```
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
```

```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
df=pd.read_csv('titanic_dataset.csv')
df
```

	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
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450
...	...	...	...	...	...	...	...	...	...
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112053
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W./C. 6607
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370376

891 rows × 12 columns

```
df.nunique()
```

	0
PassengerId	891
Survived	2
Pclass	3
Name	891
Sex	2
Age	88
SibSp	7
Parch	7
Ticket	681
Fare	248
Cabin	147
Embarked	3

dtype: int64

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

Survived	count
0	549
1	342

dtype: int64

```
per=(df["Survived"].value_counts()/df.shape[0]*100).round(2)
per
```

Survived	count
0	61.62
1	38.38

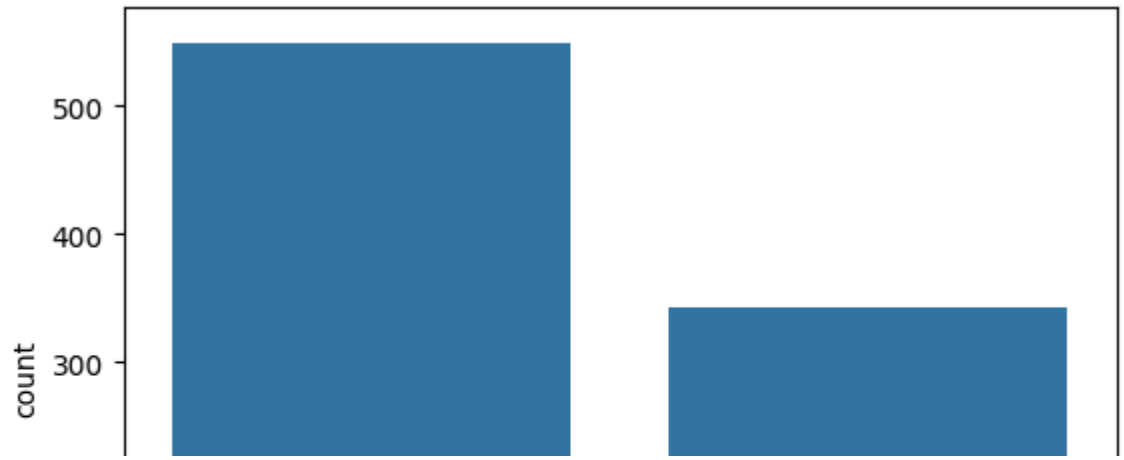
dtype: float64

```
df.set_index("PassengerId")
```

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fa
1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.25
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.28
3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.92
4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.10
5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.05
...	...	...	...	...	...	...	...	...	
887	0	2	Montvila, Rev.	male	27.0	0	0	211536	13.00

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

```
<Axes: xlabel='Survived', ylabel='count'>
```



```
df.Pclass.unique()
```

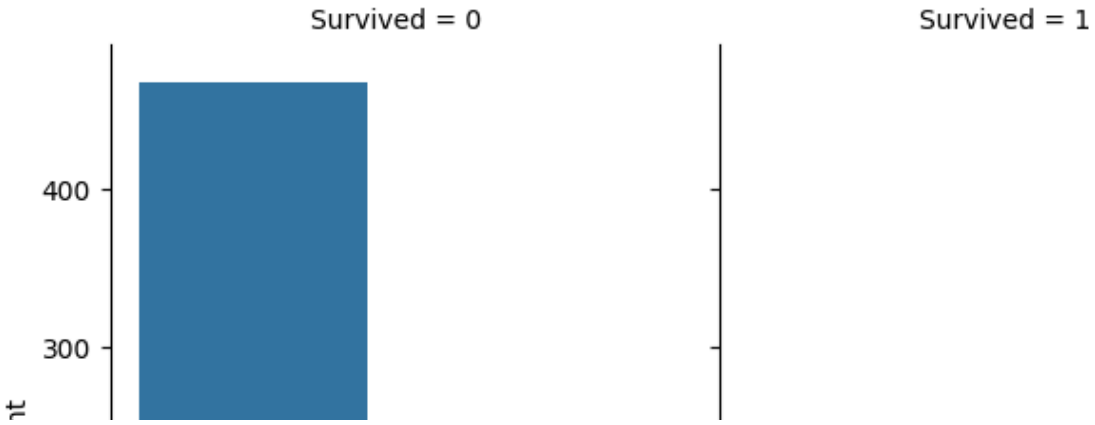
```
array([3, 1, 2])
```

```
df.rename(columns = {'Sex':'Gender'})
```

	PassengerId	Survived	Pclass	Name	Gender	Age	SibSp	Parch	Ticket
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450
...	...	...	...	...	...	...	...	...	...
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112053

```
sns.catplot(x="Sex",col="Survived",kind="count",data=df,height=5,aspect=.7)
```

