ldy9lwtqa

April 19, 2025

```
[1]: 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
```
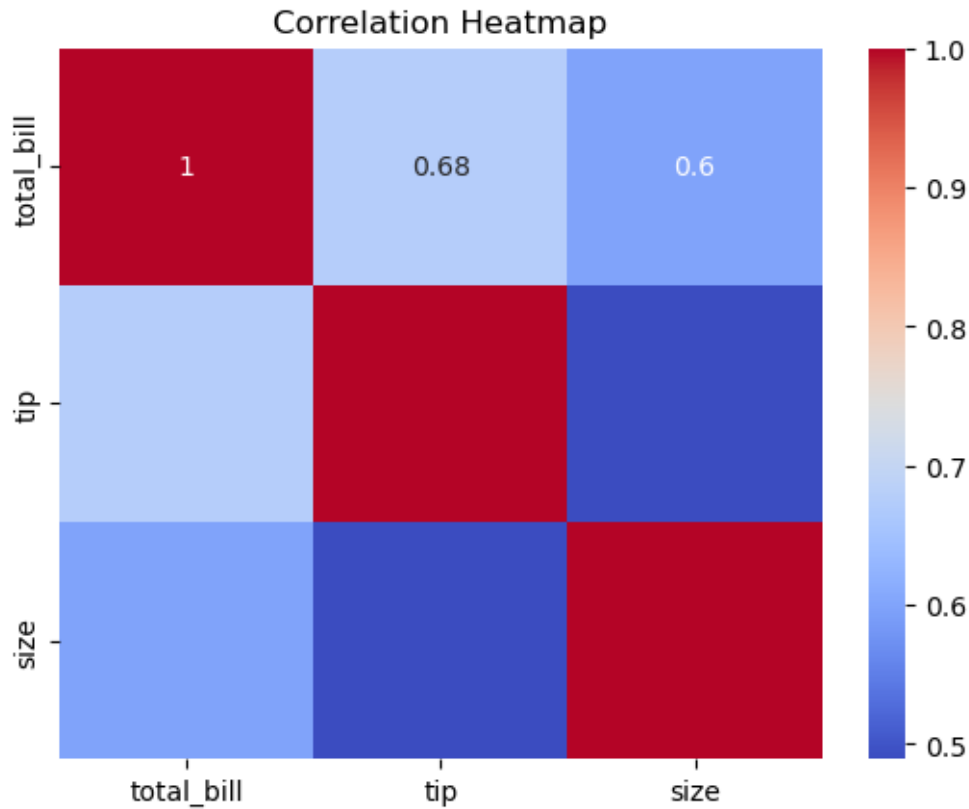
```
[13]: data[['total_bill', 'tip', 'size']].corr()
```

```
[13]:             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
```

```
[15]: import matplotlib.pyplot as plt
     # Select only numeric columns
     numeric_data = data.select_dtypes(include=['number'])
     # Compute and plot correlation heatmap
     sns.heatmap(numeric_data.corr(), annot=True, cmap='coolwarm')
     plt.title("Correlation Heatmap")
     plt.show()
```
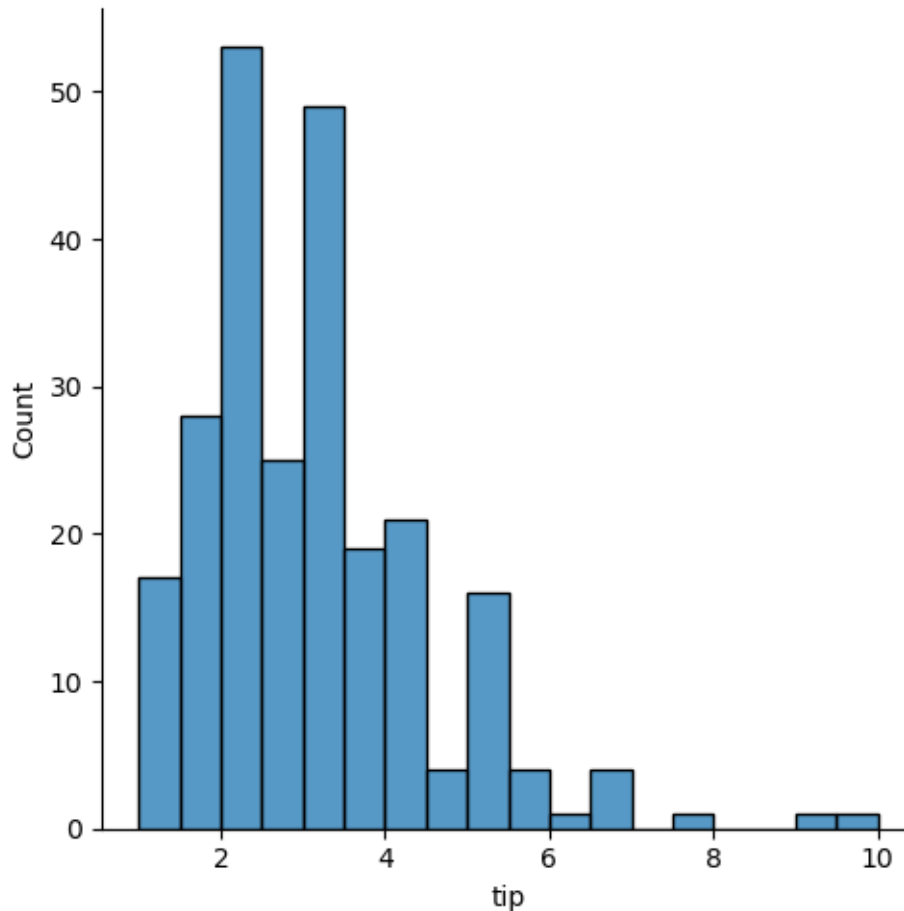
Correlation Heatmap

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

C:\Users\Vishwajeet Kulkarni\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):
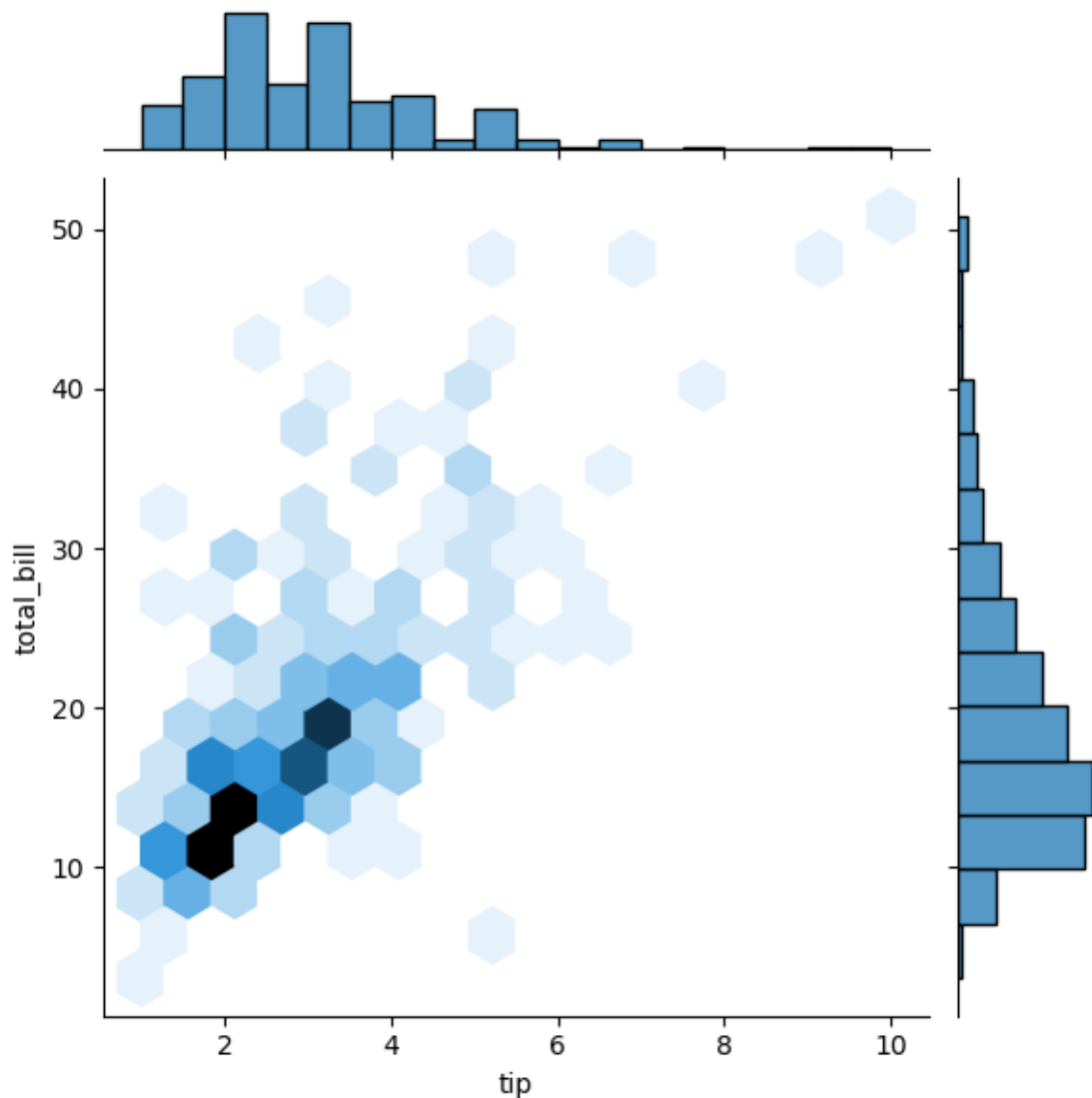
```
[17]: <seaborn.axisgrid.FacetGrid at 0x203a5460d10>
```

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

C:\Users\Vishwajeet Kulkarni\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
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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):

```
[18]: <seaborn.axisgrid.JointGrid at 0x203a559f650>
```

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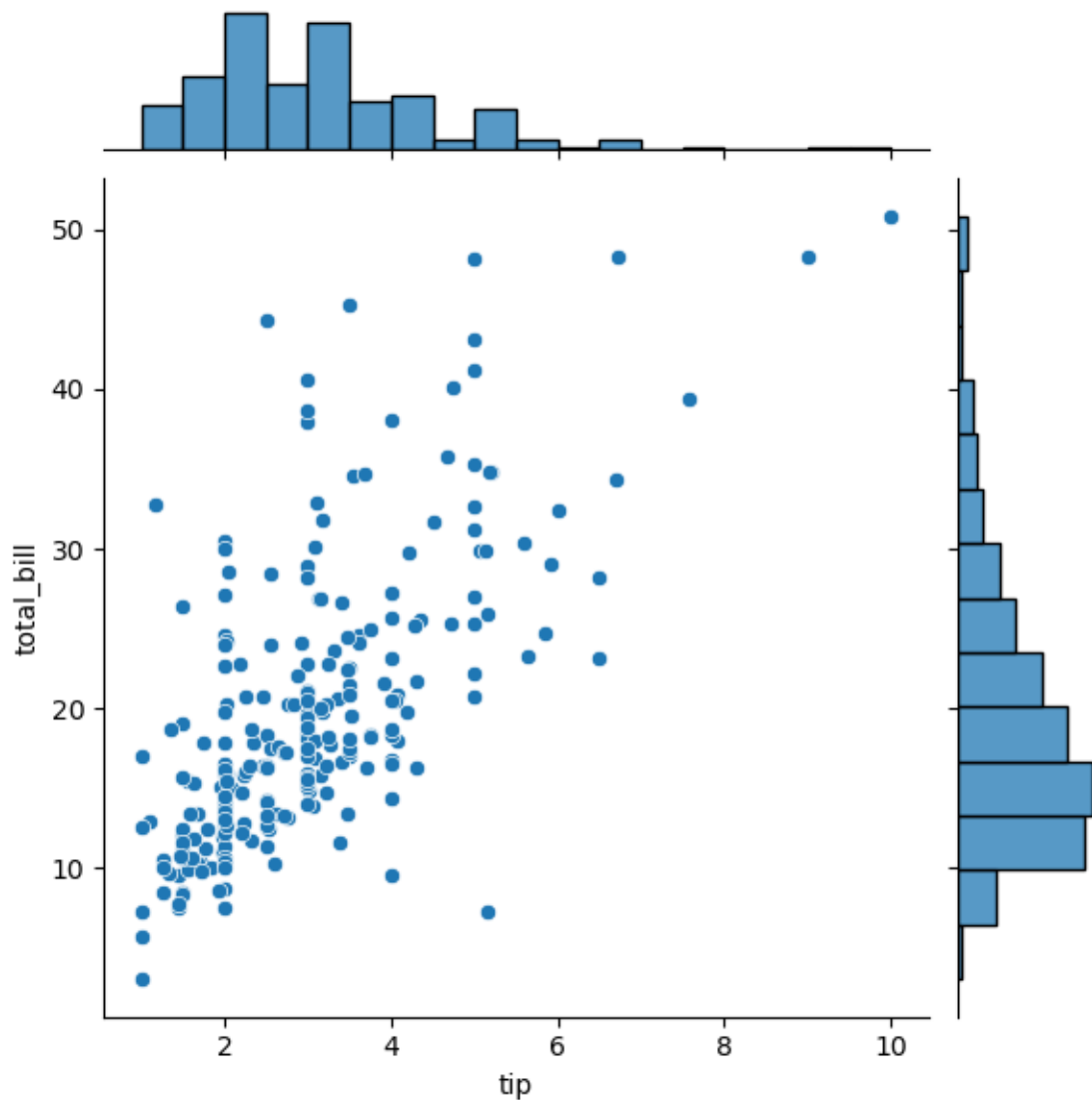sns.jointplot(x='tip', y='total_bill', data=data,kind='scatter')
```

C:\Users\Vishwajeet Kulkarni\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
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  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\Vishwajeet Kulkarni\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):

`<seaborn.axisgrid.JointGrid at 0x203a5e14050>`



[21]: 
```python
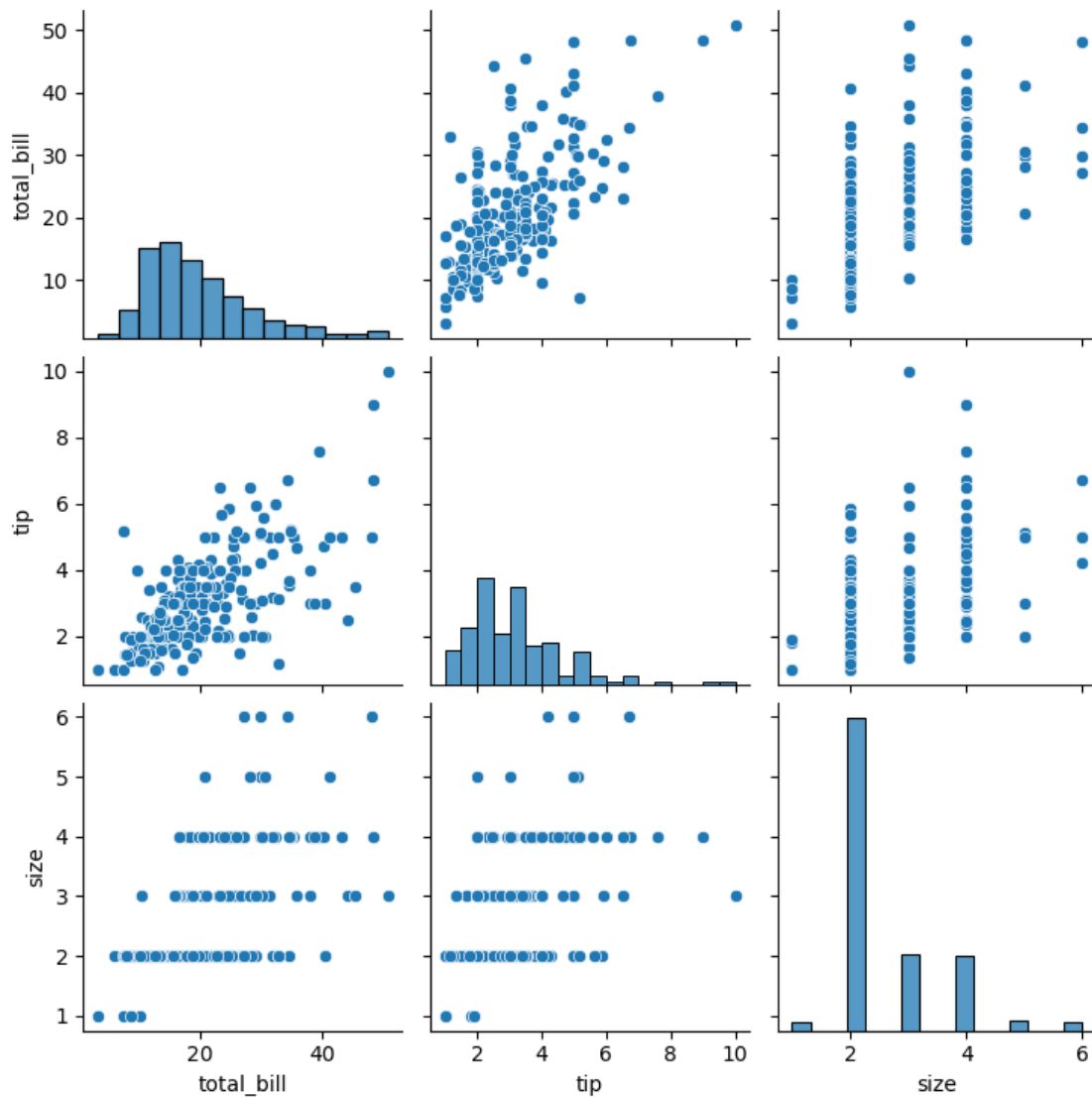#Pairplot
sns.pairplot(data)
```

C:\Users\Vishwajeet Kulkarni\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
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C:\Users\Vishwajeet Kulkarni\anaconda3\Lib\site-
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```
before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\Vishwajeet Kulkarni\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.PairGrid at 0x203a55d5bd0>`

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

```
C:\Users\Vishwajeet Kulkarni\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:\Users\Vishwajeet Kulkarni\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
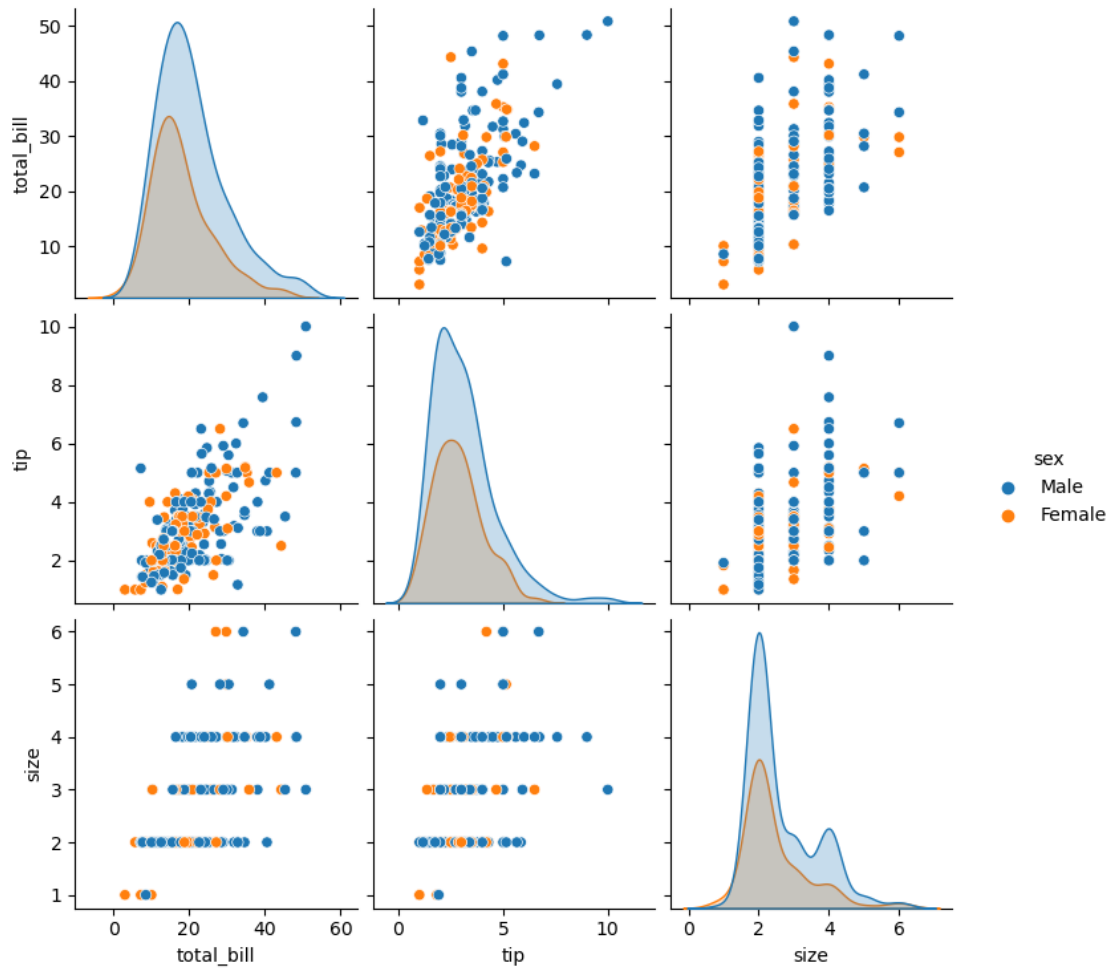default and silence this warning.
  grouped_data = data.groupby(
C:\Users\Vishwajeet Kulkarni\anaconda3\Lib\site-
packages\seaborn\_oldcore.py:1119: FutureWarning: use_inf_as_na option is
deprecated and will be removed in a future version. Convert inf values to NaN
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C:\Users\Vishwajeet Kulkarni\anaconda3\Lib\site-
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observed=False to retain current behavior or observed=True to adopt the future
default and silence this warning.
  grouped_data = data.groupby(
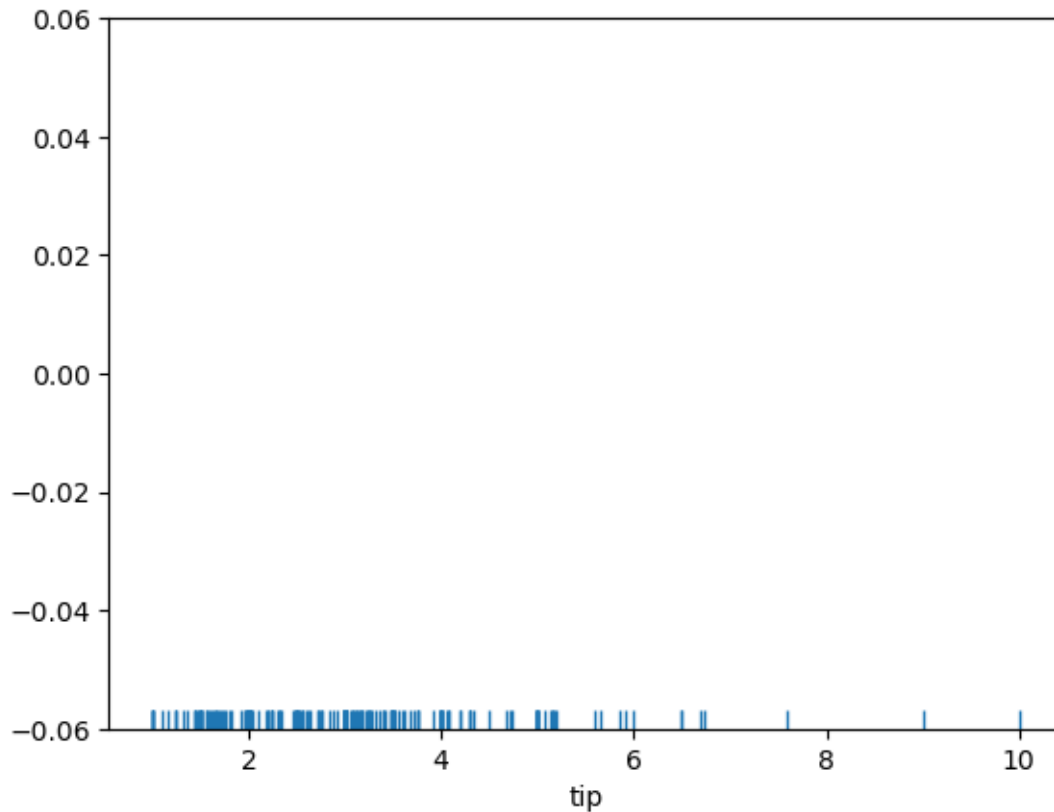```

[22]: <seaborn.axisgrid.PairGrid at 0x203a6210310>

[23]: 
```python
#Rug plot
sns.rugplot(data['tip'])
```

C:\Users\Vishwajeet Kulkarni\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):

[23]: <Axes: xlabel='tip'>

```
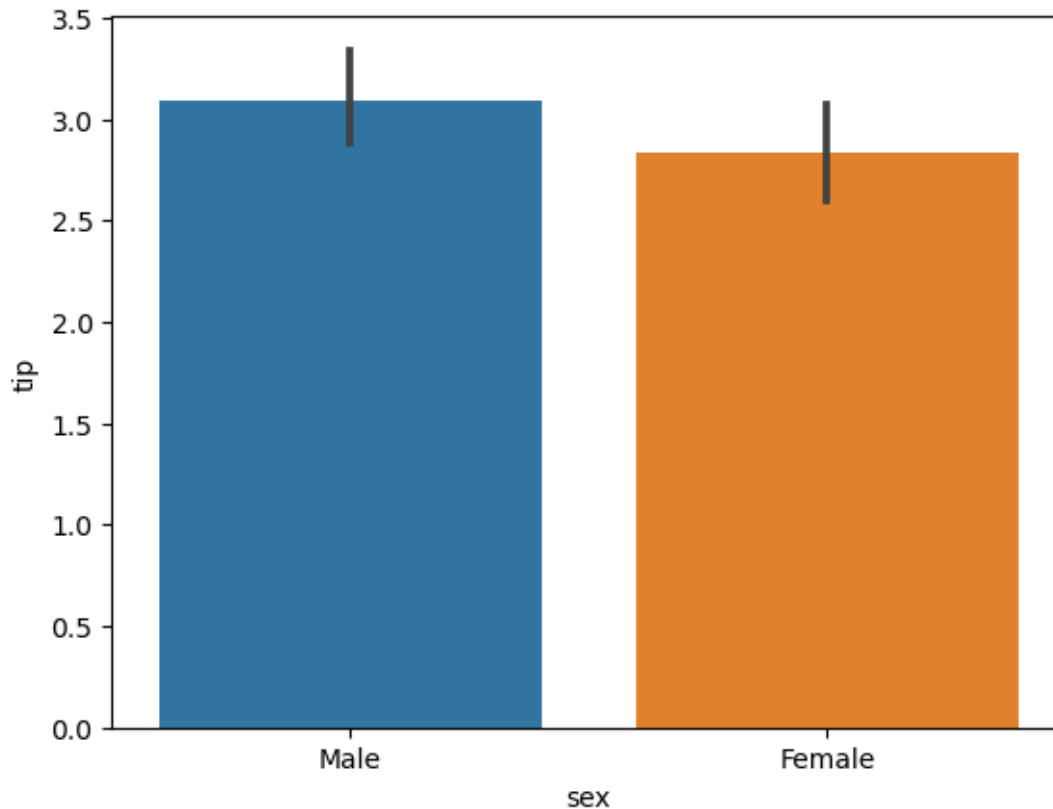[33]:   #Barplot
        sns.barplot(x='sex', y='tip', data=data)
```

C:\Users\Vishwajeet Kulkarni\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)

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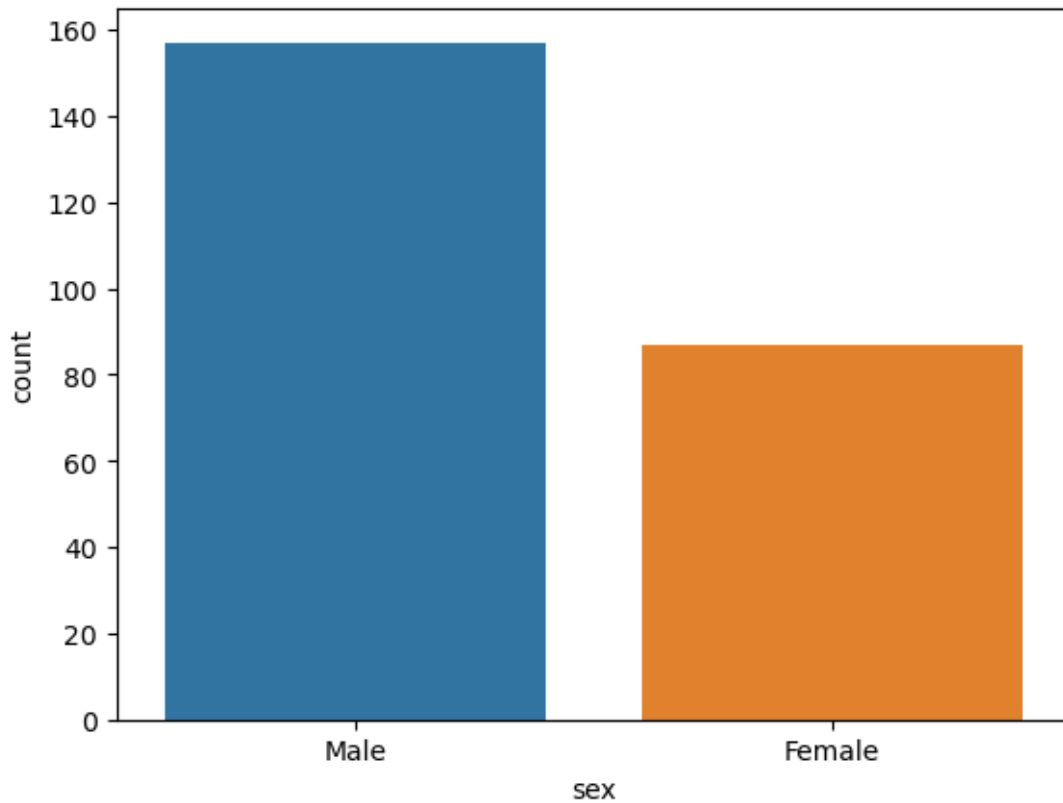[33]: <Axes: xlabel='sex', ylabel='tip'>
```

```
#Count plot
sns.countplot(x='sex', data=data)
```

C:\Users\Vishwajeet Kulkarni\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)

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

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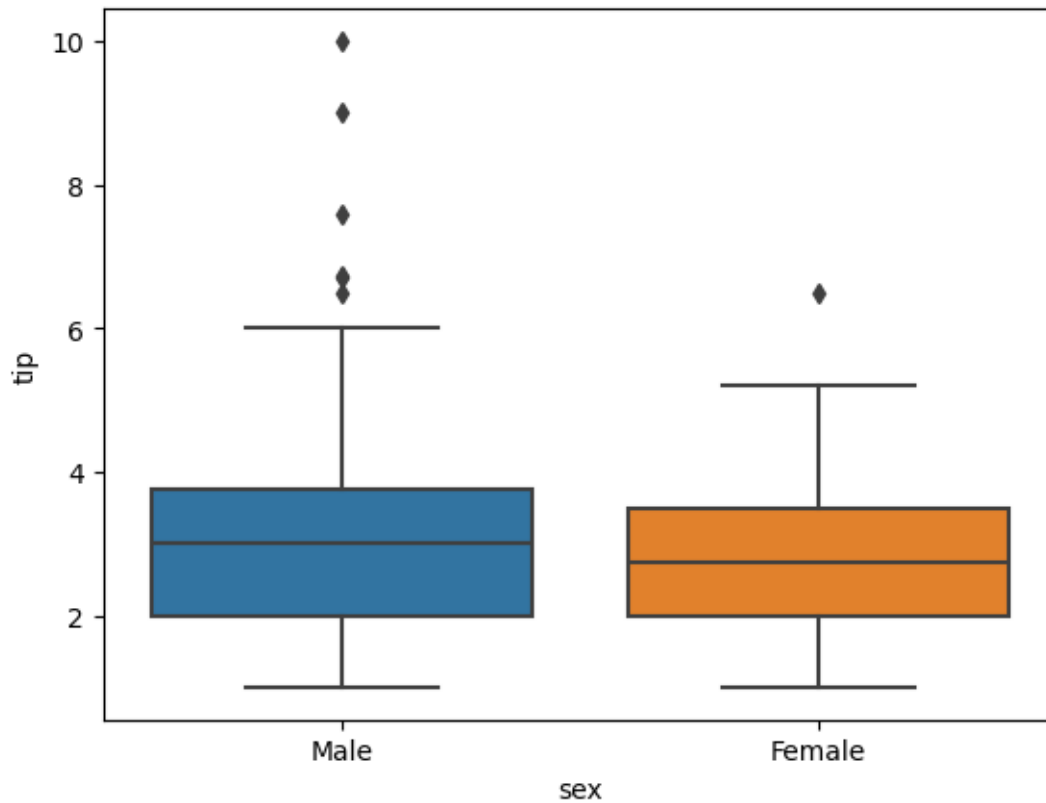[35]: #Box Plot
      sns.boxplot(x='sex', y='tip', data=data)
```

C:\Users\Vishwajeet Kulkarni\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)

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

[37]: ```python
#Violin Plot
sns.violinplot(x='sex', y='tip', data=data)
```
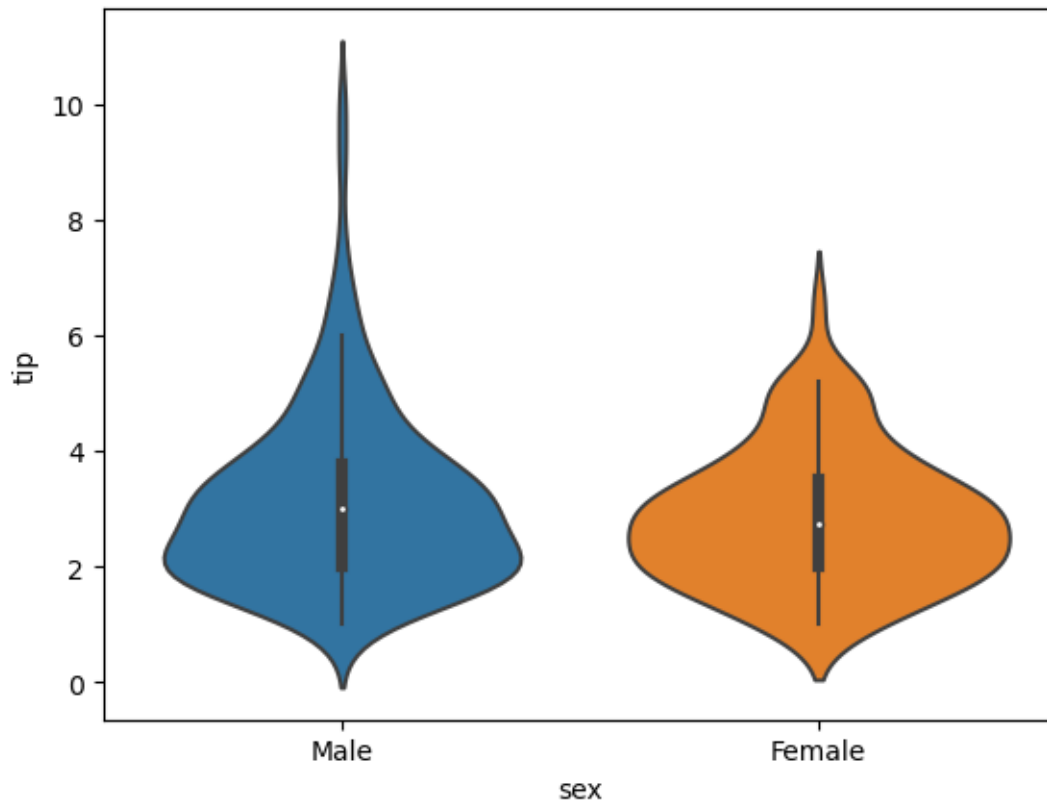
C:\Users\Vishwajeet Kulkarni\anaconda3\Lib\site-
packages\seaborn\categorical.py:641: FutureWarning: The default of
observed=False is deprecated and will be changed to True in a future version of
pandas. Pass observed=False to retain current behavior or observed=True to adopt
the future default and silence this warning.
  grouped_vals = vals.groupby(grouper)

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

```
[39]: #Strip plot
      sns.stripplot(x='sex', y='tip', data=data, jitter=False)
```
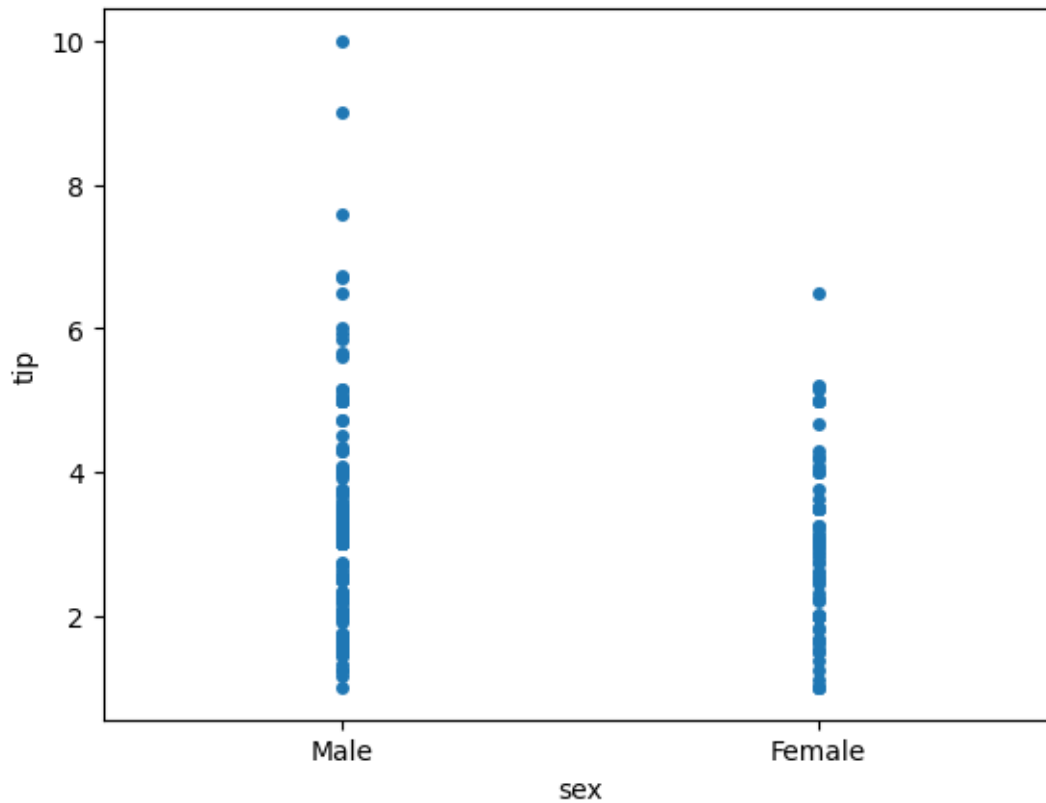
C:\Users\Vishwajeet Kulkarni\anaconda3\Lib\site-
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  with pd.option_context('mode.use_inf_as_na', True):
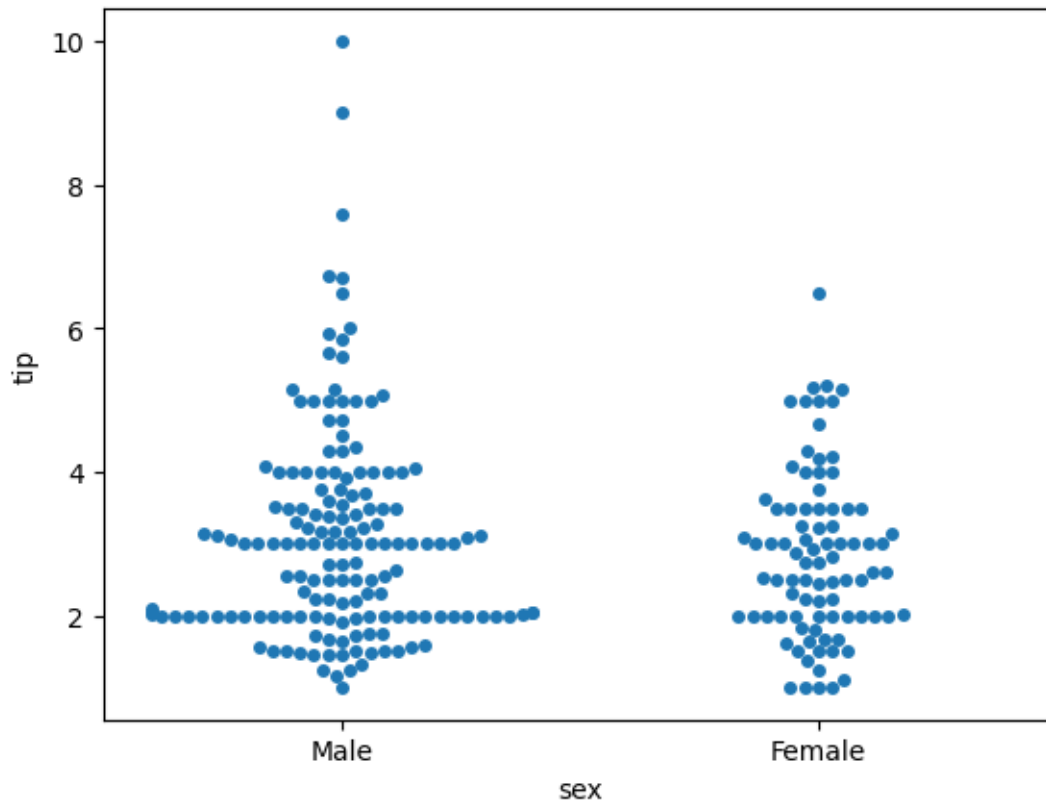
[39]: <Axes: xlabel='sex', ylabel='tip'>

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

C:\Users\Vishwajeet Kulkarni\anaconda3\Lib\site-
packages\seaborn_oldcore.py:1119: FutureWarning: use_inf_as_na option is
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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):

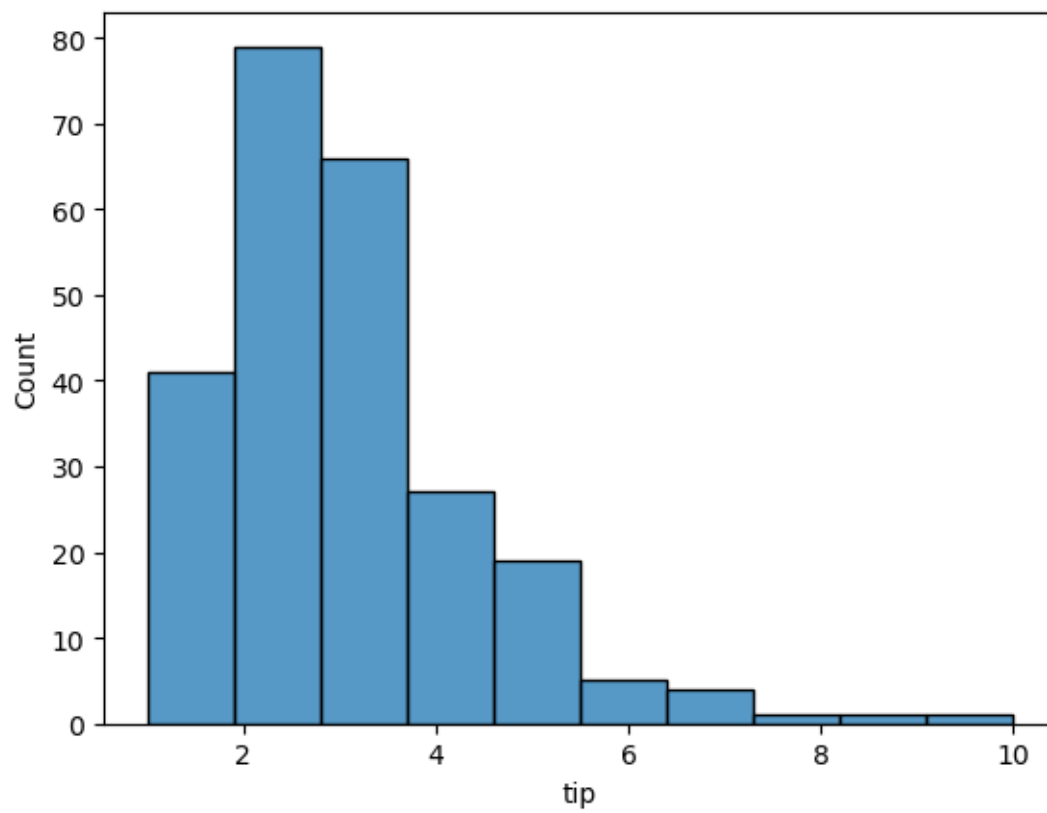```
[41]: <Axes: xlabel='sex', ylabel='tip'>
```

```
[42]: sns.histplot(data['tip'], kde=False, bins=10)
```

C:\Users\Vishwajeet Kulkarni\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):

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

[ ]: