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

df=pd.read_csv("tested.csv")

df
```

```
     PassengerId  Survived  Pclass  \
0            892         0       3
1            893         1       3
2            894         0       2
3            895         0       3
4            896         1       3
..           ...       ...     ...
413         1305         0       3
414         1306         1       1
415         1307         0       3
416         1308         0       3
417         1309         0       3

                                          Name     Sex   Age  SibSp
Parch  \
0                              Kelly, Mr. James    male  34.5      0
0
1              Wilkes, Mrs. James (Ellen Needs)  female  47.0      1
0
2                     Myles, Mr. Thomas Francis    male  62.0      0
0
3                              Wirz, Mr. Albert    male  27.0      0
0
4    Hirvonen, Mrs. Alexander (Helga E Lindqvist)  female  22.0      1
1
..                                          ...     ...   ...    ...
...
413                         Spector, Mr. Woolf    male   NaN      0
0
414                Oliva y Ocana, Dona. Fermina  female  39.0      0
0
415                Saether, Mr. Simon Sivertsen    male  38.5      0
0
416                         Ware, Mr. Frederick    male   NaN      0
0
417                     Peter, Master. Michael J    male   NaN      1
1

                Ticket      Fare Cabin Embarked
0               330911    7.8292   NaN        Q
1               363272    7.0000   NaN        S
2               240276    9.6875   NaN        Q
```

```
3                315154    8.6625   NaN        S
4               3101298   12.2875   NaN        S
..                  ...       ...   ...      ...
413          A.5. 3236    8.0500   NaN        S
414           PC 17758  108.9000  C105        C
415  SOTON/O.Q. 3101262    7.2500   NaN        S
416              359309    8.0500   NaN        S
417                2668   22.3583   NaN        C

[418 rows x 12 columns]
```

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

```
PassengerId      0
Survived         0
Pclass           0
Name             0
Sex              0
Age             86
SibSp            0
Parch            0
Ticket           0
Fare             1
Cabin          327
Embarked         0
dtype: int64
```

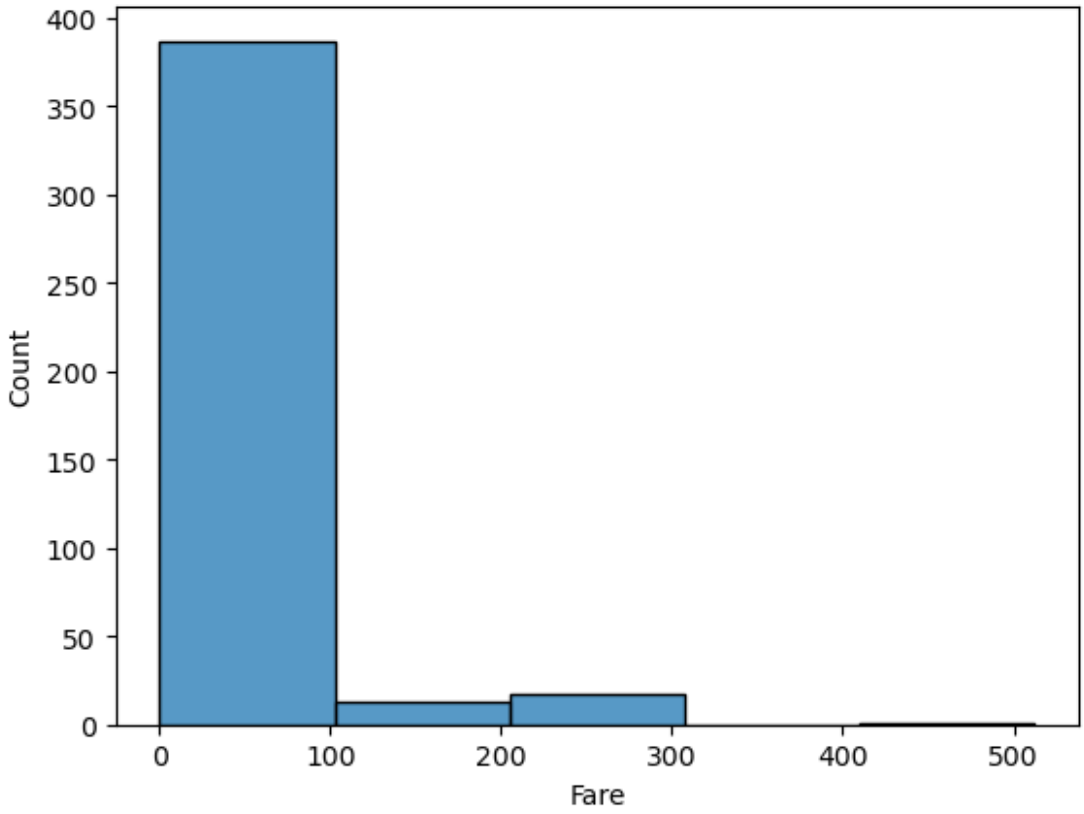
```
df.fillna(method='bfill',inplace=True)
```

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

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

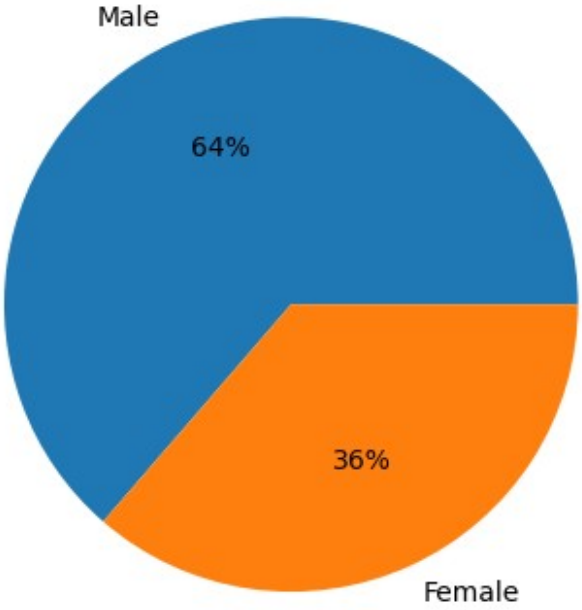
```
sns.histplot(data=df,x='Fare',bins=5)
```

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



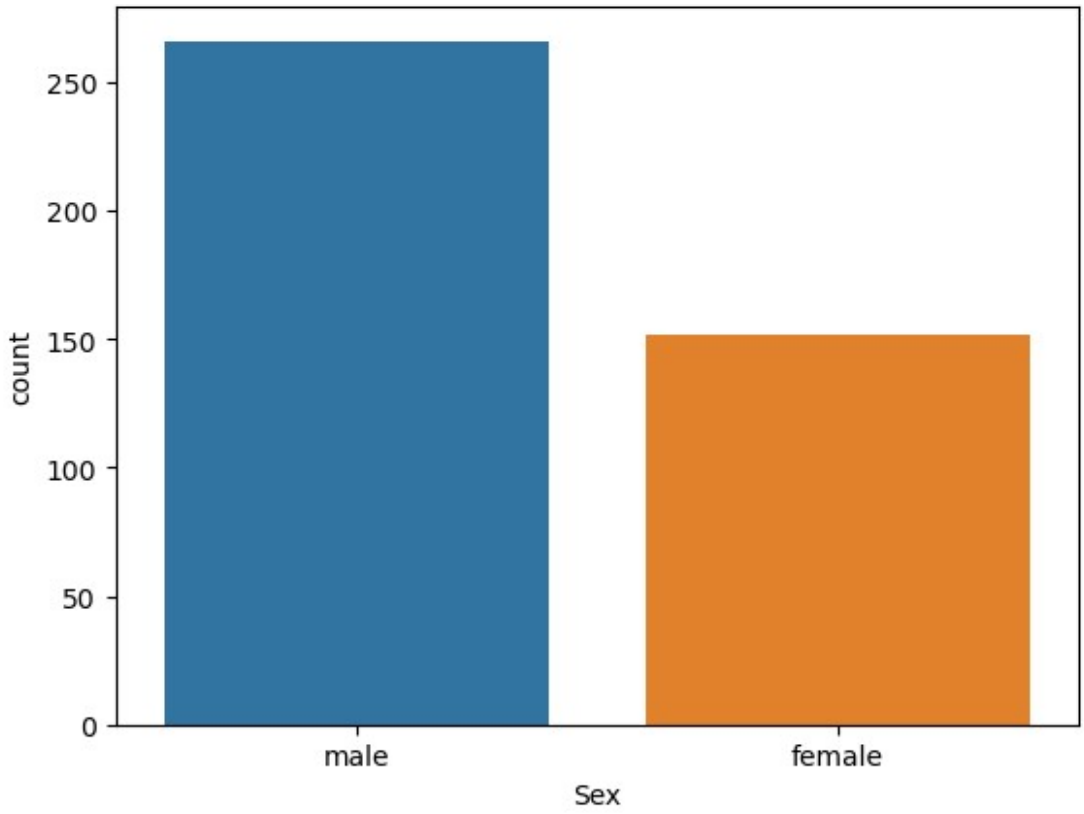

```
plt.pie(df['Sex'].value_counts(),labels=["Male",
"Female"],autopct='%.0f%%')
```

```
([<matplotlib.patches.Wedge at 0x19327ed0c70>,
  <matplotlib.patches.Wedge at 0x19327ed0b80>],
 [Text(-0.45695648023571717, 1.000595210447554, 'Male'),
  Text(0.4569564802357173, -1.000595210447554, 'Female')],
 [Text(-0.24924898921948208, 0.5457792056986657, '64%'),
  Text(0.24924898921948213, -0.5457792056986657, '36%')])
```



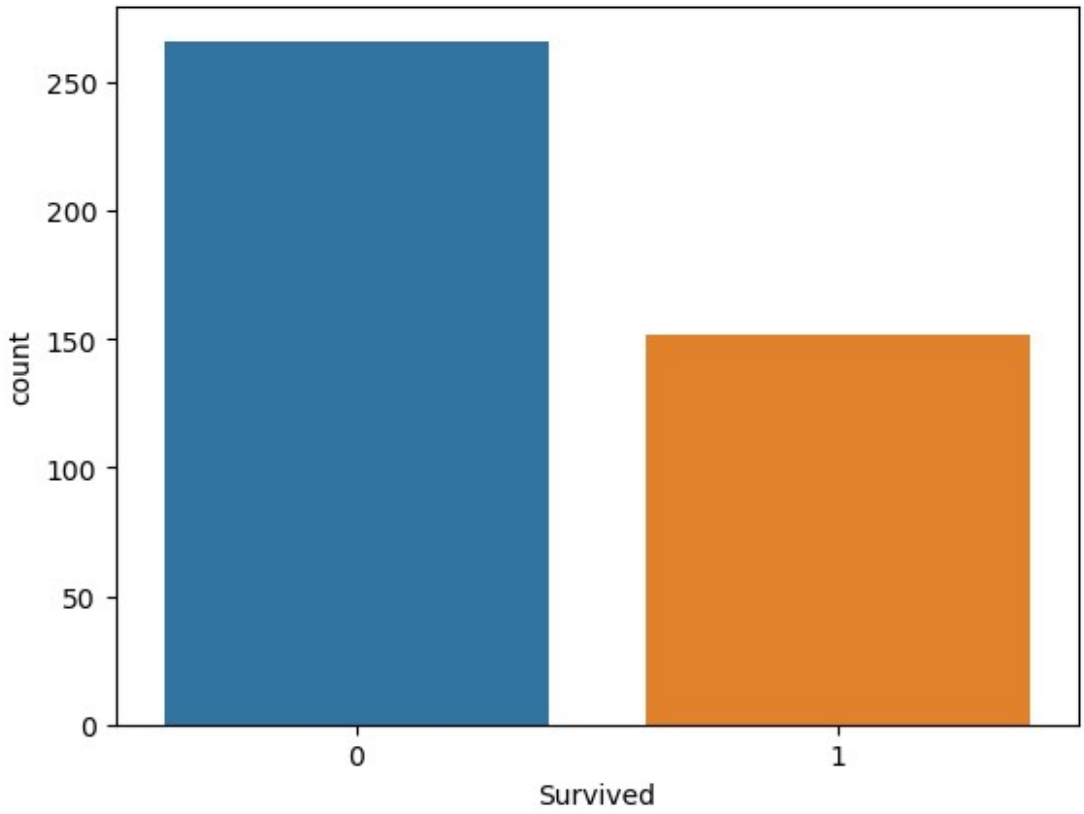

```
sns.countplot(data=df, x='Sex')
```

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



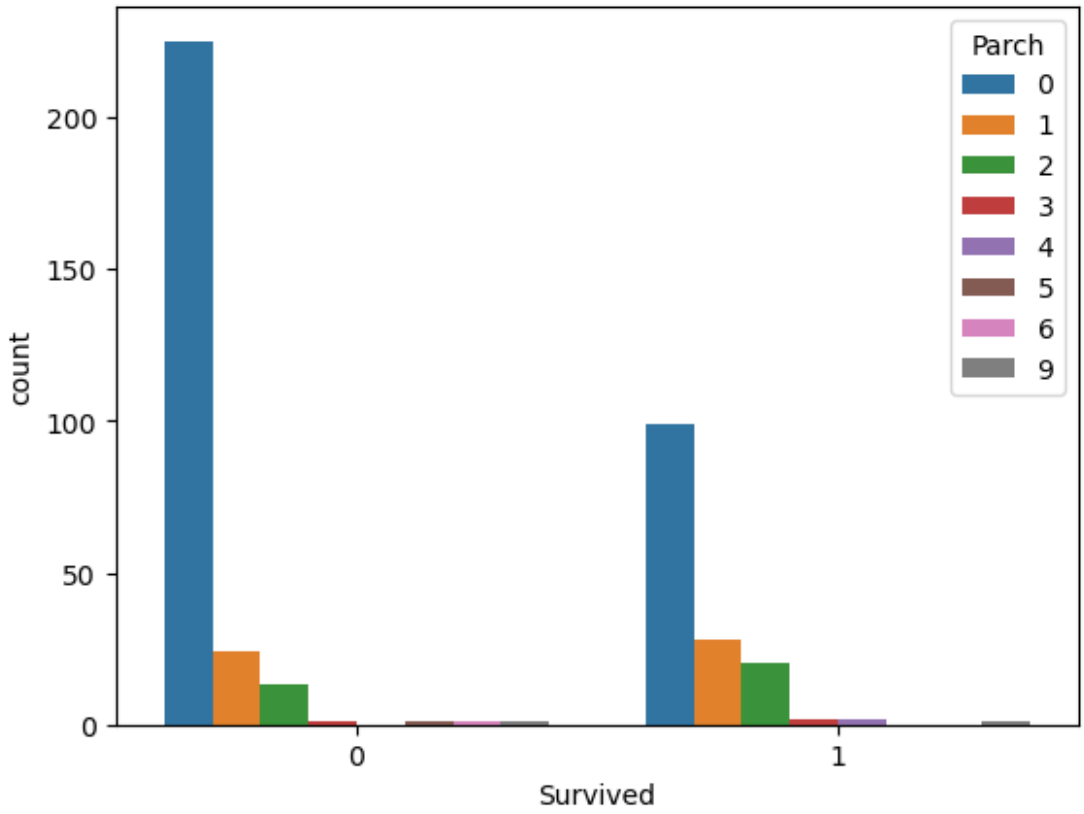

```
sns.countplot(data=df, x='Survived')
```

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



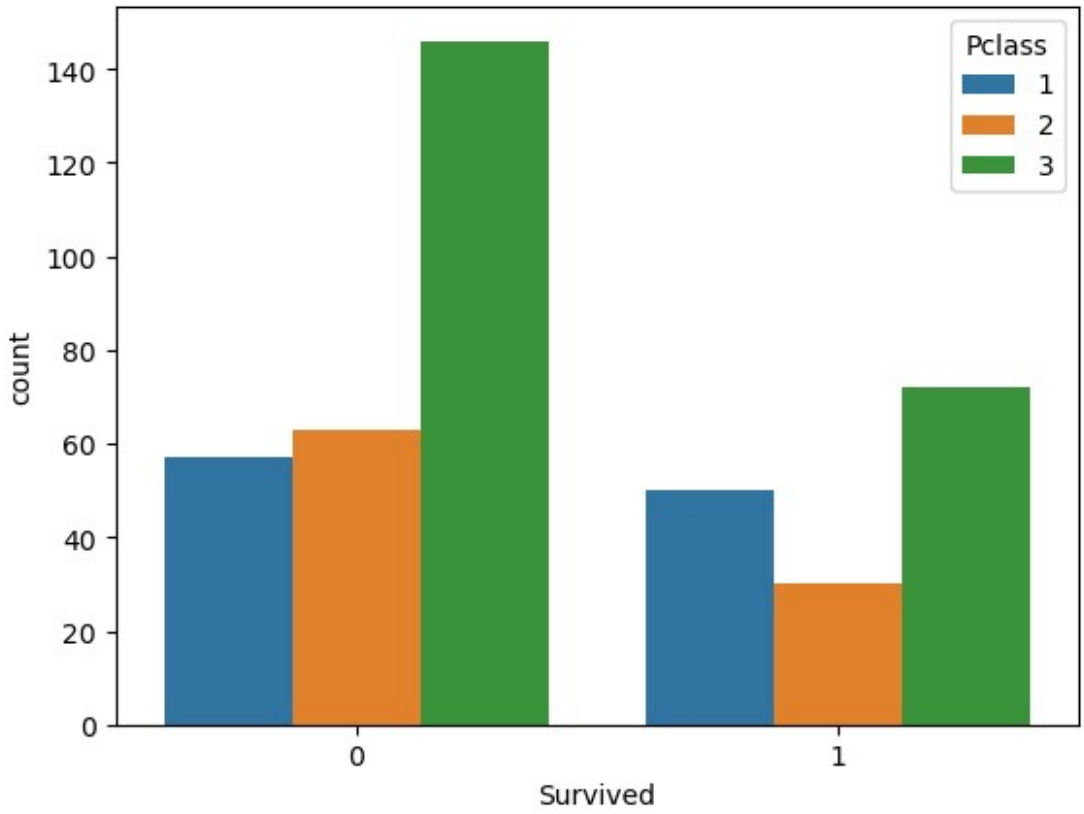

```
sns.countplot(data=df, x='Survived', hue='Parch')
```

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



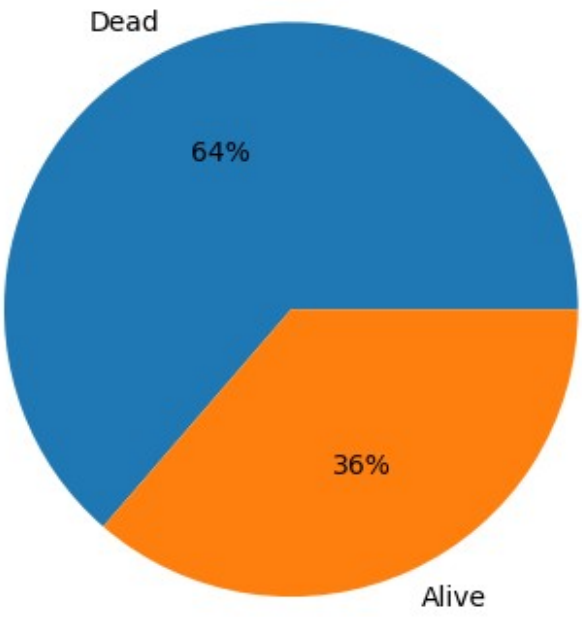

```
sns.countplot(data=df, x='Survived', hue='Pclass')
```

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




```
plt.pie(df['Survived'].value_counts(),labels=["Dead",
"Alive"],autopct='%.0f%%')
```

```
([<matplotlib.patches.Wedge at 0x1932862a380>,
  <matplotlib.patches.Wedge at 0x1932862a290>],
 [Text(-0.45695648023571717, 1.000595210447554, 'Dead'),
  Text(0.4569564802357173, -1.000595210447554, 'Alive')],
 [Text(-0.24924898921948208, 0.5457792056986657, '64%'),
  Text(0.24924898921948213, -0.5457792056986657, '36%')])
```




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

```
0    266
1    152
Name: Survived, dtype: int64
```