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

```
Requirement already satisfied: seaborn in c:\users\jitud\appdata\local\programs\p
ython\python313\lib\site-packages (0.13.2)
Requirement already satisfied: numpy!=1.24.0,>=1.20 in c:\users\jitud\appdata\loc
al\programs\python\python313\lib\site-packages (from seaborn) (2.2.6)
Requirement already satisfied: pandas>=1.2 in c:\users\jitud\appdata\local\progra
ms\python\python313\lib\site-packages (from seaborn) (2.2.3)
Requirement already satisfied: matplotlib!=3.6.1,>=3.4 in c:\users\jitud\appdata
\local\programs\python\python313\lib\site-packages (from seaborn) (3.10.3)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\jitud\appdata\local\p
rograms\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->seabor
n) (1.3.2)
Requirement already satisfied: cycler>=0.10 in c:\users\jitud\appdata\local\progr
ams\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->seaborn)
(0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\jitud\appdata\local
\programs\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->seabo
rn) (4.58.0)
Requirement already satisfied: kiwisolver>=1.3.1 in c:\users\jitud\appdata\local
\programs\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->seabo
rn) (1.4.8)
Requirement already satisfied: packaging>=20.0 in c:\users\jitud\appdata\local\pr
ograms\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->seaborn)
(24.2)
Requirement already satisfied: pillow>=8 in c:\users\jitud\appdata\local\programs
\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (11.
2.1)
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\jitud\appdata\local\p
rograms\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->seabor
n) (3.2.3)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\jitud\appdata\loc
al\programs\python\python313\lib\site-packages (from matplotlib!=3.6.1,>=3.4->sea
born) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\users\jitud\appdata\local\progr
ams\python\python313\lib\site-packages (from pandas>=1.2->seaborn) (2025.2)
Requirement already satisfied: tzdata>=2022.7 in c:\users\jitud\appdata\local\pro
grams\python\python313\lib\site-packages (from pandas>=1.2->seaborn) (2025.2)
Requirement already satisfied: six>=1.5 in c:\users\jitud\appdata\local\programs
\python\python313\lib\site-packages (from python-dateutil>=2.7->matplotlib!=3.6.
1,>=3.4->seaborn) (1.17.0)
[notice] A new release of pip is available: 25.1.1 -> 25.2
[notice] To update, run: python.exe -m pip install --upgrade pip
```

In [ ]:
```
Seaborn is advance plotting library of a Matplotlib.
```

In [2]:
```
import seaborn as sns
```

In [5]:
```
sns.set_style()
```

In [7]:
```
# PairPlot
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
```

In [10]:
```
# to check the name of dataset

```

```
datasets = sns.get_dataset_names()
print(datasets)
```

```
['anagrams', 'anscombe', 'attention', 'brain_networks', 'car_crashes', 'diamond
s', 'dots', 'dowjones', 'exercise', 'flights', 'fmri', 'geyser', 'glue', 'healthe
xp', 'iris', 'mpg', 'penguins', 'planets', 'seaice', 'taxis', 'tips', 'titanic']
```

In [11]:
```
# load the dataset
iris_dataset = sns.load_dataset("iris")
```

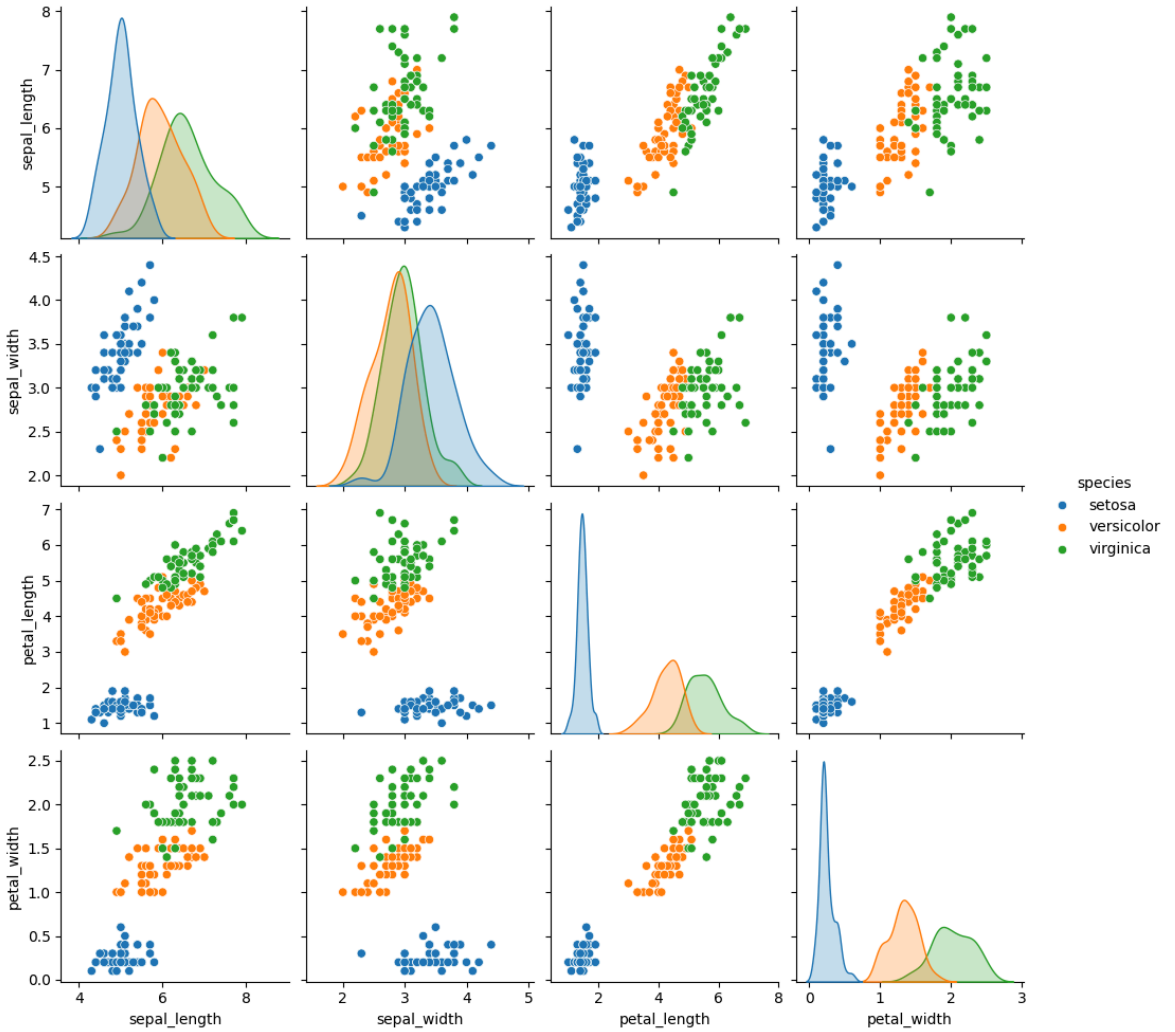
In [12]:
```
iris_dataset
```

Out[12]:

	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa
...	...	...	...	...	...
145	6.7	3.0	5.2	2.3	virginica
146	6.3	2.5	5.0	1.9	virginica
147	6.5	3.0	5.2	2.0	virginica
148	6.2	3.4	5.4	2.3	virginica
149	5.9	3.0	5.1	1.8	virginica

150 rows × 5 columns

In [13]:
```
sns.pairplot(data= iris_dataset,hue="species")
plt.show()
```



In [17]:
```
# heat

tips = sns.load_dataset("tips")
```

In [18]:
```
tips
```

Out[18]:

	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
...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	Yes	Sat	Dinner	2
241	22.67	2.00	Male	Yes	Sat	Dinner	2
242	17.82	1.75	Male	No	Sat	Dinner	2
243	18.78	3.00	Female	No	Thur	Dinner	2

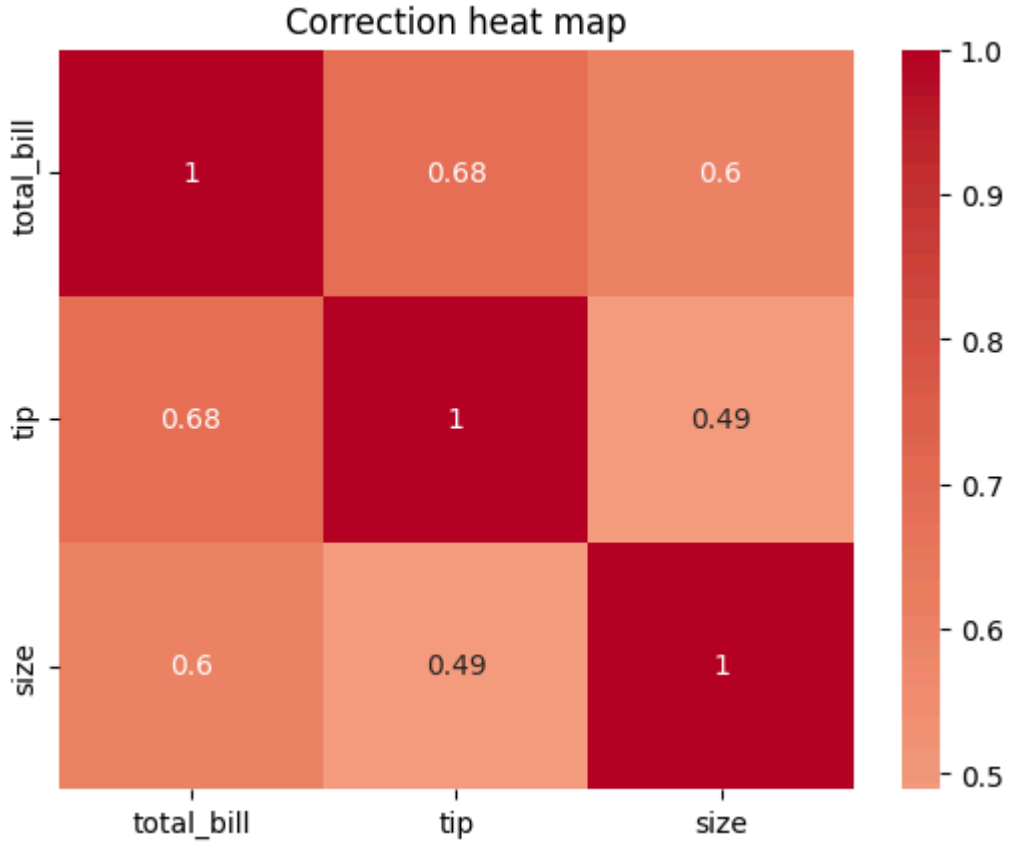
244 rows × 7 columns

In [21]:
```
corrected = tips.select_dtypes(include=["float64","int64"]).corr()
corrected
```

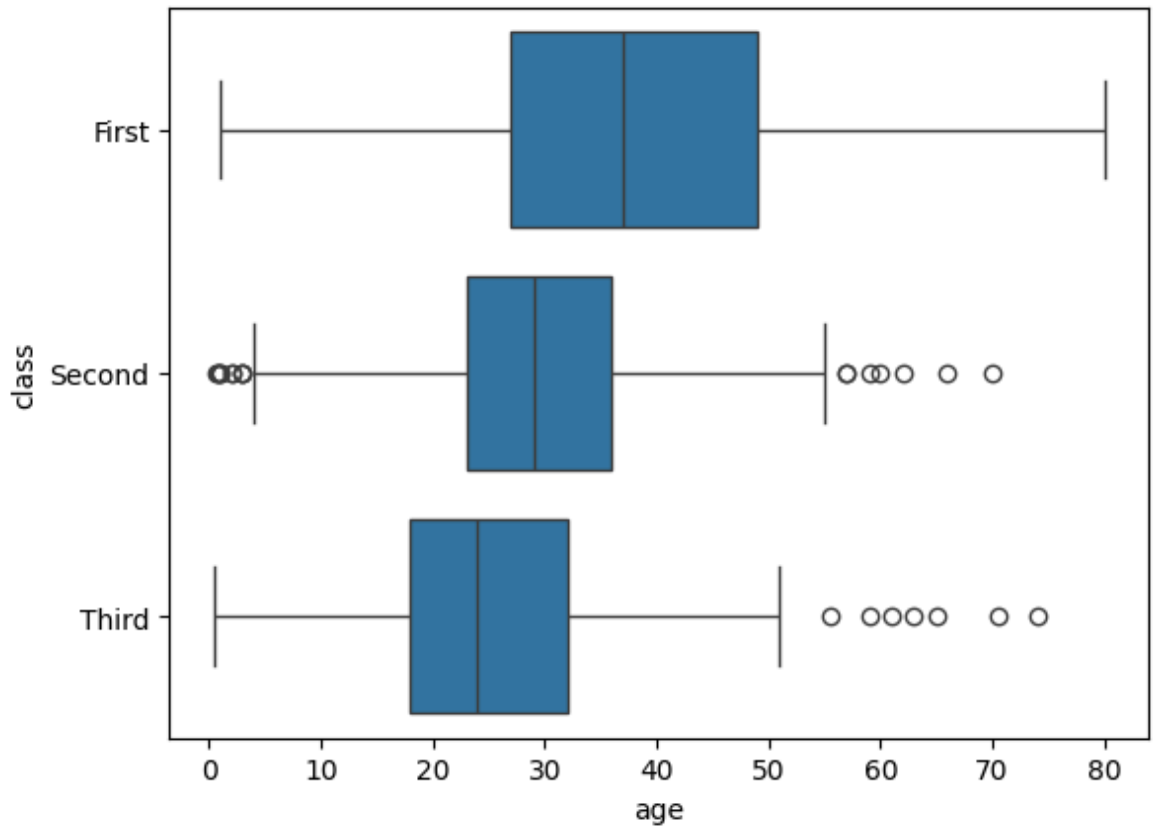
Out[21]:

	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

In [22]:
```
sns.heatmap(corrected,annot=True,cmap="coolwarm", center=0)
plt.title("Correction heat map")
plt.show()
```



In [27]:
```
# box plot
box= sns.load_dataset("titanic")
sns.boxplot(data=box,x = "age",y= "class",orient="h")
plt.show()
```



In [24]:
```
box
```

Out[24]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who
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 × 15 columns

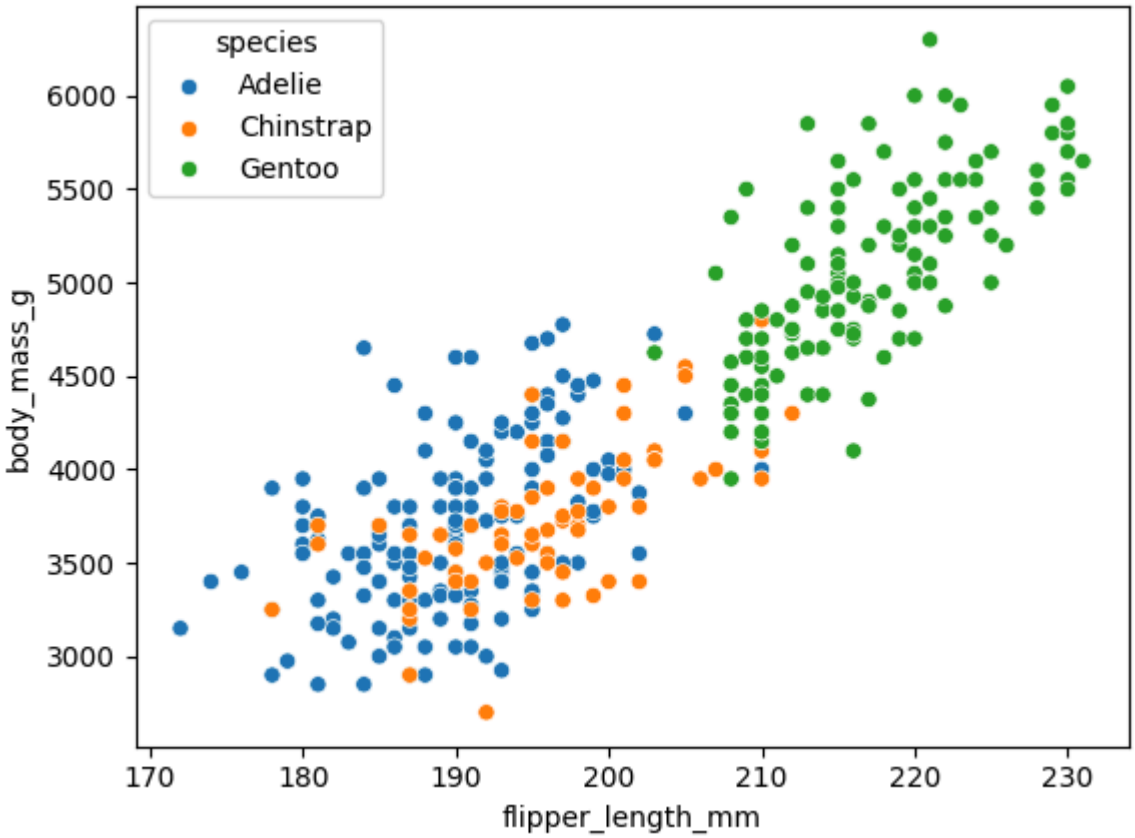
In [29]:
```
# Scatterplot
p = sns.load_dataset("penguins")
p
```

Out[29]:

	species	island	bill_length_mm	bill_depth_mm	flipper_length_mm	body_mass_
0	Adelie	Torgersen	39.1	18.7	181.0	3750.
1	Adelie	Torgersen	39.5	17.4	186.0	3800.
2	Adelie	Torgersen	40.3	18.0	195.0	3250.
3	Adelie	Torgersen	NaN	NaN	NaN	Na
4	Adelie	Torgersen	36.7	19.3	193.0	3450.
...	...	...	...	...	...	
339	Gentoo	Biscoe	NaN	NaN	NaN	Na
340	Gentoo	Biscoe	46.8	14.3	215.0	4850.
341	Gentoo	Biscoe	50.4	15.7	222.0	5750.
342	Gentoo	Biscoe	45.2	14.8	212.0	5200.
343	Gentoo	Biscoe	49.9	16.1	213.0	5400.

344 rows × 7 columns

In [30]:
```
sns.scatterplot(data=p,x="flipper_length_mm",y="body_mass_g", hue="species")
plt.show()
```


species
Adelie
Chinstrap
Gentoo
body_mass_g
6000
5500
5000
4500
4000
3500
3000
170
180
190
200
210
220
230
flipper_length_mm

In [ ]: