In [3]:
```
#1. Use the inbuilt dataset 'titanic'. The dataset contains 891 row
#about the passengers who boarded the unfortunate Titanic ship. Use
#if we can find any patterns in the data.
```

In [45]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [46]:
```
dataset = sns.load_dataset('titanic')
dataset
```

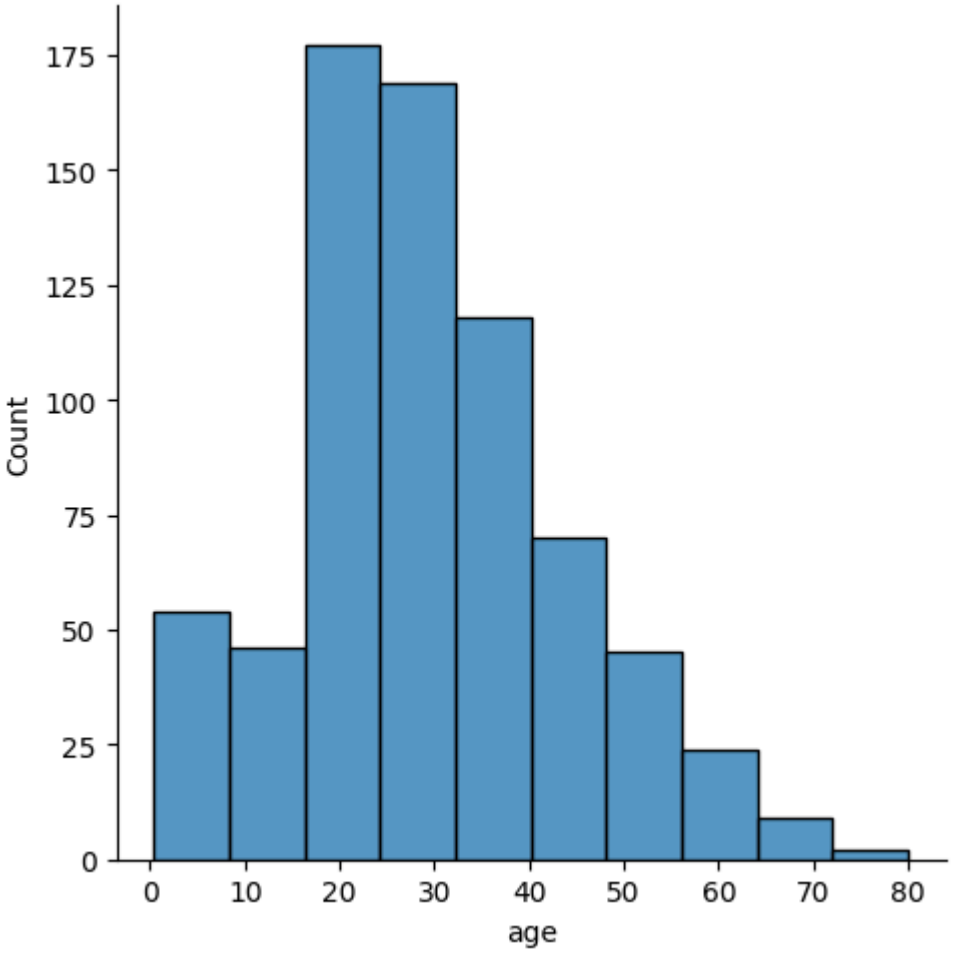
Out[46]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adu
0	0	3	male	22.0	1	0	7.2500	S	Third	man	
1	1	1	female	38.0	1	0	71.2833	C	First	woman	
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	
3	1	1	female	35.0	1	0	53.1000	S	First	woman	
4	0	3	male	35.0	0	0	8.0500	S	Third	man	
...	...	...	...	...	...	...	...	...	...	...	
886	0	2	male	27.0	0	0	13.0000	S	Second	man	
887	1	1	female	19.0	0	0	30.0000	S	First	woman	
888	0	3	female	NaN	1	2	23.4500	S	Third	woman	
889	1	1	male	26.0	0	0	30.0000	C	First	man	
890	0	3	male	32.0	0	0	7.7500	Q	Third	man	

891 rows × 15 columns

In [16]:
```
sns.displot(x = dataset['age'], bins = 10)
```

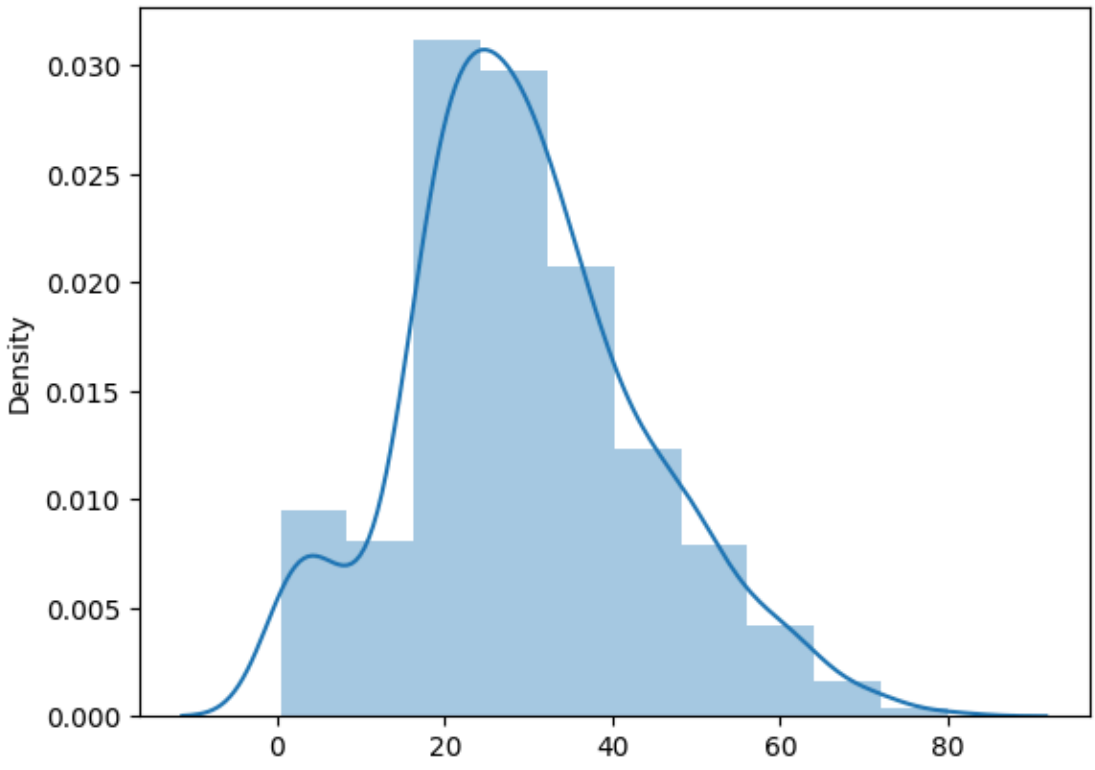
Out[16]:
```
<seaborn.axisgrid.FacetGrid at 0x7f6f53ab0750>
```



In [17]:
```
sns.distplot(x = dataset['age'], bins = 10)
```

```
<ipython-input-17-0edf267bf961>:1: UserWarning:

`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

Please adapt your code to use either `displot` (a figure-level function with
similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751 (https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751)

  sns.distplot(x = dataset['age'], bins = 10)
```

