In [1]:
```
import seaborn as sns
import matplotlib.pyplot as plt
```

In [13]:
```
titanic=sns.load_dataset("titanic")
titanic
```

Out[13]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_town	alive	alone
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN	Southampton	no	False
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C	Cherbourg	yes	False
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN	Southampton	yes	True
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C	Southampton	yes	False
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN	Southampton	no	True
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
886	0	2	male	27.0	0	0	13.0000	S	Second	man	True	NaN	Southampton	no	True
887	1	1	female	19.0	0	0	30.0000	S	First	woman	False	B	Southampton	yes	True
888	0	3	female	NaN	1	2	23.4500	S	Third	woman	False	NaN	Southampton	no	False
889	1	1	male	26.0	0	0	30.0000	C	First	man	True	C	Cherbourg	yes	True
890	0	3	male	32.0	0	0	7.7500	Q	Third	man	True	NaN	Queenstown	no	True

891 rows × 15 columns

In [14]:
```
#1.Data Understanding
titanic.head()
```

Out[14]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_town	alive	alone
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN	Southampton	no	False
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C	Cherbourg	yes	False
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN	Southampton	yes	True
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C	Southampton	yes	False
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN	Southampton	no	True

In [15]:
```
#1.Data Understanding
titanic.describe()
```

Out[15]:

	survived	pclass	age	sibsp	parch	fare
count	891.000000	891.000000	714.000000	891.000000	891.000000	891.000000
mean	0.383838	2.308642	29.699118	0.523008	0.381594	32.204208
std	0.486592	0.836071	14.526497	1.102743	0.806057	49.693429
min	0.000000	1.000000	0.420000	0.000000	0.000000	0.000000
25%	0.000000	2.000000	20.125000	0.000000	0.000000	7.910400
50%	0.000000	3.000000	28.000000	0.000000	0.000000	14.454200
75%	1.000000	3.000000	38.000000	1.000000	0.000000	31.000000
max	1.000000	3.000000	80.000000	8.000000	6.000000	512.329200

In [16]:
```
#2.Initial Check UP
titanic.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 15 columns):
 #   Column       Non-Null Count  Dtype   
---  ------       --------------  -----   
 0   survived     891 non-null    int64   
 1   pclass       891 non-null    int64   
 2   sex          891 non-null    object  
 3   age          714 non-null    float64 
 4   sibsp        891 non-null    int64   
 5   parch        891 non-null    int64   
 6   fare         891 non-null    float64 
 7   embarked     889 non-null    object  
 8   class        891 non-null    category
 9   who          891 non-null    object  
 10  adult_male   891 non-null    bool    
 11  deck         203 non-null    category
 12  embark_town  889 non-null    object  
 13  alive        891 non-null    object  
 14  alone        891 non-null    bool    
dtypes: bool(2), category(2), float64(2), int64(4), object(5)
memory usage: 80.7+ KB
```

In [17]:
```
#3.Asking Questions to the data
#1. Passengers class wise survival
#2. Gender wise who survived
#3. Which age group people survived more.
#4. Fare wise people in class with age
#5. Class wise alone
#6. How many passengers from embark_town
#7. Age wise people from pclass
#8. PClass wise fare
#9. who has maximum age from embark_town
#10.how many passengers alive from embark_town
```

In [21]:
```
#Univariant Analysis
titanic["survived"].value_counts()
```

Out[21]:
```
survived
0    549
1    342
Name: count, dtype: int64
```

In [20]:
```
titanic["survived"].value_counts(normalize=True)*100
```

Out[20]:
```
survived
0    61.616162
1    38.383838
Name: proportion, dtype: float64
```

In [22]:
```
titanic["sex"].value_counts()
```

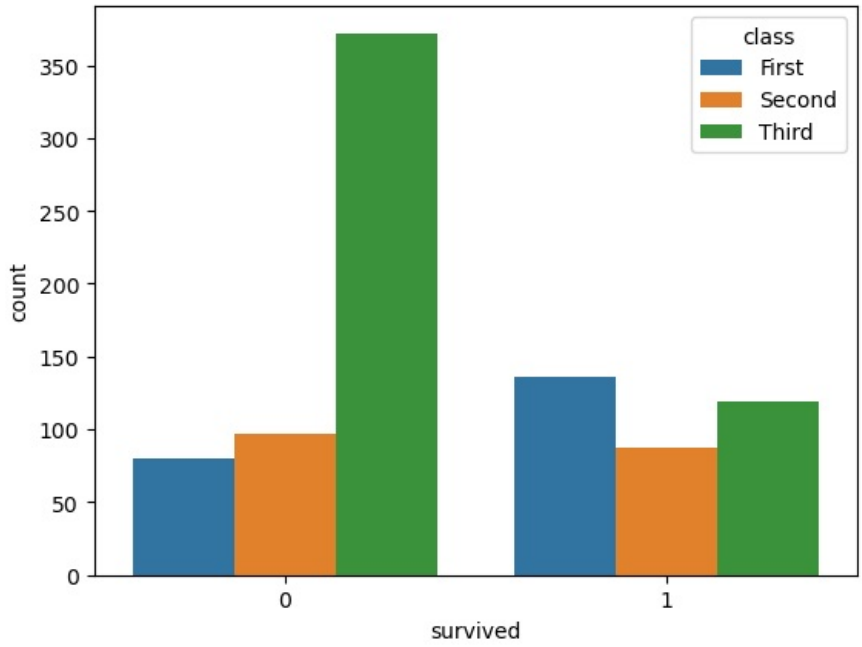
Out[22]:
```
sex
male      577
female    314
Name: count, dtype: int64
```

In [23]:
```
titanic["sex"].value_counts(normalize=True)*100
```

Out[23]:
```
sex
male      64.758698
female    35.241302
Name: proportion, dtype: float64
```

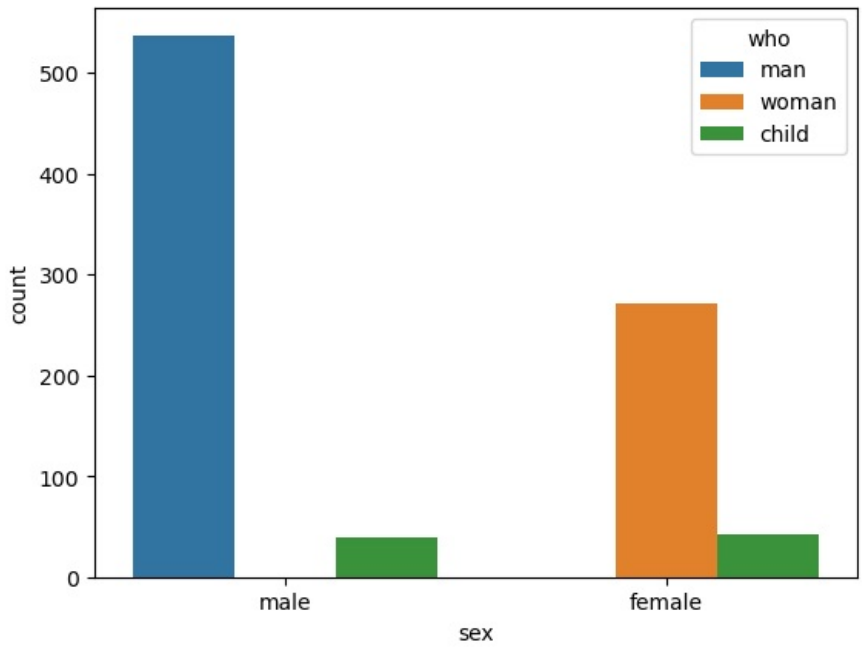
In [28]:
```
#Bivarant Analysis
#1.Passengers class wise survival
sns.countplot(titanic,x='survived',hue="class")
```

Out[28]:
```
<Axes: xlabel='survived', ylabel='count'>
```



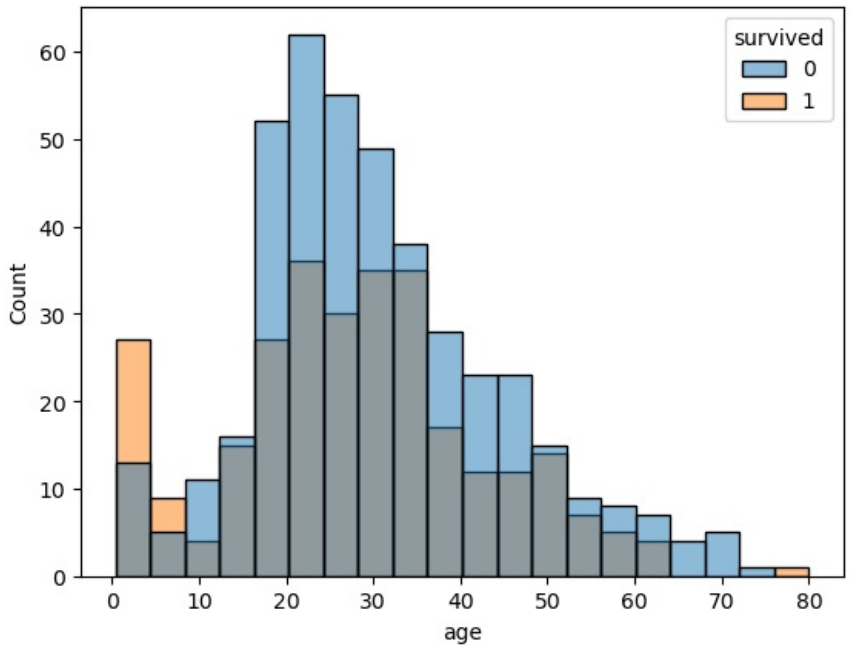
In [29]:
```
#2.Gender wise who survived
sns.countplot(titanic,x='sex',hue='who')
```

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



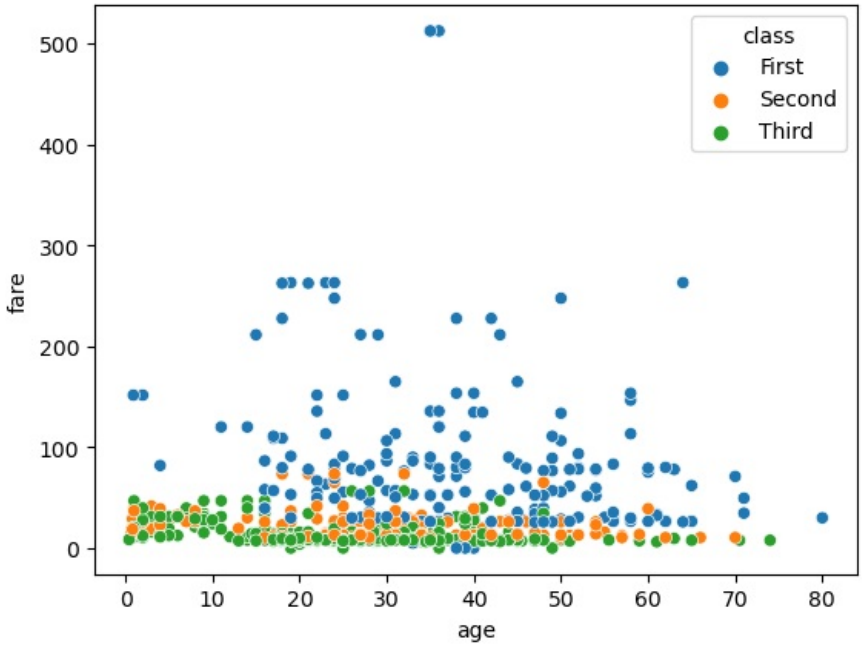
In [34]:
```
#3. Which age group people survived more.
sns.histplot(titanic, x='age',hue='survived')
```

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



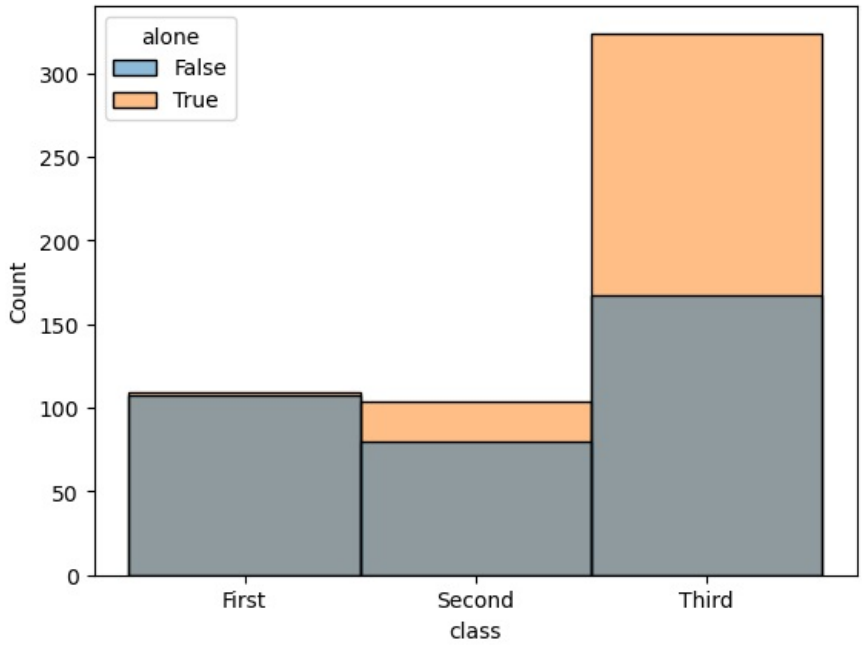
In [66]:
```
#4.Fare wise people in class with age
sns.scatterplot(titanic,x='age',y='fare',hue='class')
```

Out[66]:
```
<Axes: xlabel='age', ylabel='fare'>
```



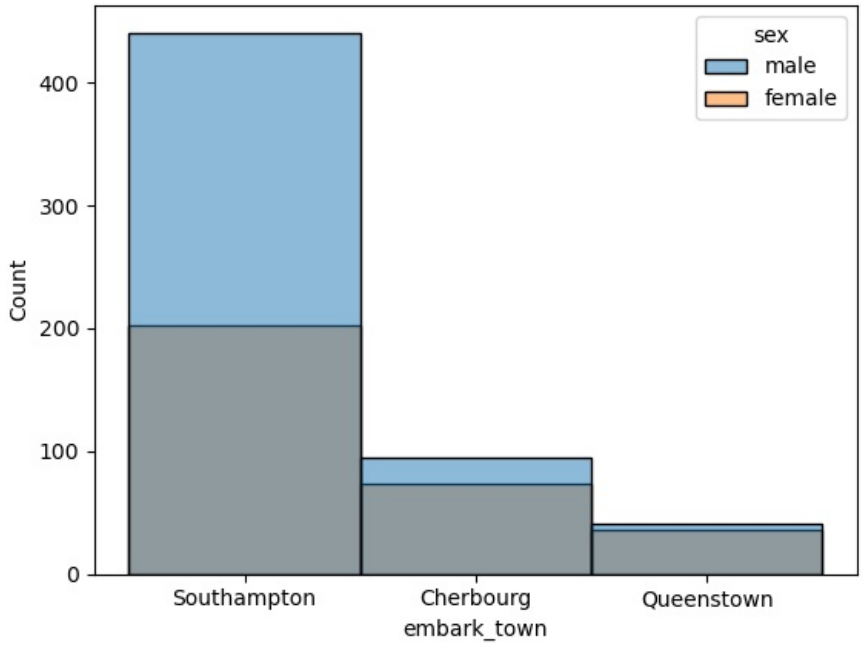
In [73]:
```
#5.Class wise alive
sns.histplot(titanic,x='class',hue='alone')
```

Out[73]:
```
<Axes: xlabel='class', ylabel='Count'>
```



In [56]:
```
#6.How many passengers from embark_town
sns.histplot(titanic,x='embark_town',hue='sex')
```

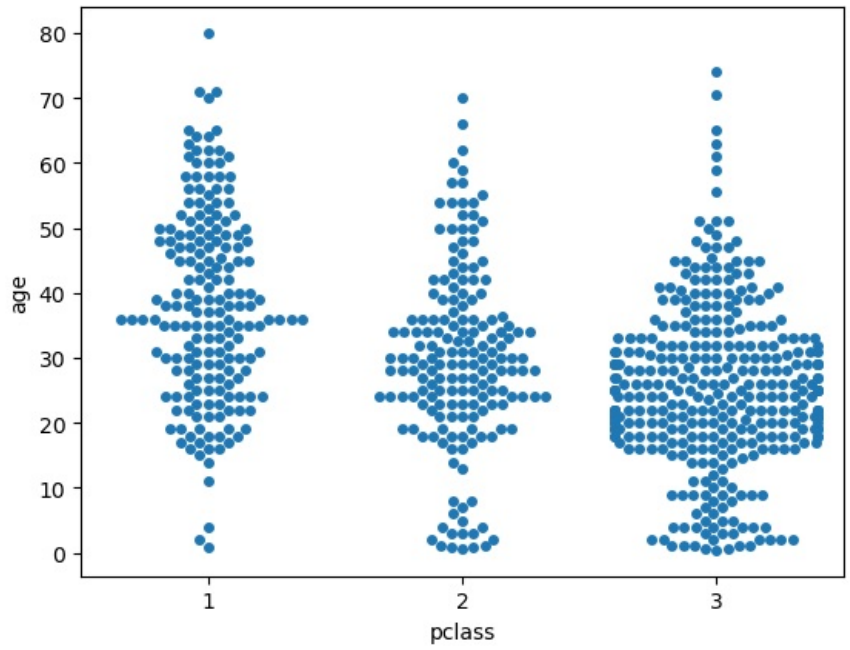
Out[56]:
```
<Axes: xlabel='embark_town', ylabel='Count'>
```



In [60]:
```
#7. Age wise people from pclass
sns.swarmplot(titanic,x='pclass',y='age')
```

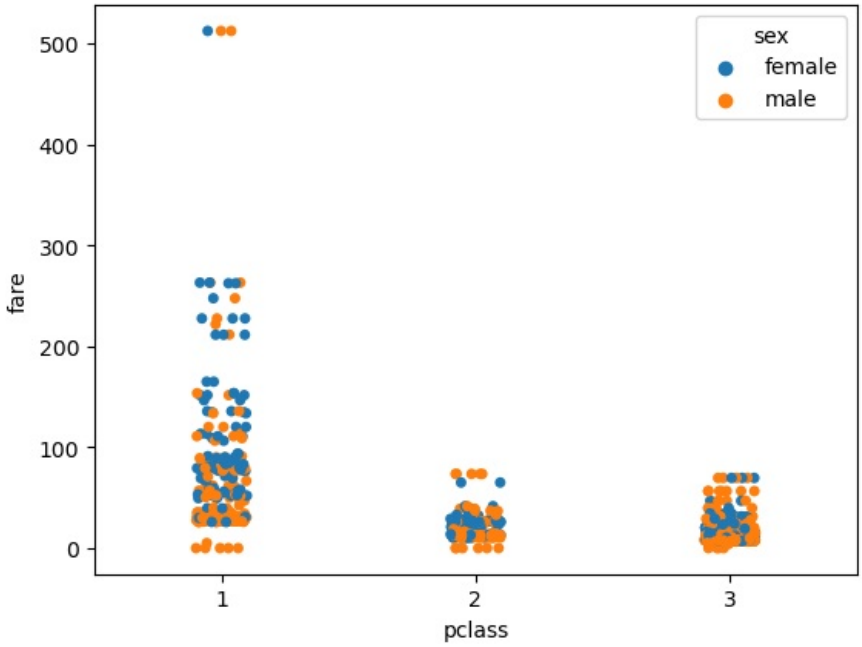
Out[60]:
```
<Axes: xlabel='pclass', ylabel='age'>
```

```
C:\Users\LabUser\anaconda3\Lib\site-packages\seaborn\categorical.py:3544: UserWarning: 15.2% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.
  warnings.warn(msg, UserWarning)
```



In [67]:
```
#8. Pclass wise fare
sns.stripplot(titanic,x="pclass",y="fare",hue='sex')
```

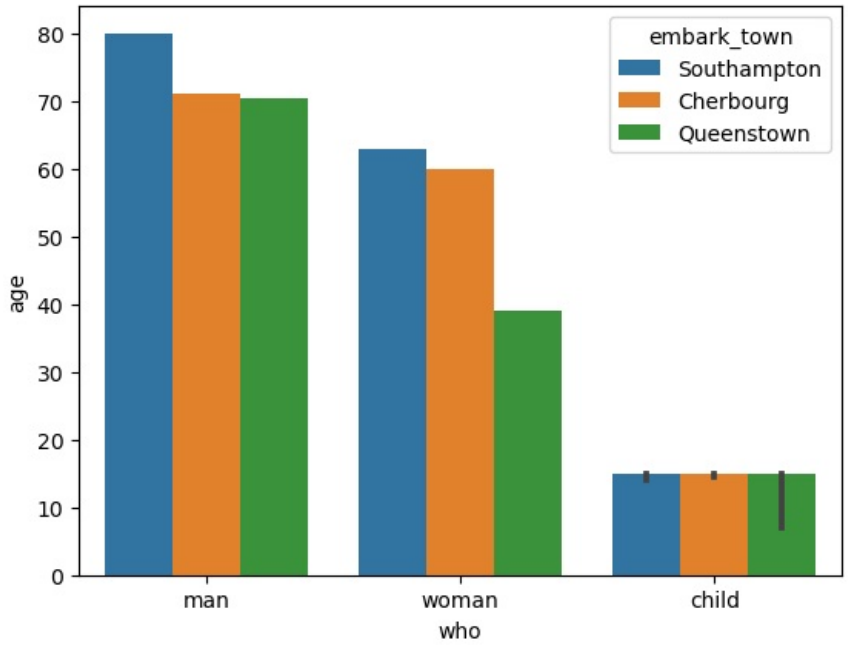
Out[67]:
```
<Axes: xlabel='pclass', ylabel='fare'>
```



In [70]:
```
#9.who has maximum age from embark_town
import numpy as np
sns.barplot(titanic,x='who',y='age',hue='embark_town',estimator=np.max)
```

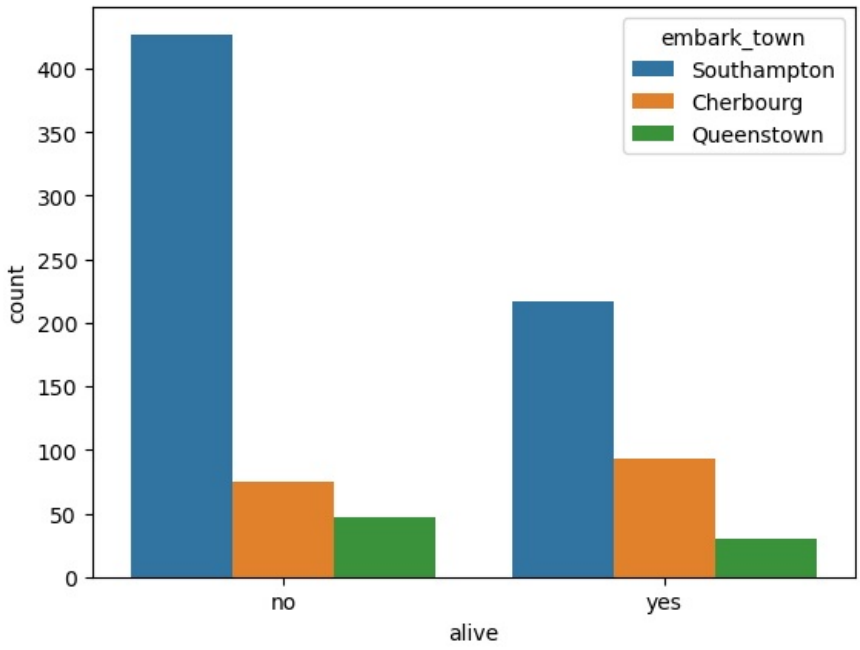
```
C:\Users\LabUser\anaconda3\Lib\site-packages\numpy\lib\nanfunctions.py:1556: RuntimeWarning: All-NaN slice enco
untered
  return function_base._ureduce(a,
```

Out[70]:
```
<Axes: xlabel='who', ylabel='age'>
```



In [72]:
```
#10.how many passengers alive from embark_town
sns.countplot(titanic,x='alive',hue="embark_town")
```

Out[72]:
```
<Axes: xlabel='alive', ylabel='count'>
```



In [ ]:
```
#From class 3 most of the people was not survived
#From class 1 most of the people was survived
#From third class most of the people are alone
#Highest count of fare between 0 to 200
#In titanic pclass have most of the people are aged between 19 to 28
#Most of the people are from southampton in embark_town
#Maximun aged people from embark_town are male
#Most of the People From embark_town southampton was alive in southampton.
```