In [10]:
```
import seaborn as sns
import matplotlib.pyplot as plt
```

In [10]:
```
titanic_data=sns.load_dataset("titanic")
titanic_data
```

Out[10]:

	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 [12]:
```
#2.DATA UNDERSTANDING
titanic_data.head()
```

Out[12]:

	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 [13]:
```
#2.INITIAL CHECK UP
titanic_data.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: 86.7+ KB
```

In [14]:
```
#MAKING QUESTIONS
#Ques1.survival rate wise survival
#Ques2.gender wise survival
#Ques3.age wise survival
#Ques4.fare wise survival
#Ques5.class wise gender
#Ques6.who survived more
#Ques7.embark town wise fare
#Ques8.class wise alone
#Ques9.class wise fare
#Ques10.age wise fare
```

In [15]:
```
#4.UNIVARIANT ANALYSIS
#Ques1.passengers class wise survival
titanic_data["survived"].value_counts(normalize=True)*100
```

Out[15]:
```
survived
0    61.616162
1    38.383838
Name: proportion, dtype: float64
```

In [16]:
```
#Ques2.gender wise survival
titanic_data["sex"].value_counts(normalize=True)*100
```

Out[16]:
```
sex
male    64.758698
female  35.241302
Name: proportion, dtype: float64
```

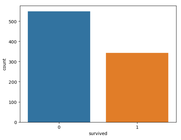
In [20]:
```
#Ques3.age wise survival
titanic_data["age"].value_counts(normalize=True)*100
```

Out[20]:
```
age
24.00    4.201681
22.00    3.781513
18.00    3.641457
19.00    3.501401
20.00    3.361345

36.50    0.140056
55.50    0.140056
0.92     0.140056
23.50    0.140056
74.00    0.140056
Name: proportion, Length: 88, dtype: float64
```

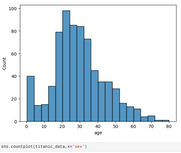
In [22]:
```
sns.countplot(titanic_data,x='survived')
```

Out[22]:
```
<Axes: xlabel='survived', ylabel='count'>
```



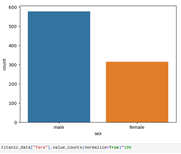
In [24]:
```
sns.histplot(titanic_data,x='age')
```

Out[24]:
```
<Axes: xlabel='age', ylabel='Count'>
```



In [25]:
```
sns.countplot(titanic_data,x='sex')
```

Out[25]:
```
<Axes: xlabel='sex', ylabel='count'>
```



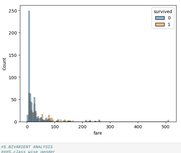
In [27]:
```
titanic_data["fare"].value_counts(normalize=True)*100
```

Out[27]:
```
fare
8.0500    4.826038
7.8958    4.713805
7.8542    4.264871
7.7500    3.816937
26.0000   3.479237

35.0000   0.112233
28.5133   0.112233
8.2375    0.112233
14.0000   0.112233
15.5167   0.112233
Name: proportion, Length: 248, dtype: float64
```

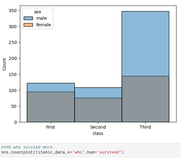
In [30]:
```
#Ques4.fare wise survival
sns.histplot(titanic_data,x='fare',hue='survived')
```

Out[30]:
```
<Axes: xlabel='fare', ylabel='Count'>
```



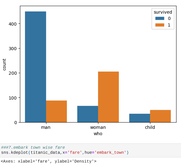
In [36]:
```
#5.BIVARIENT ANALYSIS
#Ques5.class wise gender
sns.histplot(titanic_data,x='class',hue='sex')
```

Out[36]:
```
<Axes: xlabel='class', ylabel='Count'>
```



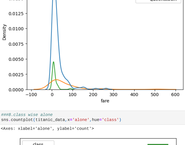
In [38]:
```
#Ques6.who survived more
sns.countplot(titanic_data,x='who',hue='survived')
```

Out[38]:
```
<Axes: xlabel='who', ylabel='count'>
```



In [40]:
```
#Ques7.embark town wise fare
sns.kdeplot(titanic_data,x='fare',hue='embark_town')
```

Out[40]:
```
<Axes: xlabel='fare', ylabel='Density'>
```



In [43]:
```
#Ques8.class wise alone
sns.countplot(titanic_data,x='alone',hue='class')
```

Out[43]:
```
<Axes: xlabel='alone', ylabel='count'>
```

In [45]:
```
#Ques9.class wise fare
sns.histplot(titanic_data,x='class',hue='embark_town')
```

Out[45]:
```
<Axes: xlabel='class', ylabel='Count'>
```

In [46]:
```
sns.histplot(titanic_data,x='class',hue='adult_male')
```

Out[46]:
```
<Axes: xlabel='class', ylabel='Count'>
```

In [48]:
```
#Ques10.age wise fare
sns.scatterplot(titanic_data,x='age',y='fare',hue='sex')
```

Out[48]:
```
<Axes: xlabel='age', ylabel='fare'>
```

In [ ]:
```
#CONCLUSIONS
#Out of 100% s1y 38% people survived.
# 64% male and 34% female survived .
# 49.5% age group of 24 survived more and 0.14% of age group of 74 survived least.
#Passengers class wise survival 61.616% 1st class survived.
#s1l classes have more women as compared females.
#men survived more than 40%,females are 200 and children are 50
#embark town Southampton has highest people who paid more fare.
#Fare wise survival people who paid more fare survived.
#more are from embark town of Southampton.
#s1ll men is more thr1d class.
# highest fare ticket bought by mens age of 30.
# every class has less people from Queenstown.
```

In [ ]:
```
```