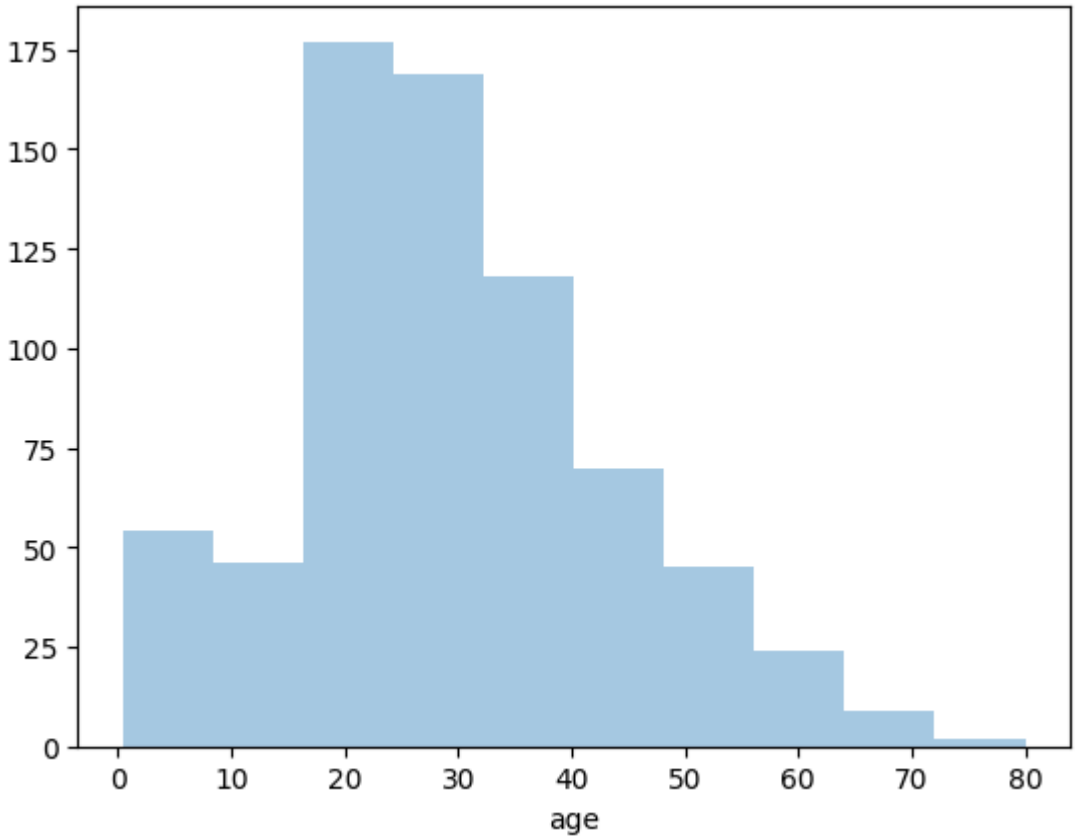
Out[17]: <Axes: ylabel='Density'>



In [23]:
```
sns.distplot(dataset['age'], bins = 10,kde=False)
```

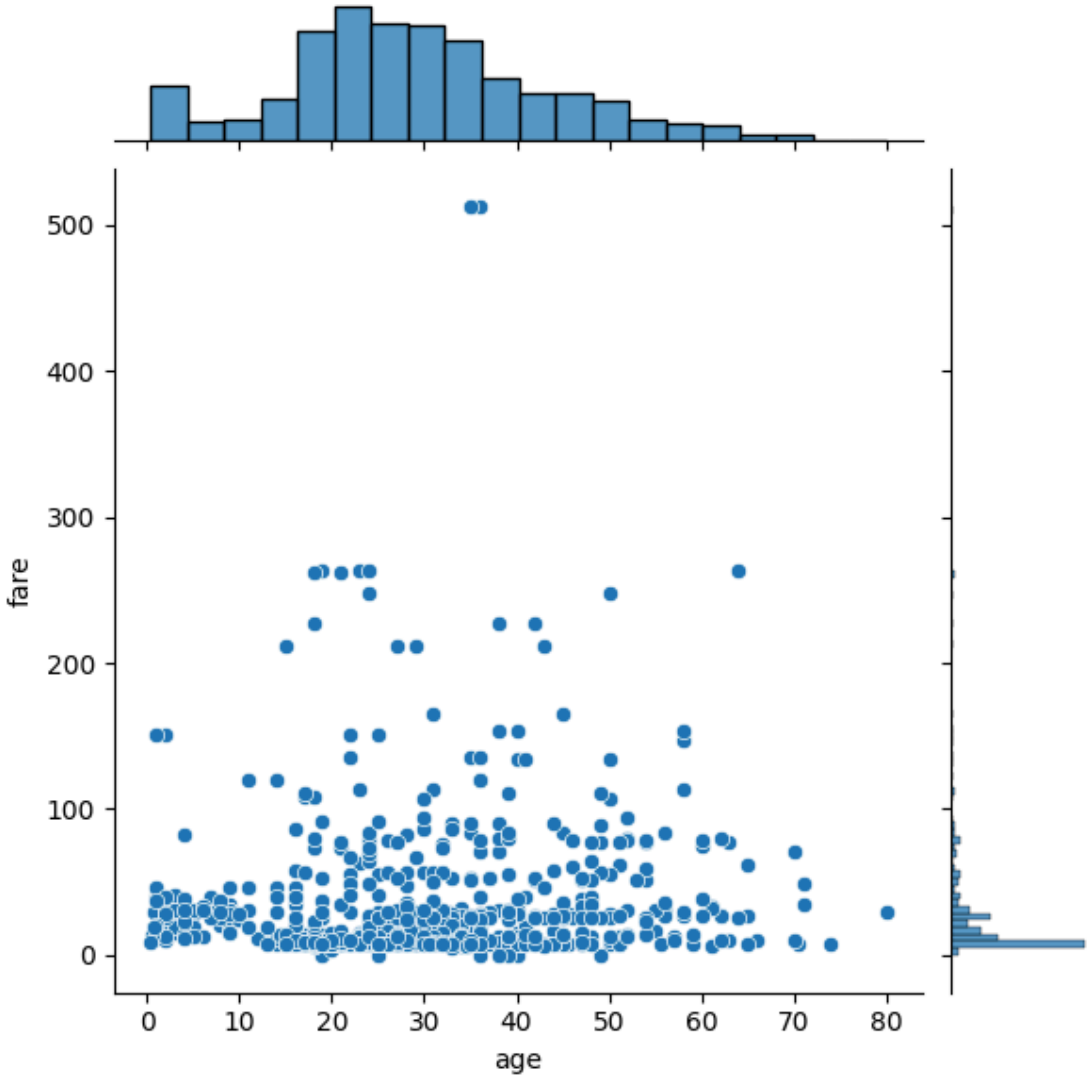
```
<ipython-input-23-f2dca48d8ca1>:1: UserWarning:

`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

Please adapt your code to use either `displot` (a figure-level function with
similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751 (https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751)

  sns.distplot(dataset['age'], bins = 10,kde=False)
```

Out[23]: <Axes: xlabel='age'>



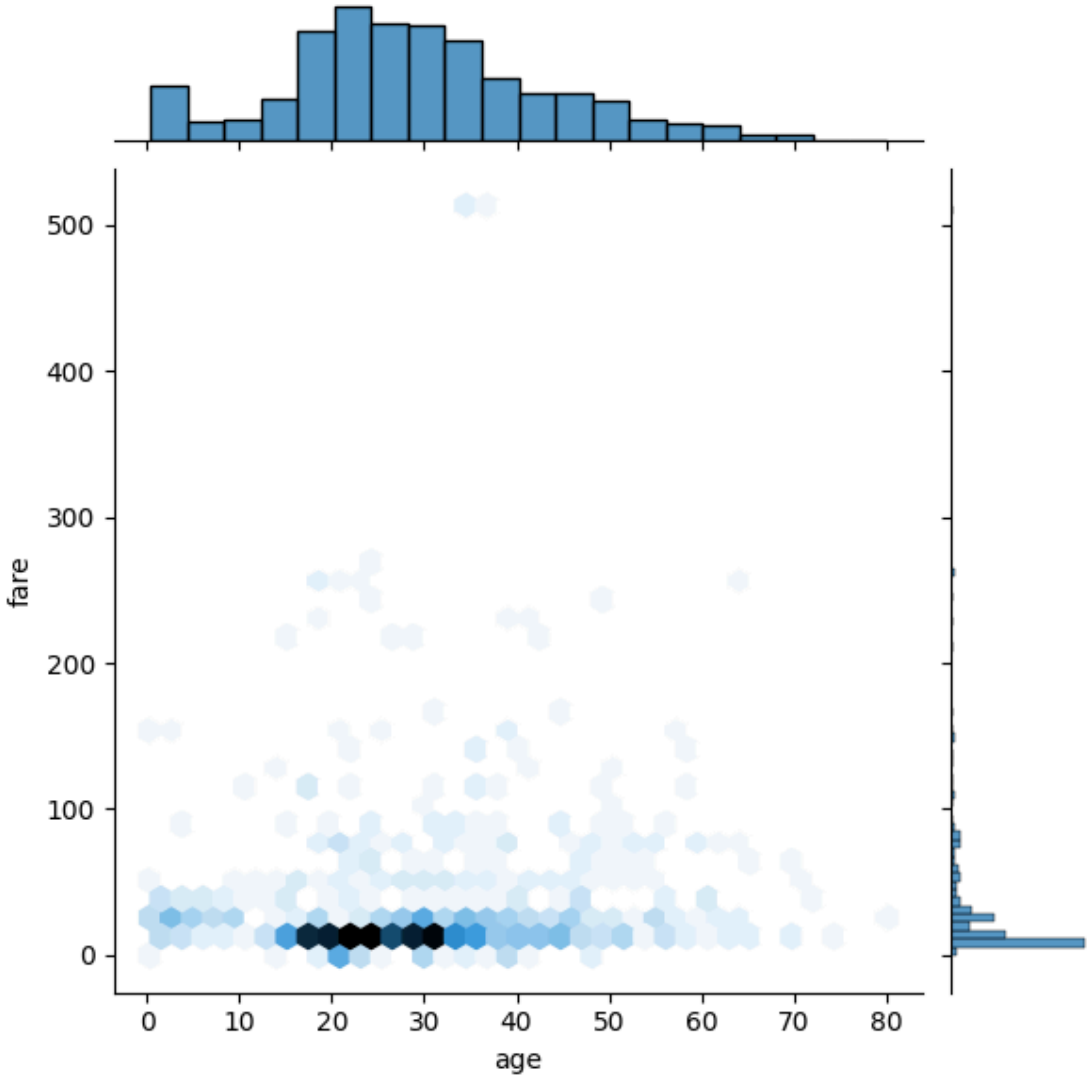
In [24]:
```
sns.jointplot(x = dataset['age'], y = dataset['fare'], kind ='scatt
```

Out[24]:
```
<seaborn.axisgrid.JointGrid at 0x7f6f5157aa10>
```



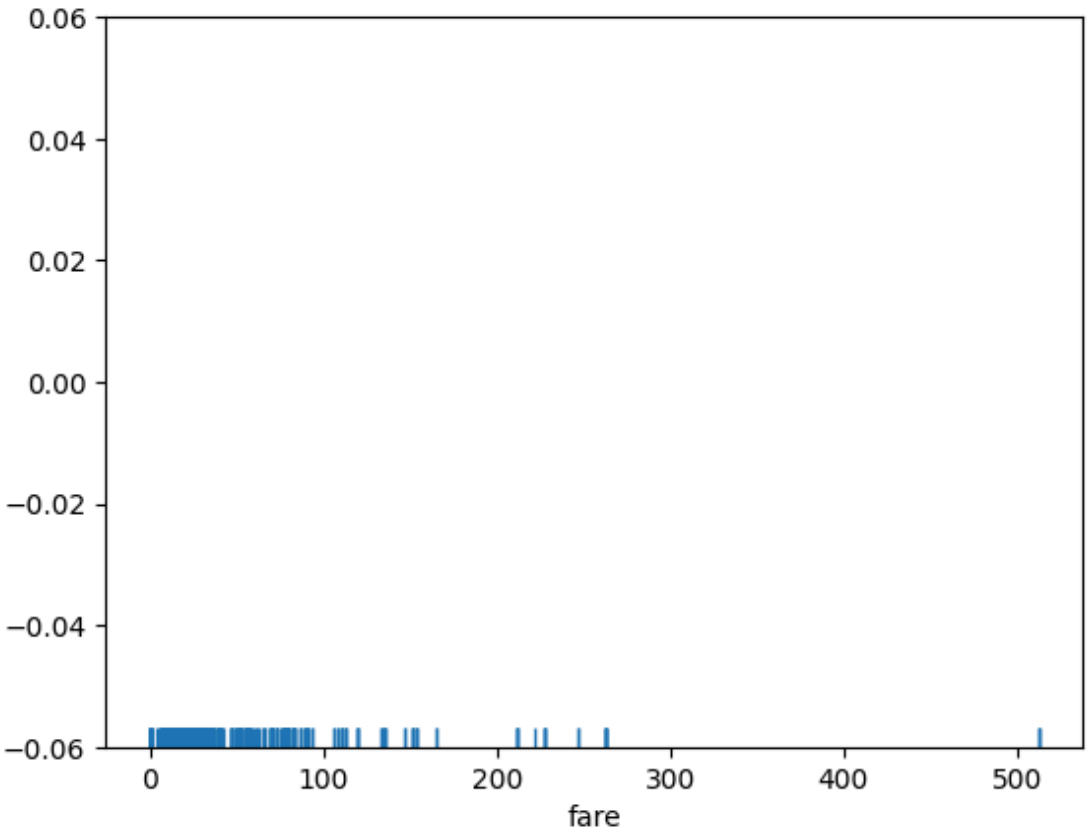
In [26]:
```
sns.jointplot(x = dataset['age'], y = dataset['fare'], kind ='hex')
```

Out[26]:
```
<seaborn.axisgrid.JointGrid at 0x7f6f51575cd0>
```



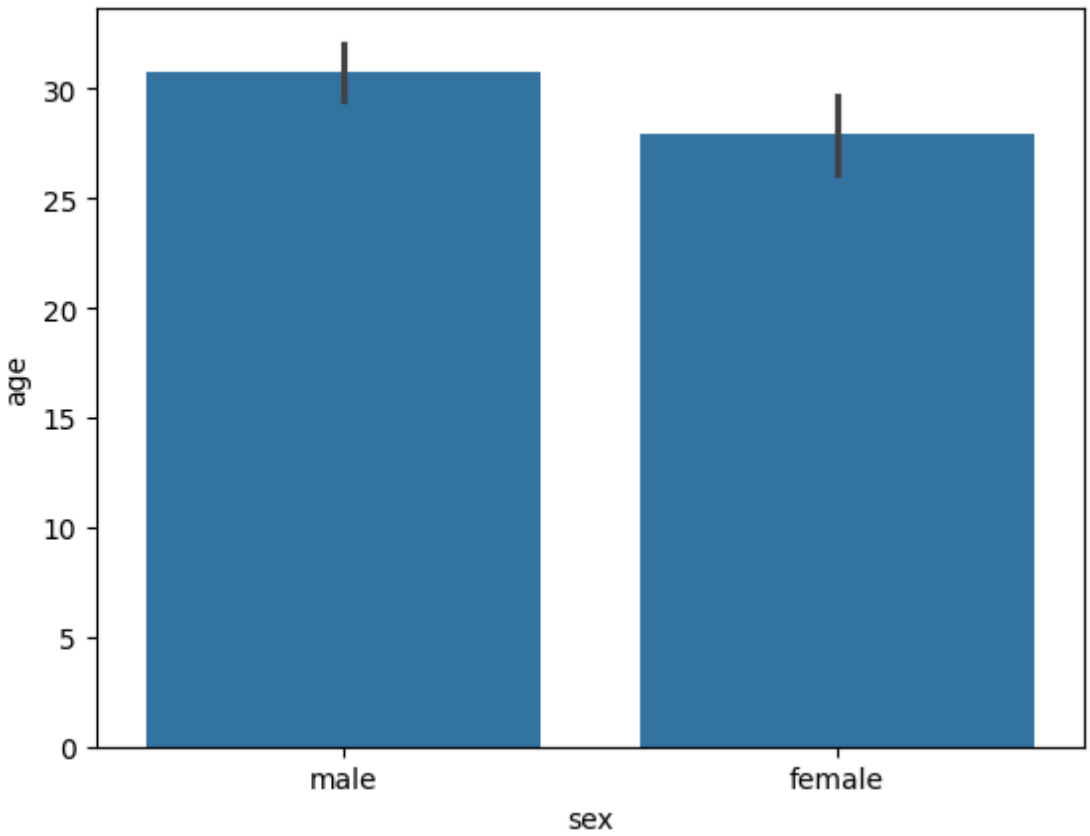
In [27]:
```
sns.rugplot(dataset['fare'])
```

Out[27]: <Axes: xlabel='fare'>



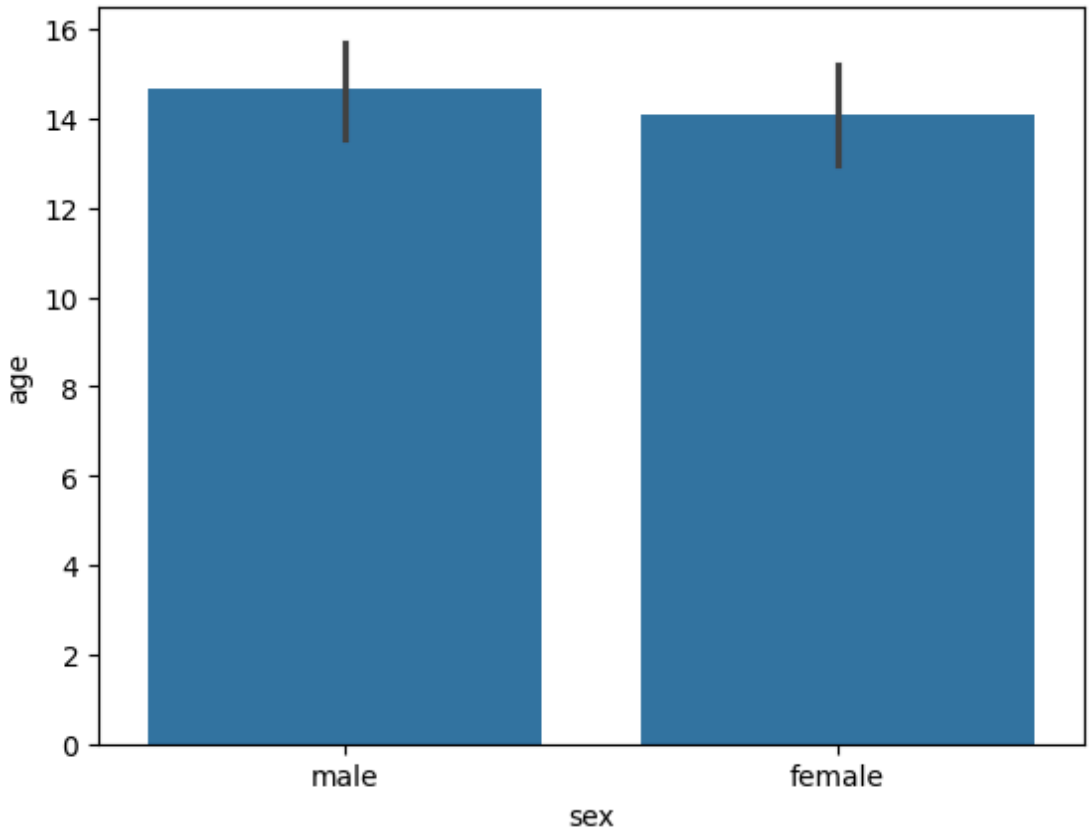
In [28]:
```
sns.barplot(x='sex', y='age', data=dataset)
```

Out[28]: <Axes: xlabel='sex', ylabel='age'>



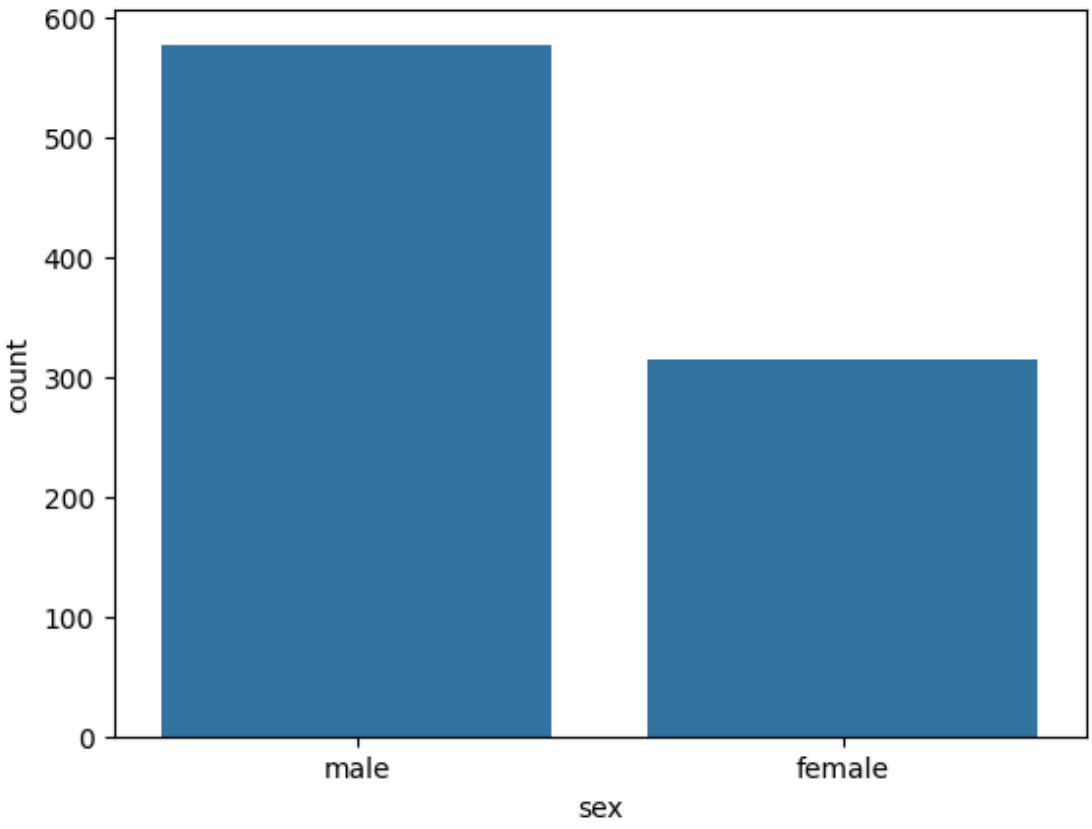
In [29]:
```
sns.barplot(x='sex', y='age', data=dataset, estimator=np.std)
```

Out[29]: <Axes: xlabel='sex', ylabel='age'>



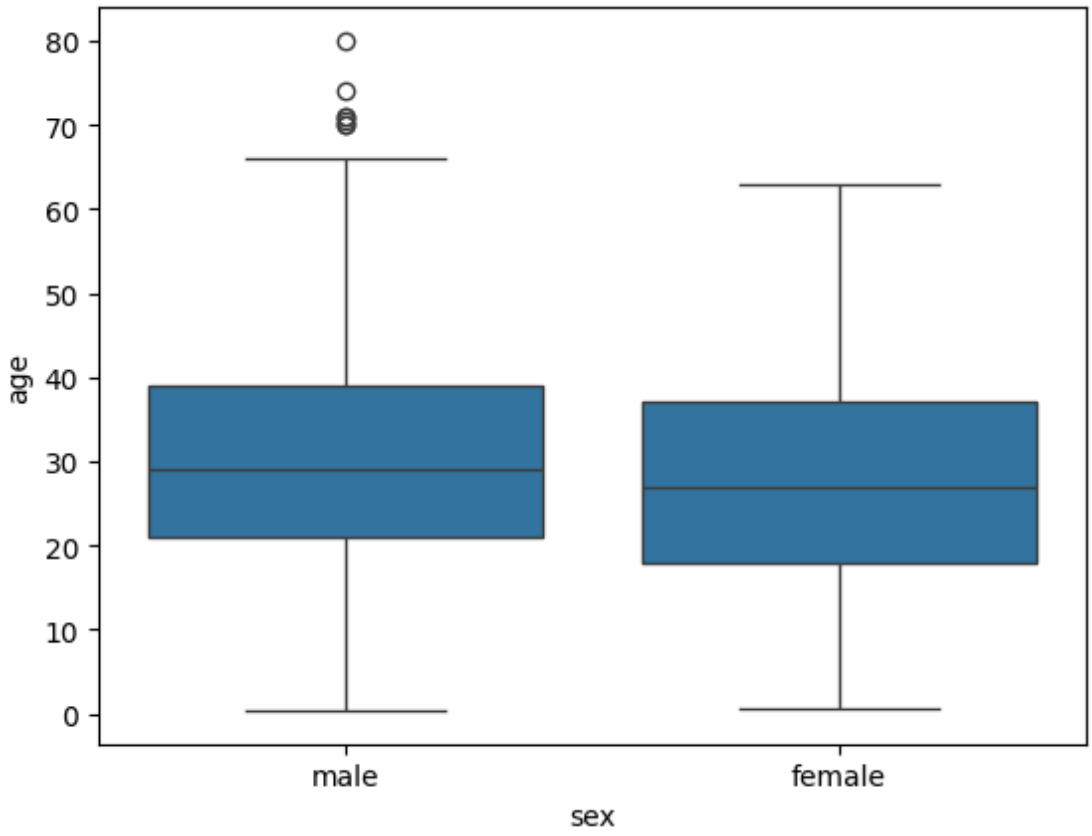
In [30]:
```
sns.countplot(x='sex', data=dataset)
```

Out[30]: <Axes: xlabel='sex', ylabel='count'>



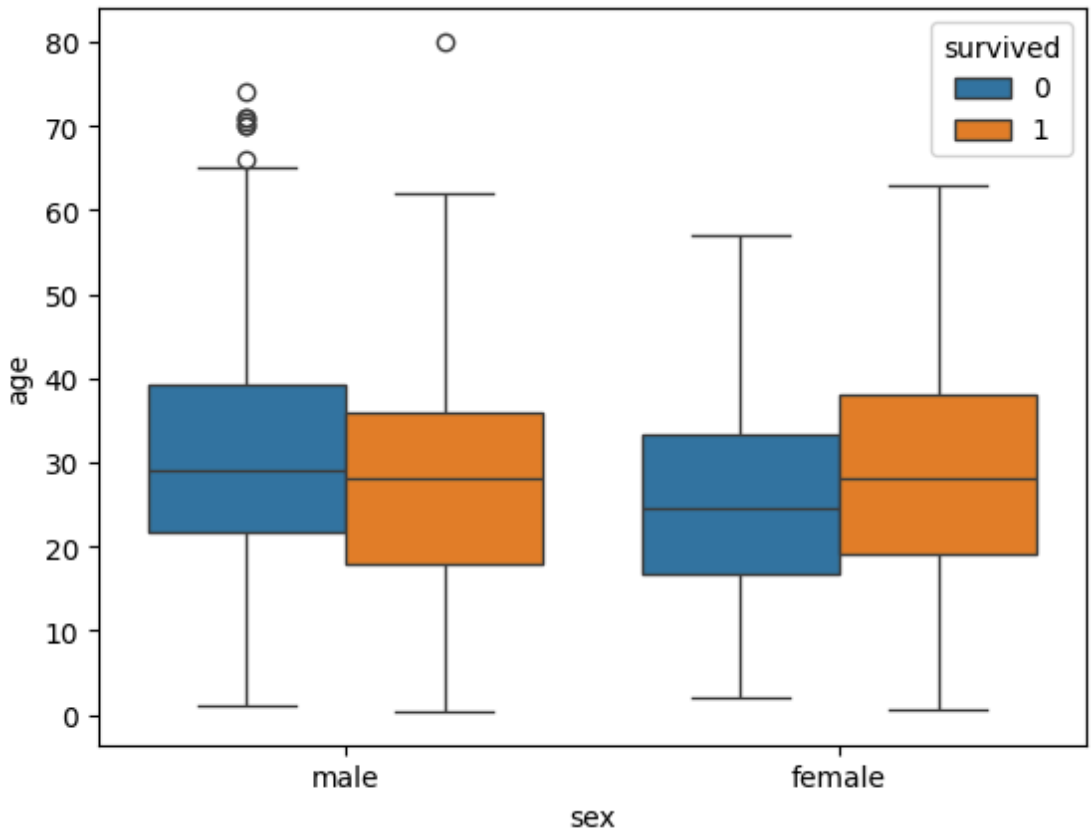
In [31]:
```
sns.boxplot(x='sex', y='age', data=dataset)
```

Out[31]: <Axes: xlabel='sex', ylabel='age'>



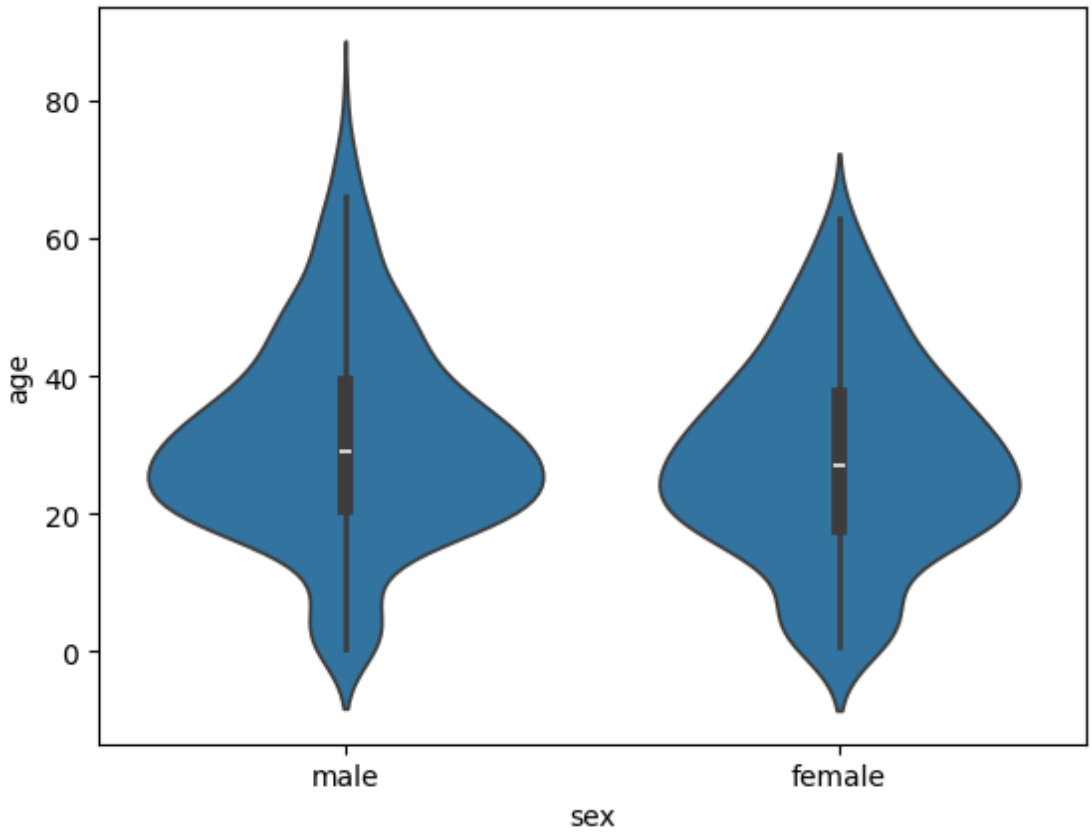
In [32]:
```
sns.boxplot(x='sex', y='age', data=dataset, hue="survived")
```

Out[32]: <Axes: xlabel='sex', ylabel='age'>



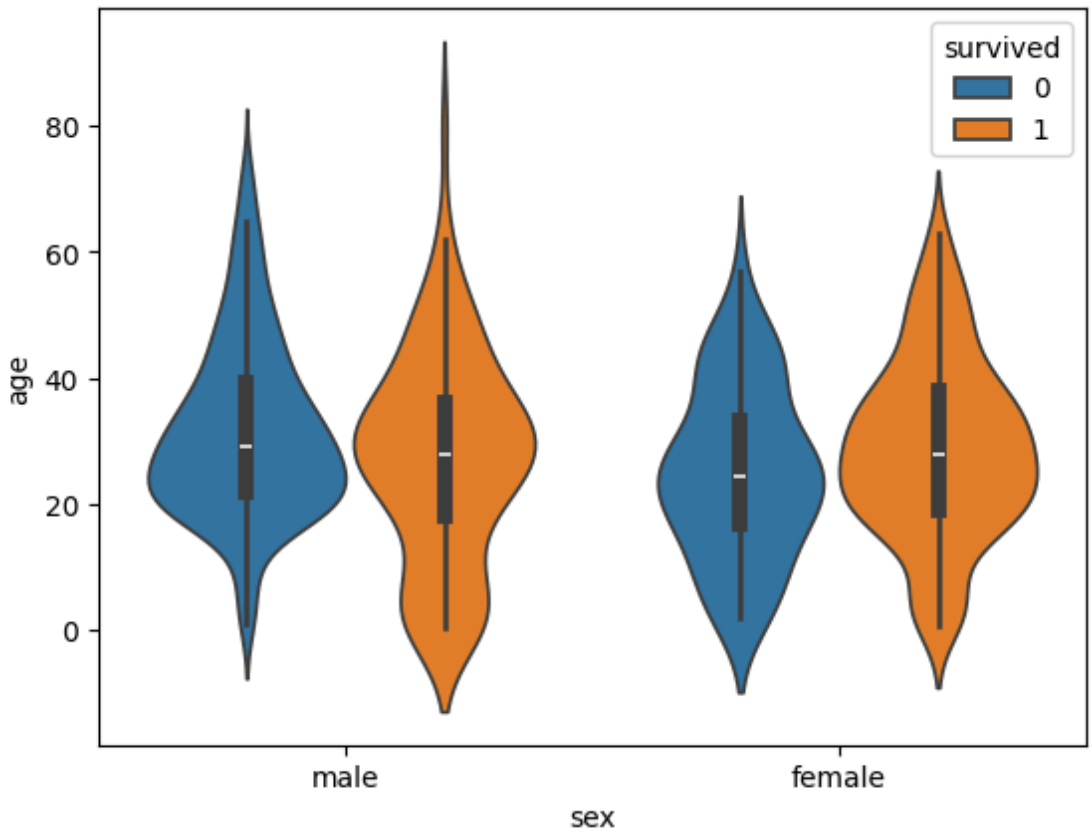
In [33]:
```
sns.violinplot(x='sex', y='age', data=dataset)
```

Out[33]:
```
<Axes: xlabel='sex', ylabel='age'>
```



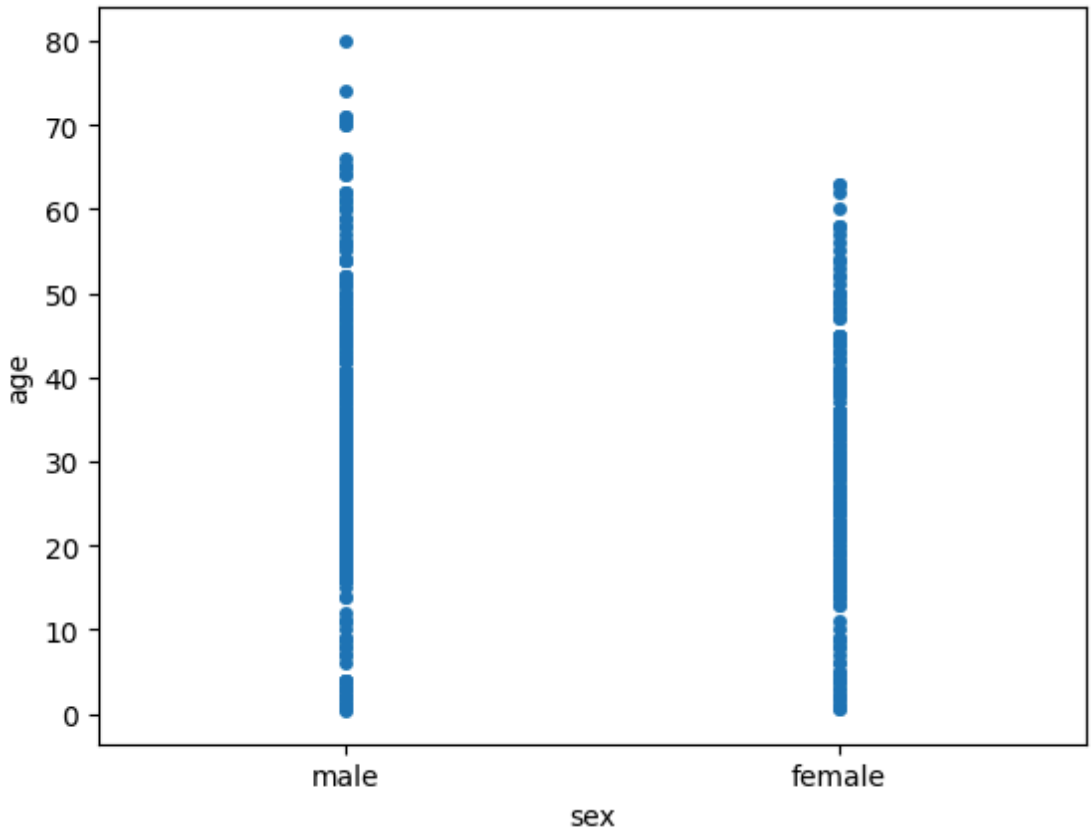
In [34]:
```
sns.violinplot(x='sex', y='age', data=dataset, hue='survived')
```

Out[34]:
```
<Axes: xlabel='sex', ylabel='age'>
```



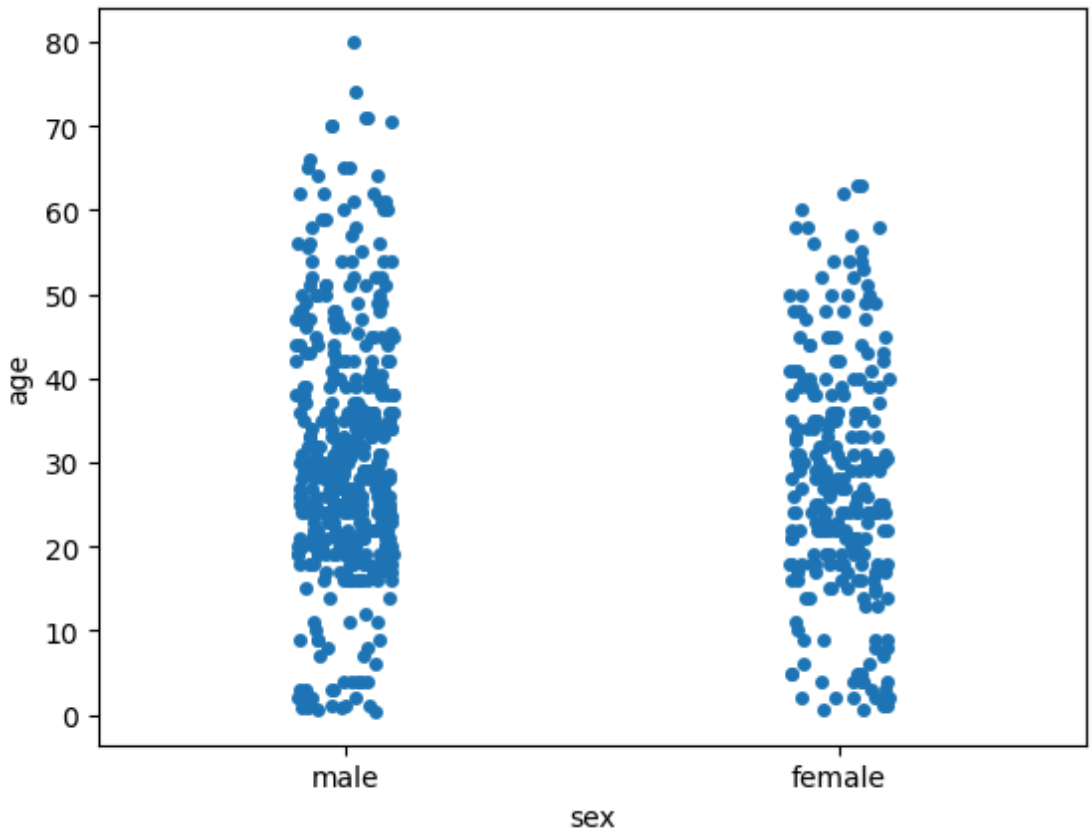
In [35]:
```
sns.stripplot(x='sex', y='age', data=dataset, jitter=False)
```

Out[35]: <Axes: xlabel='sex', ylabel='age'>



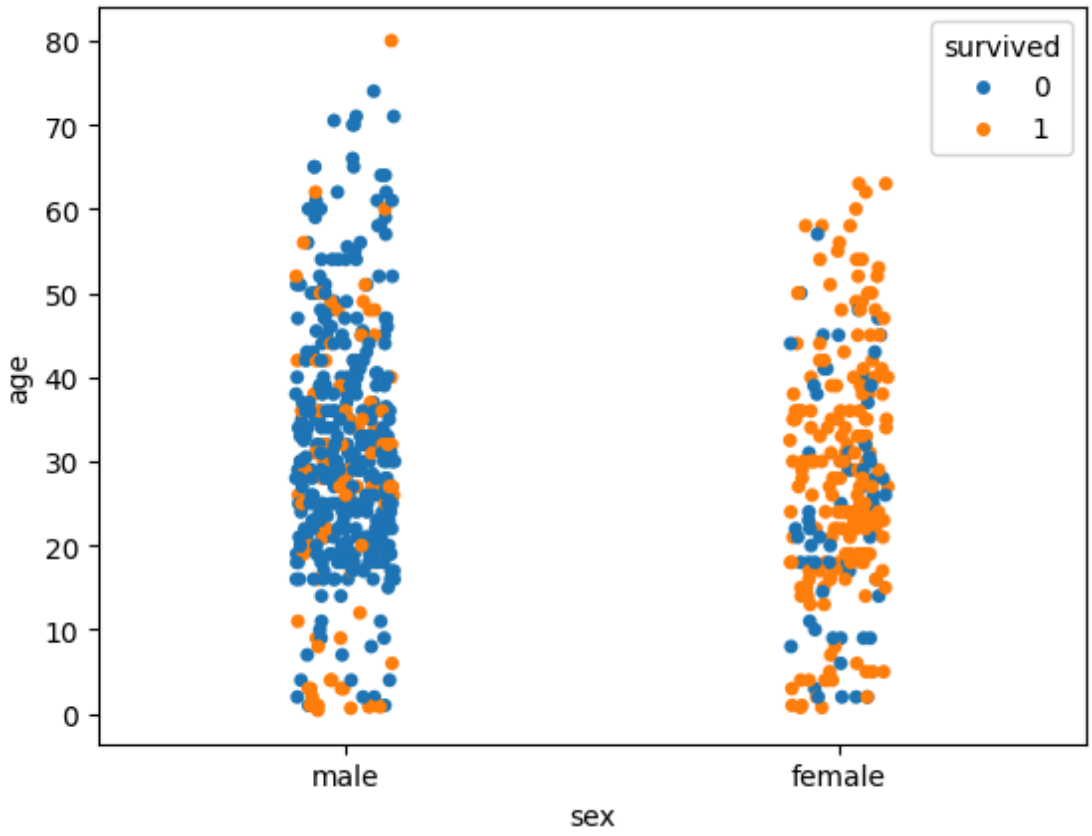
In [36]:
```
sns.stripplot(x='sex', y='age', data=dataset, jitter=True)
```

Out[36]: <Axes: xlabel='sex', ylabel='age'>



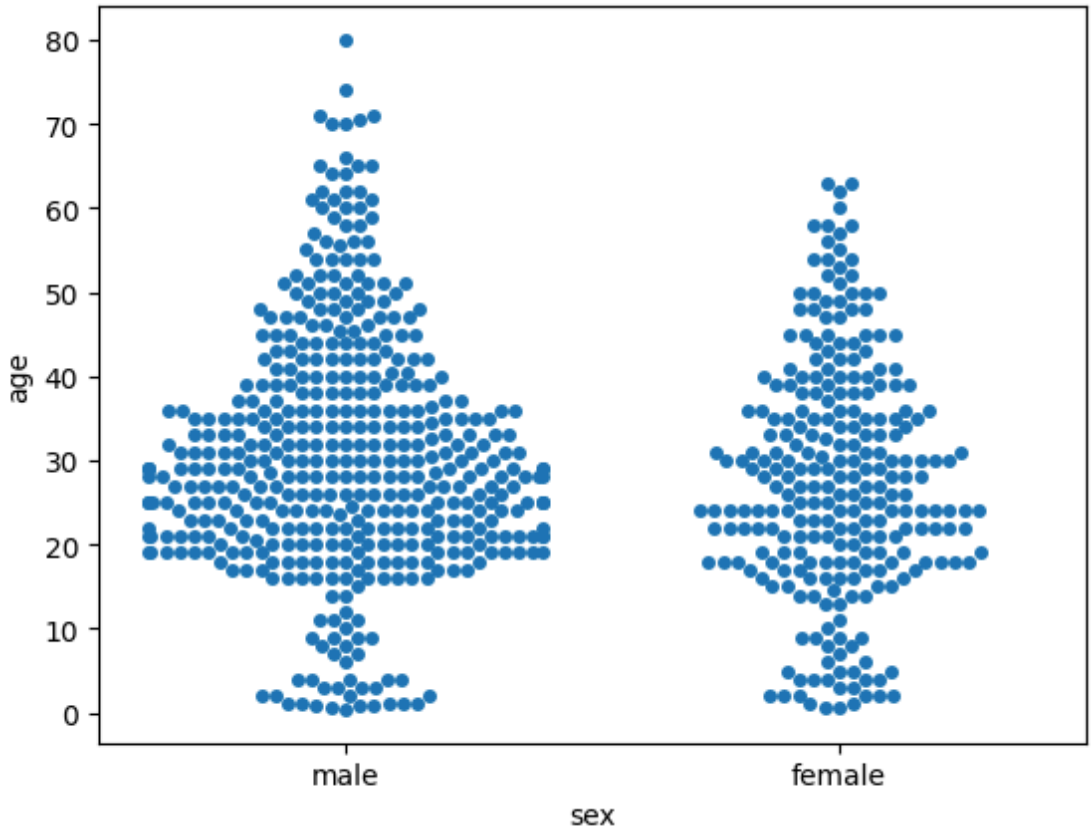
In [37]:
```
sns.stripplot(x='sex', y='age', data=dataset, jitter=True, hue='sur
```

Out[37]: <Axes: xlabel='sex', ylabel='age'>



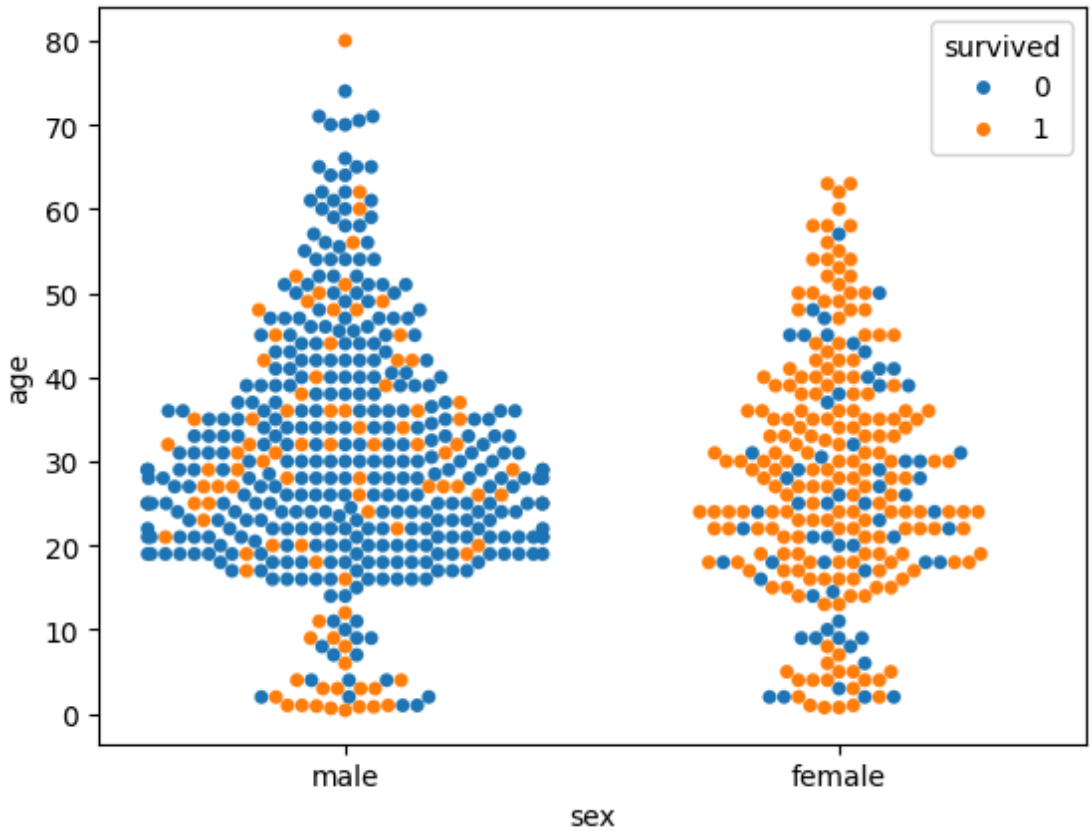
In [38]:
```
sns.swarmplot(x='sex', y='age', data=dataset)
```

Out[38]: <Axes: xlabel='sex', ylabel='age'>



In [39]:
```
sns.swarmplot(x='sex', y='age', data=dataset, hue='survived')
```

Out[39]:
```
<Axes: xlabel='sex', ylabel='age'>
```



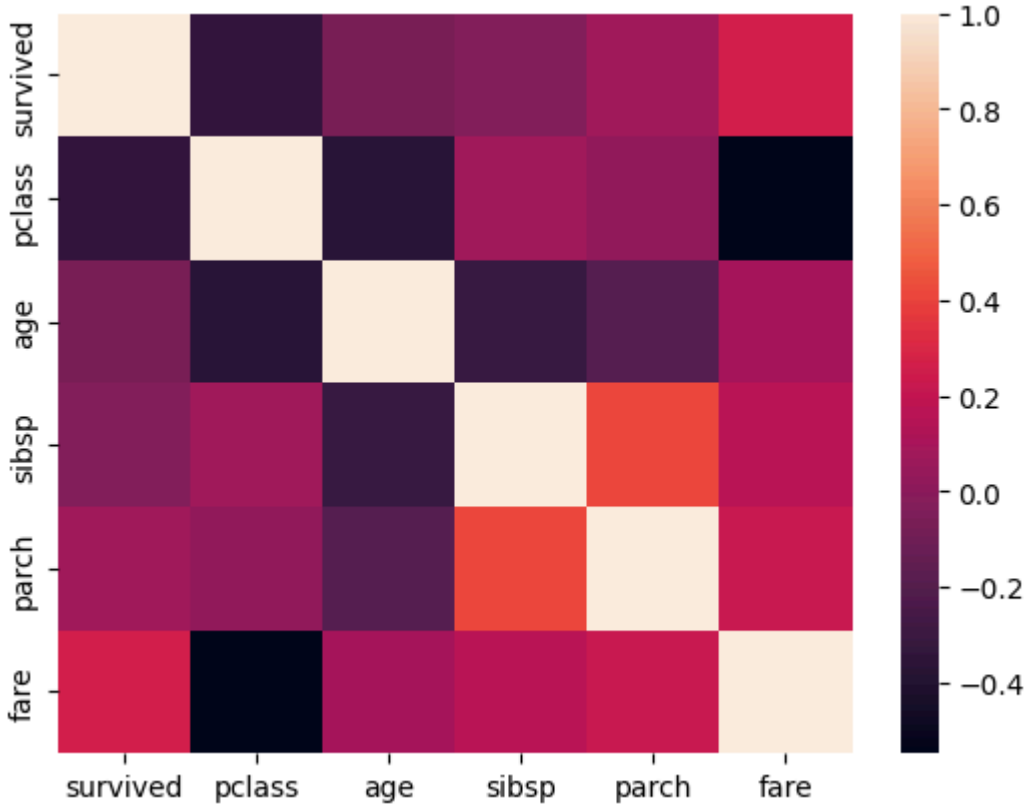
In [73]:
```
numerical_dataset = dataset.select_dtypes(include=np.number)
numerical_dataset.corr()
```

Out[73]:

	survived	pclass	age	sibsp	parch	fare
survived	1.000000	-0.338481	-0.077221	-0.035322	0.081629	0.257307
pclass	-0.338481	1.000000	-0.369226	0.083081	0.018443	-0.549500
age	-0.077221	-0.369226	1.000000	-0.308247	-0.189119	0.096067
sibsp	-0.035322	0.083081	-0.308247	1.000000	0.414838	0.159651
parch	0.081629	0.018443	-0.189119	0.414838	1.000000	0.216225
fare	0.257307	-0.549500	0.096067	0.159651	0.216225	1.000000

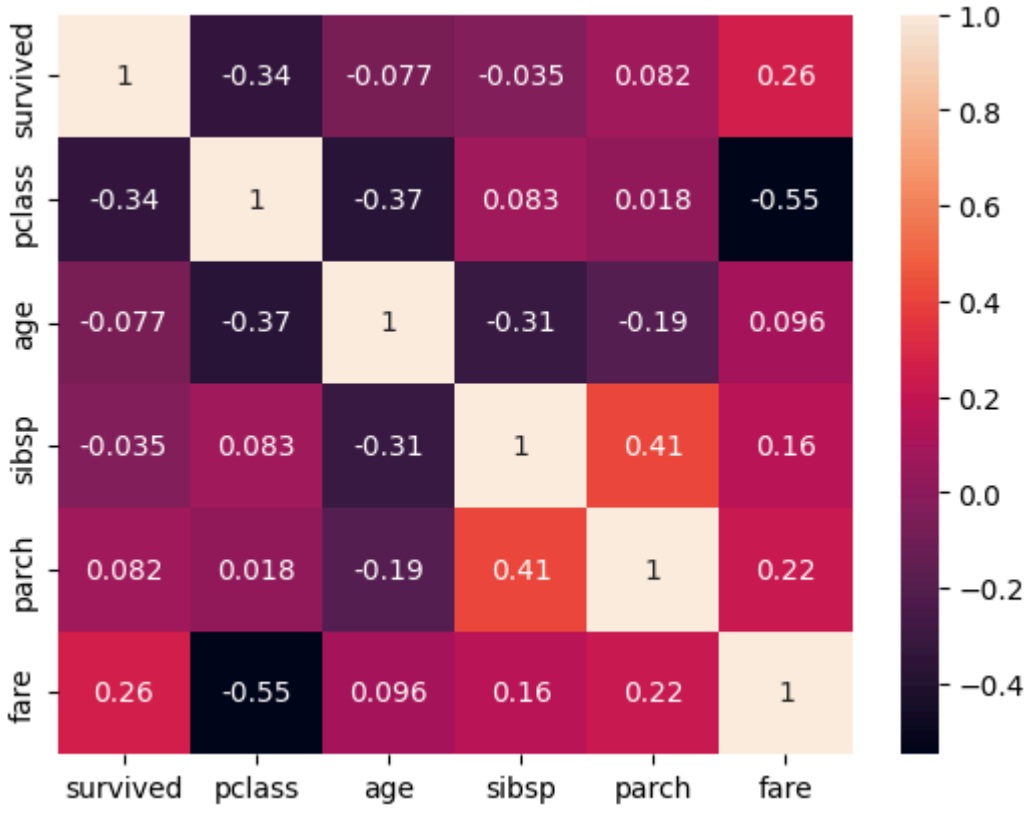
In [70]:
```
sns.heatmap(numerical_dataset.corr())
```

Out[70]: <Axes: >



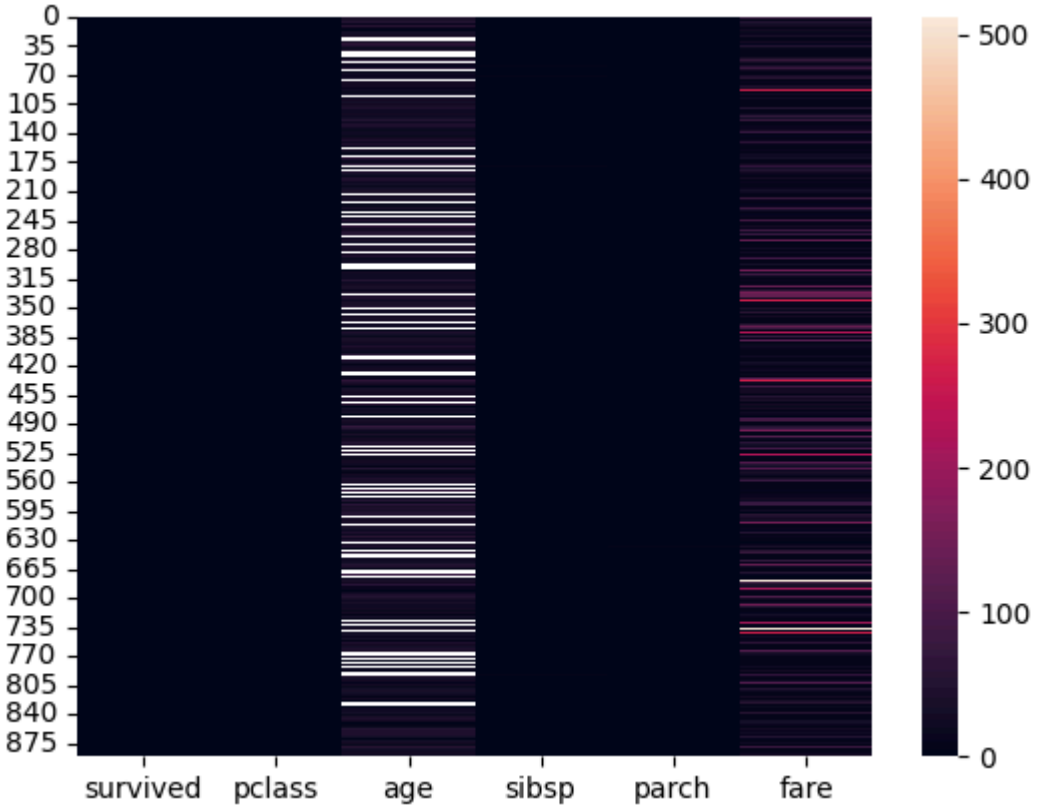
In [71]:
```
sns.heatmap(numerical_dataset.corr(),annot=True)
```

Out[71]: <Axes: >



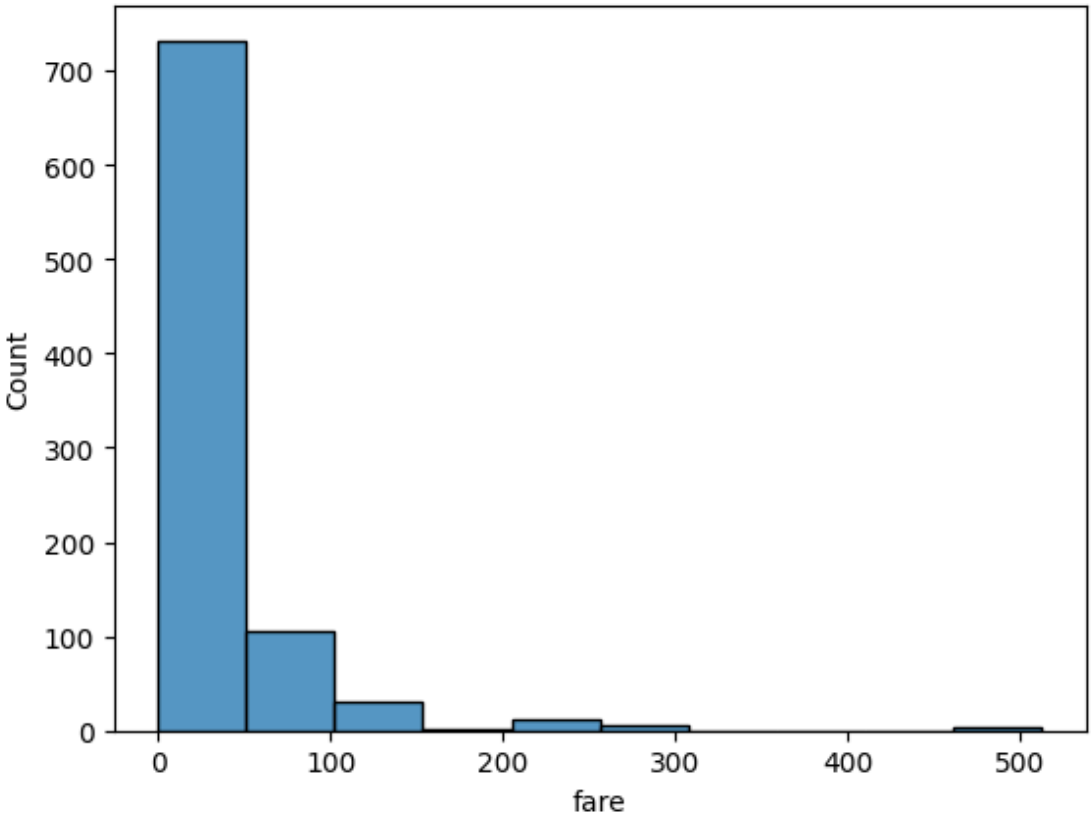
In [76]:
```
sns.heatmap(numerical_dataset)
```

Out[76]: <Axes: >



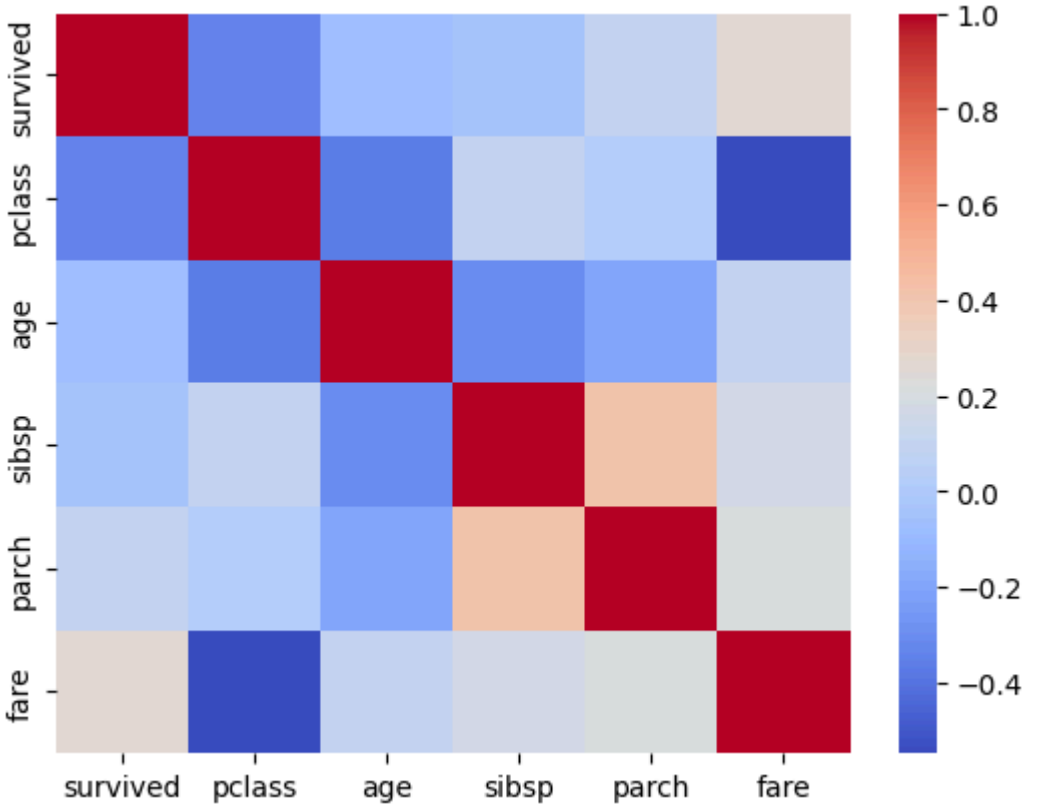
In [75]:
```
sns.histplot(dataset['fare'], kde=False, bins=10)
```

Out[75]: <Axes: xlabel='fare', ylabel='Count'>



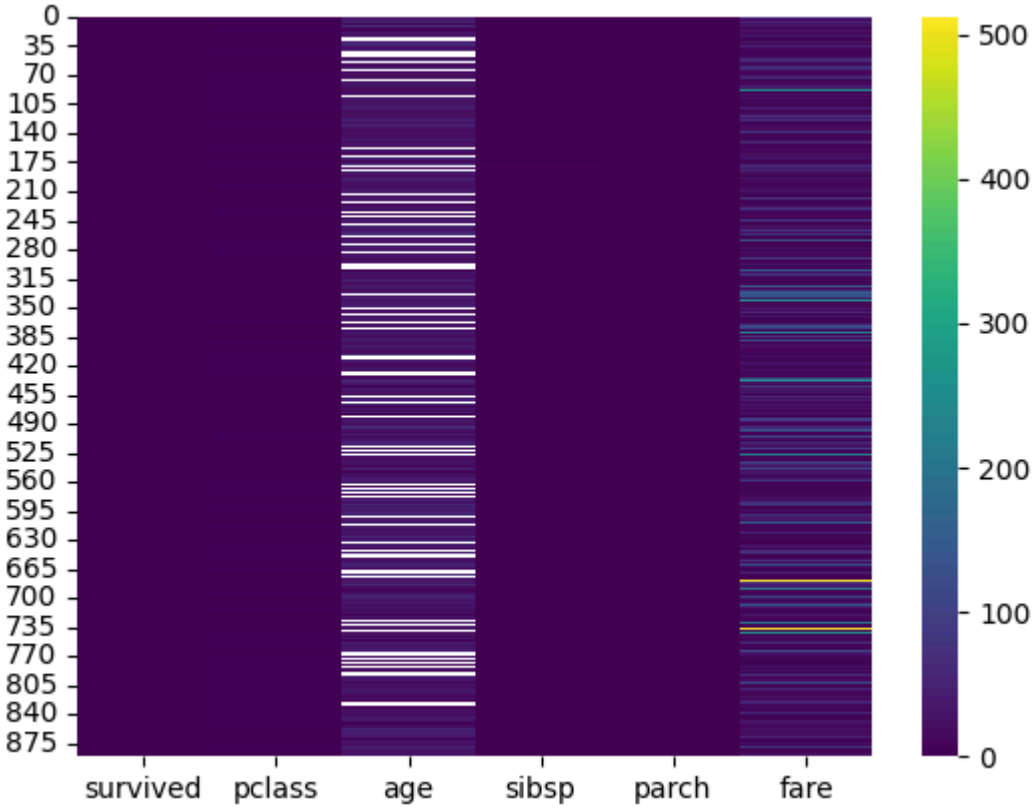
In [78]:
```
sns.heatmap(numerical_dataset.corr(), cmap='coolwarm')
```

Out[78]: <Axes: >



In [80]:
```
sns.heatmap(numerical_dataset, cmap='viridis')
```

Out[80]: <Axes: >



In [ ]: