In [1]:
```python
import pandas as pd;
import numpy as ny;
import seaborn as sns;
import matplotlib.pyplot as plt
```

In [2]:
```python
titanic = pd.read_csv('tested.csv')
```

In [3]:
```python
titanic.head()
```

Out[3]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cab
0	892	0	3	Kelly, Mr. James	male	34.5	0	0	330911	7.8292	Na
1	893	1	3	Wilkes, Mrs. James (Ellen Needs)	female	47.0	1	0	363272	7.0000	Na
2	894	0	2	Myles, Mr. Thomas Francis	male	62.0	0	0	240276	9.6875	Na
3	895	0	3	Wirz, Mr. Albert	male	27.0	0	0	315154	8.6625	Na
4	896	1	3	Hirvonen, Mrs. Alexander (Helga E Lindqvist)	female	22.0	1	1	3101298	12.2875	Na

In [4]:
```python
titanic.shape
```

Out[4]: (418, 12)

In [5]:
```python
titanic.isna().sum()
```

Out[5]:
```
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
```

In [6]:
```python
titanic.dtypes
```

Out[6]:
```
PassengerId      int64
Survived         int64
Pclass           int64
Name            object
Sex             object
Age            float64
SibSp            int64
Parch            int64
Ticket          object
Fare           float64
Cabin           object
Embarked        object
dtype: object
```

In [7]:
```python
print(titanic['Age'].mean())

titanic['Age'] = titanic['Age'].fillna(titanic['Age'].mean())
```
```
30.272590361445783
```

In [8]:
```python
titanic['Cabin'] = titanic['Cabin'].fillna(titanic['Cabin'].mean)
```

In [9]:
```python
titanic['Fare'] = titanic['Fare'].fillna(titanic['Fare'].mean())
```

In [10]:
```python
titanic.isna().sum()
```

Out[10]:
```
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
```

```
In [11]: titanic.dtypes
```

```
Out[11]: PassengerId      int64
         Survived         int64
         Pclass           int64
         Name            object
         Sex             object
         Age            float64
         SibSp            int64
         Parch            int64
         Ticket          object
         Fare           float64
         Cabin           object
         Embarked        object
         dtype: object
```

In [12]: `titanic`

Out[12]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	
0	892	0	3	Kelly, Mr. James	male	34.50000	0	0	330911	
1	893	1	3	Wilkes, Mrs. James (Ellen Needs)	female	47.00000	1	0	363272	
2	894	0	2	Myles, Mr. Thomas Francis	male	62.00000	0	0	240276	
3	895	0	3	Wirz, Mr. Albert	male	27.00000	0	0	315154	
4	896	1	3	Hirvonen, Mrs. Alexander (Helga E Lindqvist)	female	22.00000	1	1	3101298	:
...	...	...	...	...	...	...	...	...	...	
413	1305	0	3	Spector, Mr. Woolf	male	30.27259	0	0	A.5. 3236	
414	1306	1	1	Oliva y Ocana, Dona. Fermina	female	39.00000	0	0	PC 17758	1(
415	1307	0	3	Saether, Mr. Simon Sivertsen	male	38.50000	0	0	SOTON/O.Q. 3101262	
416	1308	0	3	Ware, Mr. Frederick	male	30.27259	0	0	359309	
417	1309	0	3	Peter, Master. Michael J	male	30.27259	1	1	2668	:

418 rows × 12 columns
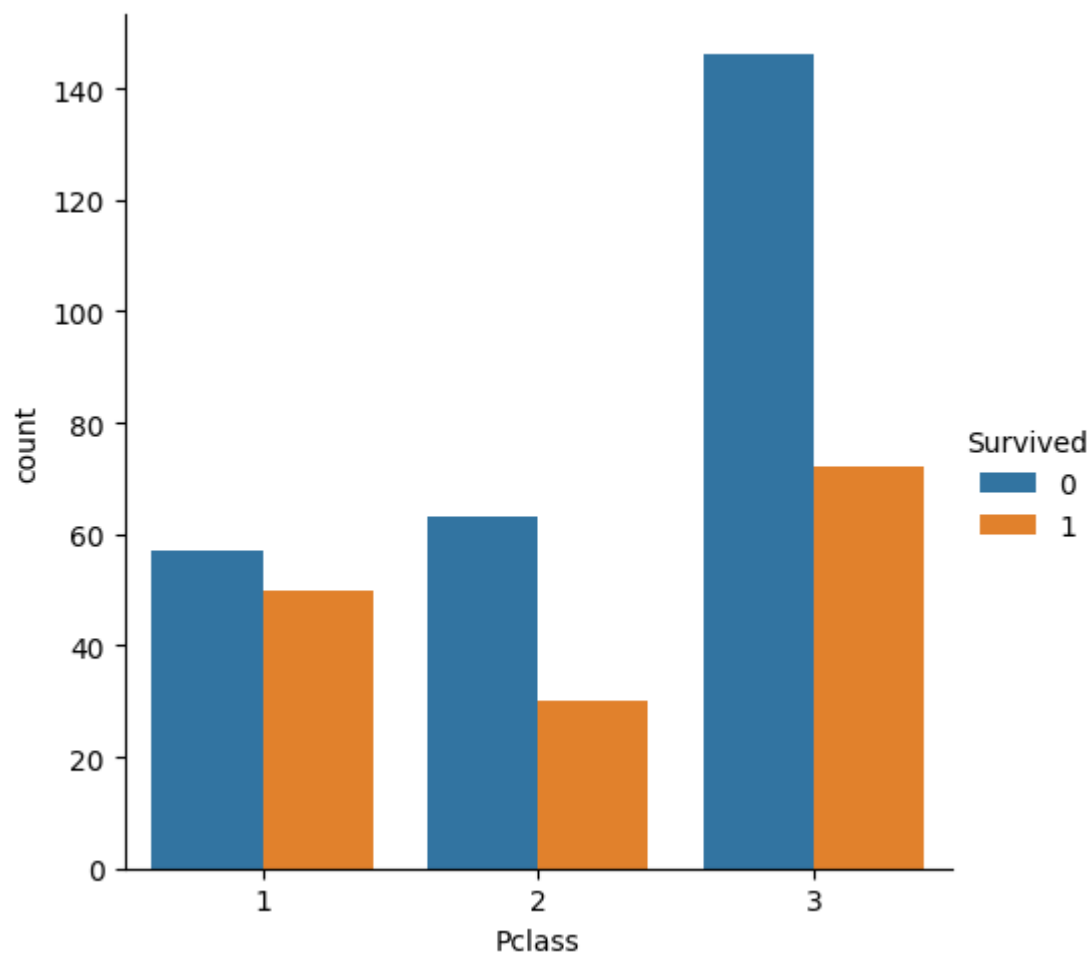
In [13]:
```python
sns.catplot(x ="Sex", hue ="Survived",
kind ="count", data = titanic)
```

Out[13]: <seaborn.axisgrid.FacetGrid at 0x7f7c0ad44f70>
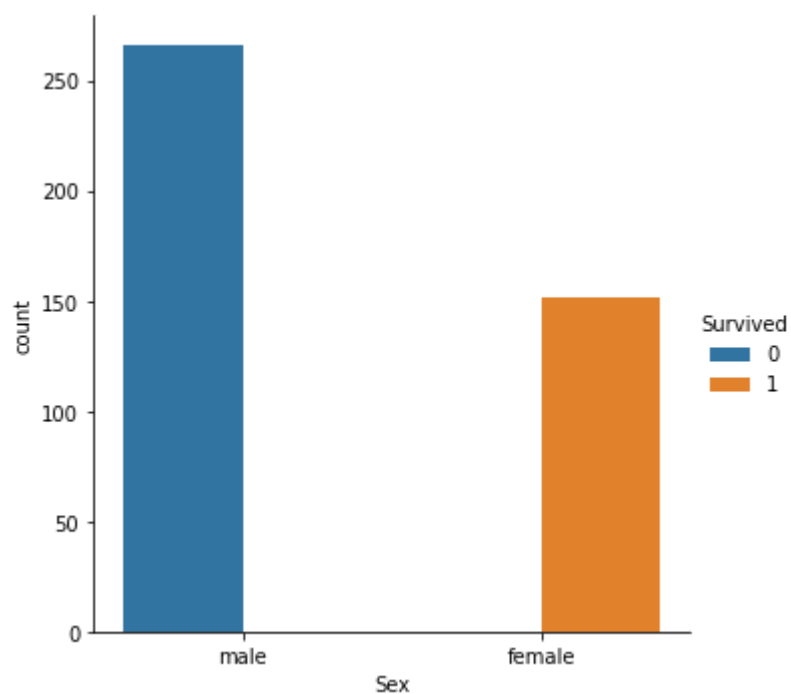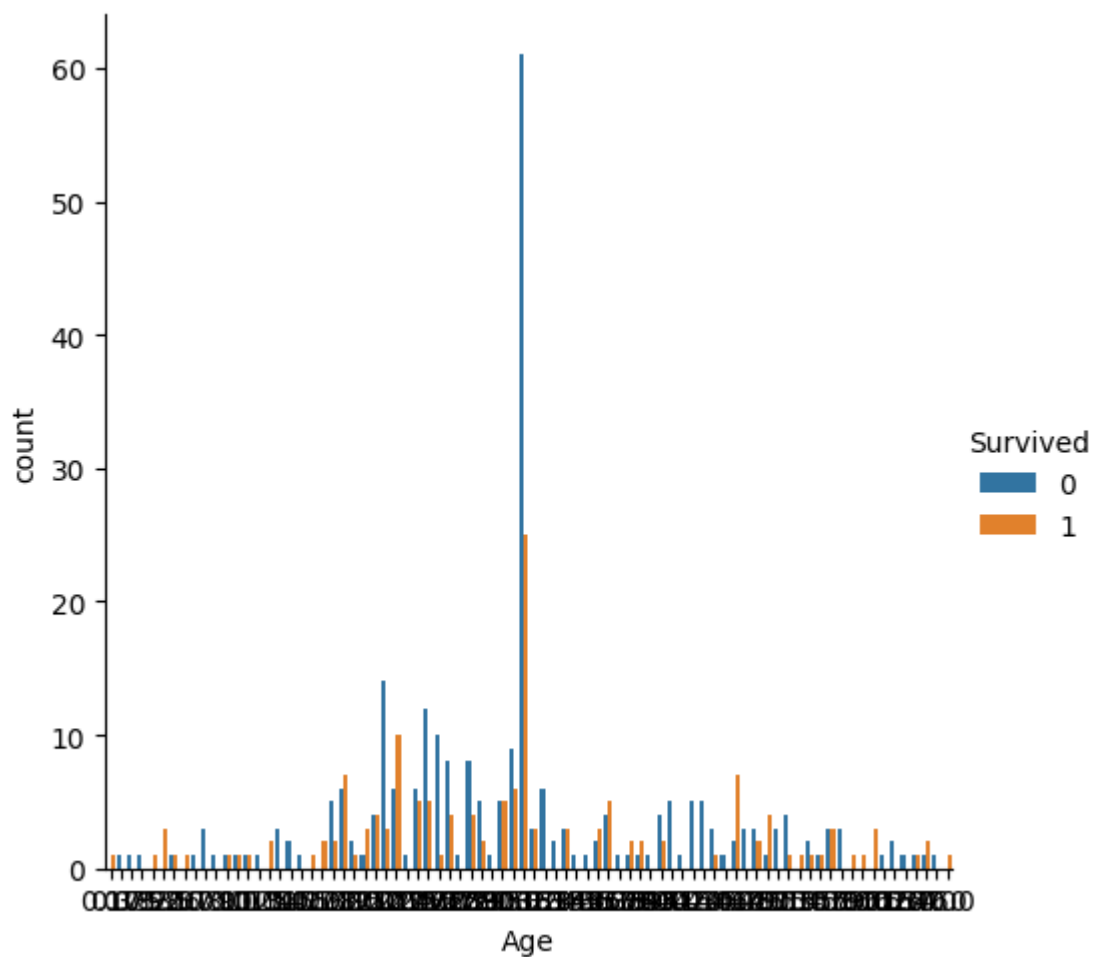
In [14]:
```python
sns.catplot(x ="Pclass", hue ="Survived",
kind ="count", data = titanic)
```

Out[14]: <seaborn.axisgrid.FacetGrid at 0x7f7c088b7f70>

In [15]:
```
sns.catplot(x ="Age", hue ="Survived",
kind ="count", data = titanic)
```
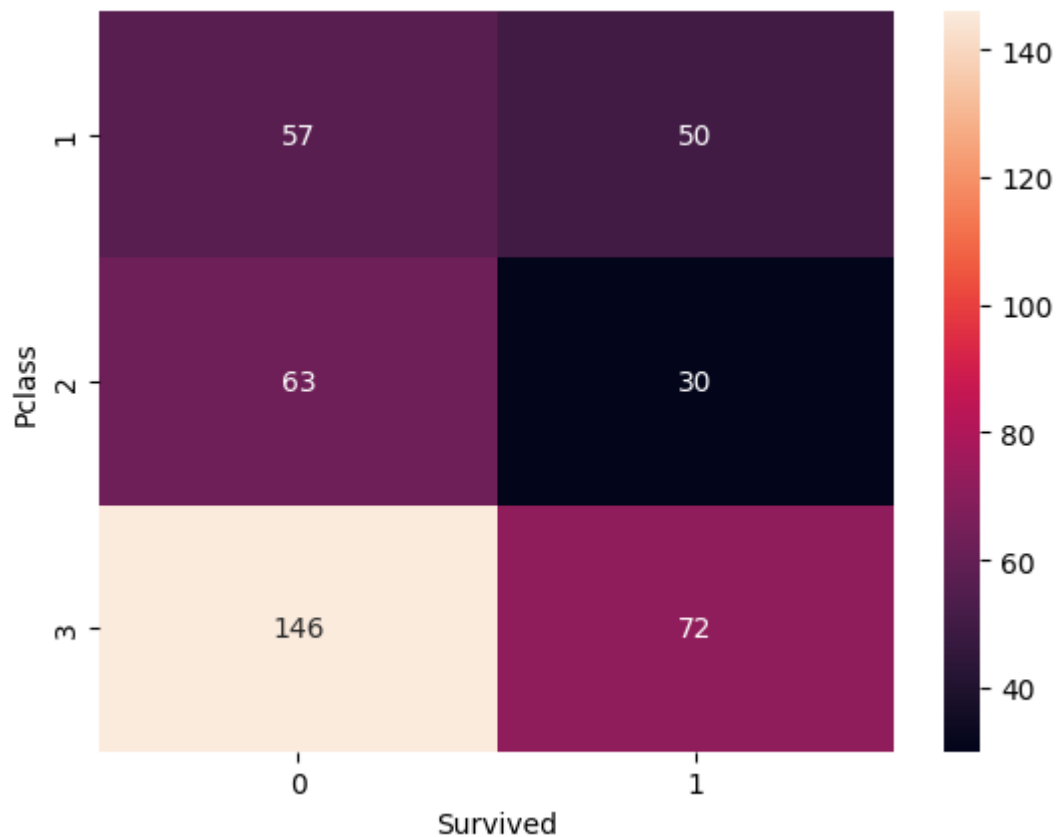
Out[15]: <seaborn.axisgrid.FacetGrid at 0x7f7c0abb9ca0>

In [16]:
```python
# Group the dataset by Pclass and Survived and then unstack them
group = titanic.groupby(['Pclass', 'Survived'])
pclass_survived = group.size().unstack()

# Heatmap - Color encoded 2D representation of data.
sns.heatmap(pclass_survived, annot = True, fmt ="d")
```
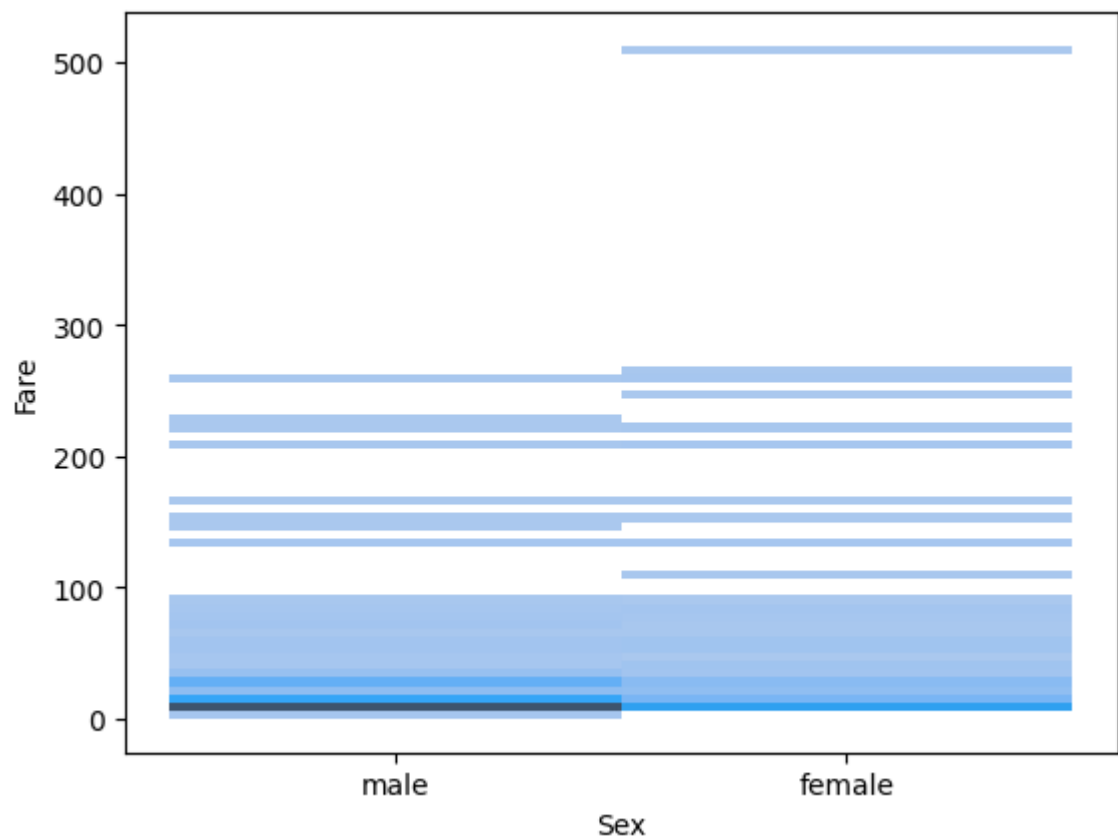
Out[16]: <AxesSubplot:xlabel='Survived', ylabel='Pclass'>
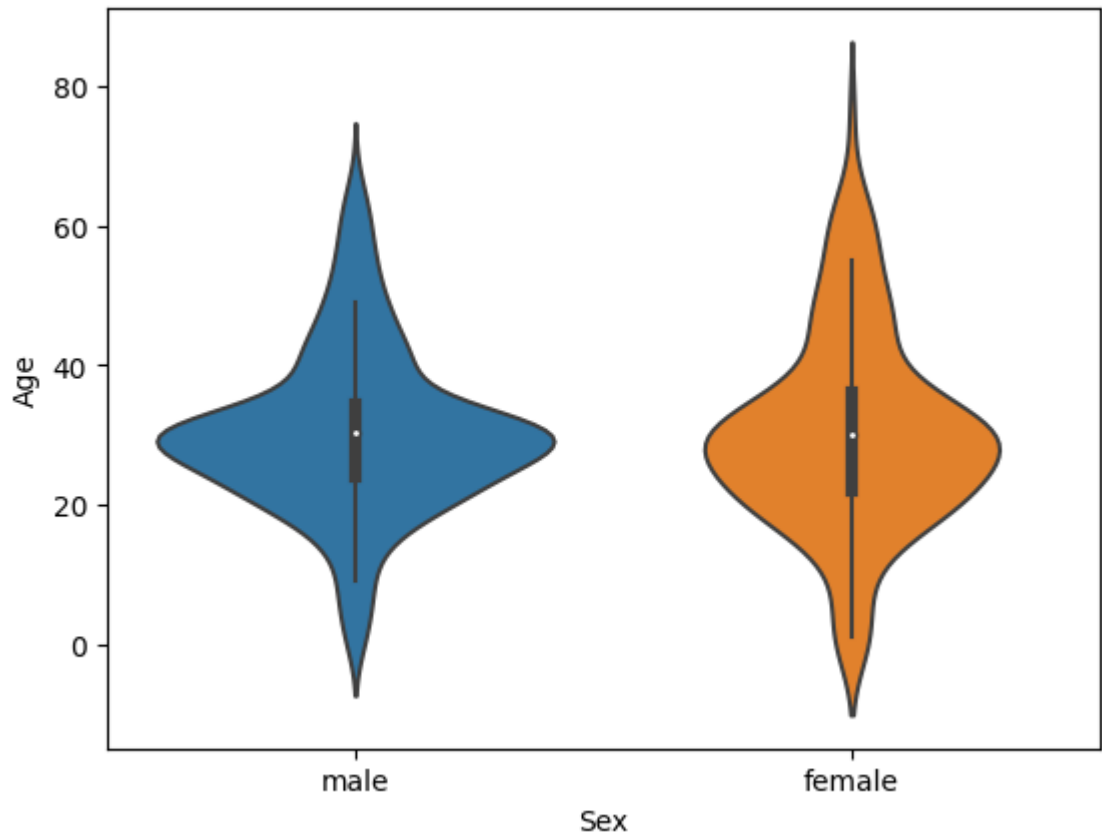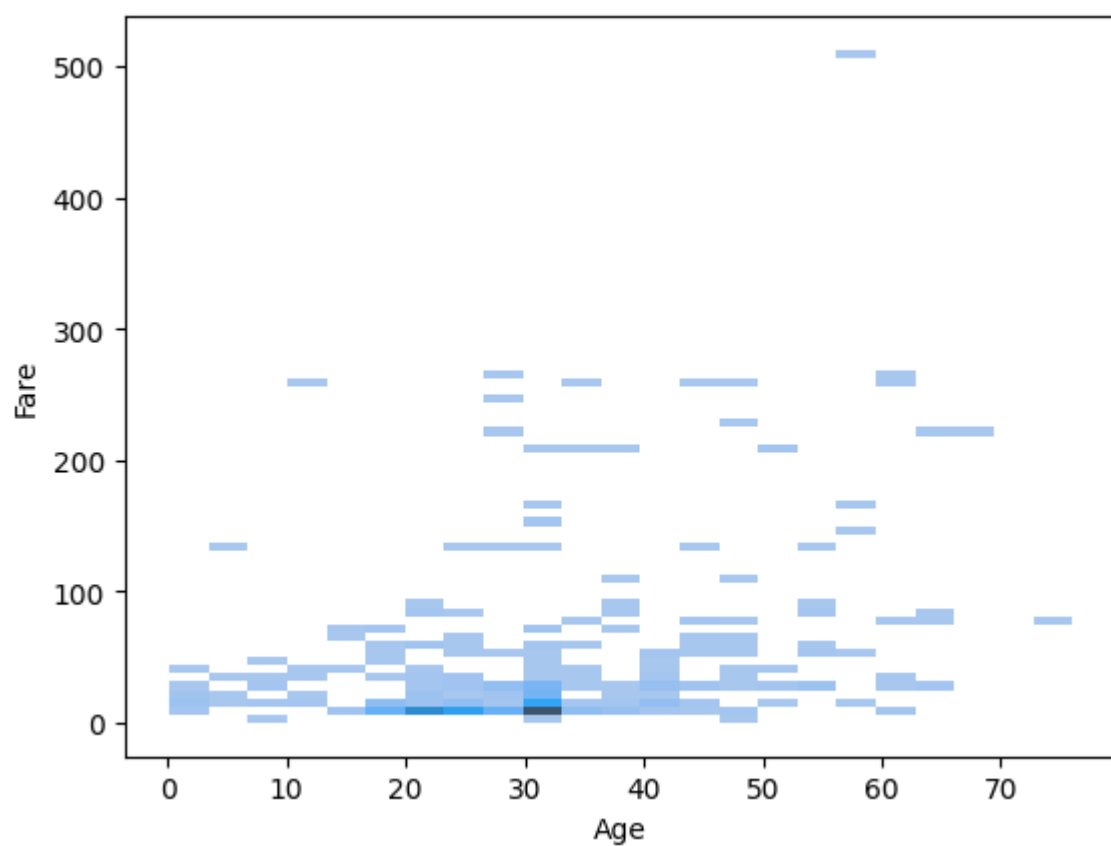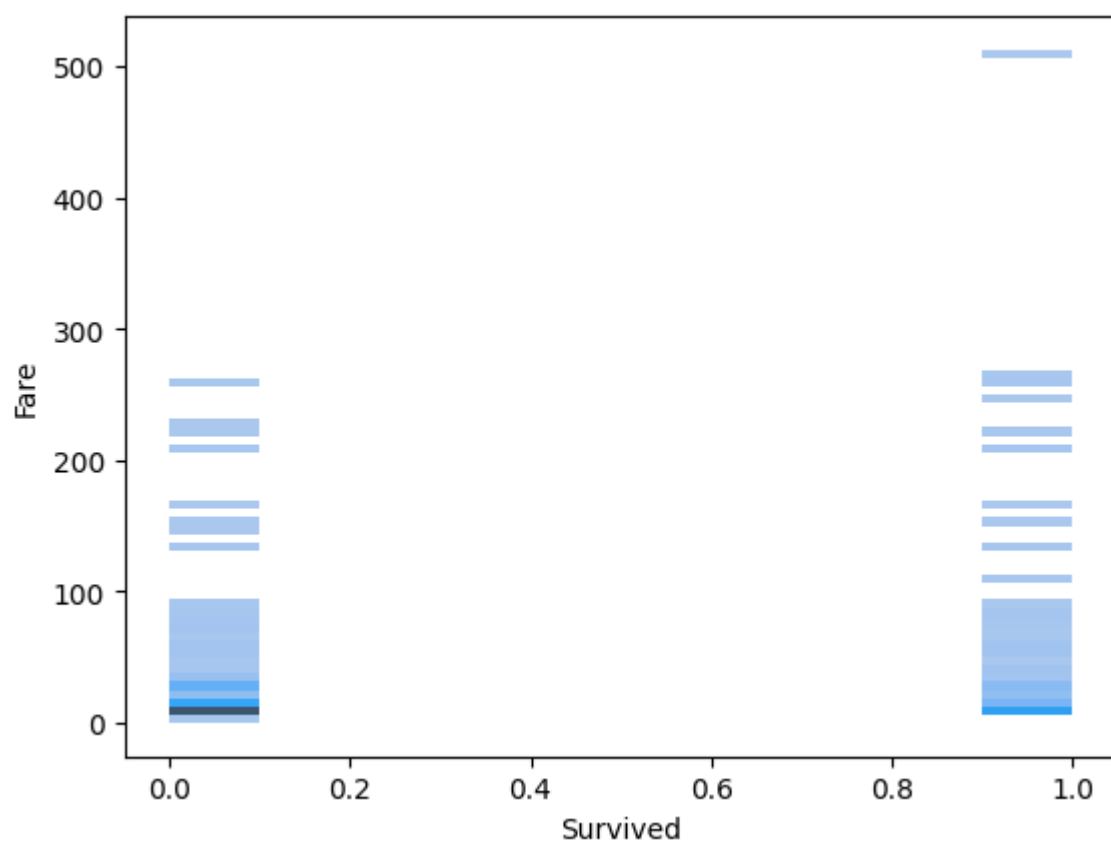
In [17]: ```python
sns.violinplot(x ="Sex", y ="Age", data = titanic, split = True)
```

Out[17]: <AxesSubplot:xlabel='Sex', ylabel='Age'>

In [18]: `sns.histplot(data= titanic , x='Sex' , y='Fare')`

Out[18]: `<AxesSubplot:xlabel='Sex', ylabel='Fare'>`

In [19]: `sns.histplot(data= titanic , y='Fare',x='Age')`

Out[19]: `<AxesSubplot:xlabel='Age', ylabel='Fare'>`

In [20]: `sns.histplot(data= titanic , y='Fare',x='Survived')`

Out[20]: `<AxesSubplot:xlabel='Survived', ylabel='Fare'>`

In [21]: `sns.histplot(data= titanic , y='Fare',x='Pclass')`

Out[21]: `<AxesSubplot:xlabel='Pclass', ylabel='Fare'>`



In [ ]: