```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

```
dt=pd.read_csv("/content/titanic_dataset.csv")
```

```
dt
```

| | PassengerId | Survived | Pclass | Name | Sex | Age | SibSp | Parch | Ticket | Fare | Cabin | Embarked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 1 | 0 | 3 | Braund, Mr. Owen Harris | male | 22.0 | 1 | 0 | A/5 21171 | 7.2500 | NaN | S |
| **1** | 2 | 1 | 1 | Cumings, Mrs. John Bradley (Florence Briggs Th... | female | 38.0 | 1 | 0 | PC 17599 | 71.2833 | C85 | C |
| **2** | 3 | 1 | 3 | Heikkinen, Miss. Laina | female | 26.0 | 0 | 0 | STON/O2. 3101282 | 7.9250 | NaN | S |
| **3** | 4 | 1 | 1 | Futrelle, Mrs. Jacques Heath (Lily May Peel) | female | 35.0 | 1 | 0 | 113803 | 53.1000 | C123 | S |
| **4** | 5 | 0 | 3 | Allen, Mr. William Henry | male | 35.0 | 0 | 0 | 373450 | 8.0500 | NaN | S |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **886** | 887 | 0 | 2 | Montvila, Rev. Juozas | male | 27.0 | 0 | 0 | 211536 | 13.0000 | NaN | S |
| **887** | 888 | 1 | 1 | Graham, Miss. Margaret Edith | female | 19.0 | 0 | 0 | 112053 | 30.0000 | B42 | S |
| **888** | 889 | 0 | 3 | Johnston, Miss. Catherine Helen "Carrie" | female | NaN | 1 | 2 | W./C. 6607 | 23.4500 | NaN | S |
| **889** | 890 | 1 | 1 | Behr, Mr. Karl Howell | male | 26.0 | 0 | 0 | 111369 | 30.0000 | C148 | C |

```
dt.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
```

```
dt.shape
```

```
(891, 12)
```

```
dt.nunique()
```

```
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
```

```
dt['Survived'].value_counts()
```

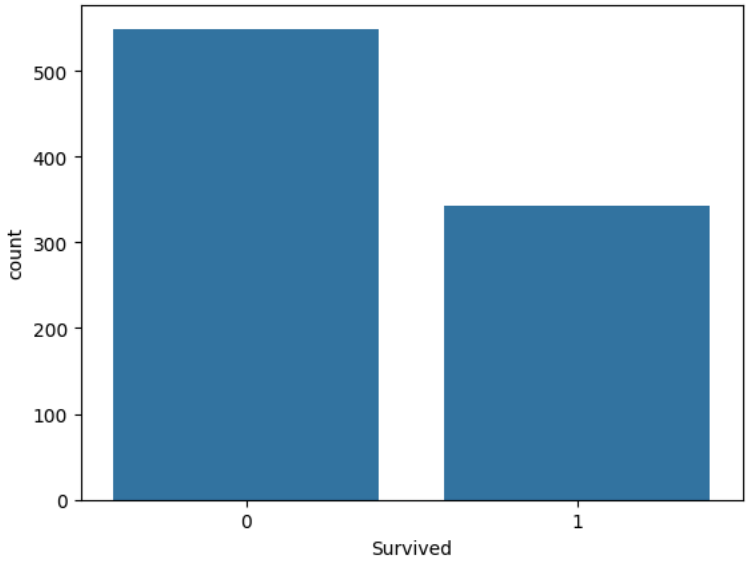
```
0    549
1    342
Name: Survived, dtype: int64
```

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

```
0    61.62
1    38.38
Name: Survived, dtype: float64
```

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

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




```
dt
```

| | 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 |
| **2** | 3 | 1 | 3 | Heikkinen, Miss. Laina | female | 26.0 | 0 | 0 | STON/O2. 3101282 | 7 |
| **3** | 4 | 1 | 1 | Futrelle, Mrs. Jacques Heath (Lily May Peel) | female | 35.0 | 1 | 0 | 113803 | 53 |

```
dt.Pclass.unique()
```

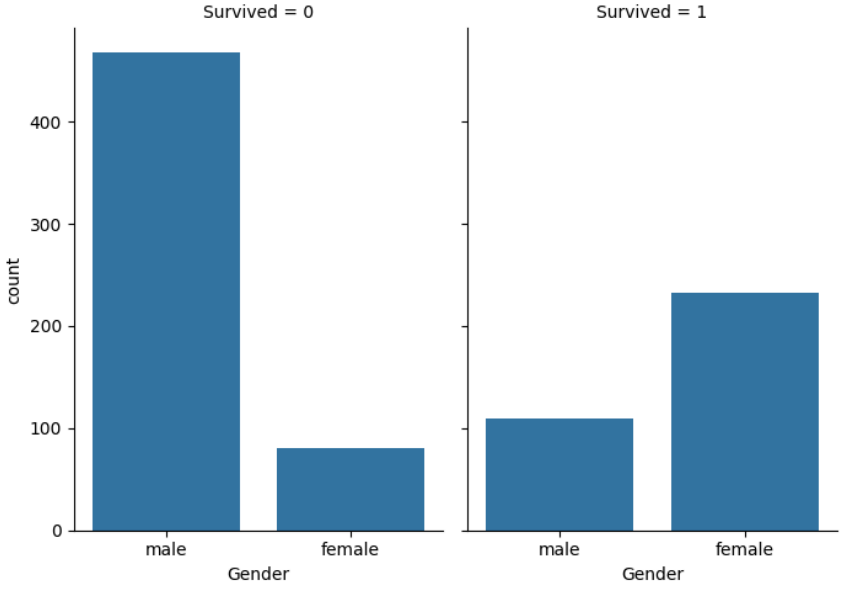
```
array([3, 1, 2])
```

```
dt.rename(columns = {"Sex":"Gender"},inplace = True)
dt
```

| | 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 | 7 |
| **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 | 5 |

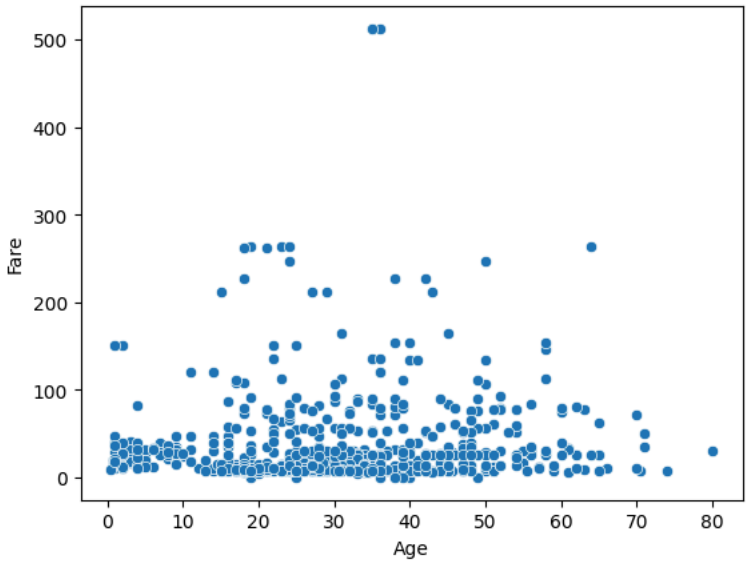
```
sns.catplot(x="Gender",col="Survived",kind="count",data=dt,height=5,aspect=.7)
```

```
<seaborn.axisgrid.FacetGrid at 0x7f8f90687c70>
```



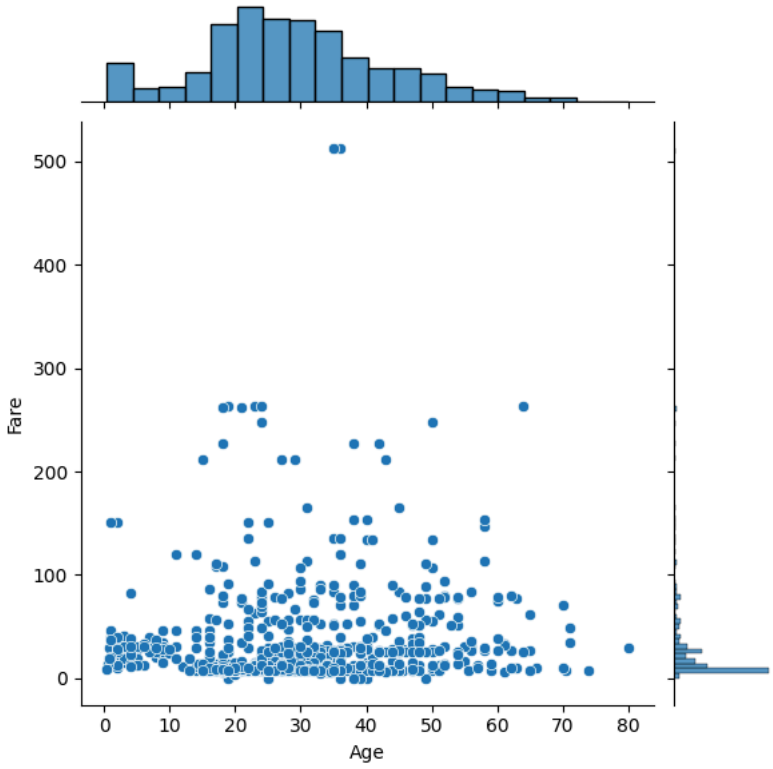

```
sns.scatterplot(x=dt["Age"],y=dt["Fare"])
```

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

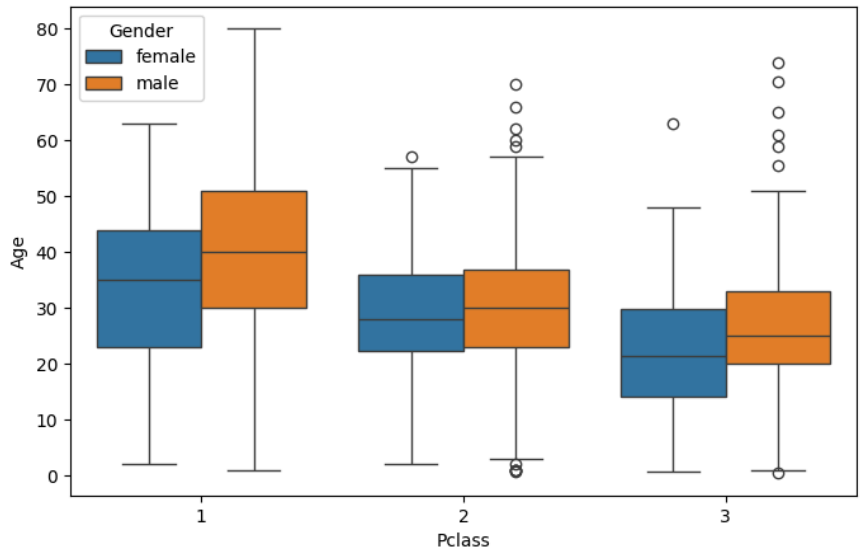



```
sns.jointplot(x="Age",y="Fare",data=dt)
```

```
<seaborn.axisgrid.JointGrid at 0x7f8f8e47dd50>
```

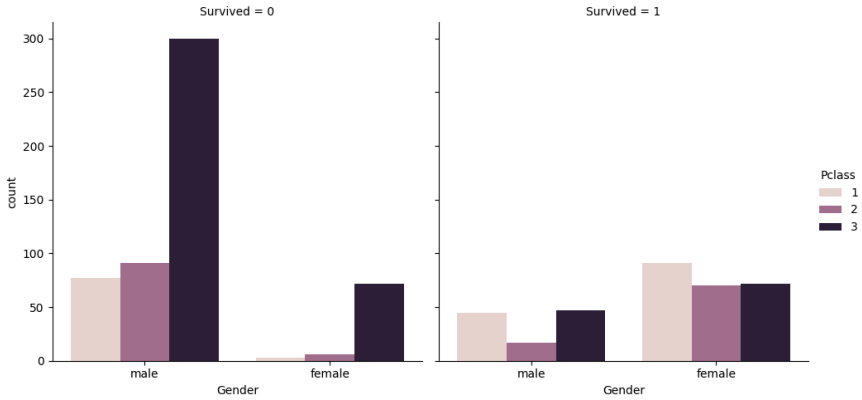



```
fig, ax1 = plt.subplots(figsize=(8,5))
pt=sns.boxplot(ax=ax1,x="Pclass",y='Age',hue='Gender',data=dt)
```



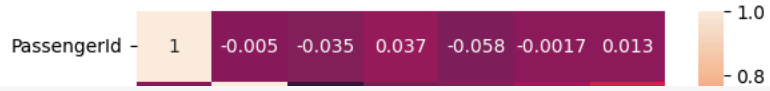

```
sns.catplot(data=dt,col="Survived",x="Gender",hue="Pclass",kind="count")
```

```
<seaborn.axisgrid.FacetGrid at 0x7f8fcbd044c0>
```




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

```
<ipython-input-28-73f7e790f972>:1: FutureWarning: The default value of numeric_only i
  corr=dt.corr()
<Axes: >
```




```
sns.pairplot(dt)
```

```
<seaborn.axisgrid.PairGrid at 0x7f8f8e222fe0>
```