import the titanic dataset

In [1]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
df=pd.read_csv("titanic.csv")
df
```

Out[1]:

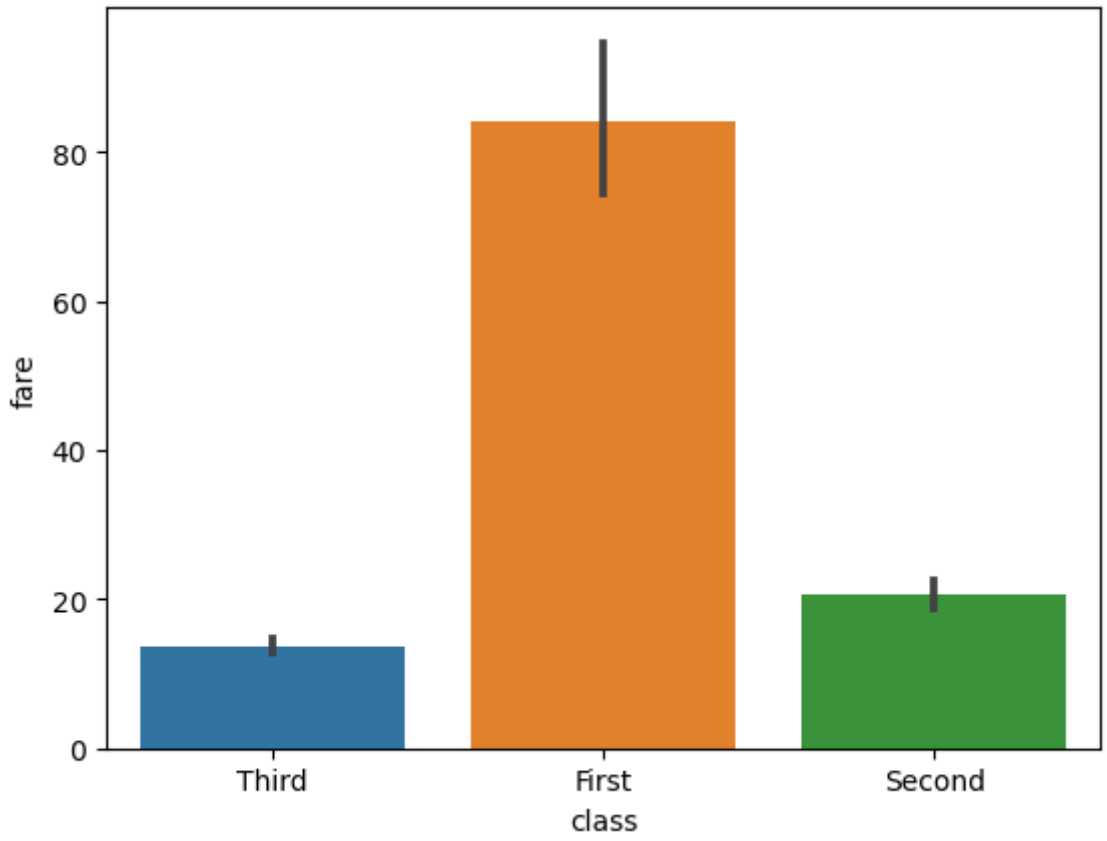
	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adul
0	0	3	male	22.0	1	0	7.2500	S	Third	man	
1	1	1	female	38.0	1	0	71.2833	C	First	woman	
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	
3	1	1	female	35.0	1	0	53.1000	S	First	woman	
4	0	3	male	35.0	0	0	8.0500	S	Third	man	
...	...	...	...	...	...	...	...	...	...	...	
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 × 16 columns

1. Write a Python program to display a bar chart of the fare of class.

In [7]:

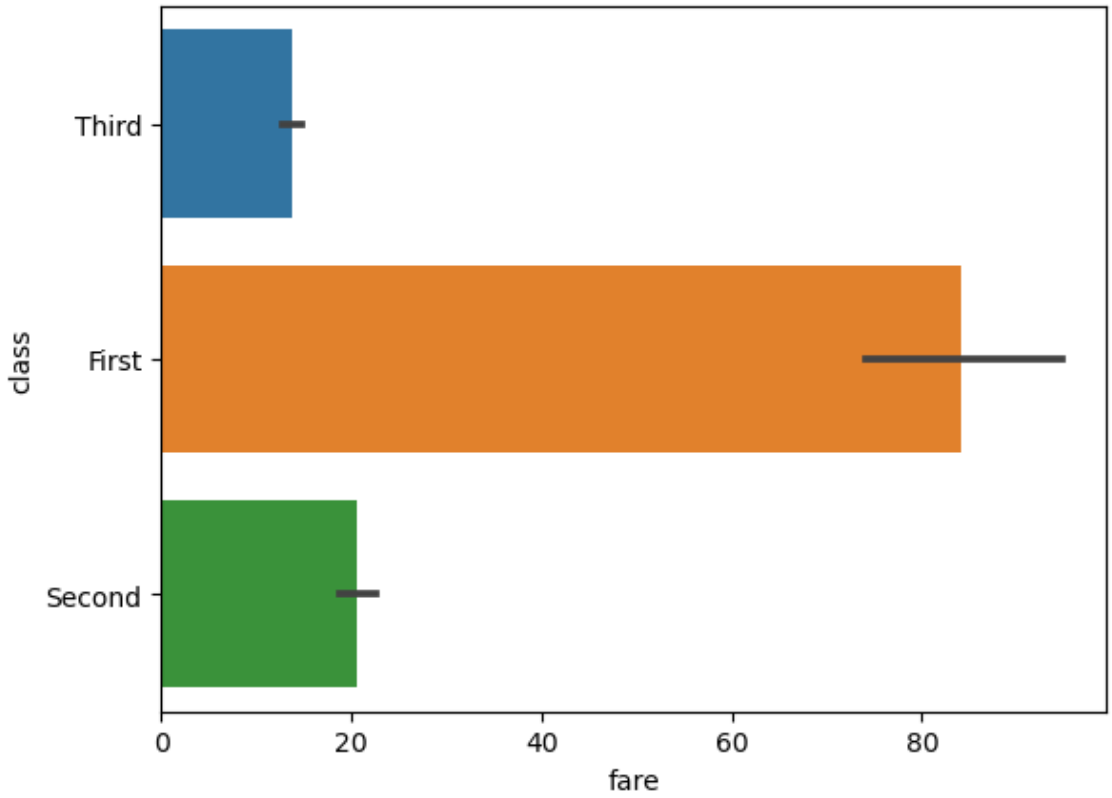
```
### code here
sns.barplot(x='class', y='fare', data=df)
plt.show()
```



2. Write a Python program to display a horizontal bar chart of the fare of class.

In [9]:

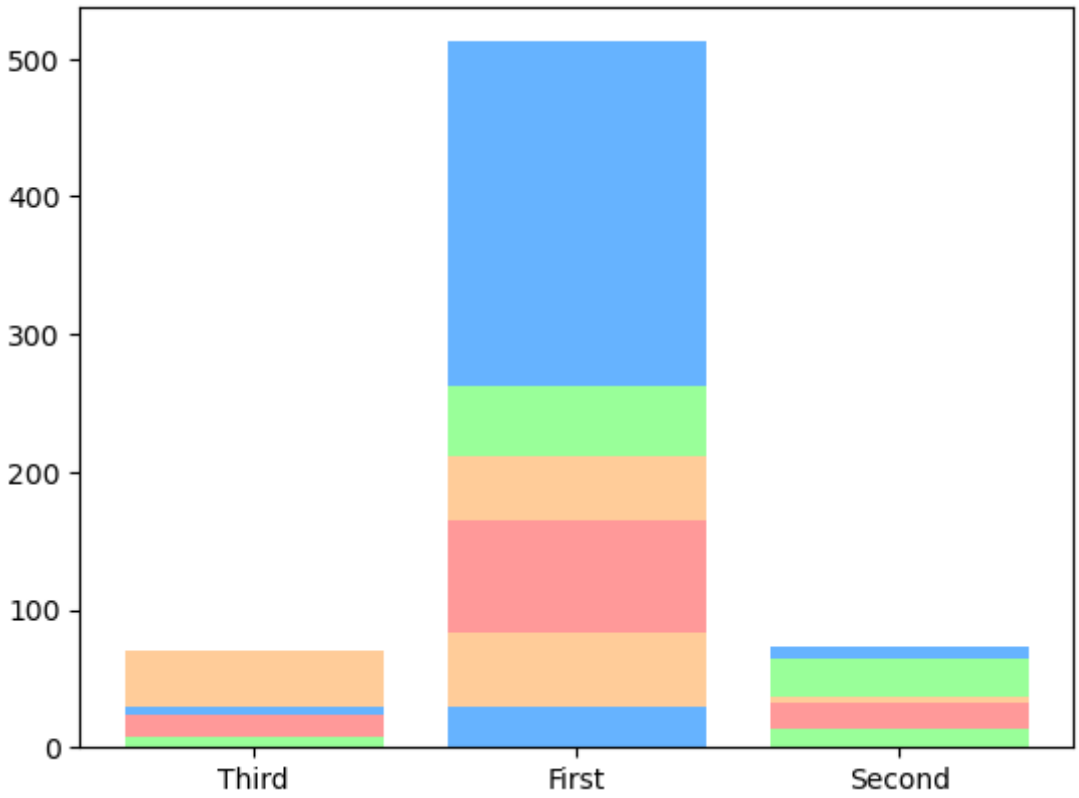
```
### code here
sns.barplot(x='fare', y='class', data=df, orient='h')
plt.show()
```



3. Write a Python program to display a bar chart of the fare of class. Use different color for each bar.

In [11]:

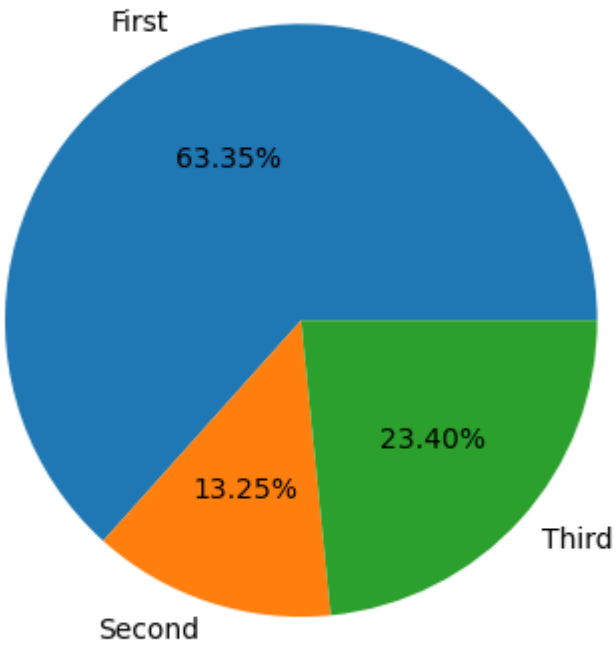
```
### code here
plt.bar(df['class'], df['fare'], color=['#ff9999','#66b3ff','#99ff99','#ffcc99'])
plt.show()
```



4. Write a Python program to create a pie chart of the fare of class.

In [14]:

```
### code here
pi=df.groupby('class')['fare'].sum()
plt.pie(pi, labels=pi.index,autopct='%0.2f%%')
plt.show()
```



######5. Write a Python program to display a count plot of all categorical columns.

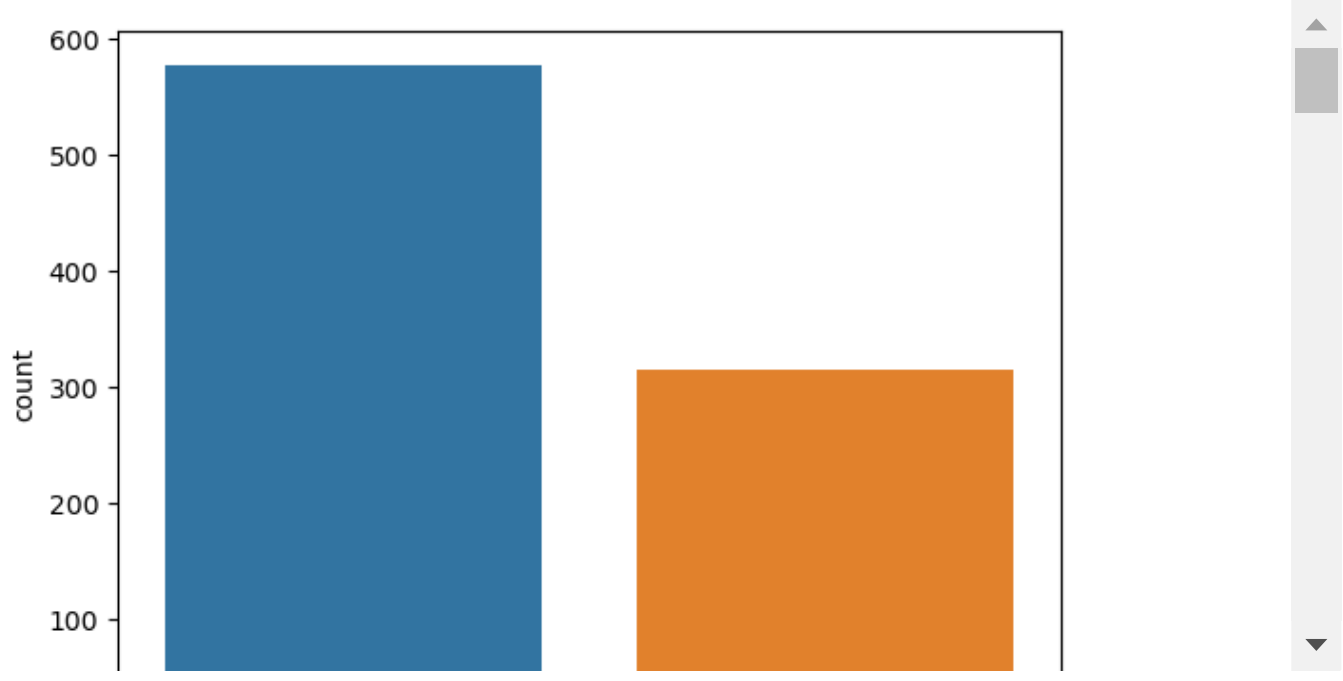
In [15]:

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 16 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    object
 9   who          891 non-null    object
 10  adult_male   891 non-null    bool
 11  deck         203 non-null    object
 12  embark_town  889 non-null    object
 13  alive        891 non-null    object
 14  alone        891 non-null    bool
 15  Unnamed: 15  0 non-null      float64
dtypes: bool(2), float64(3), int64(4), object(7)
memory usage: 99.3+ KB
```

In [17]:

```
### code here
for column in df.select_dtypes(include='object').columns:
    sns.countplot(x=column, data=df)
    plt.show()
```

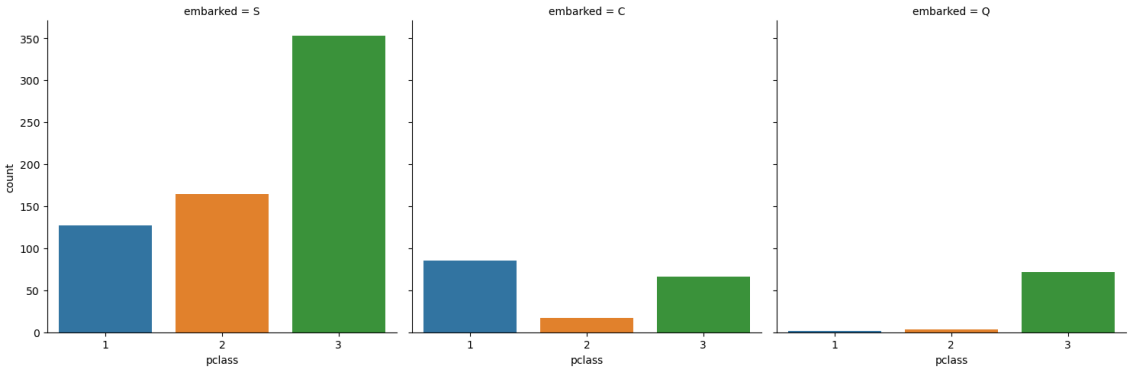


6. Write a Python program to display a factor plot of (pclass vs embarked). hist (kind = 'count')

In [19]:

```
  #### code here
sns.factorplot(x='pclass', col='embarked', data=df, kind='count')
plt.show()
```

```
C:\Users\pamar\anaconda3\lib\site-packages\seaborn\categorical.py:3717: U
serWarning: The `factorplot` function has been renamed to `catplot`. The
original name will be removed in a future release. Please update your cod
e. Note that the default `kind` in `factorplot` (``'point'``) has changed
``'strip'`` in `catplot`.
  warnings.warn(msg)
```

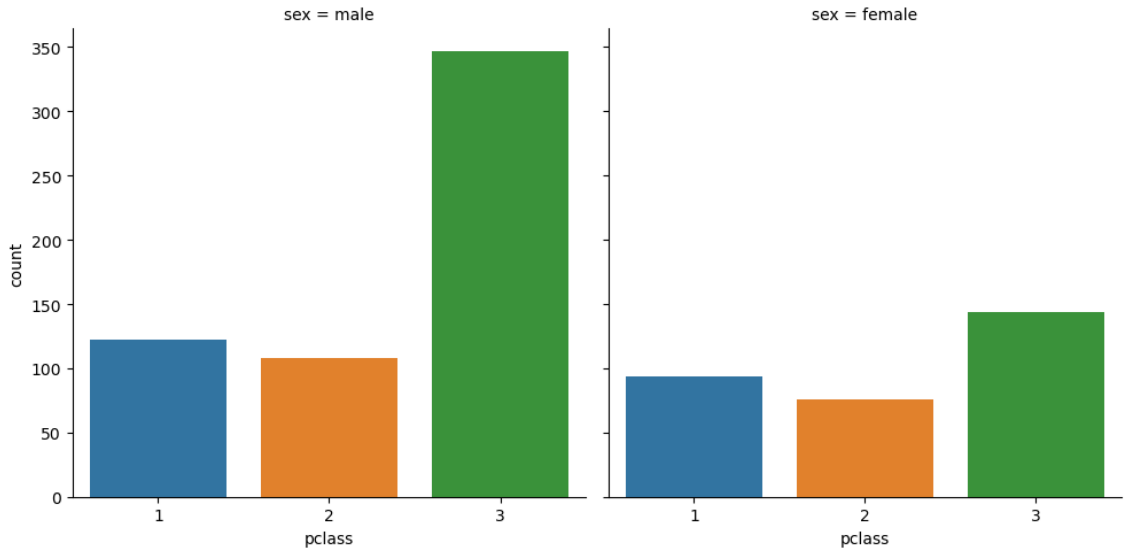


7. Write a Python programming to display a factor plot of (pclass vs sex). hist (kind = 'count')

In [20]:

```
### code here
sns.factorplot(x='pclass', col='sex', data=df, kind='count')
plt.show()
```

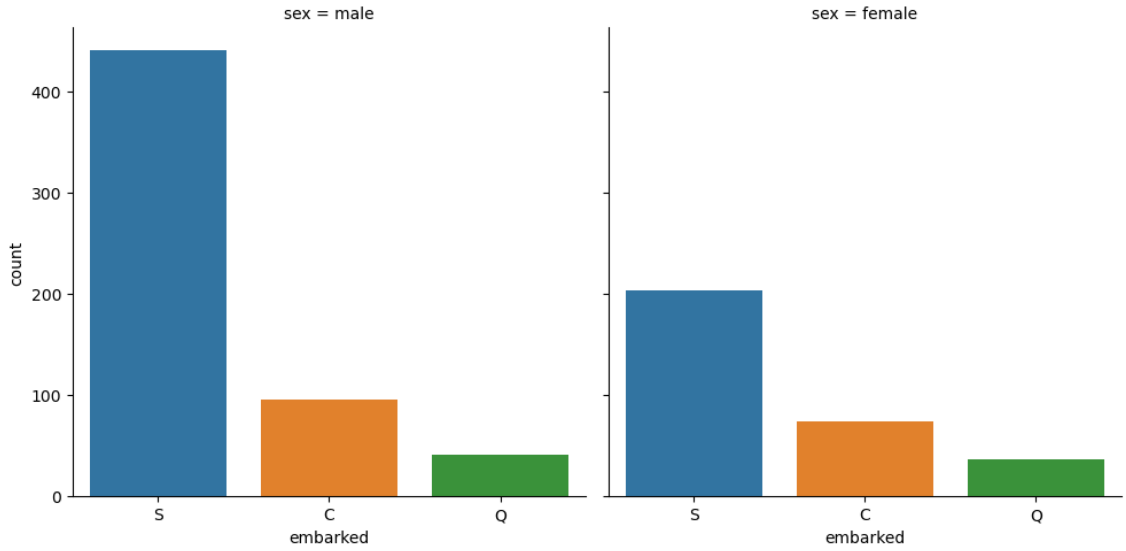
```
C:\Users\pamar\anaconda3\lib\site-packages\seaborn\categorical.py:3717: U
serWarning: The `factorplot` function has been renamed to `catplot`. The
original name will be removed in a future release. Please update your cod
e. Note that the default `kind` in `factorplot` (``'point'``) has changed
``'strip'`` in `catplot`.
  warnings.warn(msg)
```



8. Write a Python programming to display a factor plot of (embarked vs sex). hist (kind = 'count')

In [22]:

```
### code here
sns.factorplot(x='embarked', col='sex', data=df, kind='count')
plt.show()
```

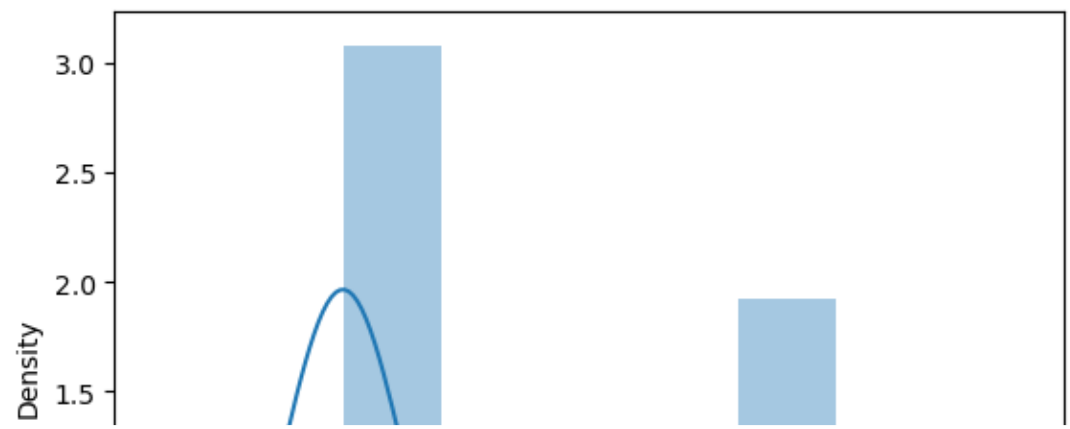


9. Write a Python program to display distribution plot for all numberical columns.

In [25]:

```
### code here
for column in df.select_dtypes(include='number').columns:
    sns.distplot(df[column].dropna())
    plt.show()
```

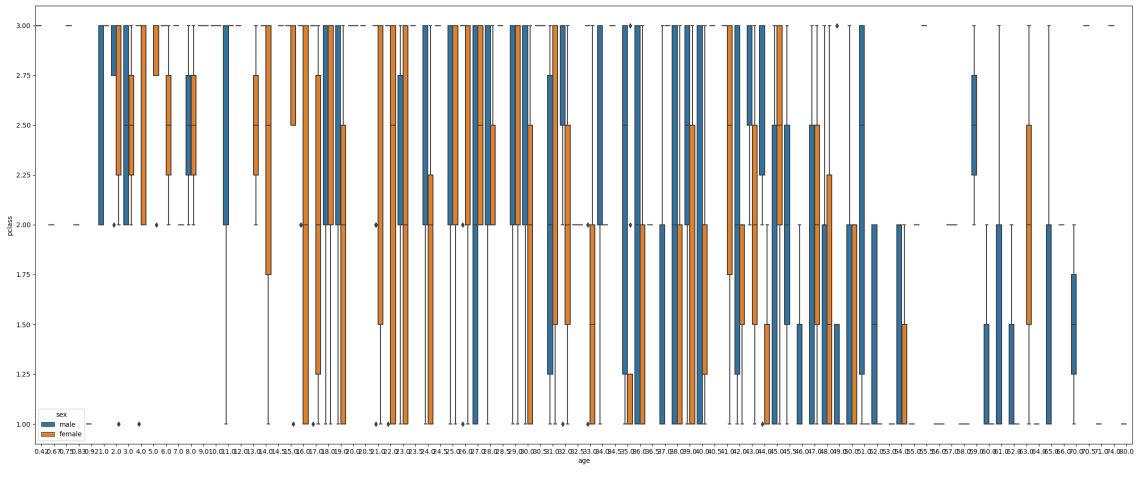
```
C:\Users\pamar\anaconda3\lib\site-packages\seaborn\distributions.py:26
19: FutureWarning: `distplot` is a deprecated function and will be rem
oved in a future version. Please adapt your code to use either `displo
t` (a figure-level function with similar flexibility) or `histplot` (a
n axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```



10. Write a Python program to display boxplot of age, pclass and hue = gender.

In [33]:

```
### code here
plt.figure(figsize=(30,12))
sns.boxplot(x='age', y='pclass', data=df,hue="sex")
plt.show()
```



In [ ]:

```

```

Bonus Question

1. What are the plots we can create on numerical columns.

```
### write here
##Some common plots that can be created on numerical columns include:

> Line plots
> Scatter plots
> Histograms
> Box plots
> Violin plots
> Heat maps
> Density plots
> Bar charts
> Pie charts
```

2. What are the plots we can create on categorical columns.

```
### write here
#Some common plots that can be created on categorical columns include:
> Bar charts
> Pie charts
> Stacked bar charts
> Grouped bar charts
```

> Dot plots
> Box plots
> Violin plots
> Swarm plots
> Factor plots

In [ ]: