

ez1c1zqip

April 8, 2025

```
[1]: #NAME:SHIVANI GADKARI  
#ROLL NO:13342  
import seaborn as sns
```

```
[2]: data=sns.load_dataset('tips')
```

```
[3]: data.head()
```

```
[3]:
```

	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4

```
[5]: # Check the data types of all columns  
print(data.dtypes)
```

```
total_bill    float64  
tip           float64  
sex           category  
smoker        category  
day           category  
time          category  
size          int64  
dtype: object
```

```
[7]: XYZ=data[['total_bill','tip','size']]
```

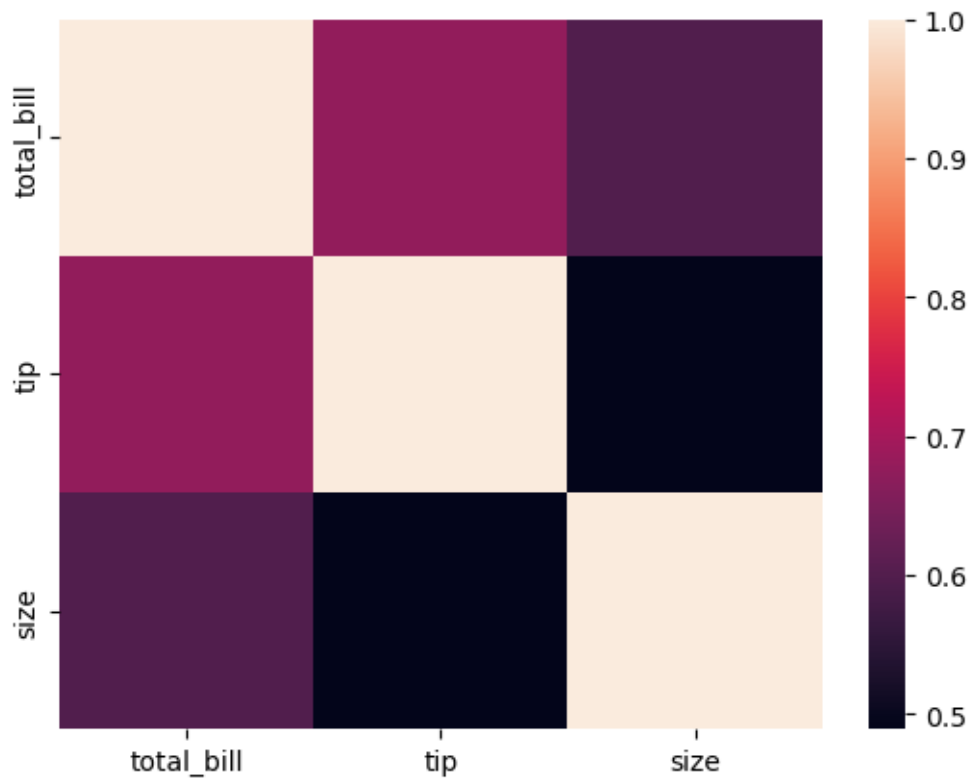
```
[8]: XYZ.corr()
```

```
[8]:
```

	total_bill	tip	size
total_bill	1.000000	0.675734	0.598315
tip	0.675734	1.000000	0.489299
size	0.598315	0.489299	1.000000

```
[11]: sns.heatmap(XYZ.corr())
```

```
[11]: <Axes: >
```



```
[17]: #1.DISTRIBUTION PLOT:  
#DISPLOT:  
data['tip']
```

```
[17]: 0      1.01  
      1      1.66  
      2      3.50  
      3      3.31  
      4      3.61  
      ...  
     239     5.92  
     240     2.00  
     241     2.00  
     242     1.75  
     243     3.00  
      Name: tip, Length: 244, dtype: float64
```

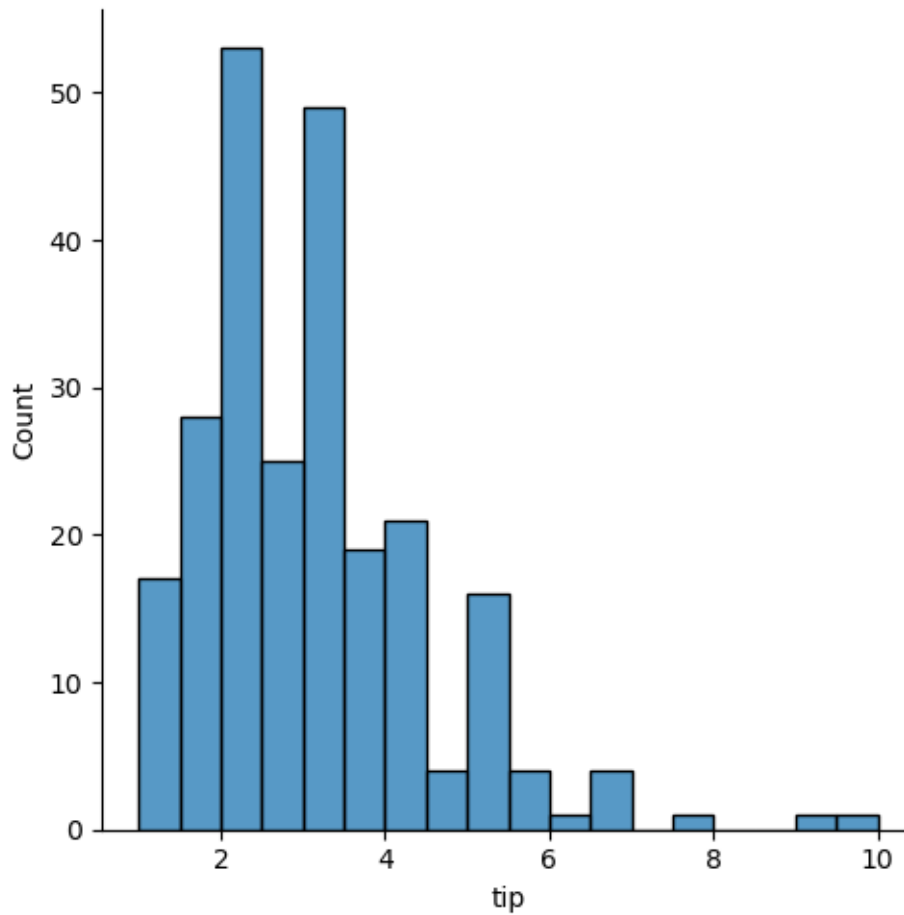
```
[19]: sns.displot(data['tip'])
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:

FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.

```
with pd.option_context('mode.use_inf_as_na', True):
```

[19]: <seaborn.axisgrid.FacetGrid at 0x2acf90a9150>



```
[21]: #JOINPLOT:
sns.jointplot(x='tip',y='total_bill',data=data,kind='hex')
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:

FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.

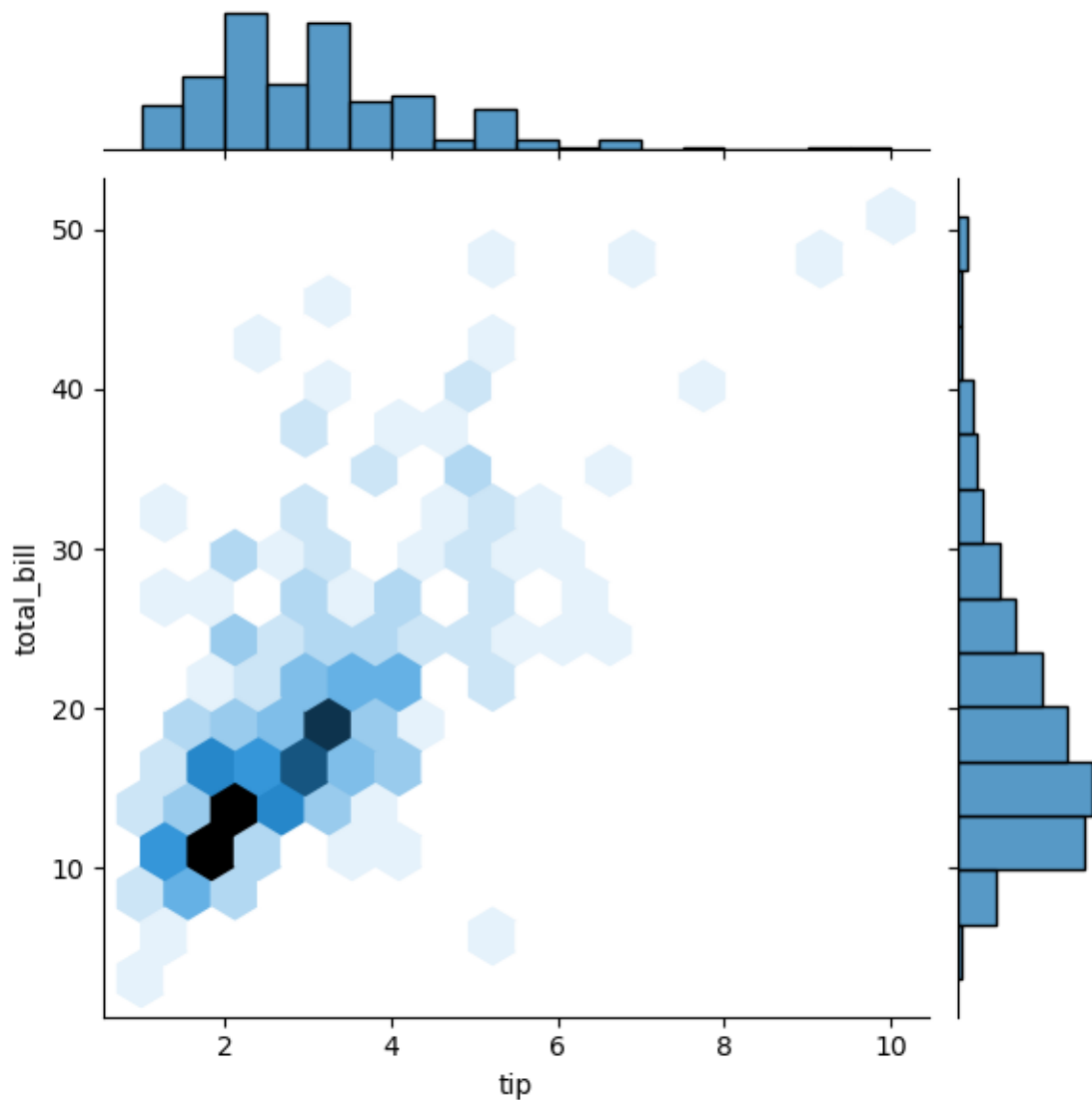
```
with pd.option_context('mode.use_inf_as_na', True):
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:

FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.

