In [ ]:
```
# 1. Use the inbuilt dataset 'titanic'. The dataset contains 891 rows and contai
# the passengers who boarded the unfortunate Titanic ship. Use the Seaborn libra
# find any patterns in the data.

import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt

# Load the dataset
titanic = sns.load_dataset('titanic')

print(titanic.shape)
```

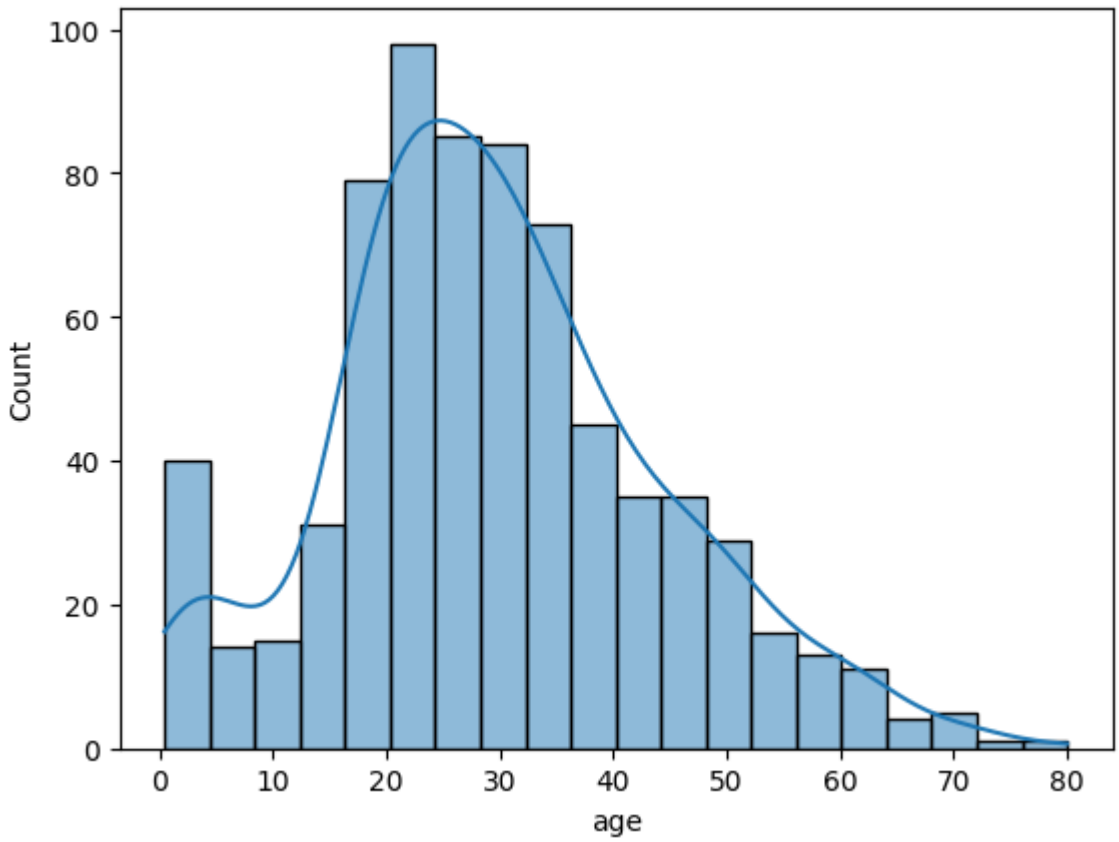
```
(891, 15)
```

In [ ]:
```
print(titanic.columns)
```

```
Index(['survived', 'pclass', 'sex', 'age', 'sibsp', 'parch', 'fare',
       'embarked', 'class', 'who', 'adult_male', 'deck', 'embark_town',
       'alive', 'alone'],
      dtype='object')
```

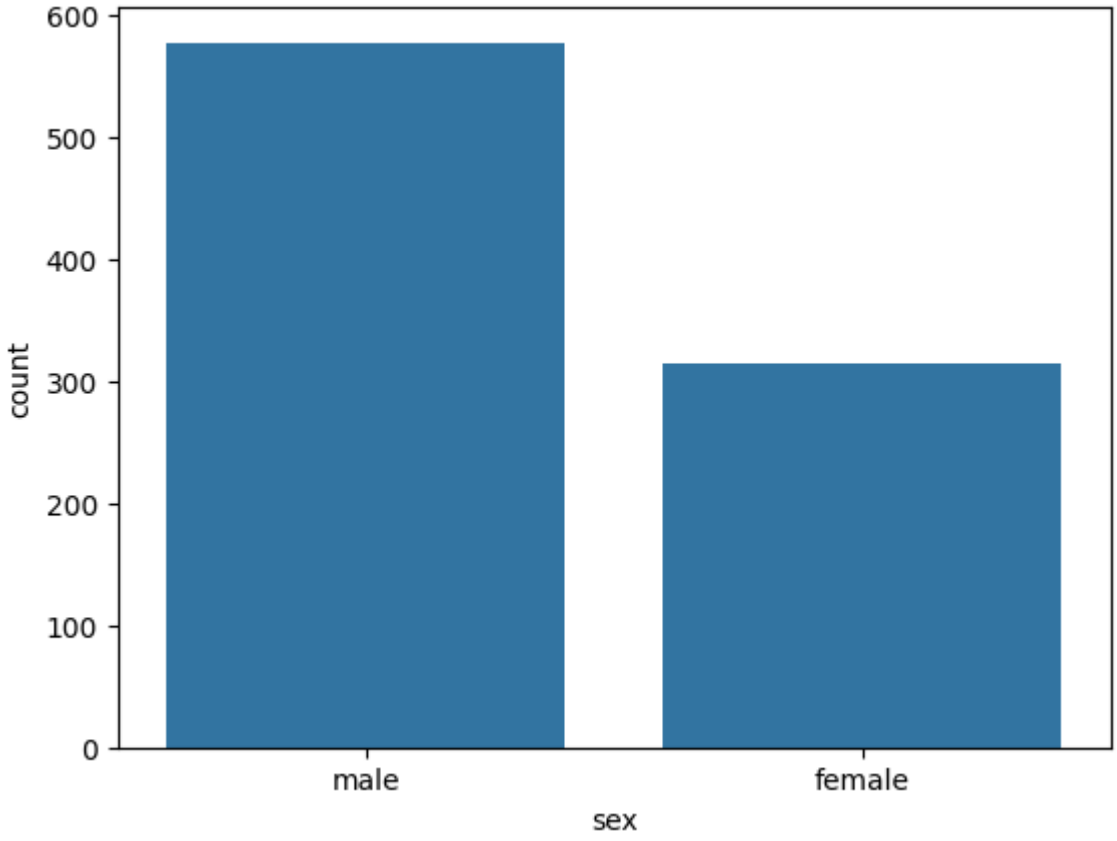
In [ ]:
```
# columns
# ['survived', 'pclass', 'sex', 'age', 'sibsp', 'parch', 'fare','embarked', 'cla

# Visualize the distribution of 'age' column
sns.histplot(data=titanic, x="age", kde=True)
```

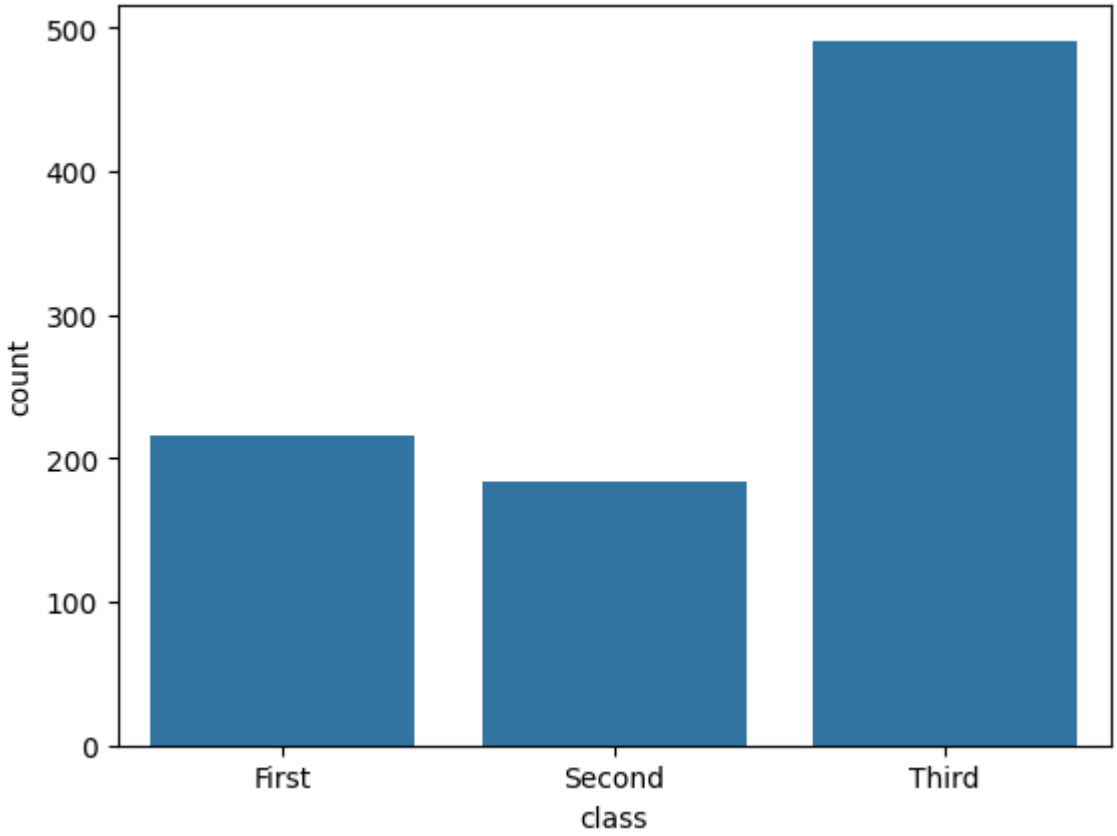
Out[ ]:
```
<Axes: xlabel='age', ylabel='Count'>
```



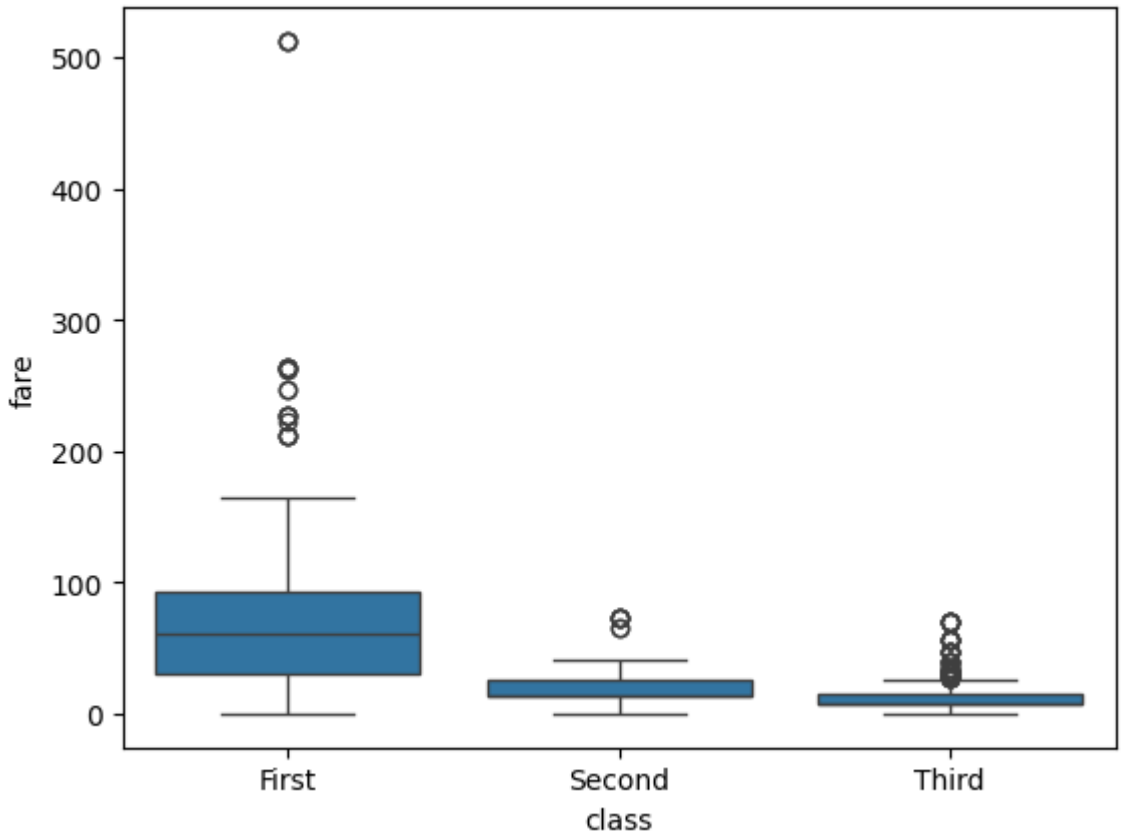
In [ ]:
```
# Display the distribution of 'sex' and 'class'
sns.countplot(x='sex', data=titanic)
plt.show()
```

```
sns.countplot(x='class', data=titanic)
plt.show()
```

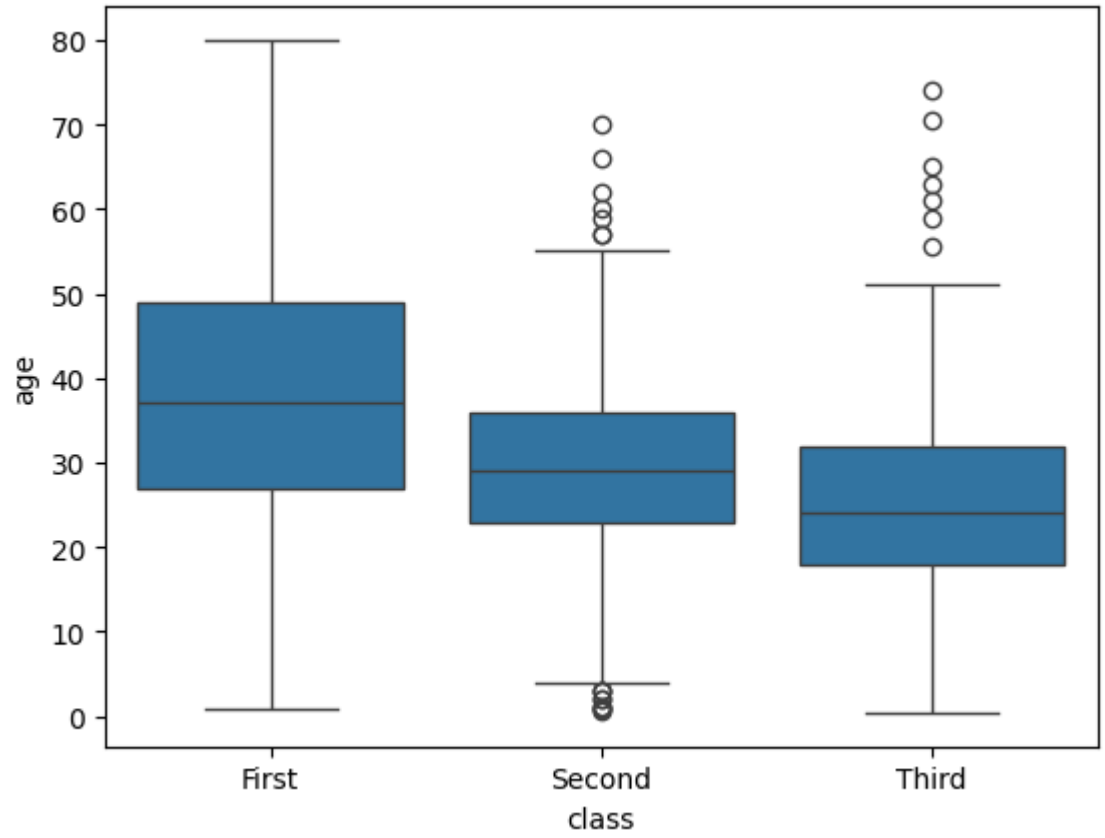




In [ ]:
```
# Explore the relationship between 'fare' and 'class'
sns.boxplot(x='class', y='fare', data=titanic)
plt.show()
```

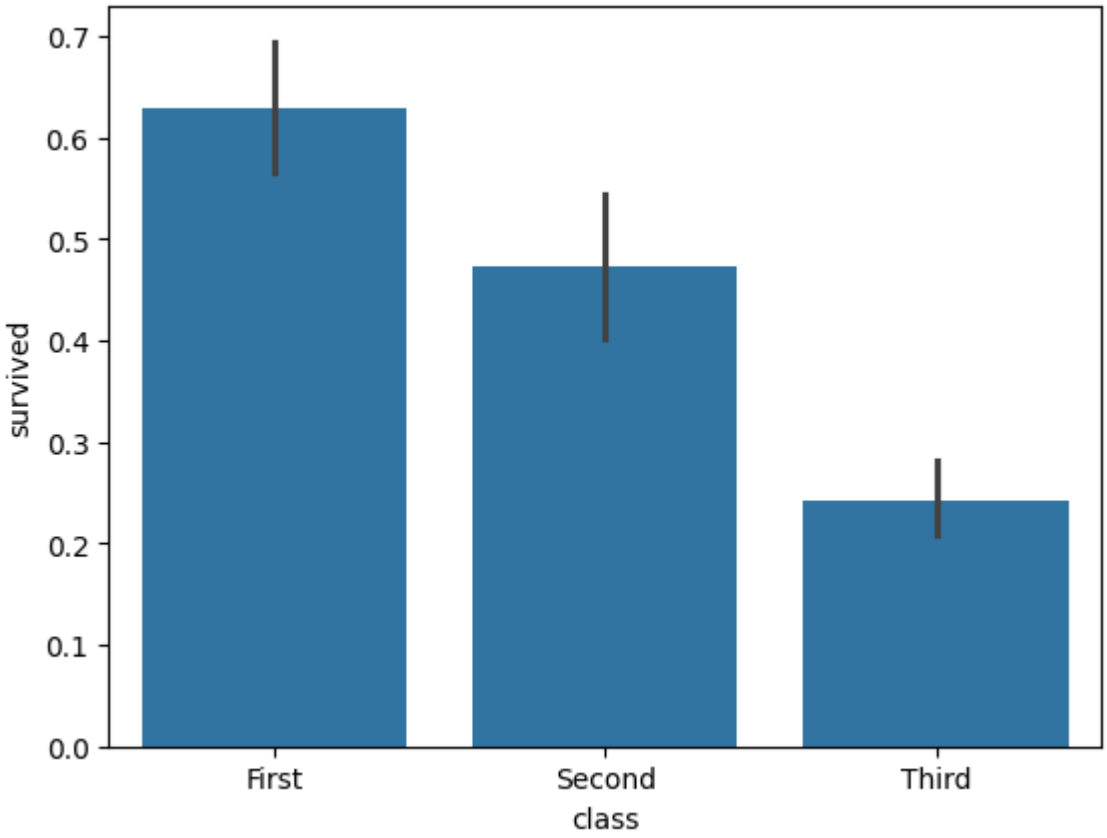


In [ ]:
```
# Explore the relationship between 'age' and 'class'
sns.boxplot(x='class', y='age', data=titanic)
plt.show()
```

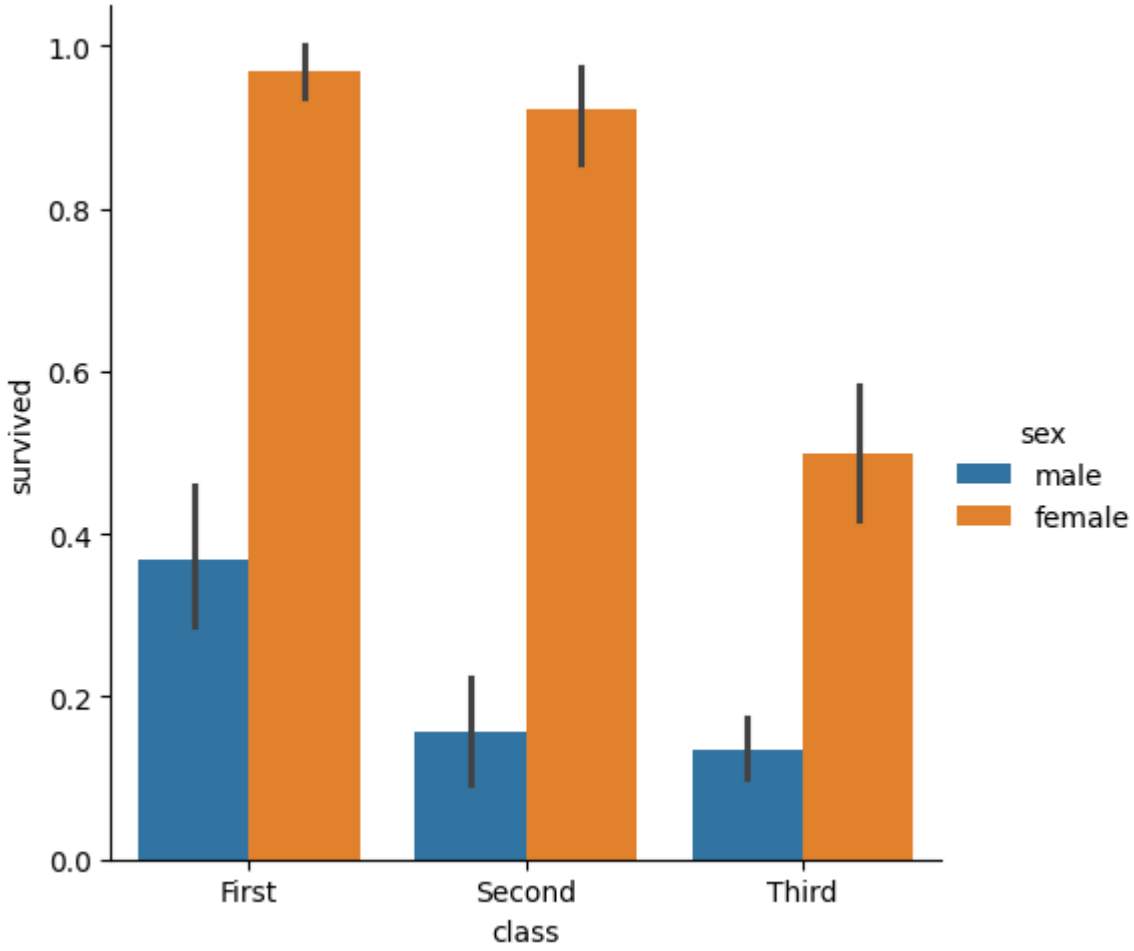


In [ ]:
```
# Visualize the survival rate based on 'class'
sns.barplot(x="class", y="survived", data=titanic)
```

Out[ ]: <Axes: xlabel='class', ylabel='survived'>

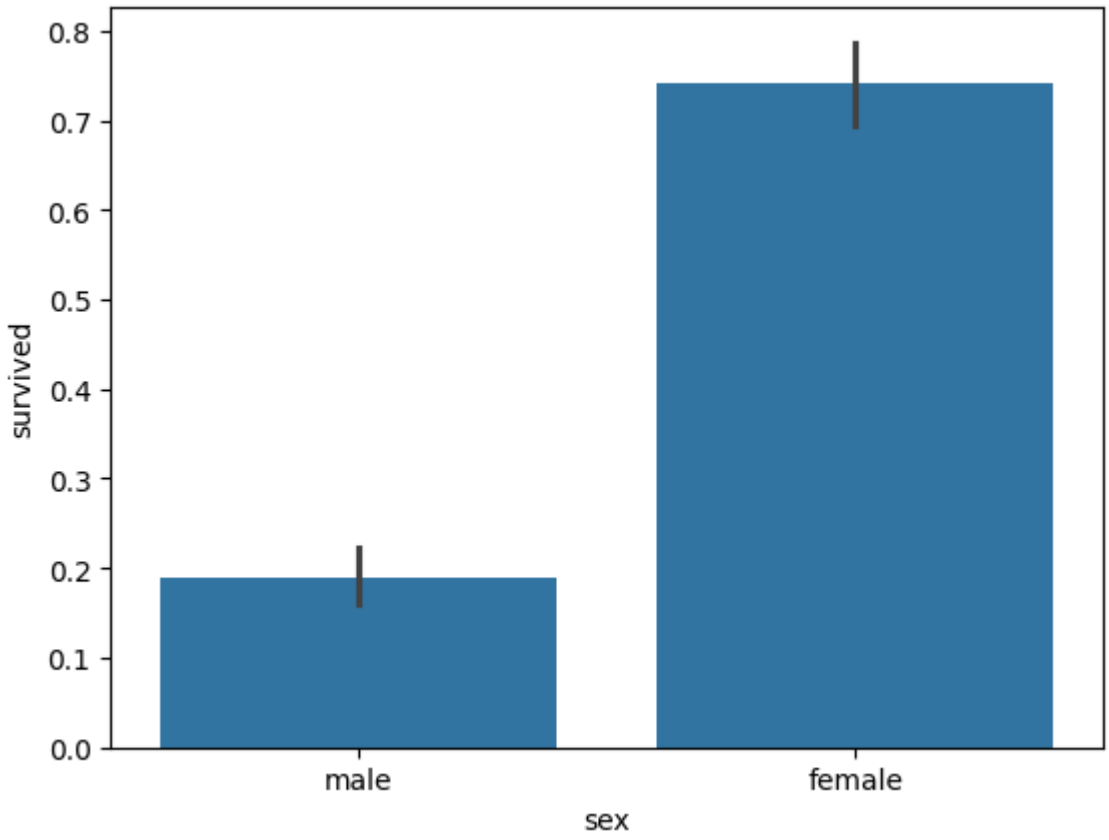


In [ ]:
```
# Explore the survival rate by 'sex' and 'class'
sns.catplot(x='class', y='survived', hue='sex', kind='bar', data=titanic)
plt.show()
```



In [ ]:
```
# visualize the survival rate based on sex
sns.barplot(x="sex",y="survived",data=titanic)
```

Out[ ]: <Axes: xlabel='sex', ylabel='survived'>



In [ ]:
```
# 2. Write a code to check how the price of the ticket (column name: 'fare') for
# distributed by plotting a histogram

sns.histplot(data=titanic, x='fare', kde=True, bins=30)
plt.title('Distribution of Fares')  # Set the title of the plot
plt.show()
```