

Write a function that uses `seaborn` to visualize data as we need it! We'll work on the penguins dataset and plot the numeric variables except for body mass.

```
In [1]: import seaborn as sns
penguins = sns.load_dataset("penguins")
```

```
In [2]: penguins
```

```
Out[2]:   species      island  bill_length_mm  bill_depth_mm  flipper_length_mm  body_mass_g
          0    Adelie  Torgersen        39.1           18.7            181.0            3
          1    Adelie  Torgersen        39.5           17.4            186.0            3
          2    Adelie  Torgersen        40.3           18.0            195.0            3
          3    Adelie  Torgersen         NaN             NaN             NaN             NaN
          4    Adelie  Torgersen        36.7           19.3            193.0            3
          ...
          339   Gentoo  Biscoe          NaN             NaN             NaN             NaN
          340   Gentoo  Biscoe        46.8           14.3            215.0            4
          341   Gentoo  Biscoe        50.4           15.7            222.0            5
          342   Gentoo  Biscoe        45.2           14.8            212.0            5
          343   Gentoo  Biscoe        49.9           16.1            213.0            5
```

344 rows × 7 columns

To flex both our plotting and function writing muscles, let's write a function to do some plotting! Your function should:

- take as input the penguins data frame
- allow the user to choose between a strip, violin, or box plot
- set one of the above three be the default
- have a docstr so users can get help() on it
- produce the plot requested by the user (of course!)
- provide a meaningful help

Write function

```
In [40]: def foo(type="strip", xval="species", yval="bill_length_mm") :
    """
    select from the desired values, enter them as strings
    type= strip, violin, box
    xval= species, island, and sex
    yval= bill_length_mm, bill_depth_mm, flipper_length_mm, body_mass_g
    """
```

```
fig = sns.catplot(  
    data=penguins, kind='type',  
    x=xval, y=yval  
)  
fig.set_axis_labels(xval, yval, labelpad=10)  
fig.figure.set_size_inches(6.5, 4.5)  
fig.ax.margins(.15)
```

Get help on function

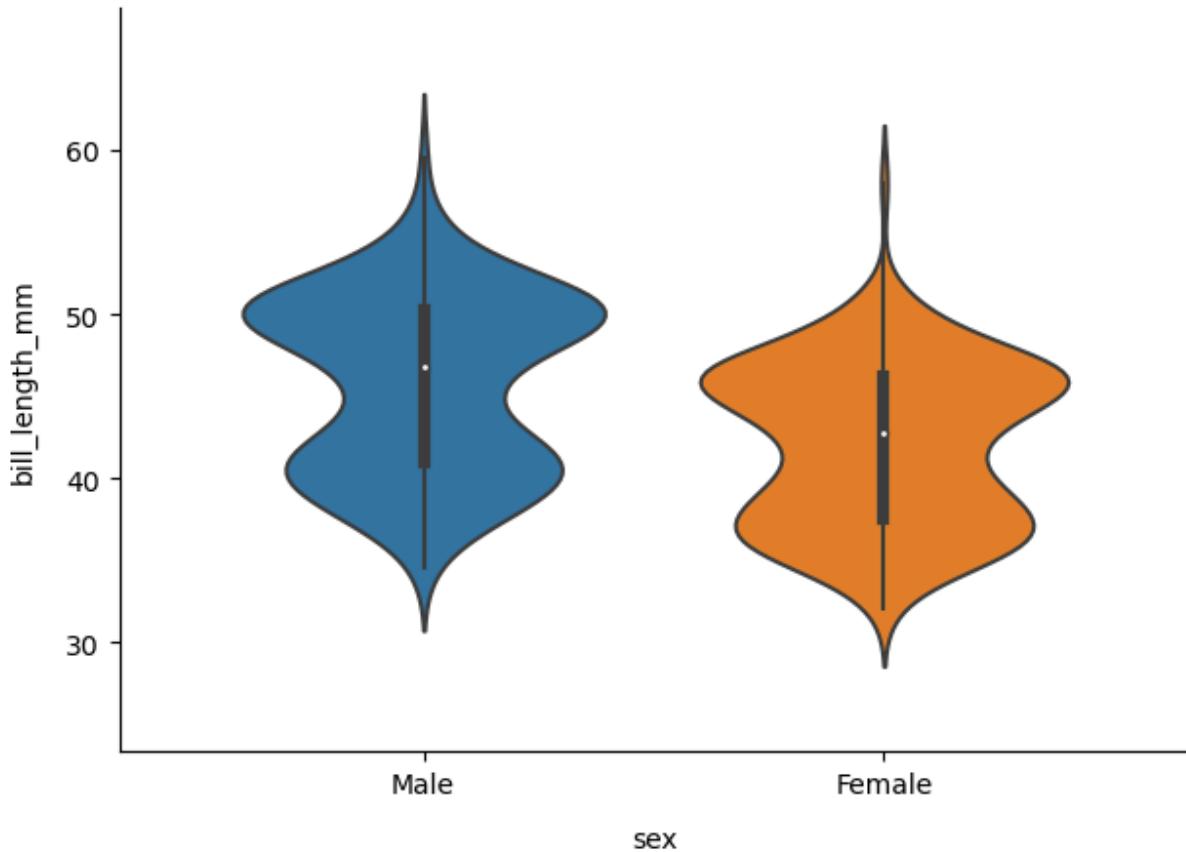
```
In [41]: help(foo)
```

Help on function foo in module __main__:

```
foo(type='strip', xval='species', yval='bill_length_mm')  
    select from the desired values, enter them as strings  
    type= strip, violin, box  
    xval= species, island, and sex  
    yval= bill_length_mm, bill_depth_mm, flipper_length_mm, body_mass_g
```

run function

```
In [42]: vplot = foo(type="violin", xval="sex")  
vplot
```



```
In [ ]:
```