```
with pd.option_context('mode.use_inf_as_na', True):
```

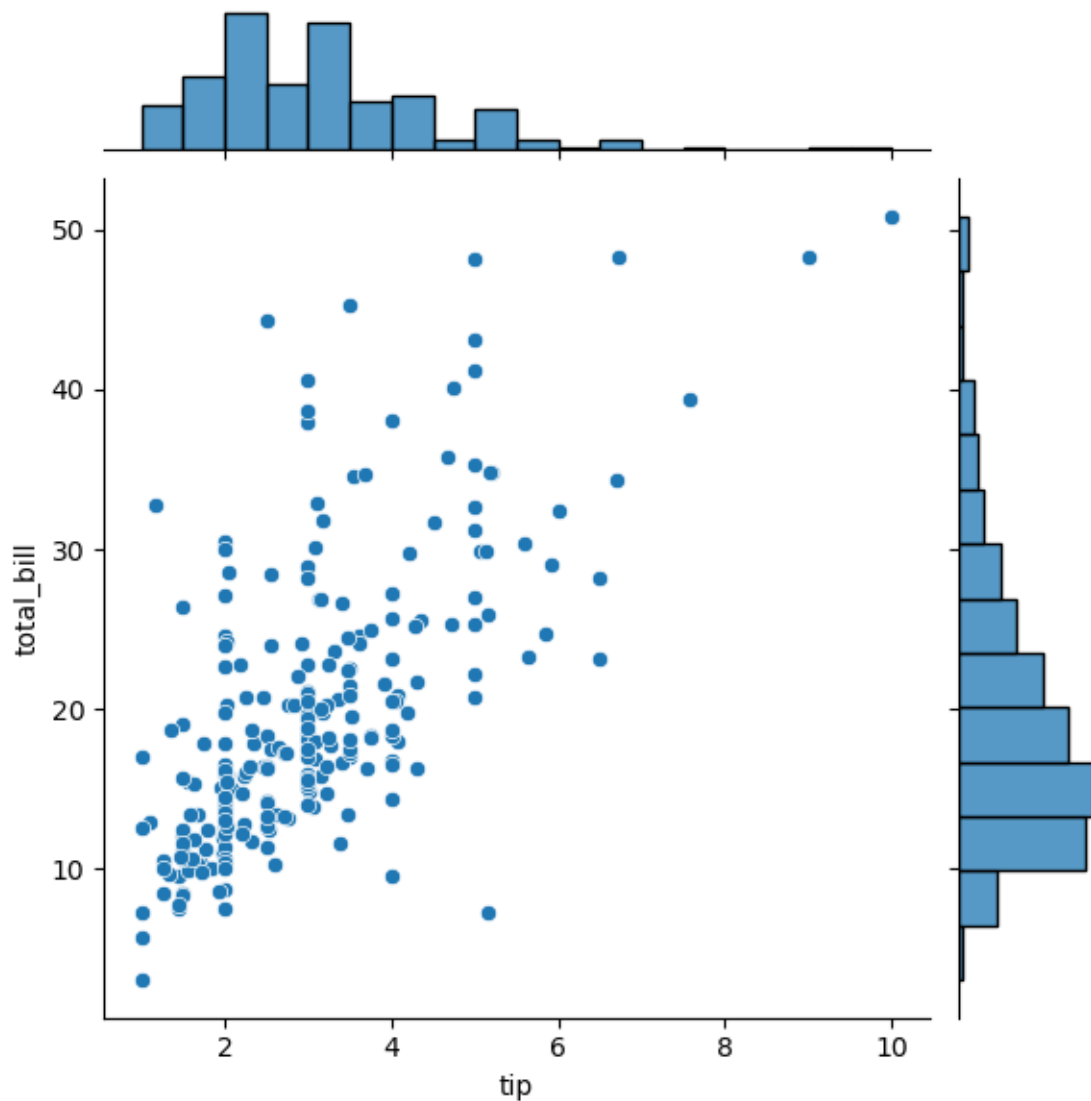
[21]: <seaborn.axisgrid.JointGrid at 0x2acfaed3190>



```
[24]: sns.jointplot(x='tip',y='total_bill',data=data,kind='scatter')
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

[24]: <seaborn.axisgrid.JointGrid at 0x2acfe90b890>

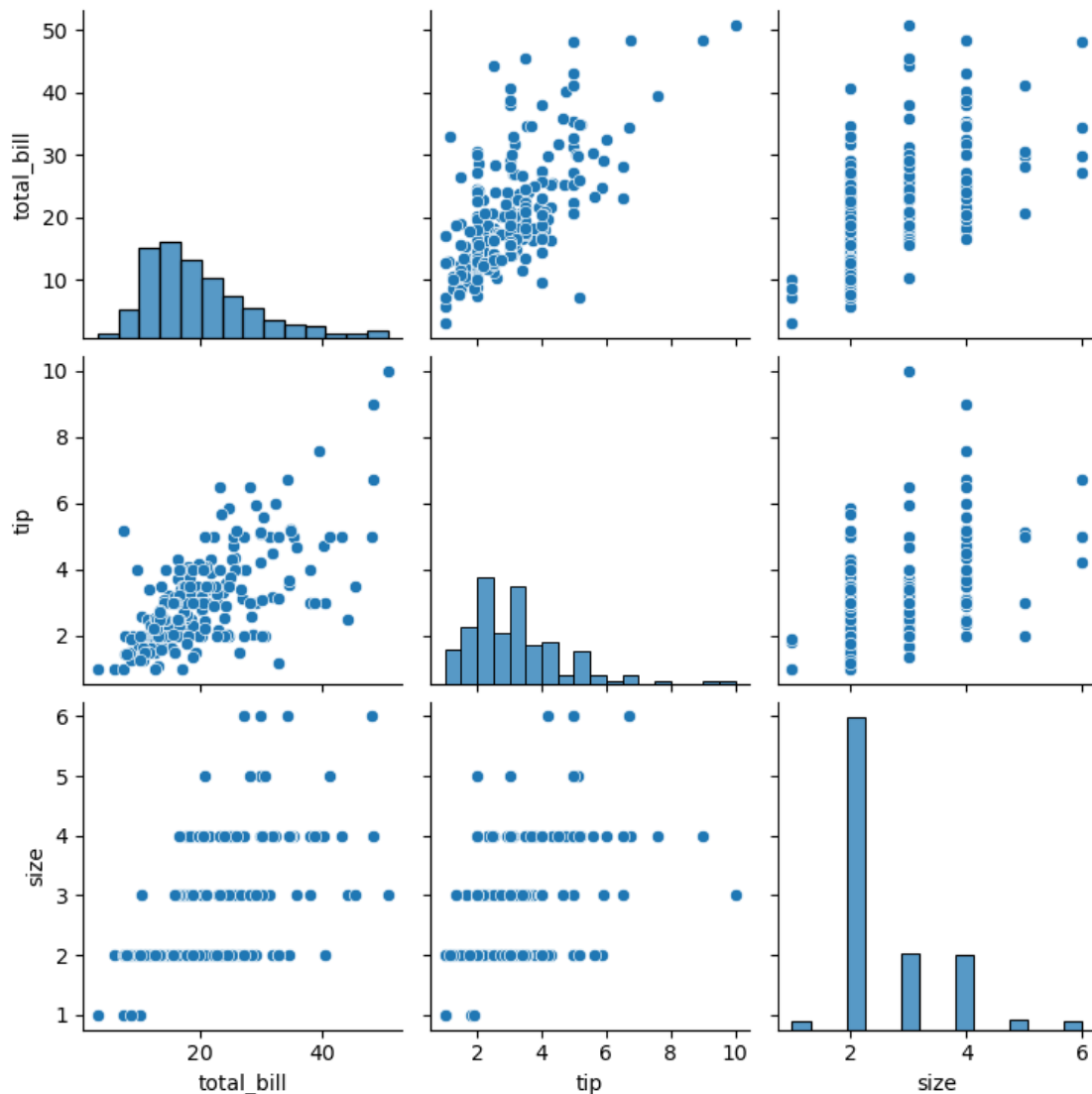


```
[22]: #PAIRPLOT:  
sns.pairplot(data)
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:  
FutureWarning: use_inf_as_na option is deprecated and will be removed in a  
future version. Convert inf values to NaN before operating instead.  
    with pd.option_context('mode.use_inf_as_na', True):  
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:  
FutureWarning: use_inf_as_na option is deprecated and will be removed in a  
future version. Convert inf values to NaN before operating instead.  
    with pd.option_context('mode.use_inf_as_na', True):
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

```
[22]: <seaborn.axisgrid.PairGrid at 0x2acfb0f3f90>
```



```
[23]: sns.pairplot(data, hue='sex')
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1057:
```

FutureWarning: The default of observed=False is deprecated and will be changed to True in a future version of pandas. Pass observed=False to retain current behavior or observed=True to adopt the future default and silence this warning.

```
grouped_data = data.groupby(
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:

FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.

```
    with pd.option_context('mode.use_inf_as_na', True):
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1057:

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C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:

FutureWarning: use_inf_as_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.

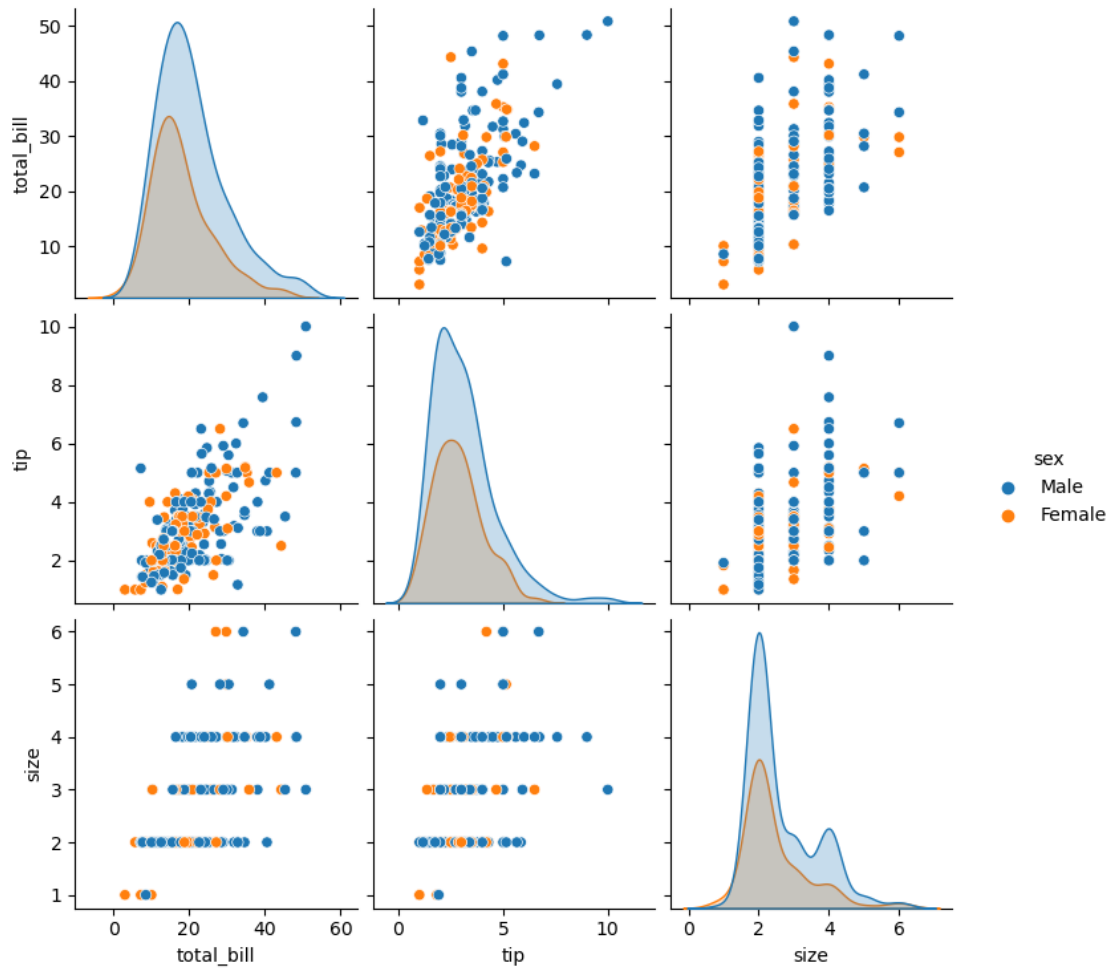
```
    with pd.option_context('mode.use_inf_as_na', True):
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1057:

FutureWarning: The default of observed=False is deprecated and will be changed to True in a future version of pandas. Pass observed=False to retain current behavior or observed=True to adopt the future default and silence this warning.

```
grouped_data = data.groupby(
```

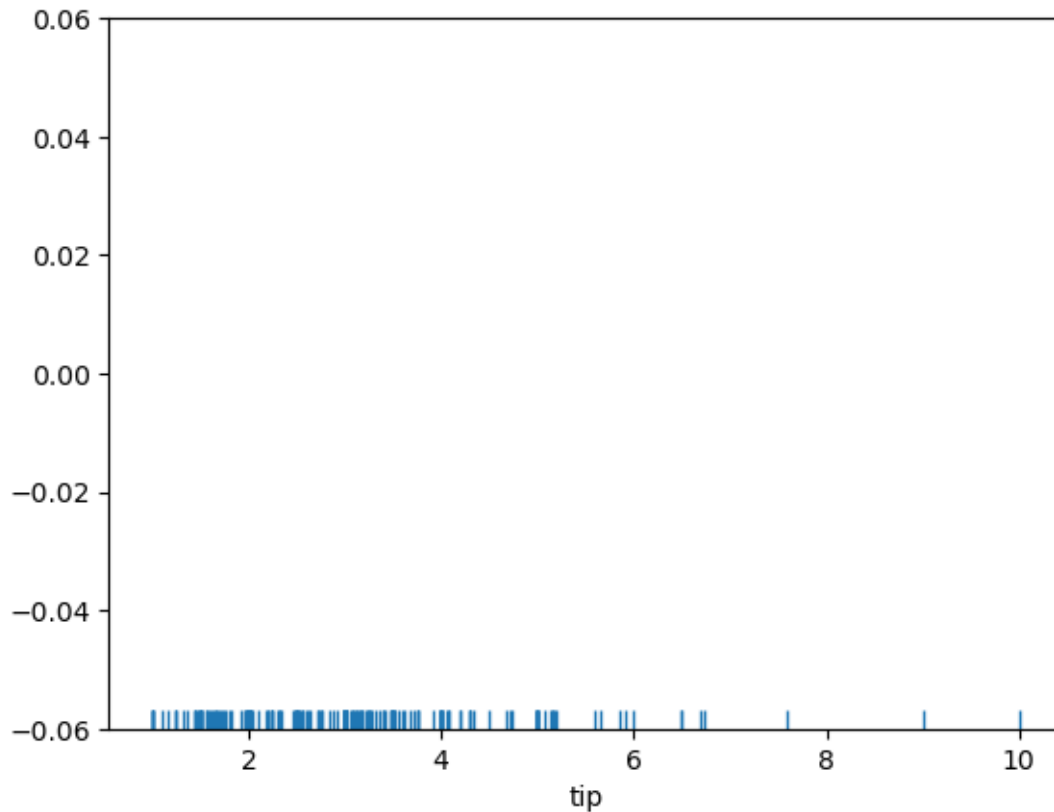
[23]: <seaborn.axisgrid.PairGrid at 0x2acfb684b90>



```
[26]: #RUG PLOT:
sns.rugplot(data['tip'])
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
with pd.option_context('mode.use_inf_as_na', True):

```
[26]: <Axes: xlabel='tip'>
```

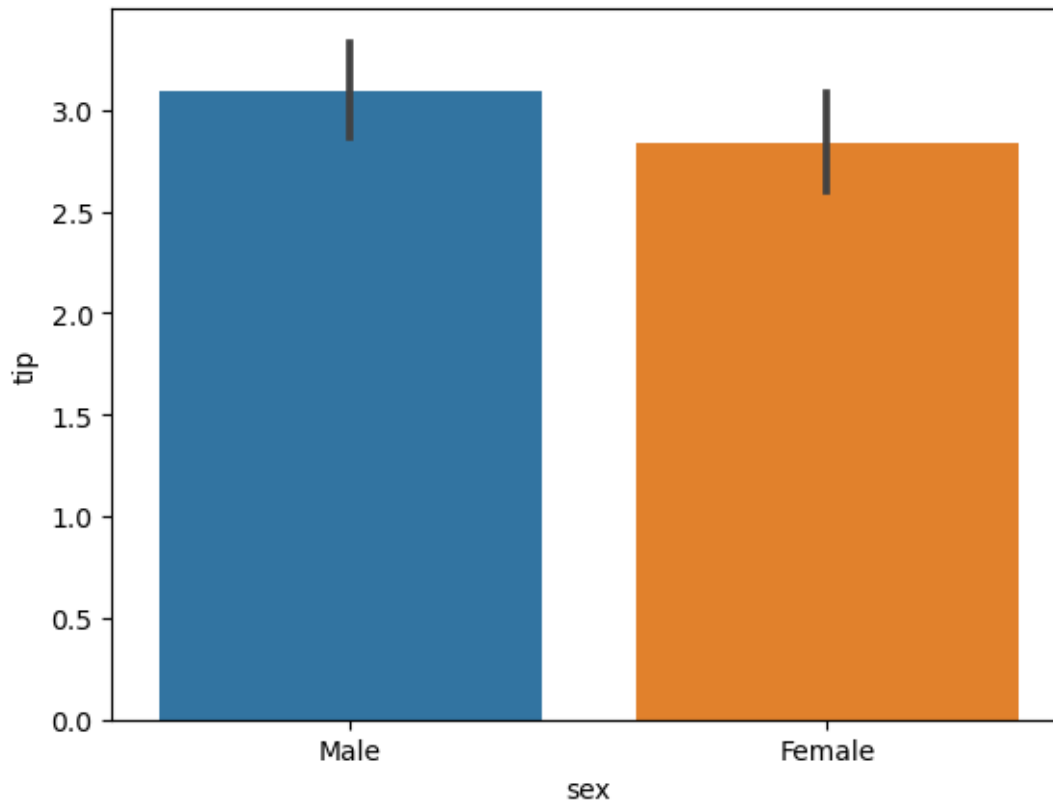



```
[27]: #2. CATEGORICAL PLOT:
```

```
[28]: #BAR PLOT:  
sns.barplot(x='sex', y='tip', data=data)
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\categorical.py:641:  
FutureWarning: The default of observed=False is deprecated and will be changed  
to True in a future version of pandas. Pass observed=False to retain current  
behavior or observed=True to adopt the future default and silence this warning.  
grouped_vals = vals.groupby(grouper)
```

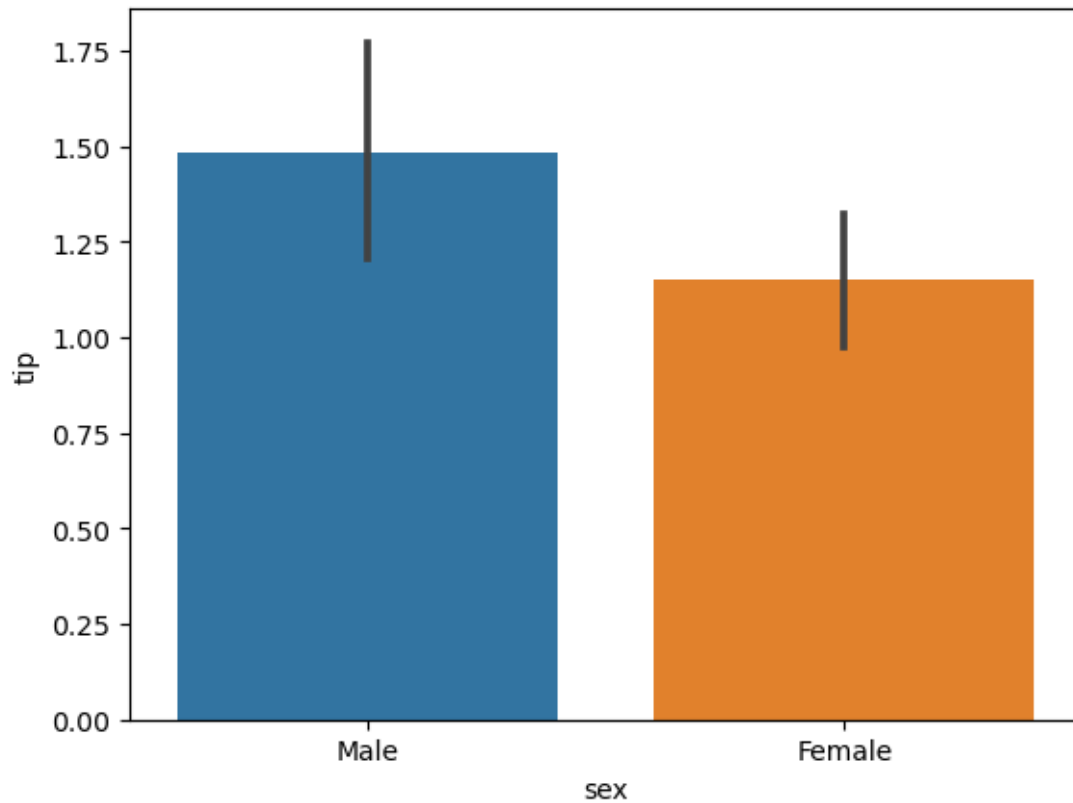
```
[28]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[30]: import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
sns.barplot(x='sex', y='tip', data=data, estimator=np.std)
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn\categorical.py:641:
FutureWarning: The default of observed=False is deprecated and will be changed
to True in a future version of pandas. Pass observed=False to retain current
behavior or observed=True to adopt the future default and silence this warning.
grouped_vals = vals.groupby(grouper)

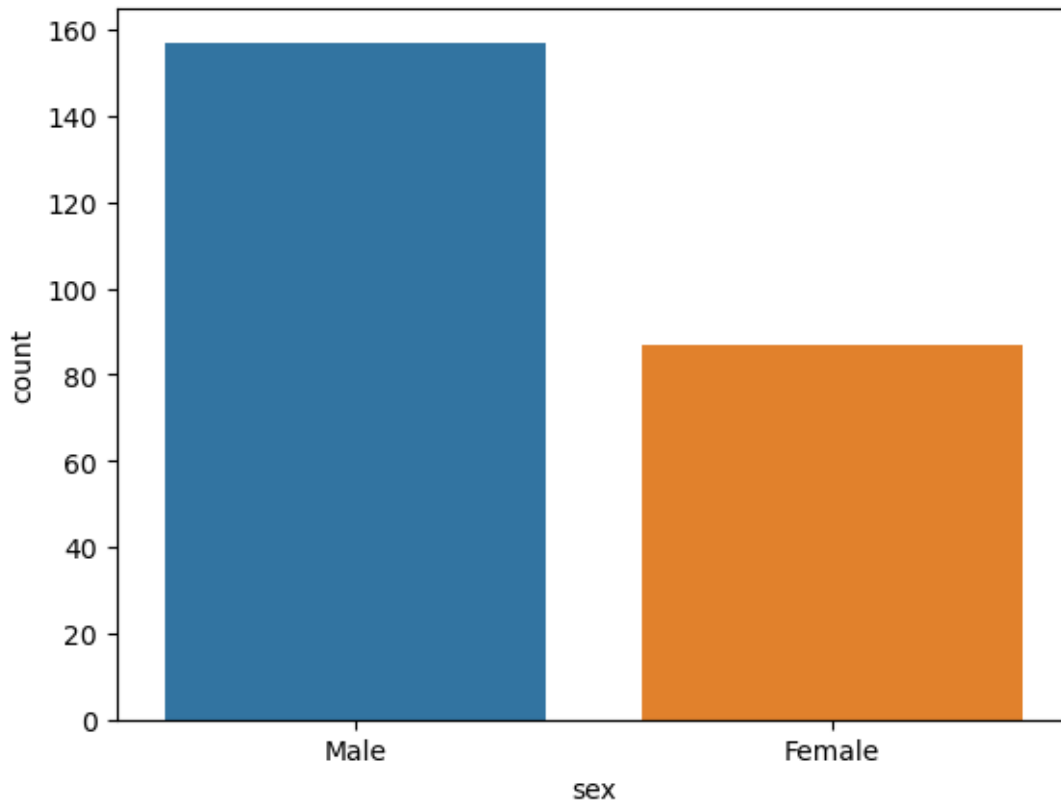
```
[30]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[31]: #COUNT PLOT:  
sns.countplot(x='sex', data=data)
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\categorical.py:641:  
FutureWarning: The default of observed=False is deprecated and will be changed  
to True in a future version of pandas. Pass observed=False to retain current  
behavior or observed=True to adopt the future default and silence this warning.  
grouped_vals = vals.groupby(grouper)
```

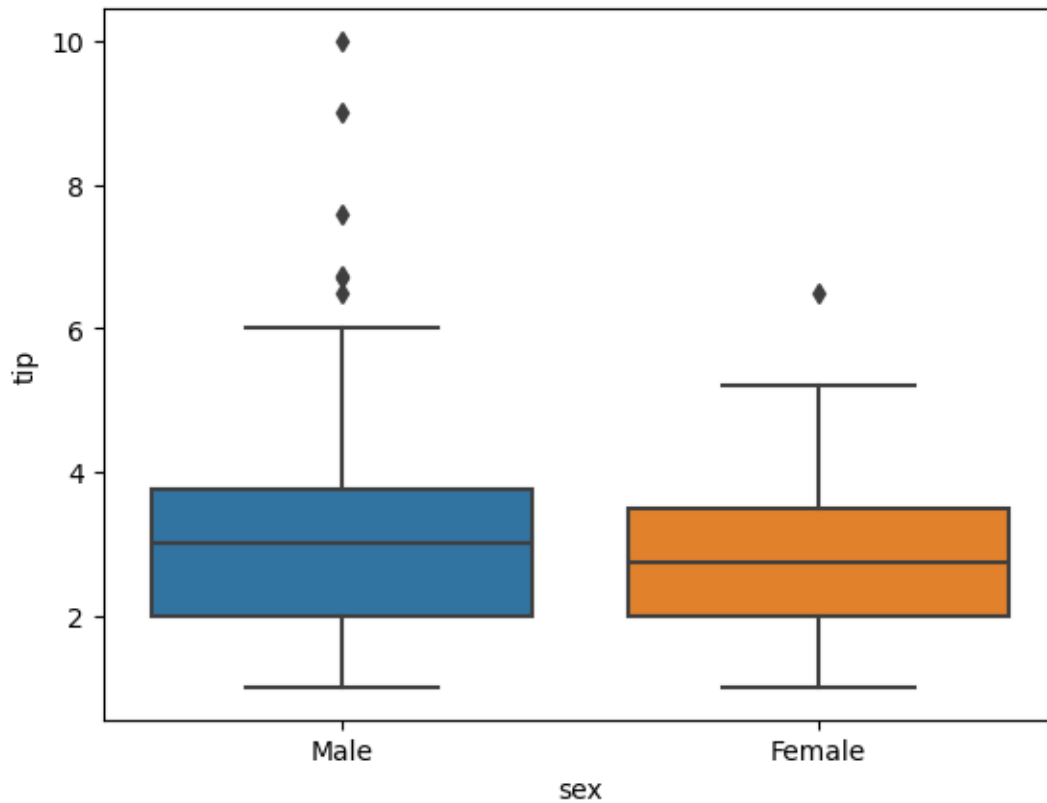
```
[31]: <Axes: xlabel='sex', ylabel='count'>
```



```
[33]: #The Box Plot:  
sns.boxplot(x='sex', y='tip', data=data)
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\categorical.py:641:  
FutureWarning: The default of observed=False is deprecated and will be changed  
to True in a future version of pandas. Pass observed=False to retain current  
behavior or observed=True to adopt the future default and silence this warning.  
grouped_vals = vals.groupby(grouper)
```

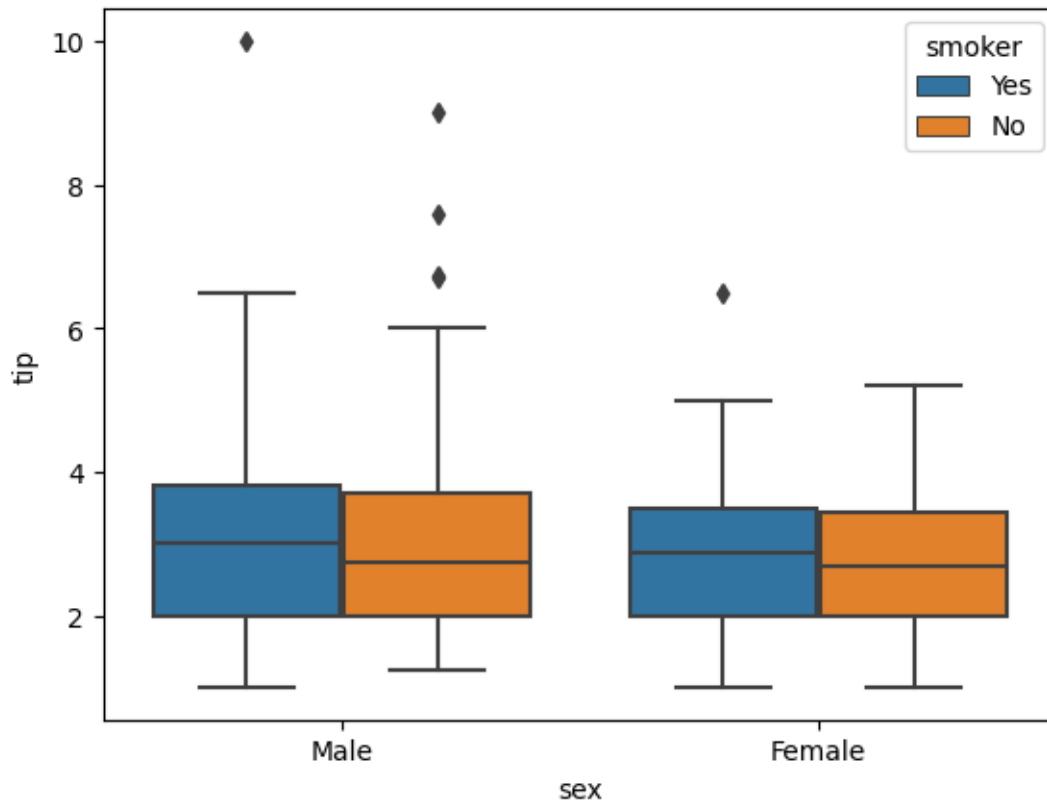
```
[33]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[36]: sns.boxplot(x='sex', y='tip', data=data, hue="smoker")
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\categorical.py:641:
FutureWarning: The default of observed=False is deprecated and will be changed
to True in a future version of pandas. Pass observed=False to retain current
behavior or observed=True to adopt the future default and silence this warning.
    grouped_vals = vals.groupby(grouper)
```

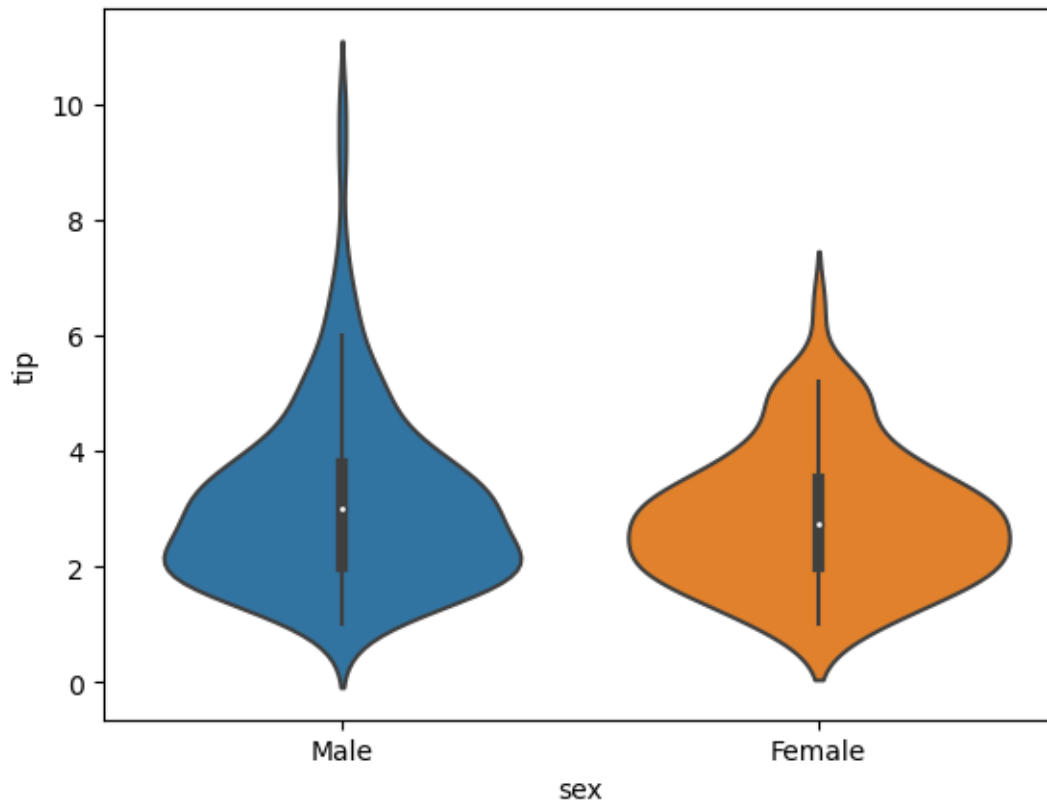
```
[36]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[38]: #Violin Plot:
sns.violinplot(x='sex', y='tip', data=data)
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn\categorical.py:641:
FutureWarning: The default of observed=False is deprecated and will be changed
to True in a future version of pandas. Pass observed=False to retain current
behavior or observed=True to adopt the future default and silence this warning.
grouped_vals = vals.groupby(grouper)

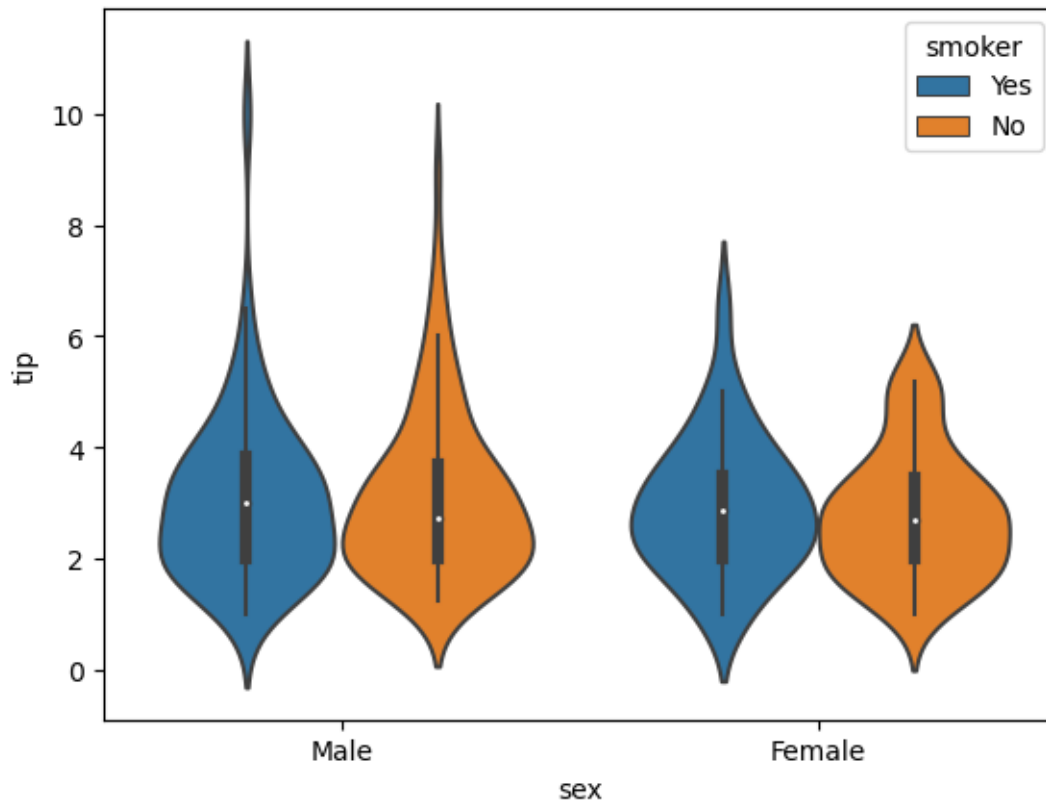
```
[38]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[40]: sns.violinplot(x='sex', y='tip', data=data, hue='smoker')
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\categorical.py:641:
FutureWarning: The default of observed=False is deprecated and will be changed
to True in a future version of pandas. Pass observed=False to retain current
behavior or observed=True to adopt the future default and silence this warning.
    grouped_vals = vals.groupby(grouper)
```

```
[40]: <Axes: xlabel='sex', ylabel='tip'>
```

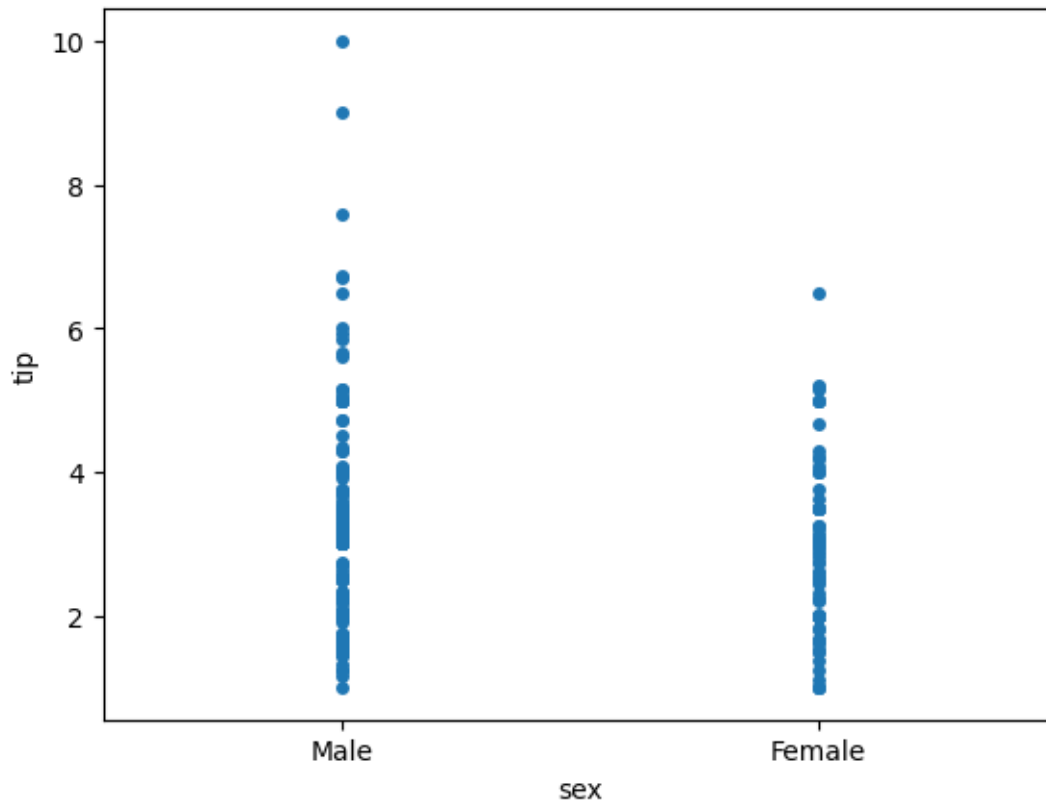


```
[41]: #3.Advanced Plots:
```

```
[44]: #Strip Plot:
sns.stripplot(x='sex', y='tip', data=data, jitter=False)
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

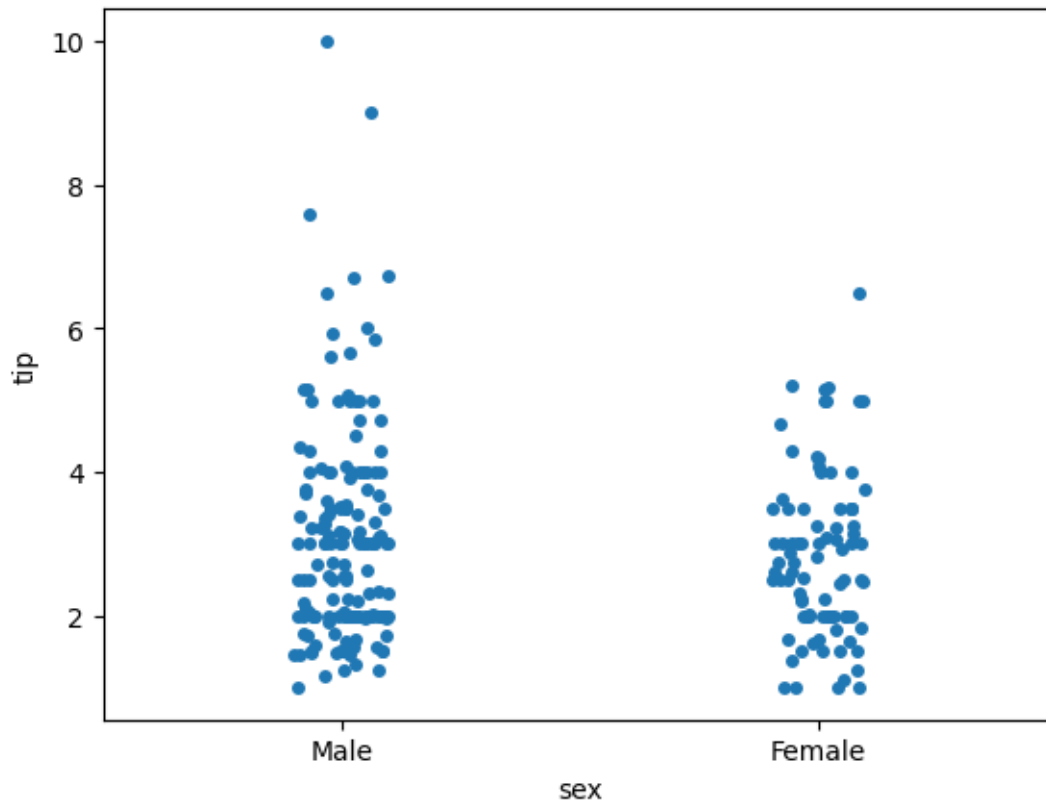
```
[44]: <Axes: xlabel='sex', ylabel='tip'>
```

```
[45]: sns.stripplot(x='sex', y='tip', data=data, jitter=True)
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

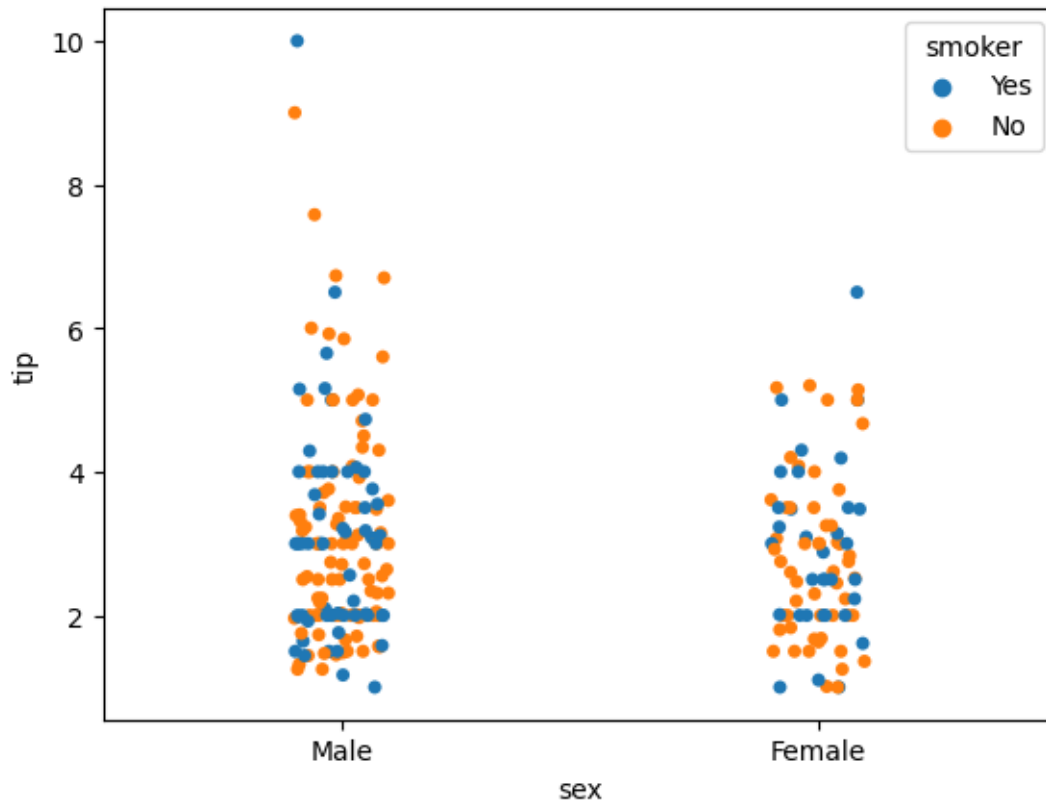
```
[45]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[46]: sns.stripplot(x='sex', y='tip', data=data, jitter=True, hue='smoker')
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

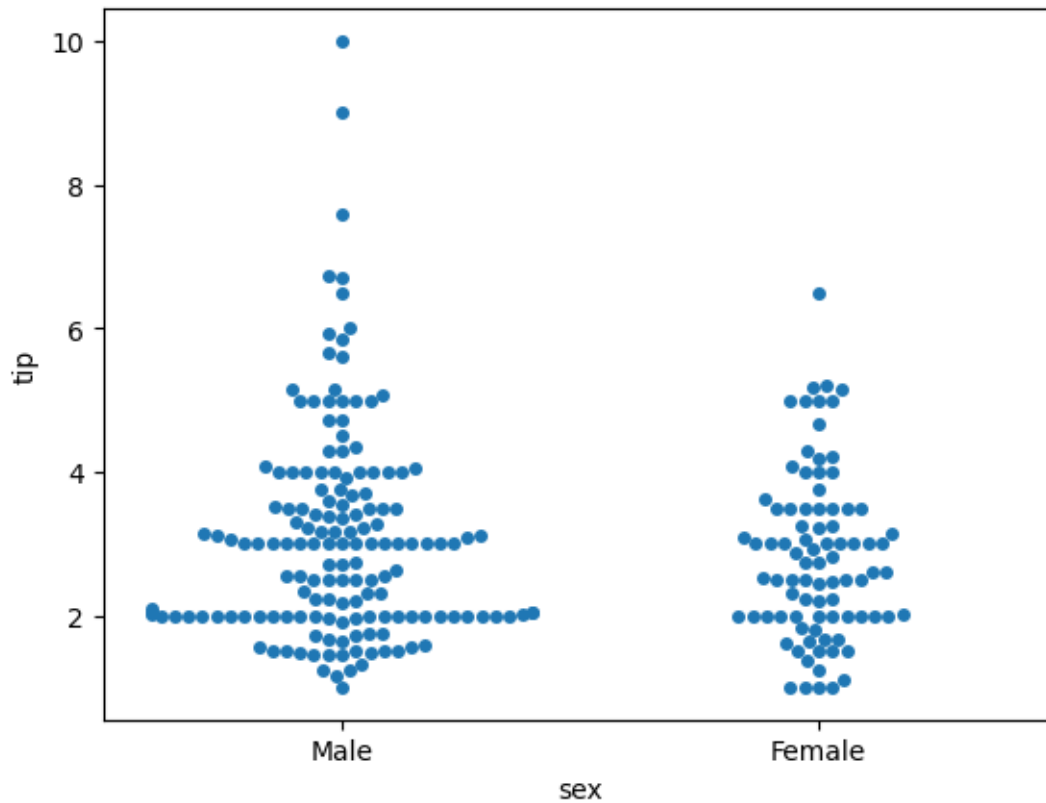
```
[46]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[47]: #Swarm Plot:  
sns.swarmplot(x='sex', y='tip', data=data)
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:  
FutureWarning: use_inf_as_na option is deprecated and will be removed in a  
future version. Convert inf values to NaN before operating instead.  
    with pd.option_context('mode.use_inf_as_na', True):  
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:  
FutureWarning: use_inf_as_na option is deprecated and will be removed in a  
future version. Convert inf values to NaN before operating instead.  
    with pd.option_context('mode.use_inf_as_na', True):
```

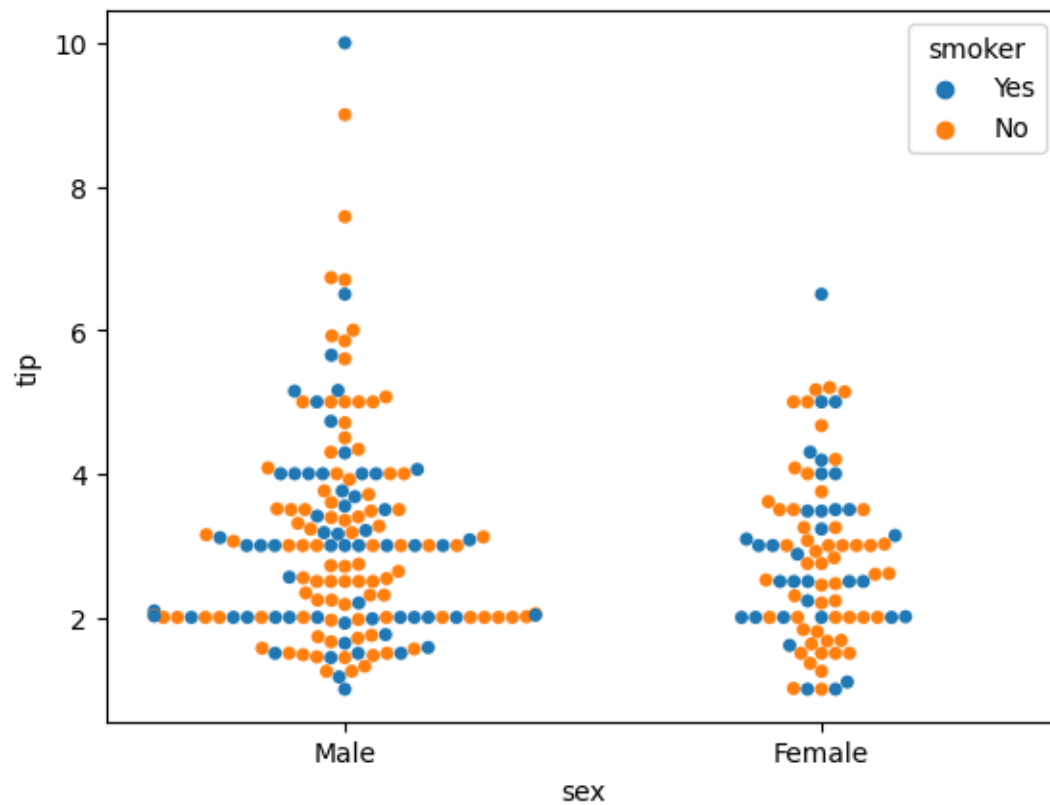
```
[47]: <Axes: xlabel='sex', ylabel='tip'>
```



```
[48]: sns.swarmplot(x='sex', y='tip', data=data, hue='smoker')
```

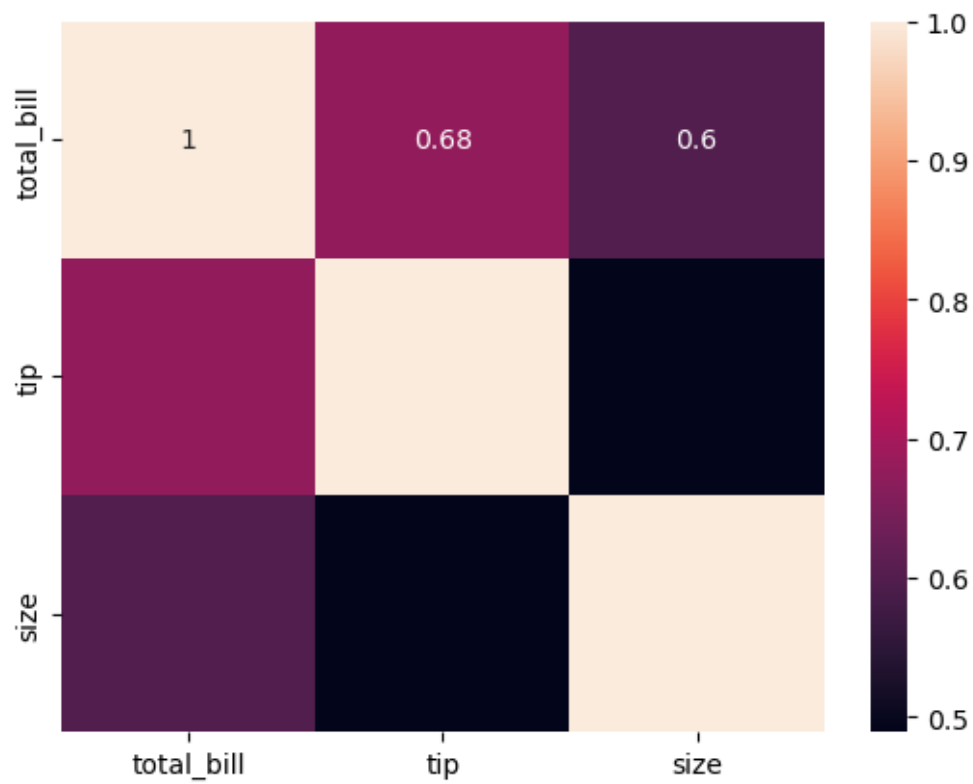
```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
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FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

```
[48]: <Axes: xlabel='sex', ylabel='tip'>
```



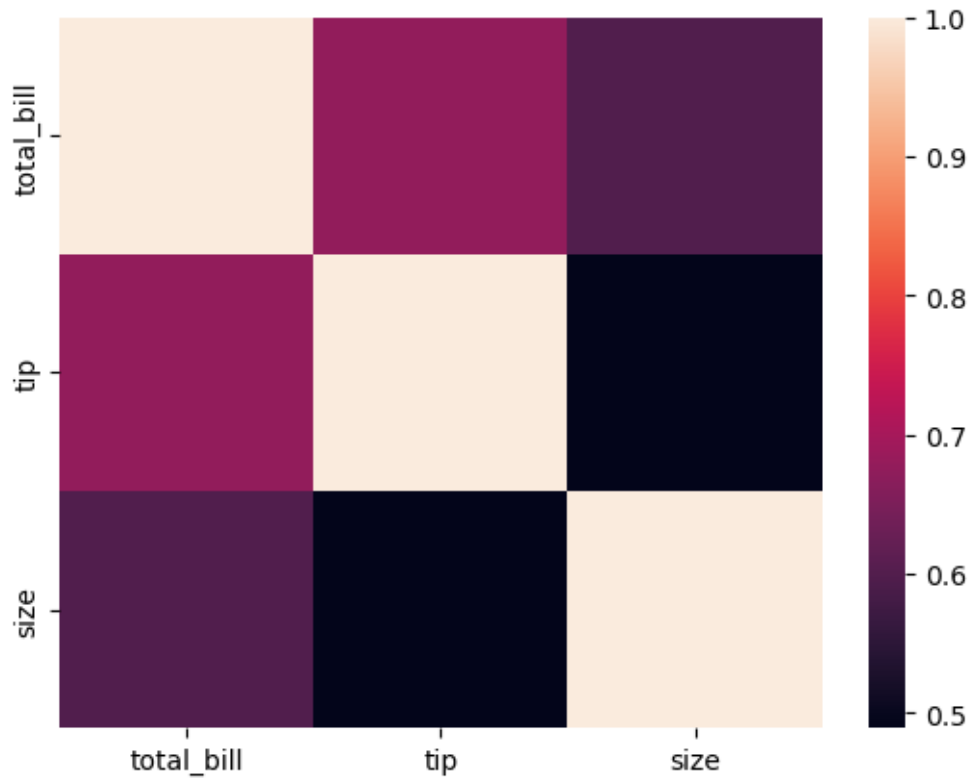
```
[50]: #4. MATRIX PLOT:  
corr = XYZ.corr()  
sns.heatmap(corr, annot=True)
```

```
[50]: <Axes: >
```



```
[51]: corr = XYZ.corr()  
sns.heatmap(corr)
```

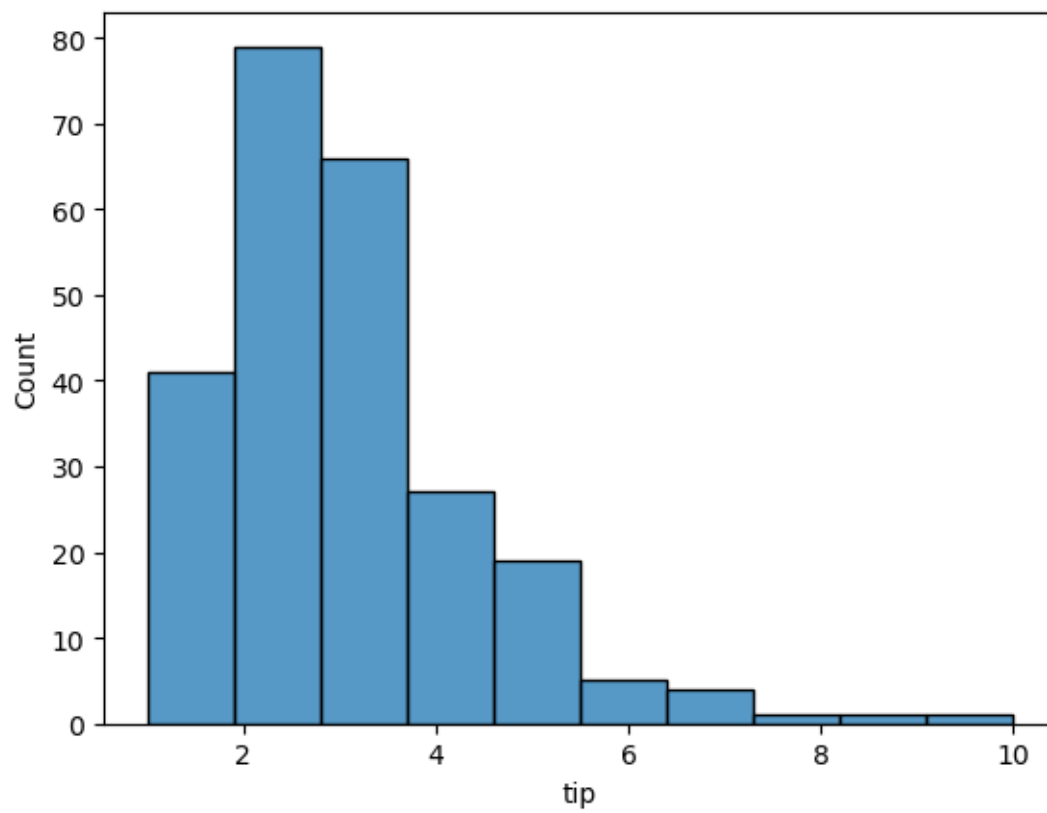
```
[51]: <Axes: >
```



```
[53]: import seaborn as sns
dataset = sns.load_dataset('tips')
sns.histplot(dataset['tip'], kde=False, bins=10)
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
with pd.option_context('mode.use_inf_as_na', True):

```
[53]: <Axes: xlabel='tip', ylabel='Count'>
```



[]: