In [2]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [ ]:
```
```

In [3]:
```
a=pd.Series([4, 3, 4, 4, 2, 2, 2, 3, 2, 3, 1, 6, 1, 3, 1, 2, 2, 1, 1, 3, 3, 2, 2, 2, 2, 1, 3, 3, 3, 1, 2, 1, 3, 3, 3, 1, 3, 1, 2, 3, 2, 4, 2, 4, 4, 4, 3, 2, 2, 3, 3, 3, 3, 3, 1, 2, 4, 5, 3, 3, 2, 1, 2, 2, 3, 3, 2, 6,
a.value_counts()
```

Out[3]:
```
3    28
2    25
1    13
4     8
6     2
5     1
dtype: int64
```

In [5]:
```
import seaborn as sns
df = sns.load_dataset('titanic')
df
```

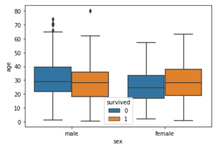
Out[5]:

	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

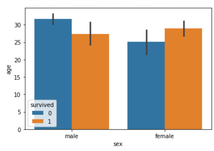
In [8]:
```
sns.boxplot(data=df,x="sex",y="age",hue="survived")
```

Out[8]:
```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



In [9]:
```
sns.barplot(data=df,x="sex",y="age",hue="survived")
```

Out[9]:
```
<AxesSubplot:xlabel='sex', ylabel='age'>
```



In [10]:
```
df
```

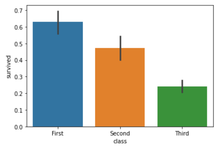
Out[10]:

	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 [11]:
```
sns.barplot(data=df,y="survived",x="class")
```

Out[11]:
```
<AxesSubplot:xlabel='class', ylabel='survived'>
```

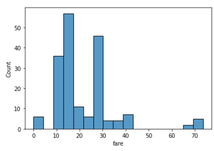


In [13]:
```
df_second=df.loc[df["class"]=="Second"]
df_second["fare"]
```

Out[13]:
```
9      30.0708
15     16.0000
17     13.0000
20     26.0000
21     13.0000
        ...
866    13.8583
874    24.0000
880    26.0000
883    10.5000
886    13.0000
Name: fare, Length: 184, dtype: float64
```

In [14]:
```
sns.histplot(df_second["fare"])
```

Out[14]:
```
<AxesSubplot:xlabel='fare', ylabel='Count'>
```



In [16]:
```
df_second.loc[df_second["fare"]>60]["survived"].mean()
```

Out[16]:
```
0.2857142857142857
```

In [17]:
```
df_second["survived"].mean()
```

Out[17]:
```
0.4728260869565217
```

In [ ]:
```
```

In [19]:
```
df_third=df.loc[df["class"]=="Third"]
df_third[df_third["survived"]==1].shape[0]
```

Out[19]:
```
119
```

In [20]:
```
df_third.shape[0]
```

Out[20]:
```
491
```

In [21]:
```
df_third["fare"].mean()
```

Out[21]:
```
13.675550101832997
```

In [22]:
```
df_third["fare"].median()
```

Out[22]:
```
8.05
```

In [24]:
```
df_first=df.loc[df["class"]=="First"]
df_first["survived"].mean()
```

Out[24]:
```
0.6296296296296297
```

In [25]:
```
df["survived"].mean()
```

Out[25]:
```
0.3838383838383838
```

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