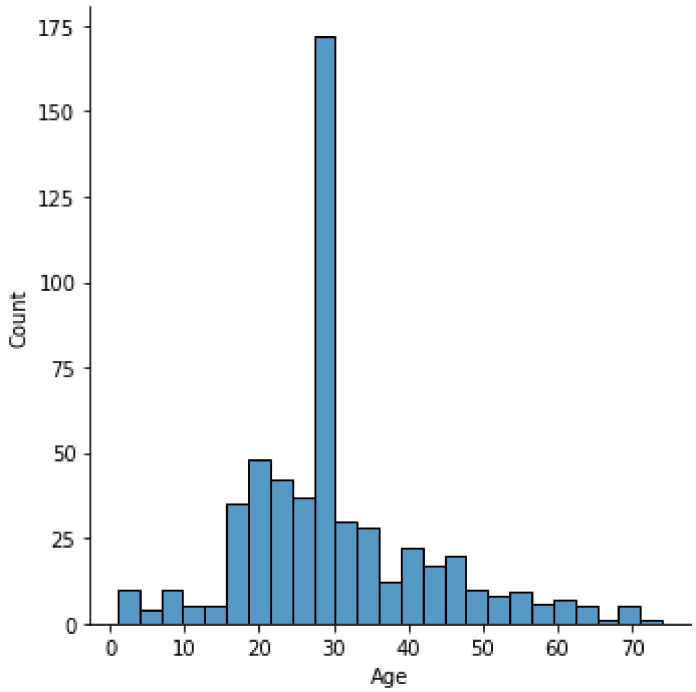
```
sns.countplot(x="Pclass",hue="Survived",data=df)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f5977e65c10>
```




```
sns.displot(df[df["Survived"]==0]["Age"])
```

```
<seaborn.axisgrid.FacetGrid at 0x7f5977e31e50>
```




```
pd.crosstab(df["Pclass"],df["Survived"])
```

Survived	0	1
Pclass		
1	80	136
2	97	87
3	372	119

```
pd.crosstab(df["Sex"],df["Survived"])
```

Survived	0	1
Sex		
female	81	233
male	468	109

```
df.corr()
```

	PassengerId	Survived	Pclass	Age	SibSp	Parch	Far
PassengerId	1.000000	-0.005007	-0.035144	0.034212	-0.057527	-0.001652	0.01265
Survived	-0.005007	1.000000	-0.338481	-0.064910	-0.035322	0.081629	0.25730
Pclass	-0.035144	-0.338481	1.000000	-0.339898	0.083081	0.018443	-0.54950
Age	0.034212	-0.064910	-0.339898	1.000000	-0.233296	-0.172482	0.09668
SibSp	-0.057527	-0.035322	0.083081	-0.233296	1.000000	0.414838	0.15965
Parch	-0.001652	0.081629	0.018443	-0.172482	0.414838	1.000000	0.21622
Fare	0.012658	0.257307	-0.549500	0.096688	0.159651	0.216225	1.00000

```
sns.heatmap(df.corr(),annot=True)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f5977e61d10>
```