<seaborn.axisgrid.FacetGrid at 0x7fcc48007b80>

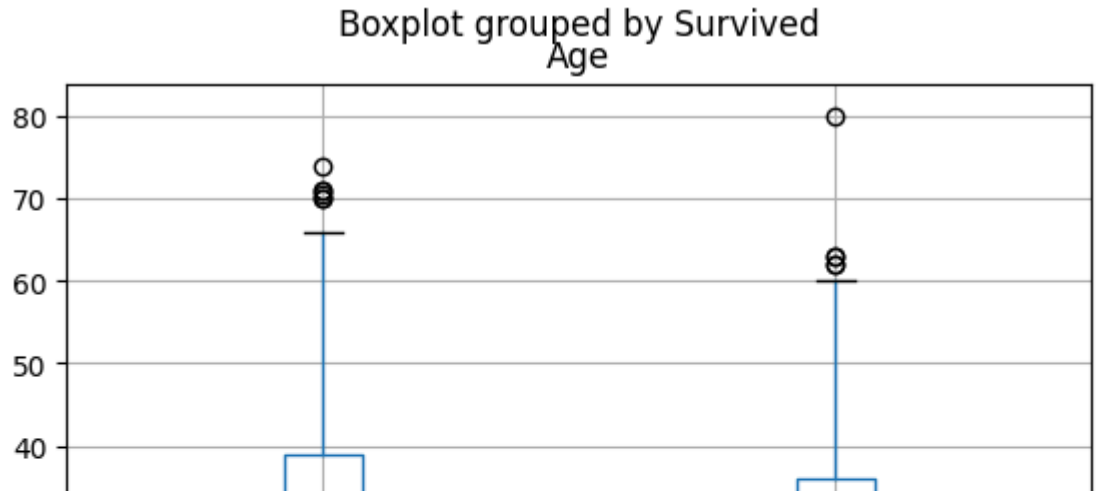



```
sns.catplot(x="Survived",hue="Sex",data=df,kind="count")
```

<seaborn.axisgrid.FacetGrid at 0x7fcc45961b70>

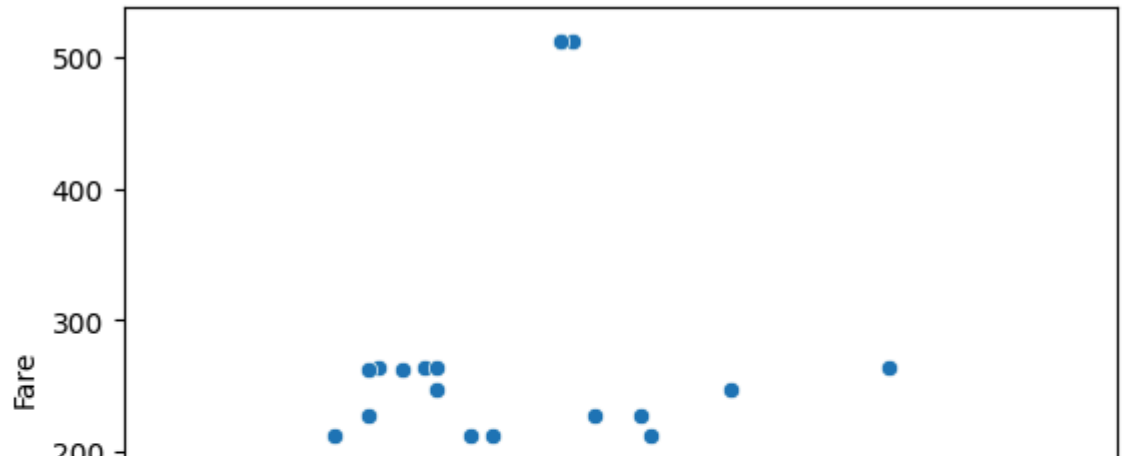
```
df.boxplot(column='Age',by="Survived")
```

```
<Axes: title={'center': 'Age'}, xlabel='Survived'>
```



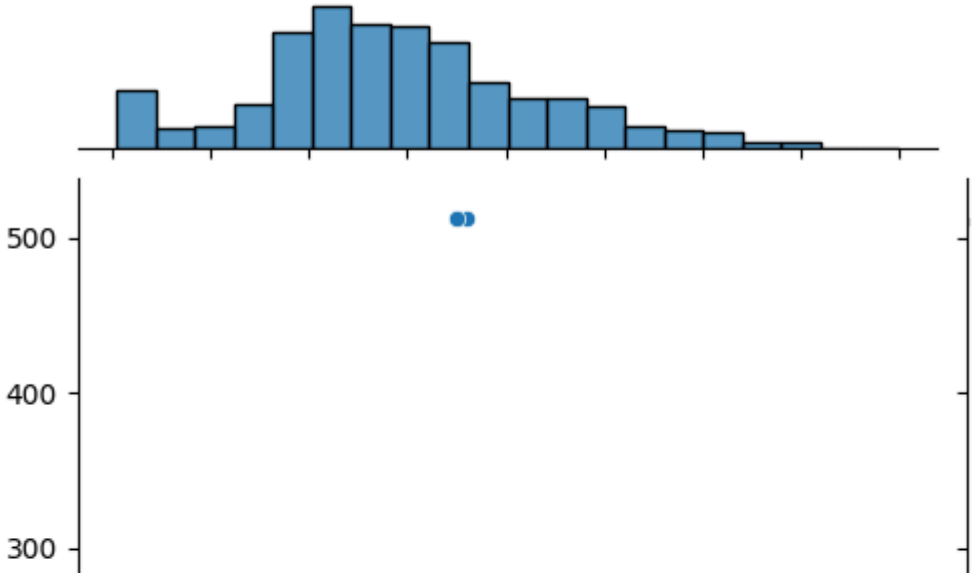

```
sns.scatterplot(x=df['Age'],y=df["Fare"])
```

```
<Axes: xlabel='Age', ylabel='Fare'>
```



```
sns.jointplot(x='Age',y="Fare",data=df)
```

```
<seaborn.axisgrid.JointGrid at 0x7fcc45738820>
```



```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-43-1decaed54b04> in <cell line: 1>()
----> 1 sns.catplot(x="Gender",col="Survived",hue="Pclass",kind="count",data=df)

                                5 frames
/usr/local/lib/python3.10/dist-packages/seaborn/_core/data.py in
_assign_variables(self, data, variables)
    230                 else:
    231                     err += "An entry with this name does not appear in
`data`."
--> 232                 raise ValueError(err)
    233
    234             else:

ValueError: Could not interpret value `Gender` for `x`. An entry with this name
does not appear in `data`.
```