

```
In [1]: !pip install seaborn
```

```
Requirement already satisfied: seaborn in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (0.12.2)
Requirement already satisfied: numpy!=1.24.0,>=1.17 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from seaborn) (1.24.2)
Requirement already satisfied: pandas>=0.25 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from seaborn) (1.4.3)
Requirement already satisfied: matplotlib!=3.6.1,>=3.1 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from seaborn) (3.7.1)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.0.7)
Requirement already satisfied: cycler>=0.10 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (4.39.4)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.4.4)
Requirement already satisfied: packaging>=20.0 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (23.0)
Requirement already satisfied: pillow>=6.2.0 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (9.4.0)
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (3.0.9)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (2.8.2)
Requirement already satisfied: importlib-resources>=3.2.0 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (5.12.0)
Requirement already satisfied: pytz>=2020.1 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from pandas>=0.25->seaborn) (2023.2)
Requirement already satisfied: zipp>=3.1.0 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from importlib-resources>=3.2.0->matplotlib!=3.6.1,>=3.1->seaborn) (3.15.0)
Requirement already satisfied: six>=1.5 in c:\users\dhruv\appdata\local\programs\python\python38\lib\site-packages (from python-dateutil>=2.7->matplotlib!=3.6.1,>=3.1->seaborn) (1.16.0)
```

```
In [19]: import seaborn as sns
import matplotlib.pyplot as plt
```

In [3]: `print(sns.get_dataset_names())`

```
['anagrams', 'anscombe', 'attention', 'brain_networks', 'car_crashes', 'diamonds', 'dots', 'dowjones', 'exercise', 'flights', 'fmri', 'geyser', 'glue', 'healthexp', 'iris', 'mpg', 'penguins', 'planets', 'seaice', 'taxi', 'tips', 'titanic', 'anagrams', 'anagrams', 'anscombe', 'anscombe', 'attention', 'attention', 'brain_networks', 'brain_networks', 'car_crashes', 'car_crashes', 'diamonds', 'diamonds', 'dots', 'dots', 'dowjones', 'dowjones', 'exercise', 'exercise', 'flights', 'flights', 'fmri', 'fmri', 'geyser', 'geyser', 'glue', 'glue', 'healthexp', 'healthexp', 'iris', 'iris', 'mpg', 'mpg', 'penguins', 'penguins', 'planets', 'planets', 'seaice', 'seaice', 'taxi', 'taxi', 'tips', 'tips', 'titanic', 'titanic', 'anagrams', 'anscombe', 'attention', 'brain_networks', 'car_crashes', 'diamonds', 'dots', 'dowjones', 'exercise', 'flights', 'fmri', 'geyser', 'glue', 'healthexp', 'iris', 'mpg', 'penguins', 'planets', 'seaice', 'taxi', 'tips', 'titanic']
```

In [4]: `print(len(sns.get_dataset_names()))`

88

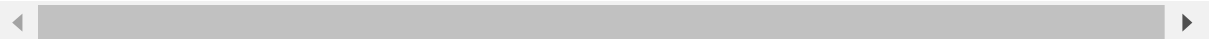
In [5]: `sns.set_theme(style="ticks")`

`df = sns.load_dataset('penguins')`

In [6]: `df.head()`

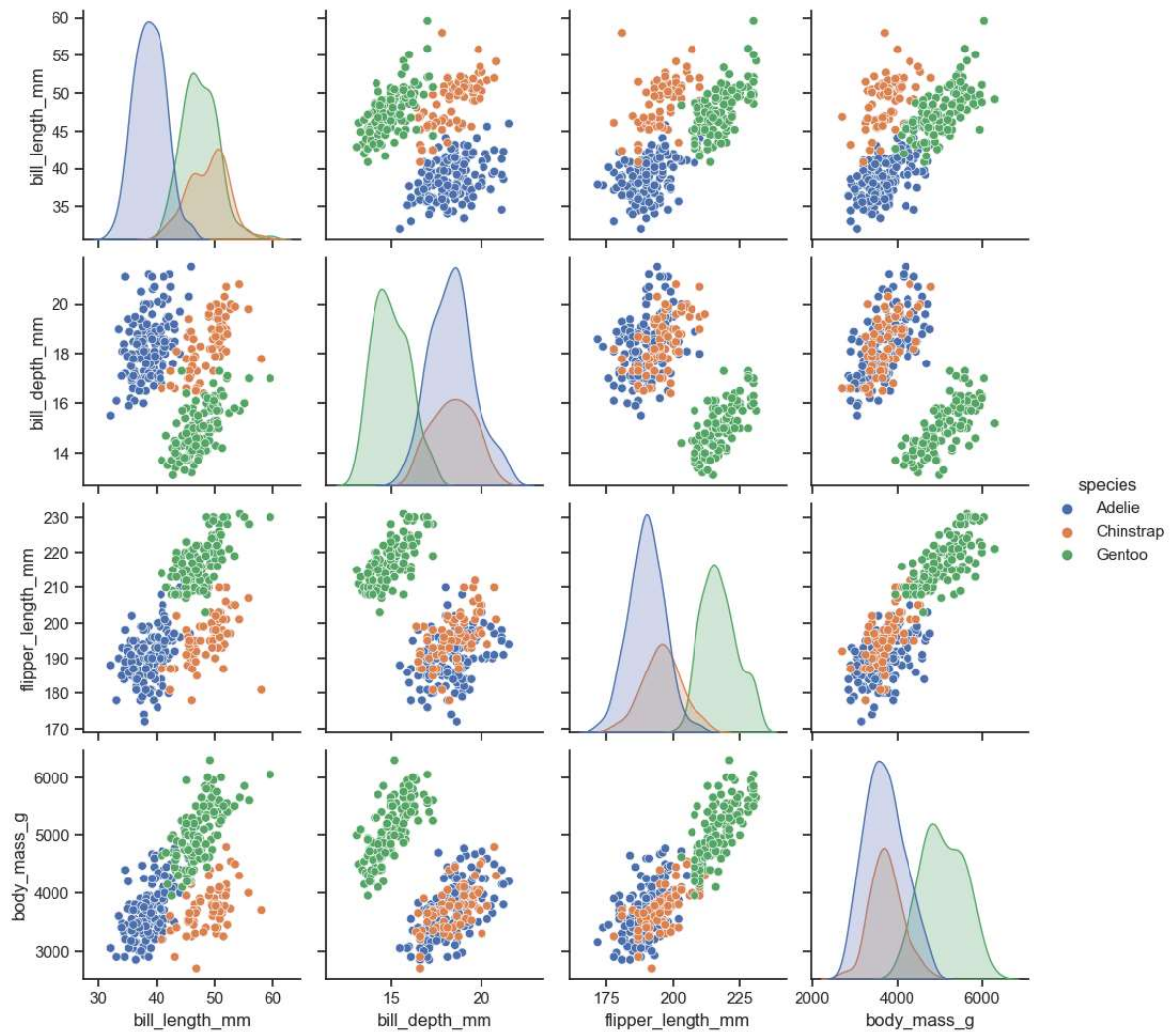
Out[6]:

	species	island	bill_length_mm	bill_depth_mm	flipper_length_mm	body_mass_g	sex
0	Adelie	Torgersen	39.1	18.7	181.0	3750.0	Male
1	Adelie	Torgersen	39.5	17.4	186.0	3800.0	Female
2	Adelie	Torgersen	40.3	18.0	195.0	3250.0	Female
3	Adelie	Torgersen	NaN	NaN	NaN	NaN	NaN
4	Adelie	Torgersen	36.7	19.3	193.0	3450.0	Female



```
In [7]: sns.pairplot(df,hue="species")
```

```
Out[7]: <seaborn.axisgrid.PairGrid at 0x29342669e50>
```



```
In [8]: df.shape
```

```
Out[8]: (344, 7)
```

```
In [9]: # example 2
```

```
In [10]: sns.set_theme(style="darkgrid")
```

```
In [11]: dft = sns.load_dataset('fmri')
```

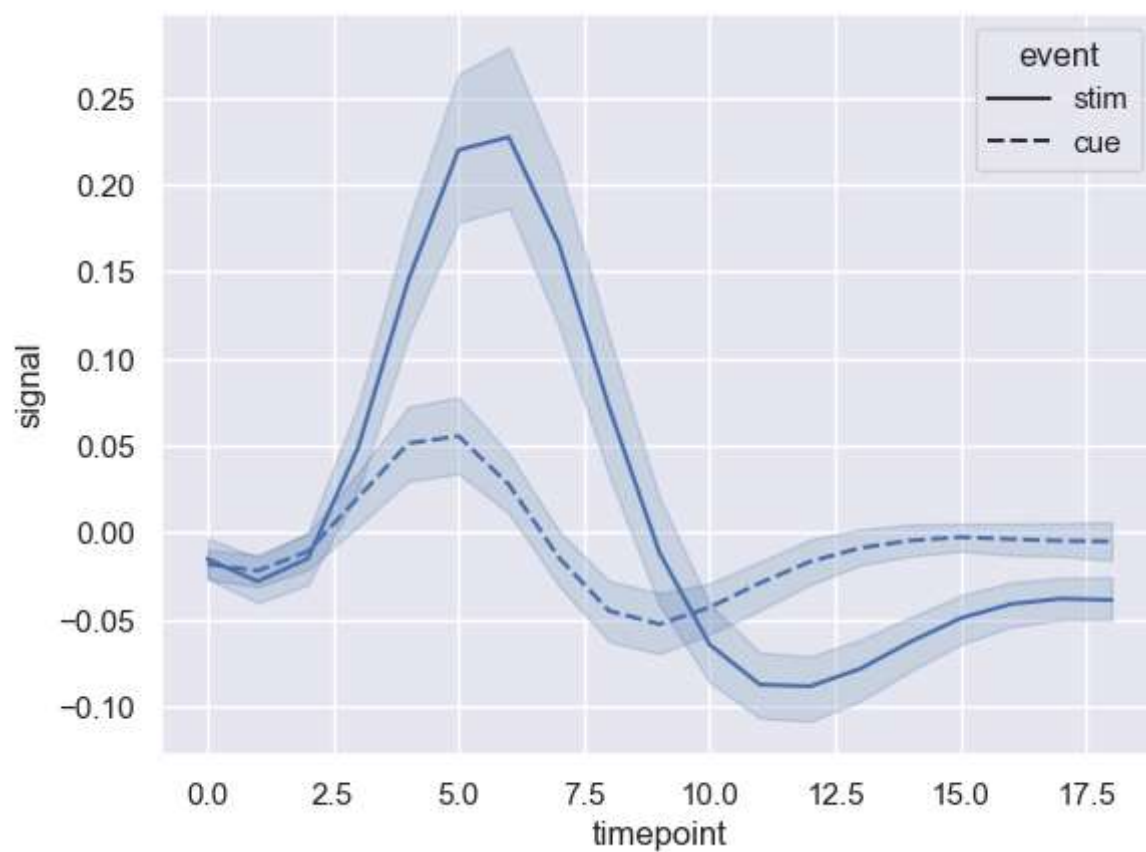
```
In [12]: dft.head()
```

```
Out[12]:
```

	subject	timepoint	event	region	signal
0	s13	18	stim	parietal	-0.017552
1	s5	14	stim	parietal	-0.080883
2	s12	18	stim	parietal	-0.081033
3	s11	18	stim	parietal	-0.046134
4	s10	18	stim	parietal	-0.037970

```
In [13]: sns.lineplot(x = "timepoint",y ="signal", data= dft,style="event")
```

```
Out[13]: <Axes: xlabel='timepoint', ylabel='signal'>
```



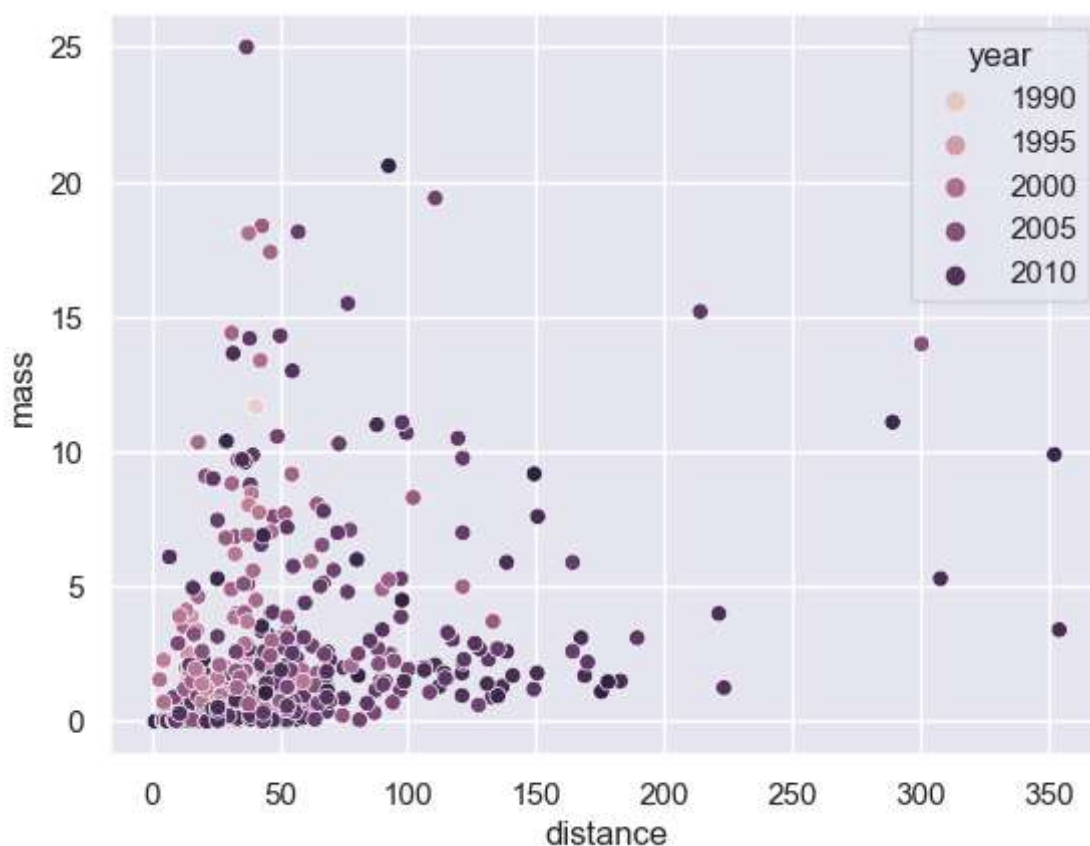
Scatter Plot

```
In [14]: sns.set_theme(style='darkgrid')
planets = sns.load_dataset('planets')
planets.head()
```

Out[14]:

	method	number	orbital_period	mass	distance	year
0	Radial Velocity	1	269.300	7.10	77.40	2006
1	Radial Velocity	1	874.774	2.21	56.95	2008
2	Radial Velocity	1	763.000	2.60	19.84	2011
3	Radial Velocity	1	326.030	19.40	110.62	2007
4	Radial Velocity	1	516.220	10.50	119.47	2009

```
In [20]: sns.scatterplot(data=planets, x='distance', y='mass', hue='year')
plt.show()
```



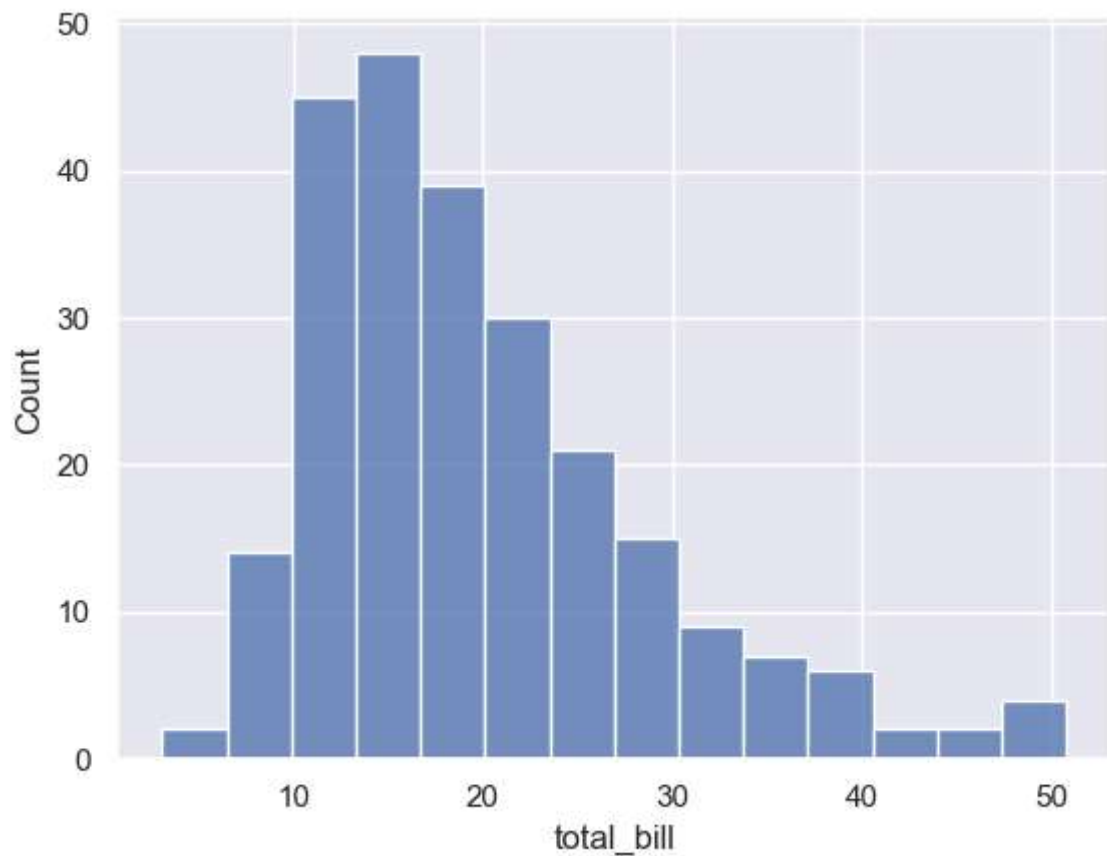
Histplot

```
In [22]: tips = sns.load_dataset('tips')  
tips.head()
```

Out[22]:

	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

```
In [27]: sns.histplot(data=tips,x='total_bill')  
plt.show()
```



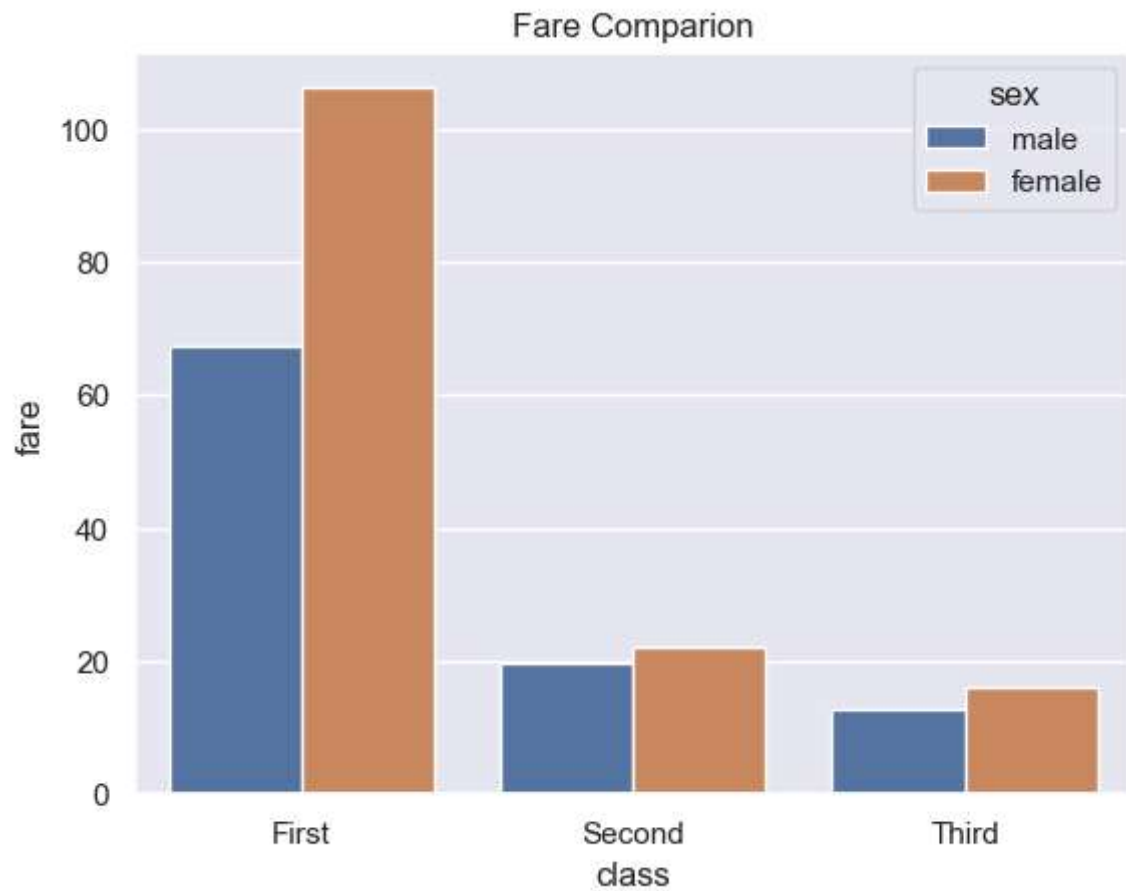
Barplot

```
In [29]: titanic = sns.load_dataset("titanic")  
titanic.head()
```

Out[29]:

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

```
In [37]: sns.barplot(data=titanic,x = 'class',y='fare',hue='sex',errorbar=None)  
plt.title("Fare Comparion")  
plt.show()
```



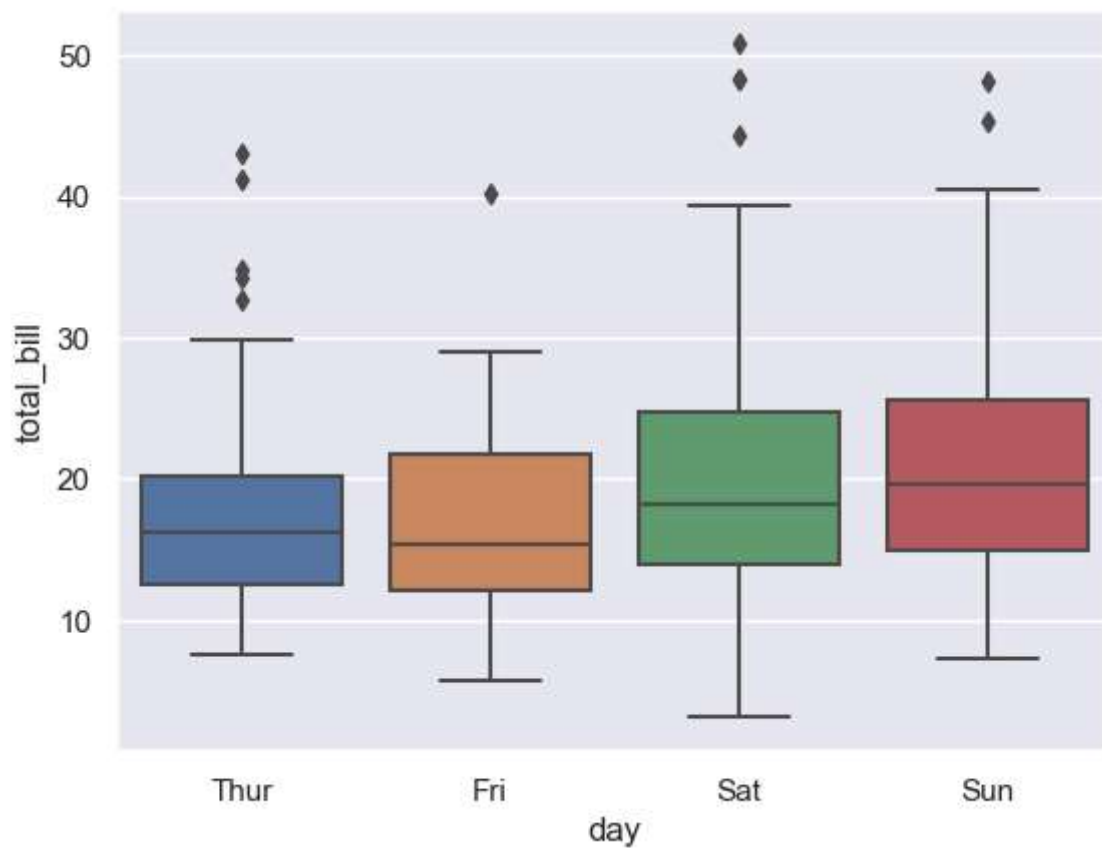
Boxplot

```
In [38]: t = sns.load_dataset("tips")  
t.head()
```

Out[38]:

	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

```
In [40]: sns.boxplot(data=t,x='day',y='total_bill')  
plt.show()
```



In []:

