lineplot

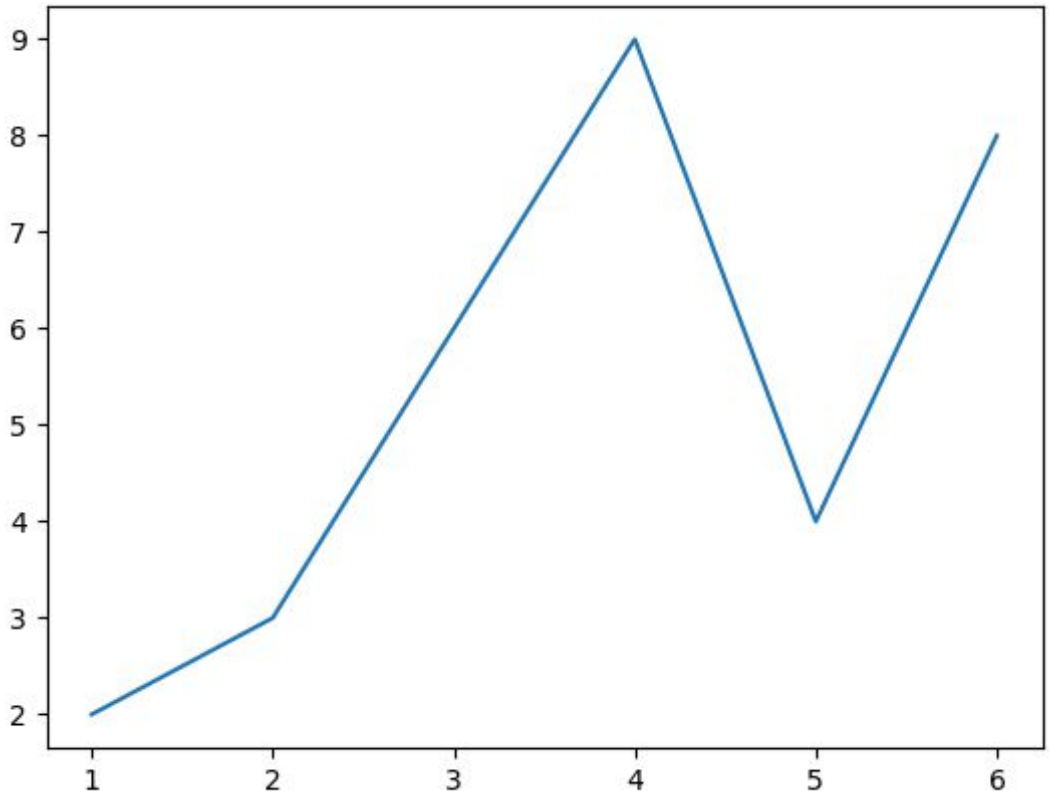
In [52]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
#import seaborn as sns
```

In [53]:
```
pip install seaborn
```

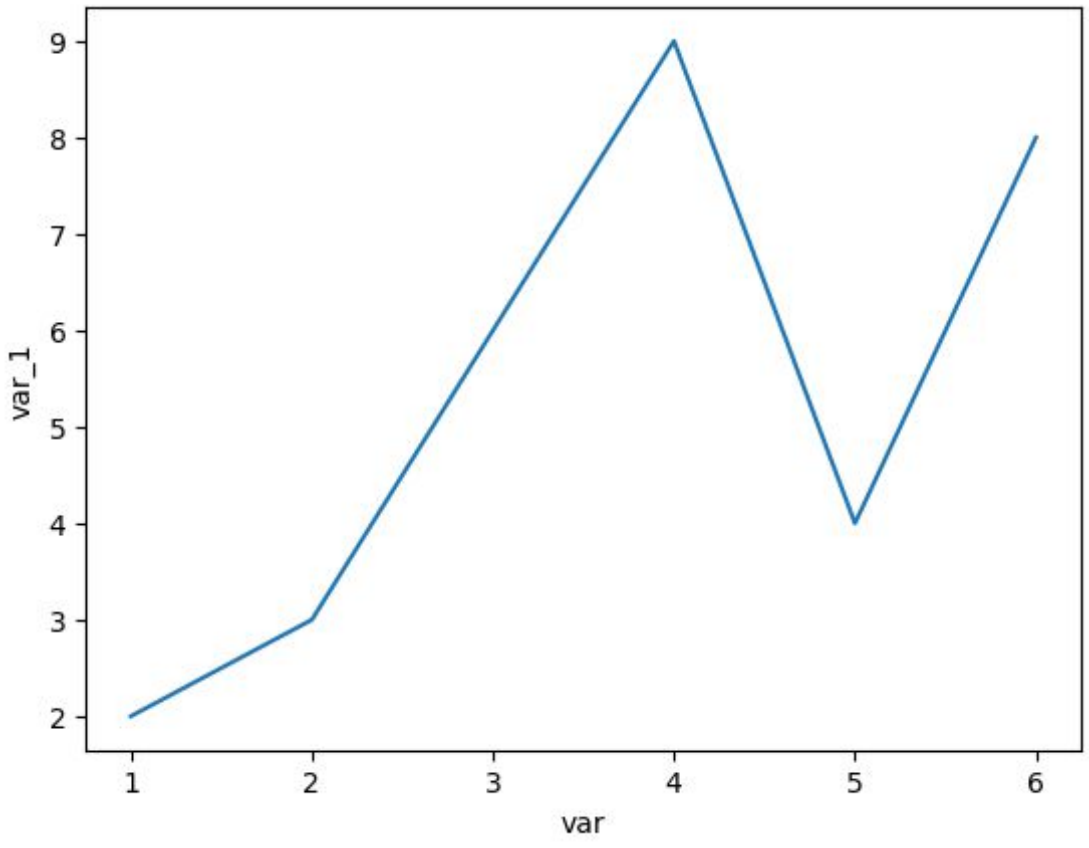
```
Requirement already satisfied: seaborn in c:\users\shaw3\anaconda3\lib\site-packag
es (0.11.2)Note: you may need to restart the kernel to use updated packages.

Requirement already satisfied: numpy>=1.15 in c:\users\shaw3\anaconda3\lib\site-pa
ckages (from seaborn) (1.24.4)
Requirement already satisfied: scipy>=1.0 in c:\users\shaw3\anaconda3\lib\site-pac
kages (from seaborn) (1.9.1)
Requirement already satisfied: pandas>=0.23 in c:\users\shaw3\anaconda3\lib\site-p
ackages (from seaborn) (1.4.4)
Requirement already satisfied: matplotlib>=2.2 in c:\users\shaw3\anaconda3\lib\sit
e-packages (from seaborn) (3.5.2)
Requirement already satisfied: pyparsing>=2.2.1 in c:\users\shaw3\anaconda3\lib\si
te-packages (from matplotlib>=2.2->seaborn) (3.0.9)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\shaw3\anaconda3\lib\s
ite-packages (from matplotlib>=2.2->seaborn) (4.25.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\shaw3\anaconda3\lib\s
ite-packages (from matplotlib>=2.2->seaborn) (1.4.2)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\shaw3\anaconda3\li
b\site-packages (from matplotlib>=2.2->seaborn) (2.8.2)
Requirement already satisfied: pillow>=6.2.0 in c:\users\shaw3\anaconda3\lib\site-
packages (from matplotlib>=2.2->seaborn) (9.2.0)
Requirement already satisfied: cycler>=0.10 in c:\users\shaw3\anaconda3\lib\site-p
ackages (from matplotlib>=2.2->seaborn) (0.11.0)
Requirement already satisfied: packaging>=20.0 in c:\users\shaw3\anaconda3\lib\sit
e-packages (from matplotlib>=2.2->seaborn) (21.3)
Requirement already satisfied: pytz>=2020.1 in c:\users\shaw3\anaconda3\lib\site-p
ackages (from pandas>=0.23->seaborn) (2022.1)
Requirement already satisfied: six>=1.5 in c:\users\shaw3\anaconda3\lib\site-packa
ges (from python-dateutil>=2.7->matplotlib>=2.2->seaborn) (1.16.0)
```

In [54]:
```
import seaborn as sns
```

In [55]:
```
var=[1,2,3,4,5,6]
var_1=[2,3,6,9,4,8]

plt.plot(var,var_1)
plt.show()
```

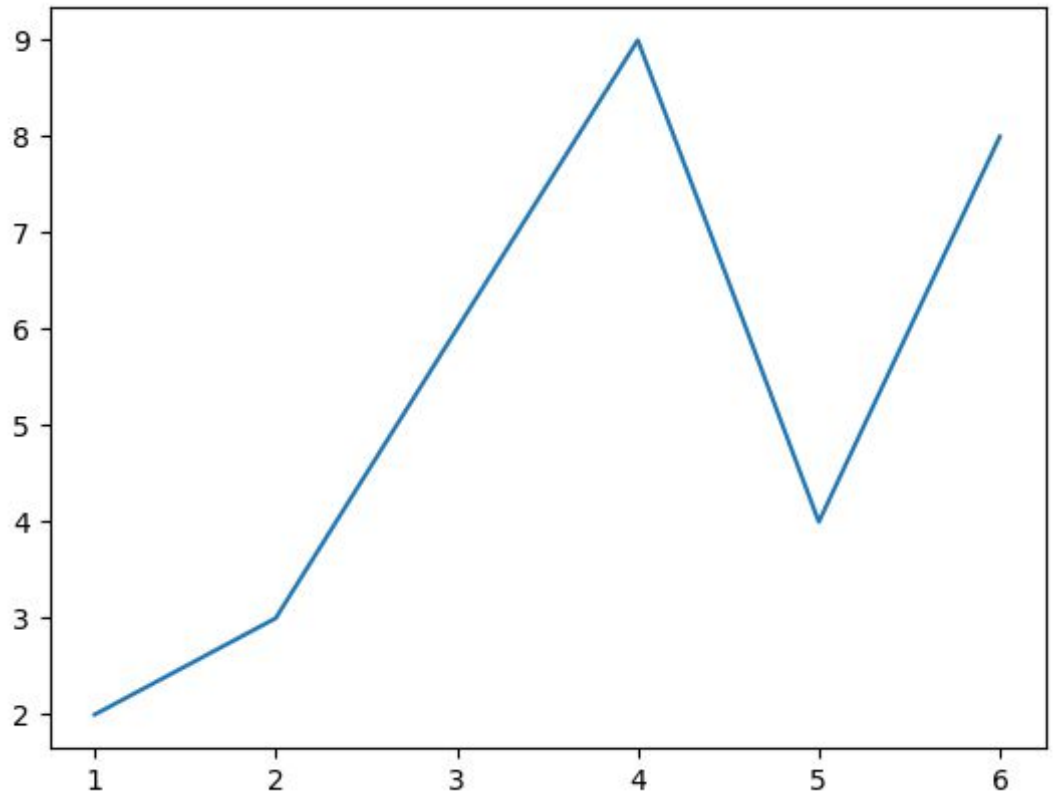


In [56]:
```
var=[1,2,3,4,5,6]
var_1=[2,3,6,9,4,8]

x_1=pd.DataFrame({"var": var, "var_1":var_1})

sns.lineplot(x="var",y="var_1",data= x_1)
plt.show()
```



In [57]:
```
var=[1,2,3,4,5,6]
var_1=[2,3,6,9,4,8]
```

```
sns.lineplot(x=var,y=var_1)
plt.show()
```



In [58]:
```
y_1=sns.load_dataset("penguins")
```

In [59]:
```
y_1.head()
```

Out[59]:

	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 [73]:
```
y_1
```

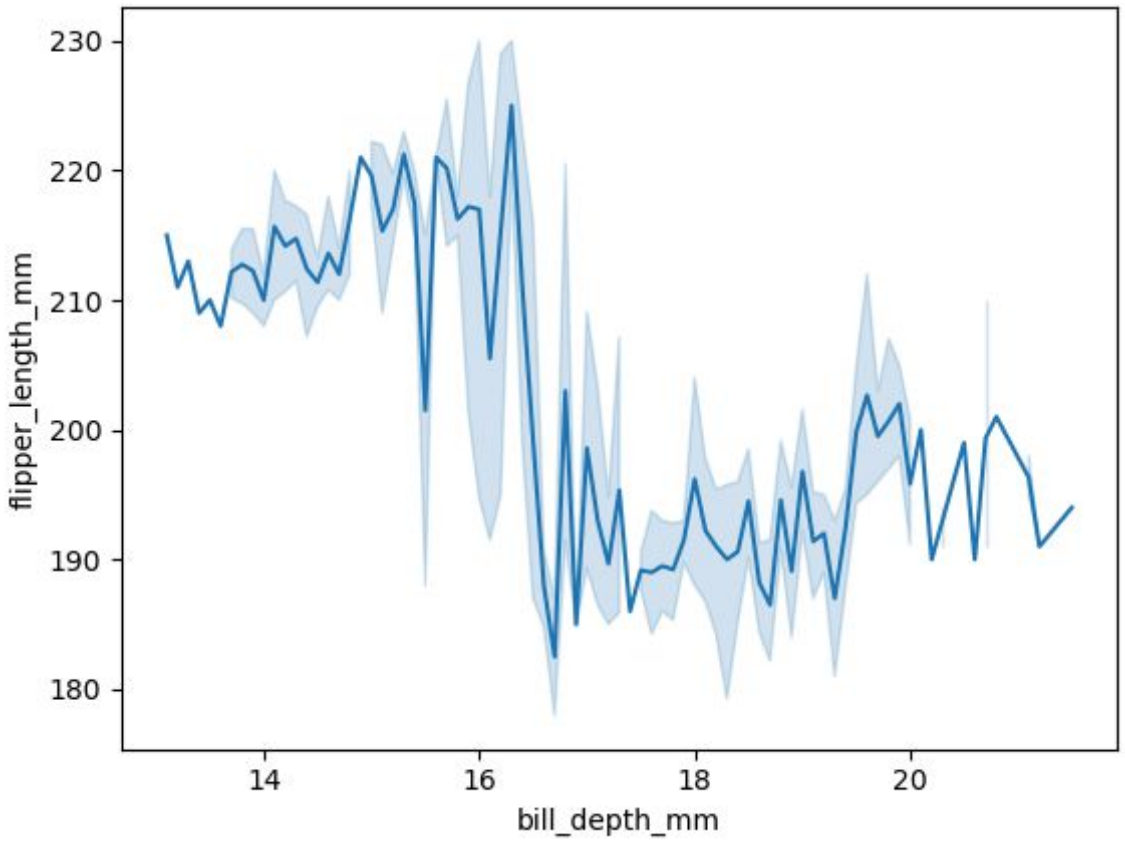
Out[73]:

	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
...	...	...	...	...	...	...	...
339	Gentoo	Biscoe	NaN	NaN	NaN	NaN	NaN
340	Gentoo	Biscoe	46.8	14.3	215.0	4850.0	Female
341	Gentoo	Biscoe	50.4	15.7	222.0	5750.0	Male
342	Gentoo	Biscoe	45.2	14.8	212.0	5200.0	Female
343	Gentoo	Biscoe	49.9	16.1	213.0	5400.0	Male

344 rows × 7 columns

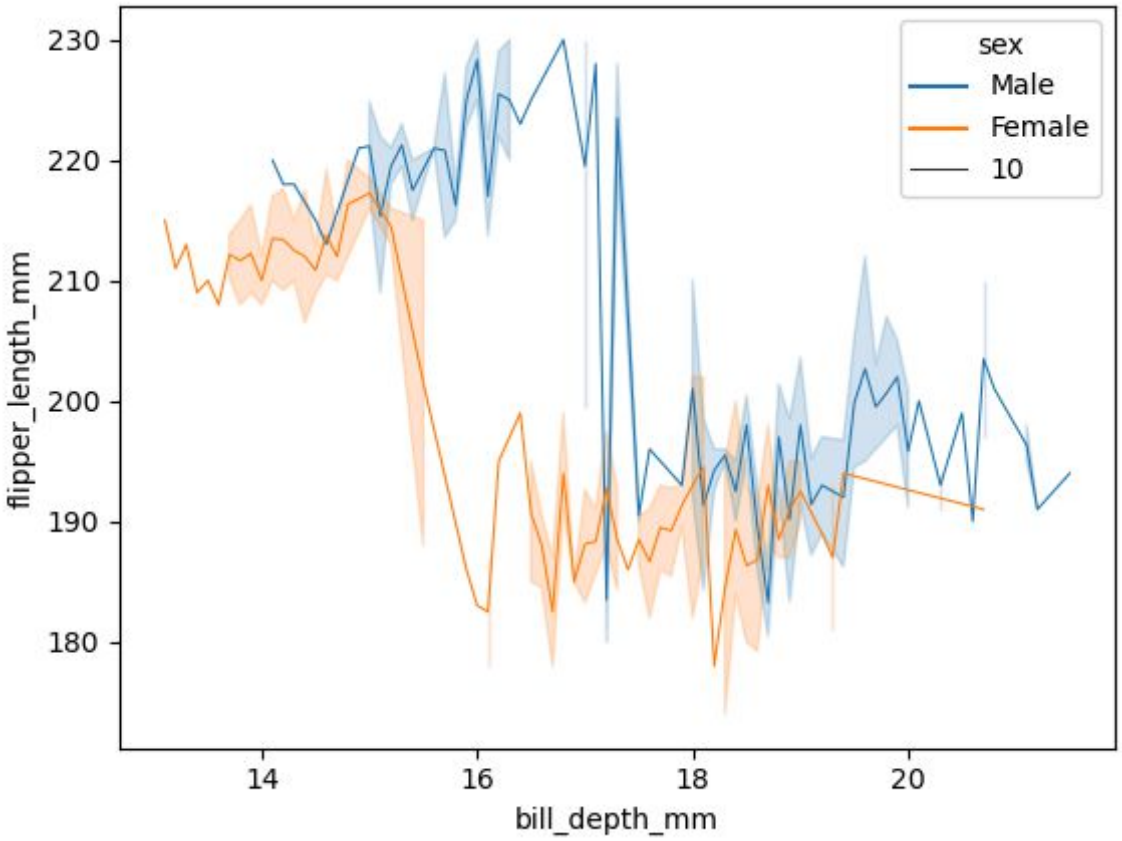
In [74]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1)
```

Out[74]:
```
<AxesSubplot:xlabel='bill_depth_mm', ylabel='flipper_length_mm'>
```



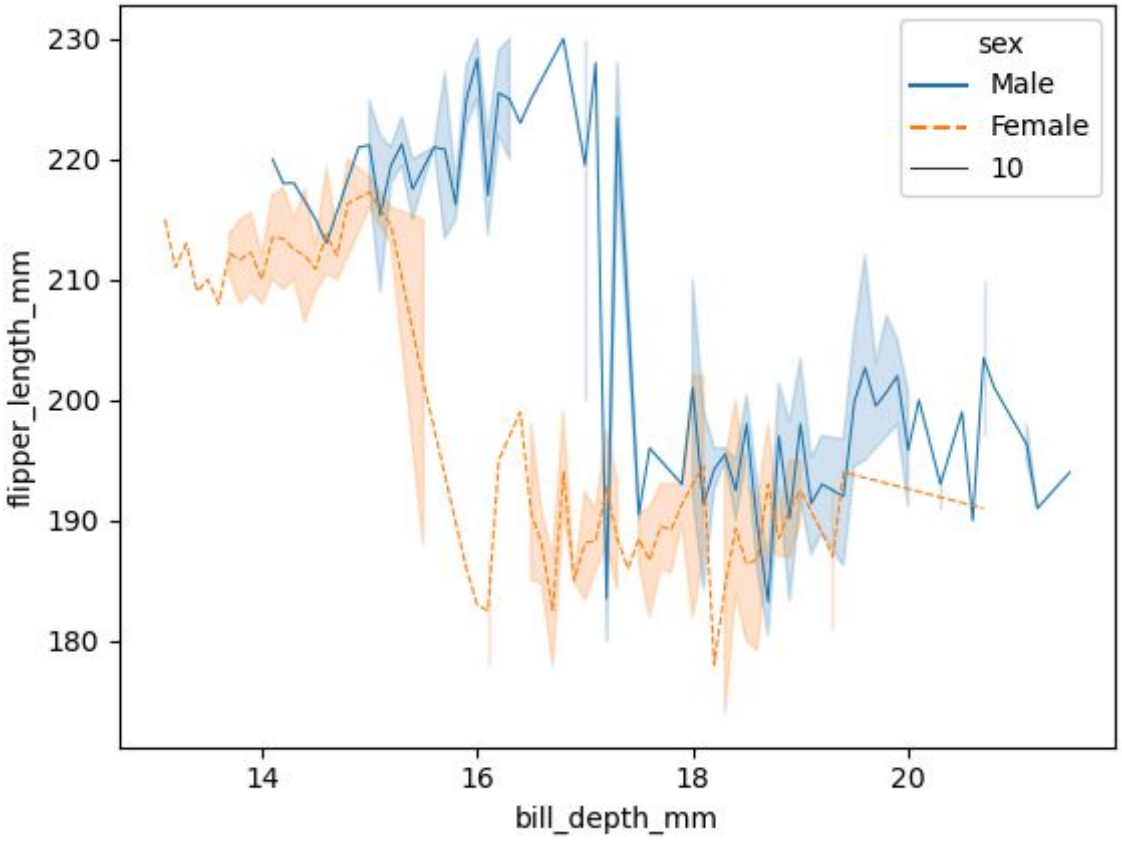
In [75]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10)
```

Out[75]:
```
<AxesSubplot:xlabel='bill_depth_mm', ylabel='flipper_length_mm'>
```



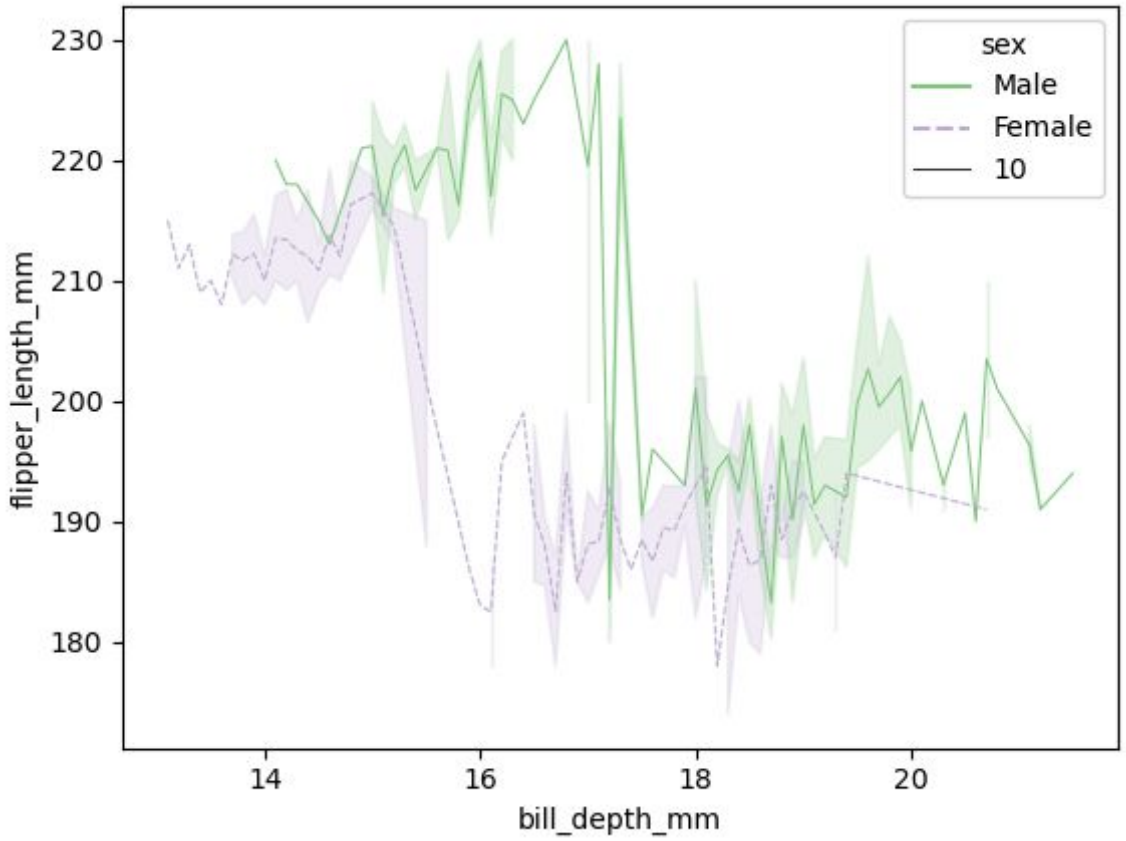
In [76]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10,sty
```

Out[76]:
```
<AxesSubplot:xlabel='bill_depth_mm', ylabel='flipper_length_mm'>
```

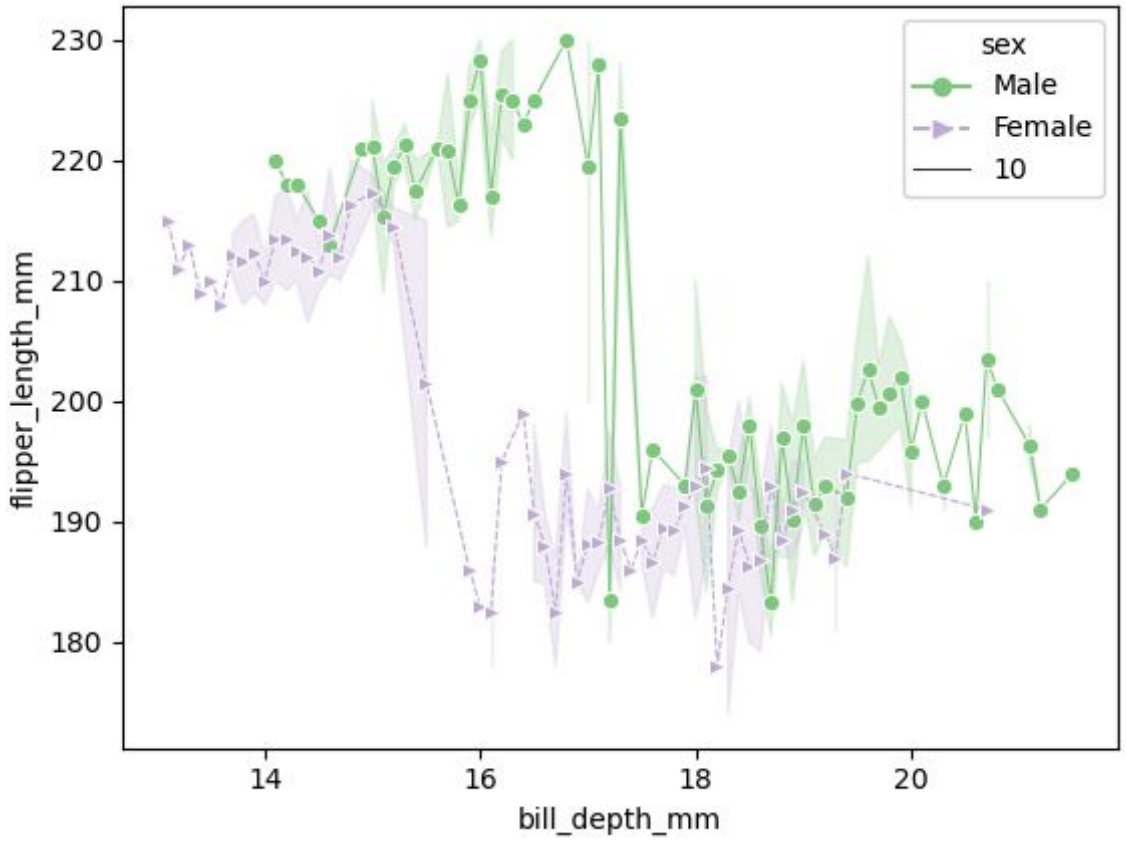


In [77]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10,sty
```

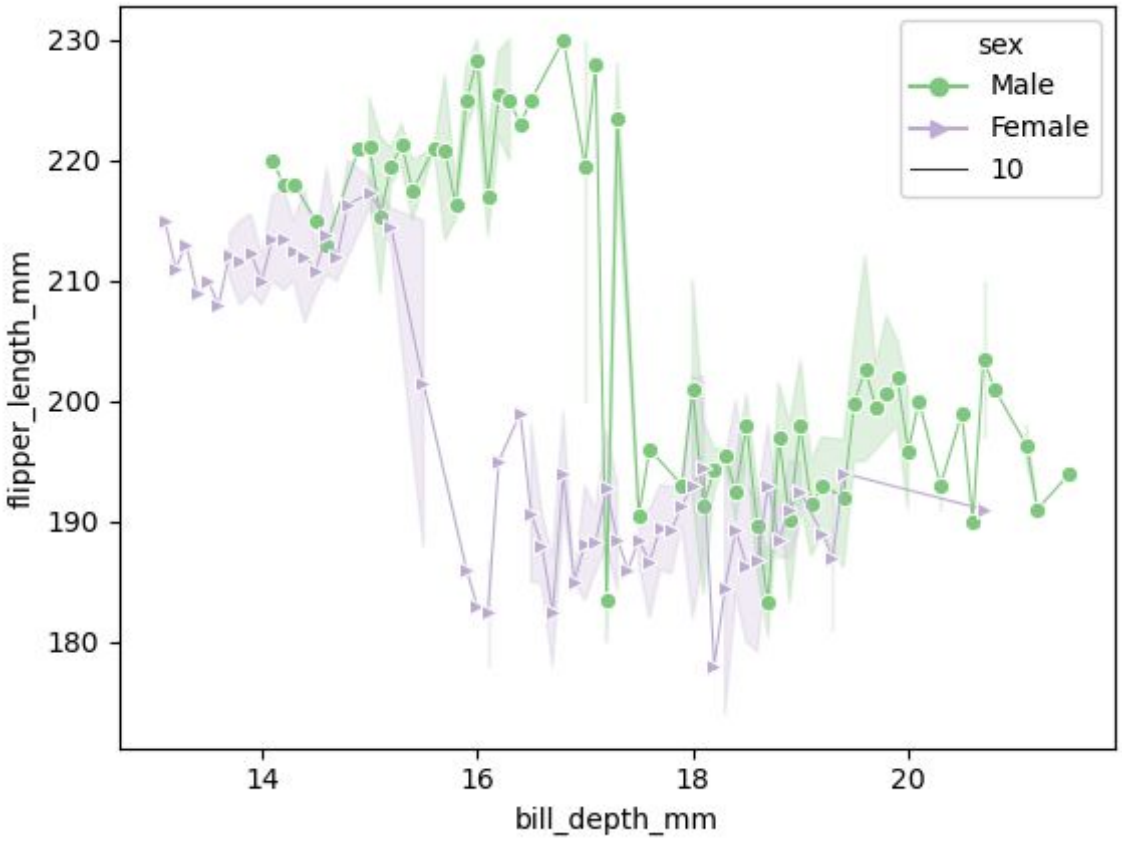
Out[77]:
```
<AxesSubplot:xlabel='bill_depth_mm', ylabel='flipper_length_mm'>
```



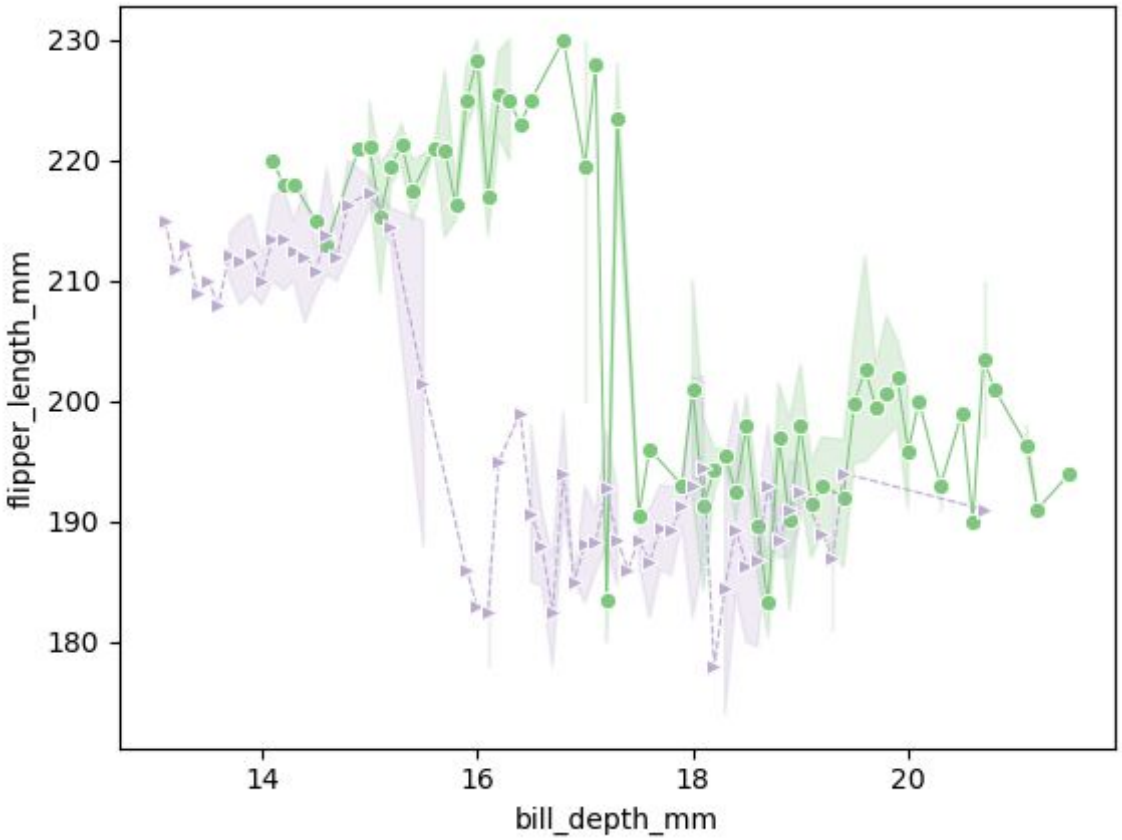
In [78]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10,sty
plt.show()
```



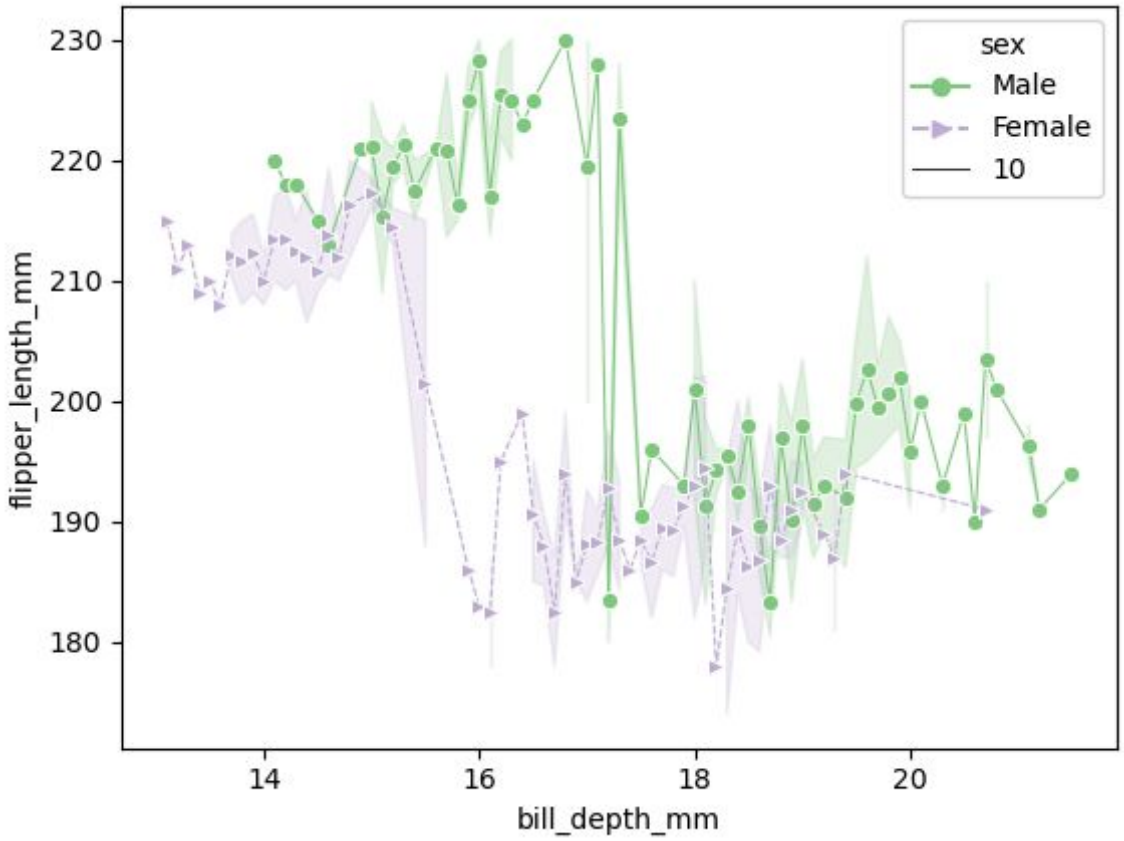
In [79]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10,sty
plt.show()
```



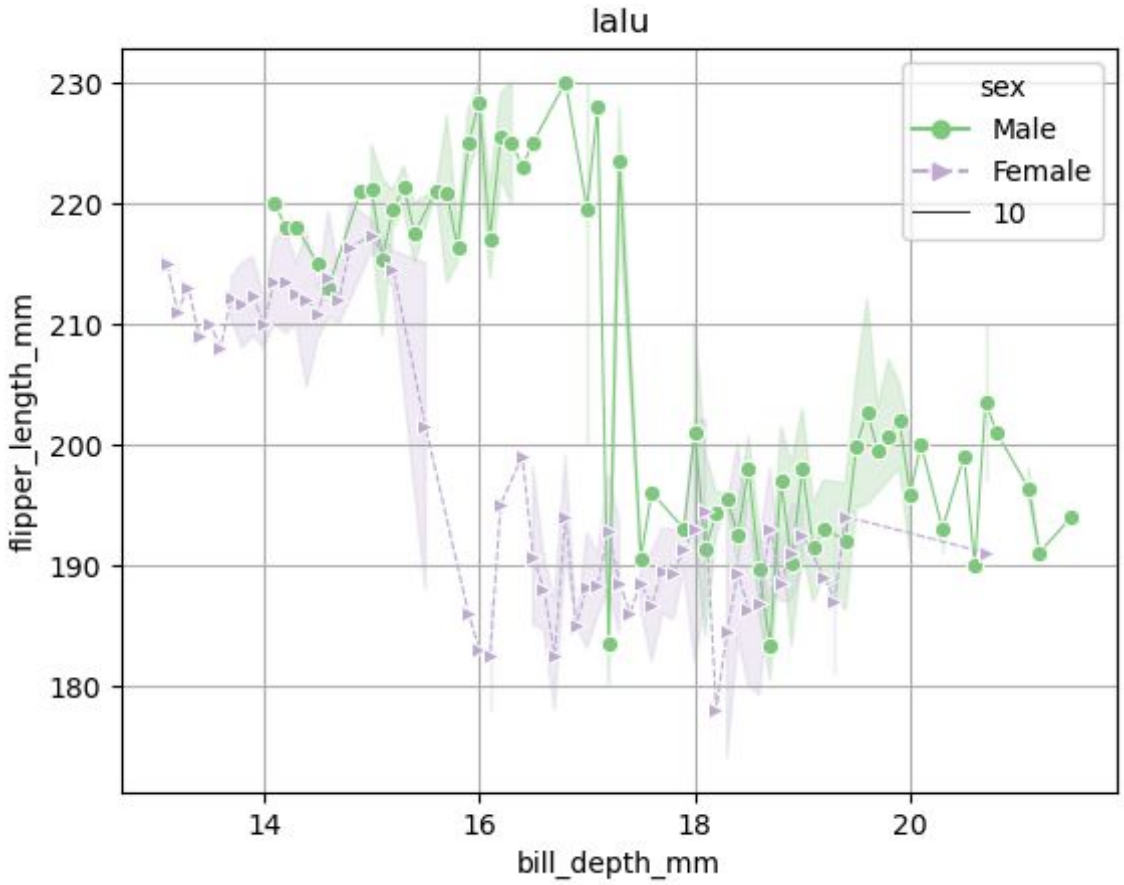
In [80]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10,sty
             palette="Accent",markers=["o",">"],legend=False)
plt.show()
```



In [81]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10,sty
             palette="Accent",markers=["o",">"],legend="brief")
plt.show()
```



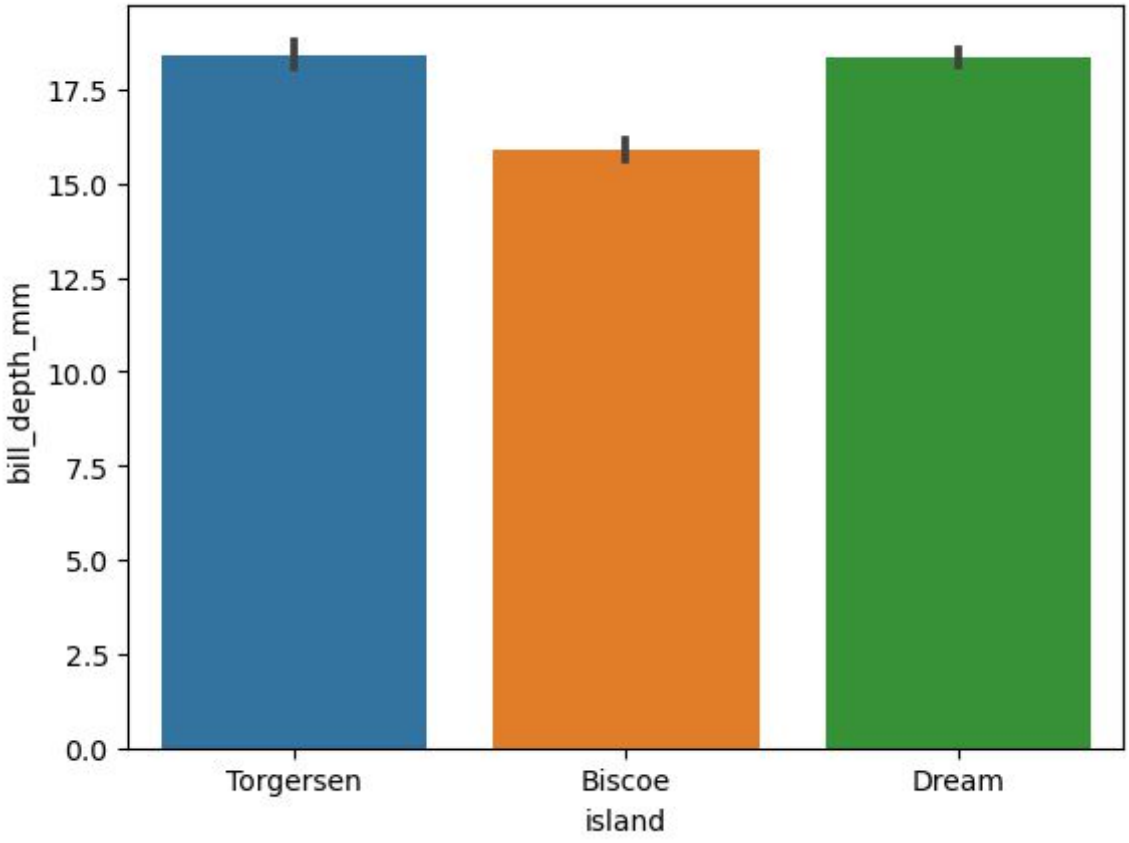
In [82]:
```
sns.lineplot(x="bill_depth_mm",y="flipper_length_mm",data=y_1,hue="sex",size=10,sty
             palette="Accent",markers=["o",">"],legend="brief")
plt.grid()
plt.title("lalu")
plt.show()
```



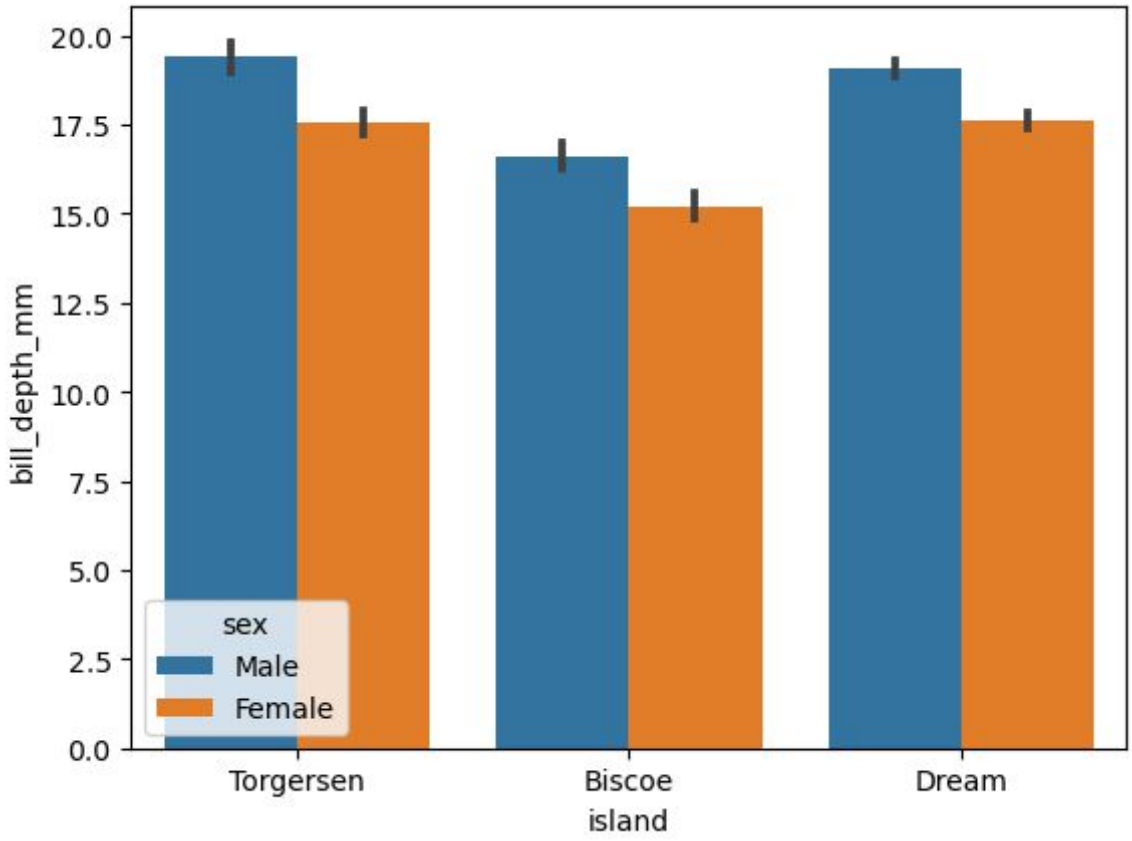
bar plot

sns.barplot(x=y_1.island,y=y_1.bill_depth_mm) plt.show()

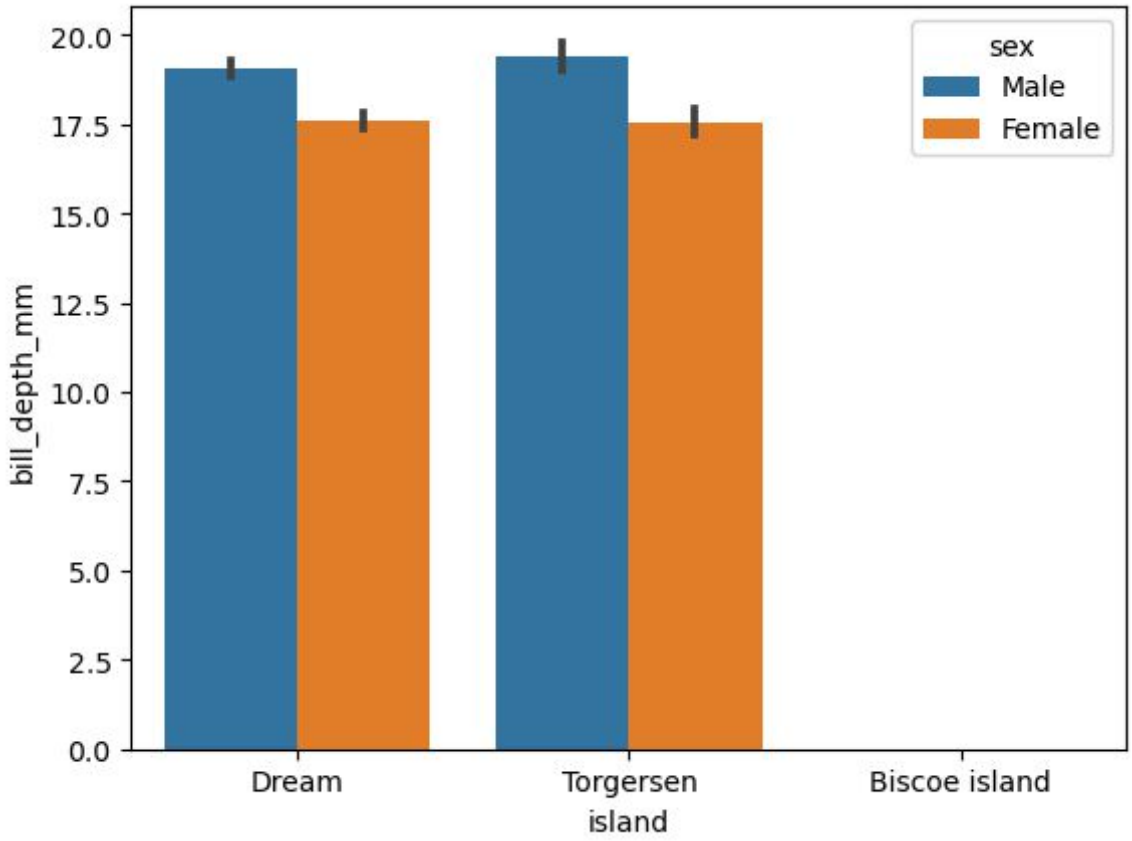
In [83]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1)
plt.show()
```



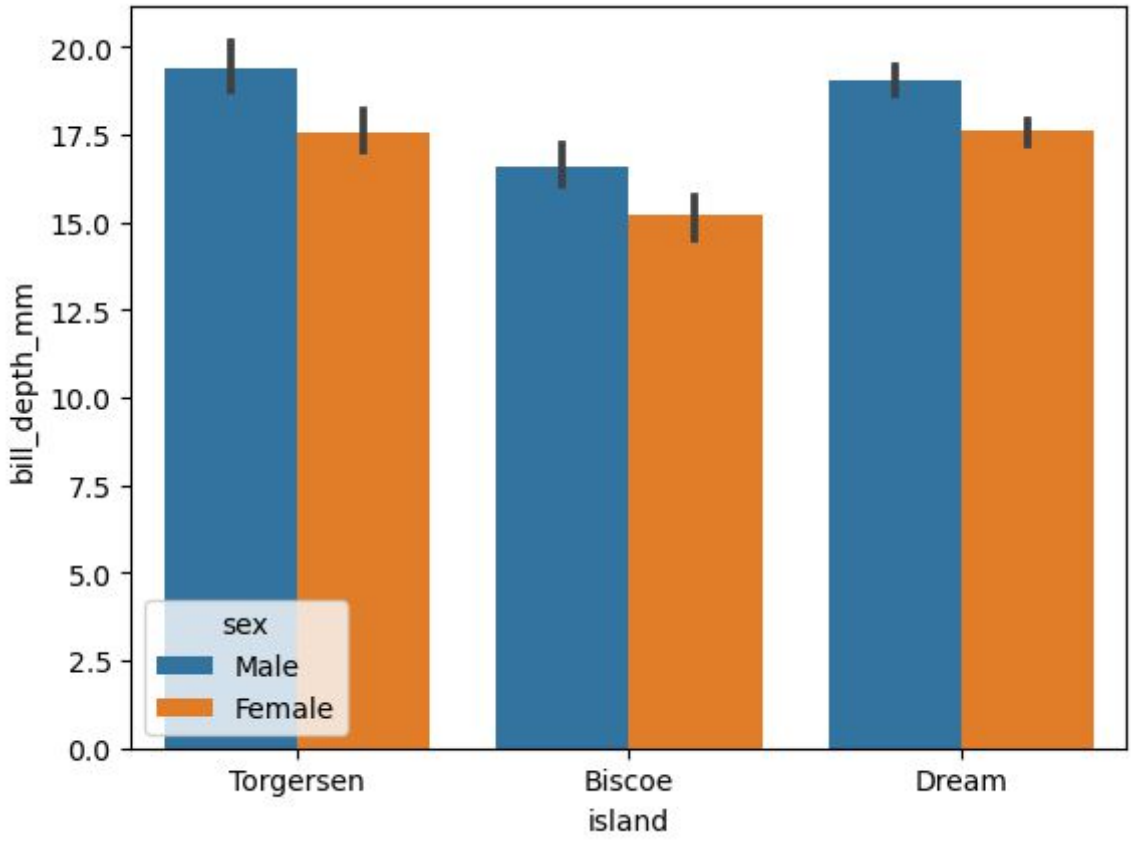
In [84]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex")
plt.show()
```



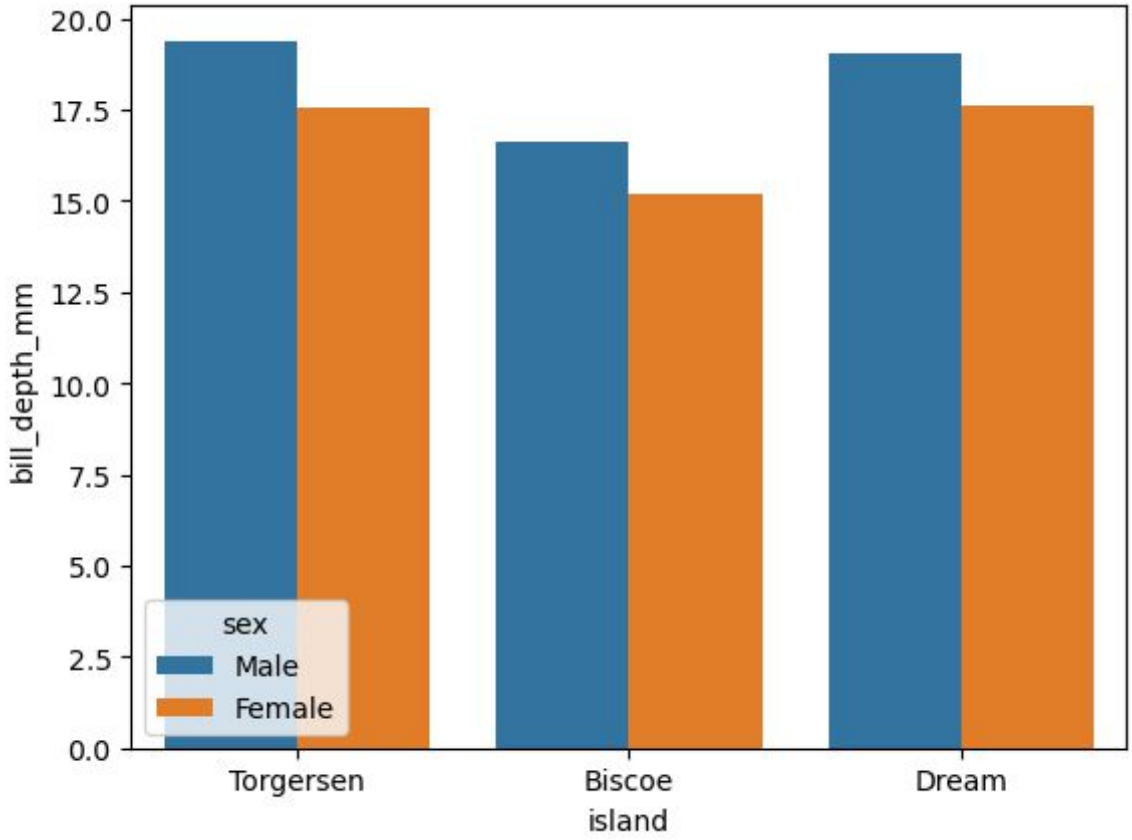
In [85]:
```
order_1=["Dream","Torgersen","Biscoe island"]
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",order=order_1)
plt.show()
```



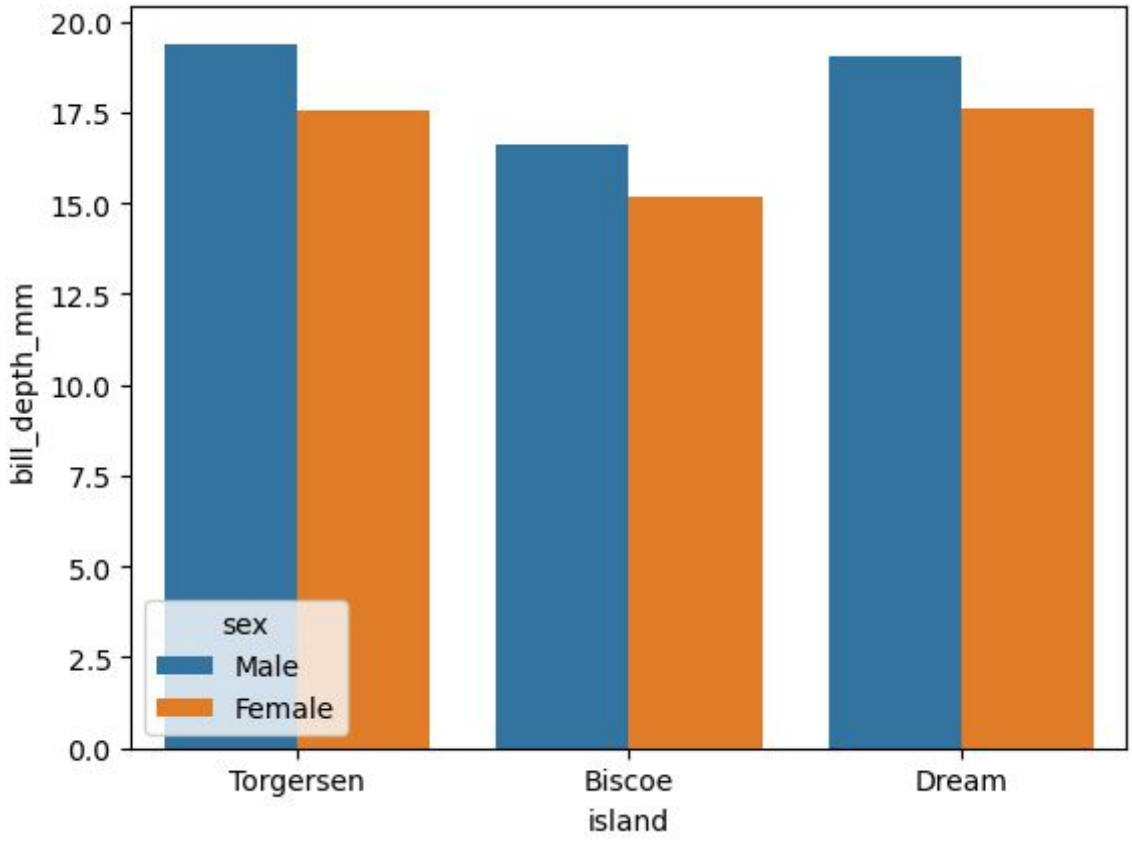
In [87]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100)
plt.show()
```



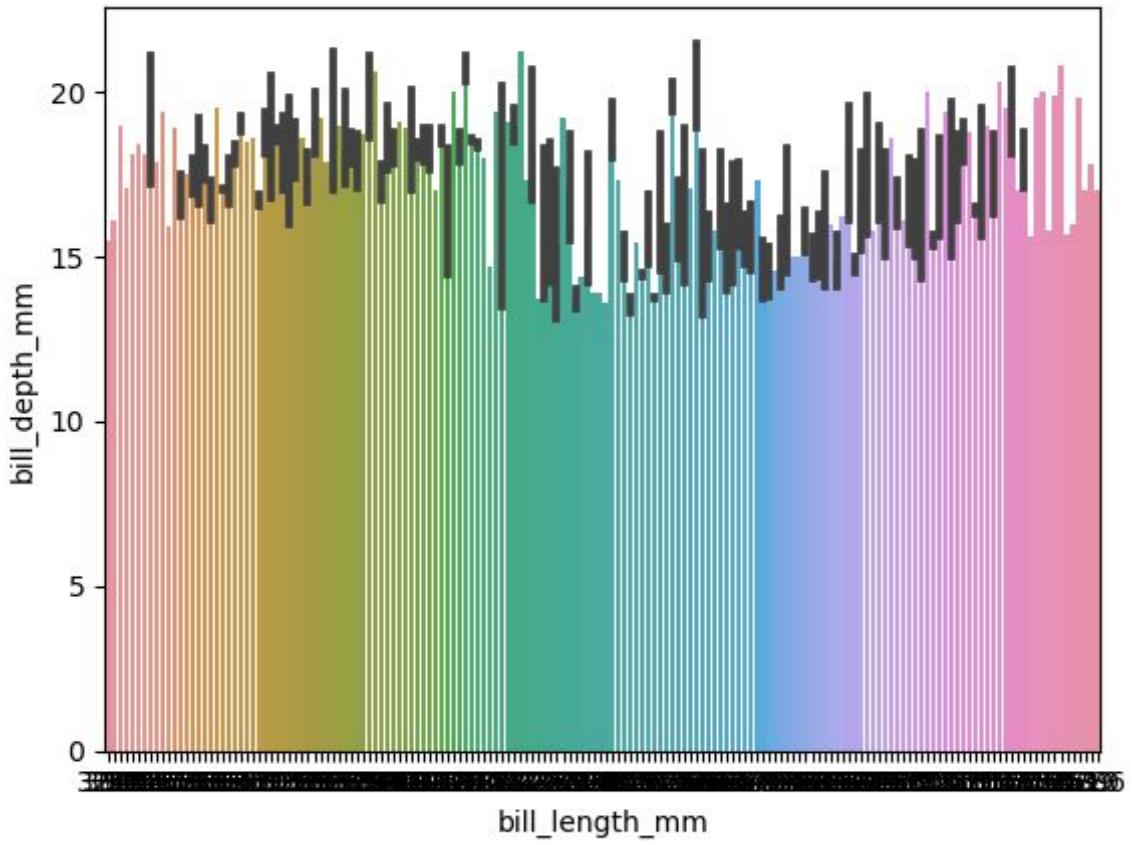
In [88]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=0)
plt.show()
```



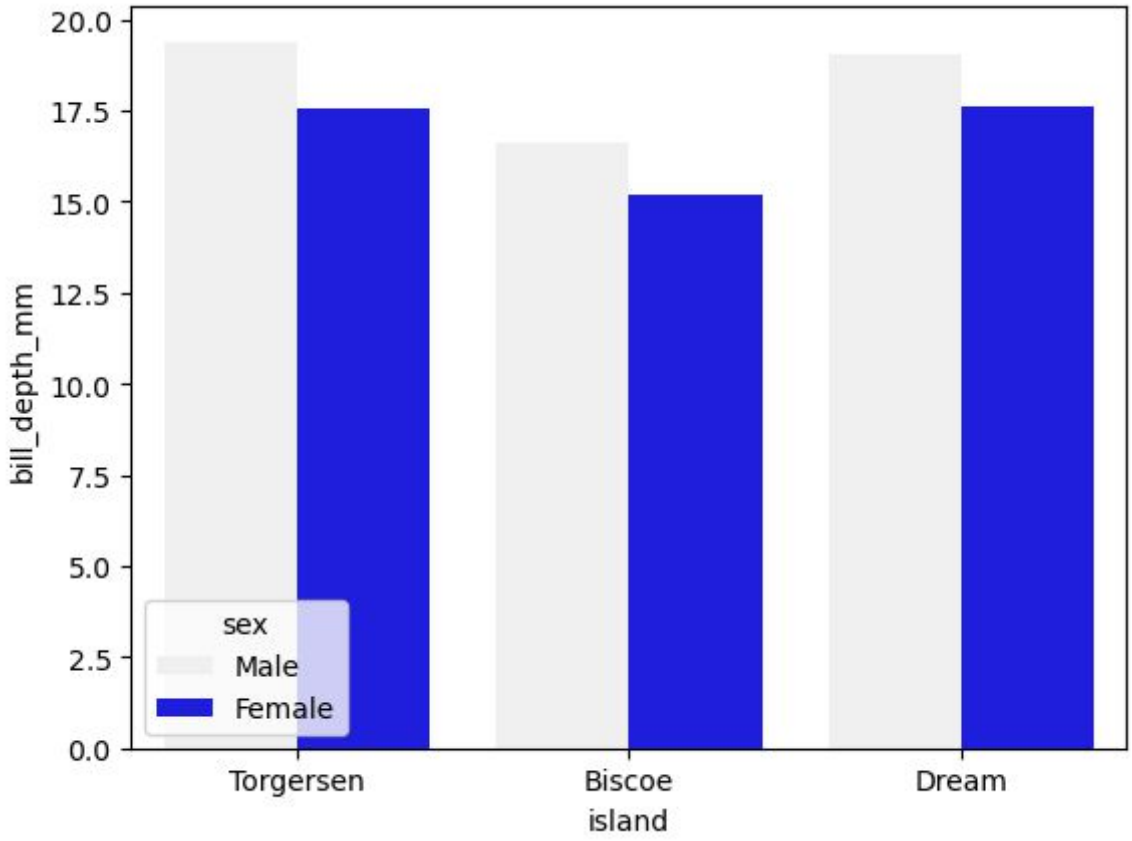
In [90]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,n_boot=1)
plt.show()                                                                    #size
```



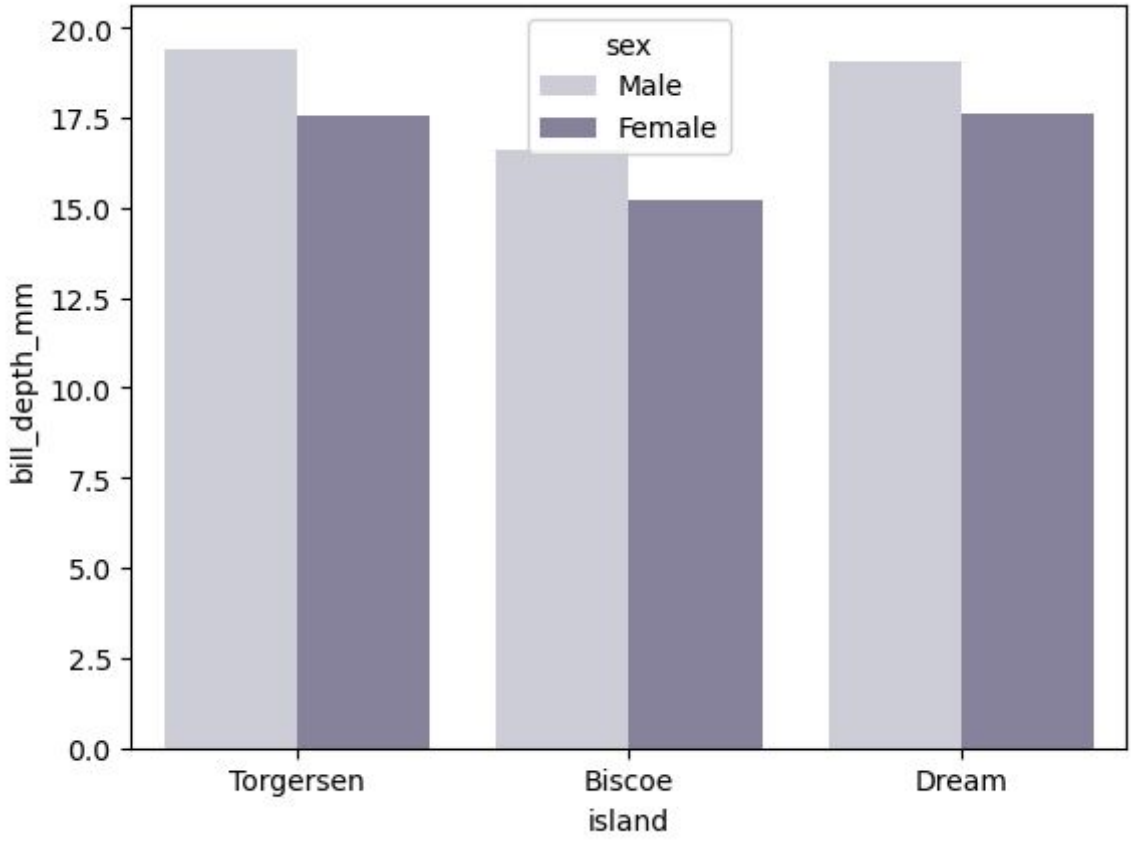
In [92]:
```
sns.barplot(x="bill_length_mm",y="bill_depth_mm",data=y_1,orient="v")
plt.show()
```



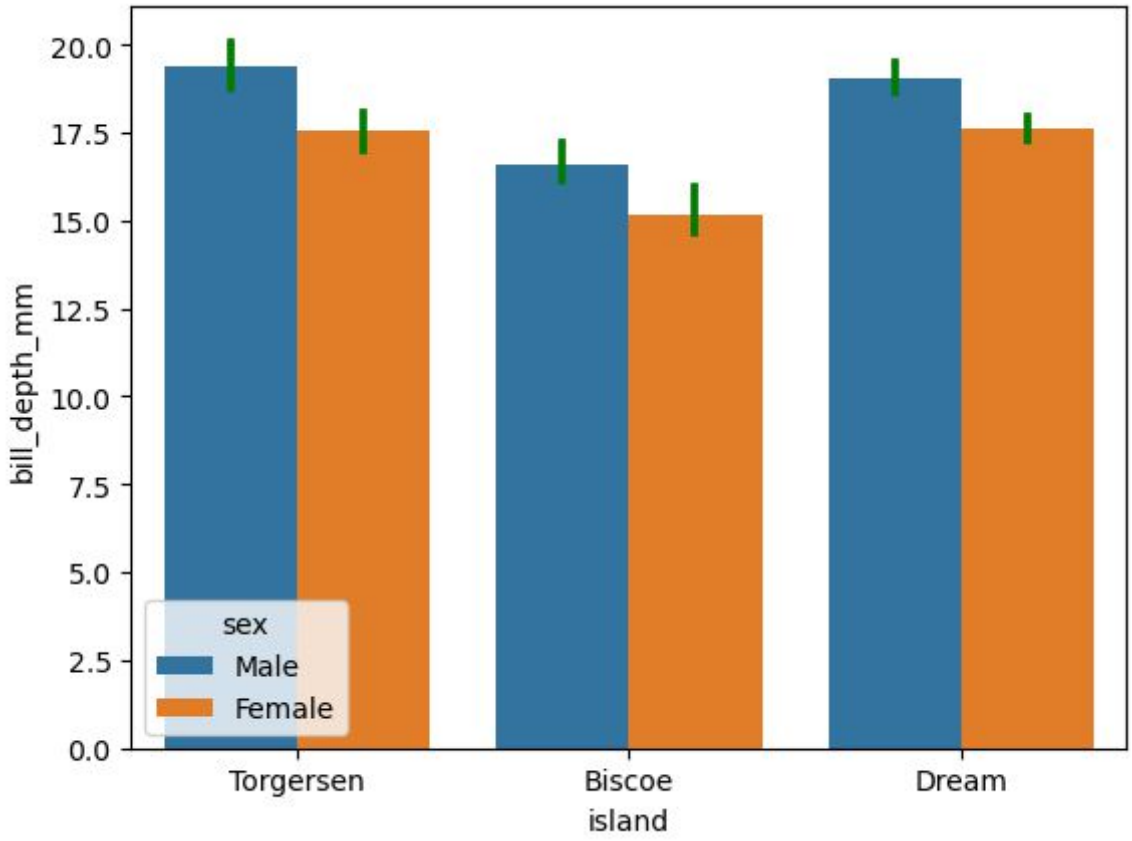
In [93]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,n_boot=1,color='
plt.show()
```



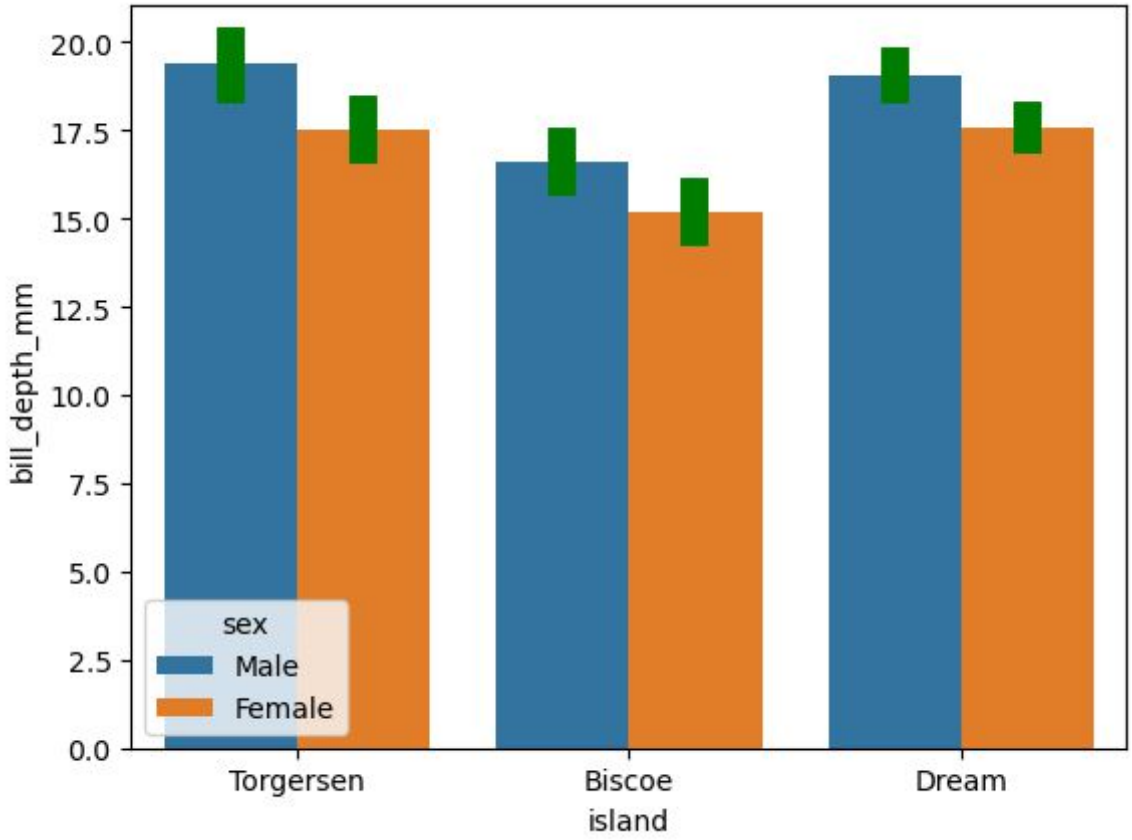
In [95]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,n_boot=1,saturat
plt.show()
```



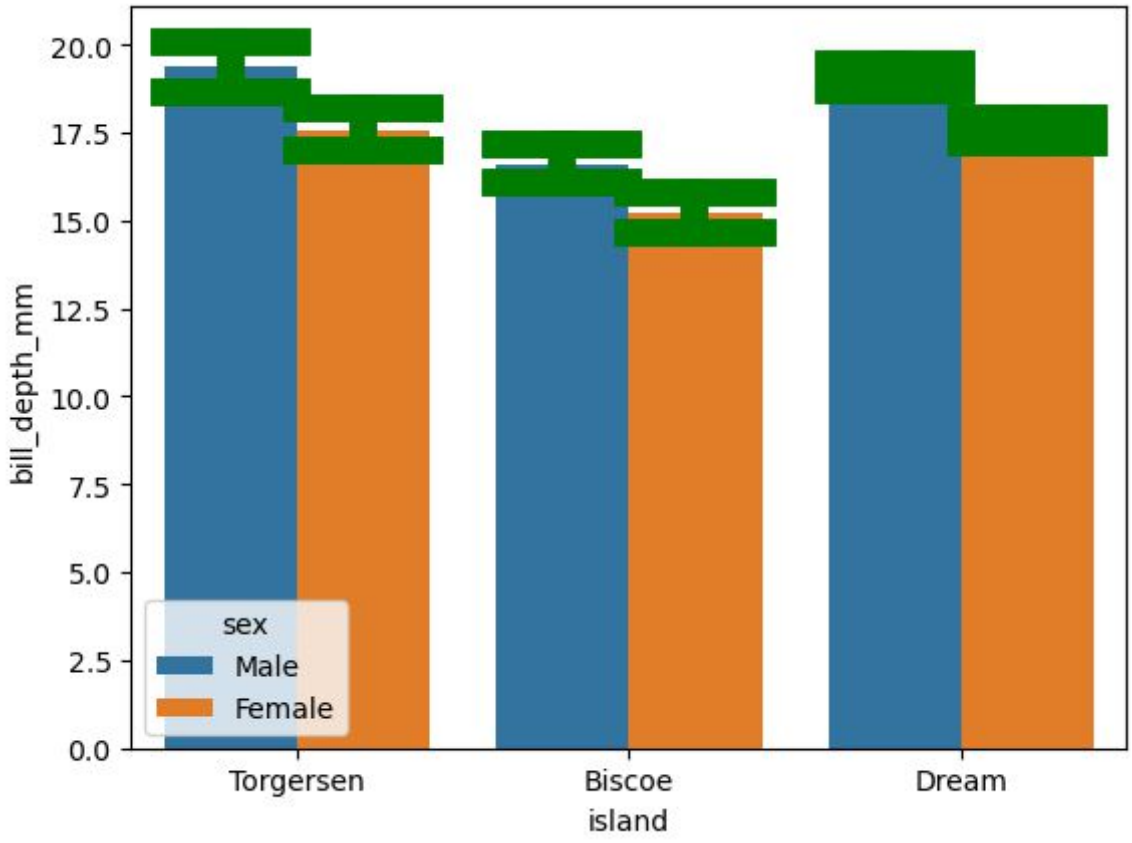
In [100…
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,errcolor="g")
plt.show()
```



In [99]:
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,errcolor="g",err
plt.show()
```

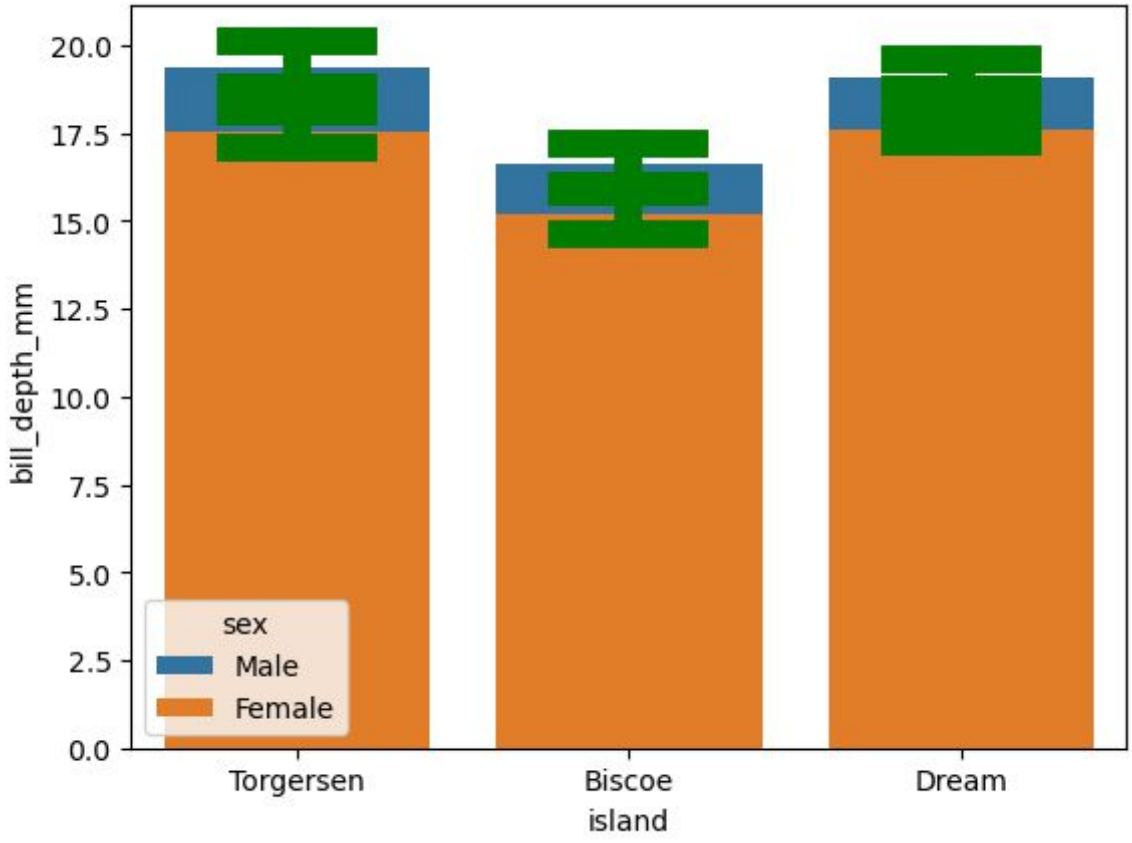


In [101…
```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,errcolor="g",err
plt.show()
```



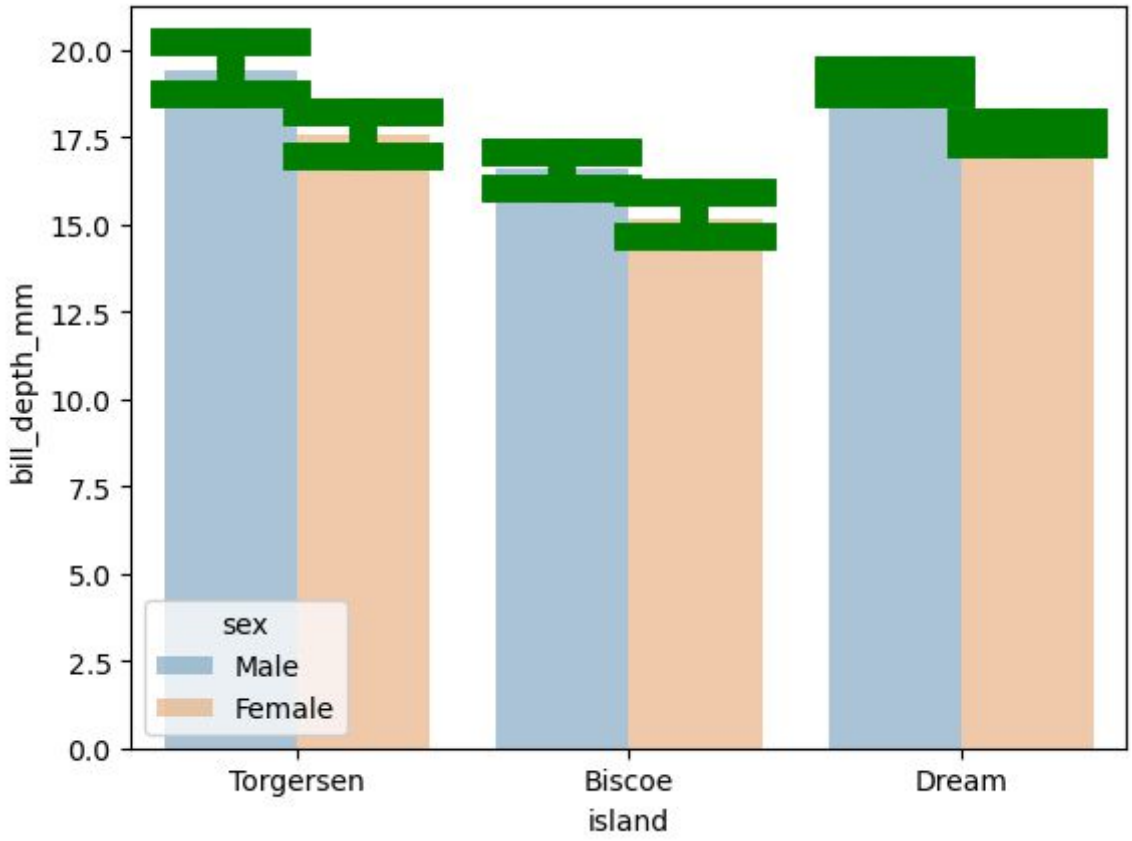
In [106…

```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,errcolor="g",err
plt.show()
```



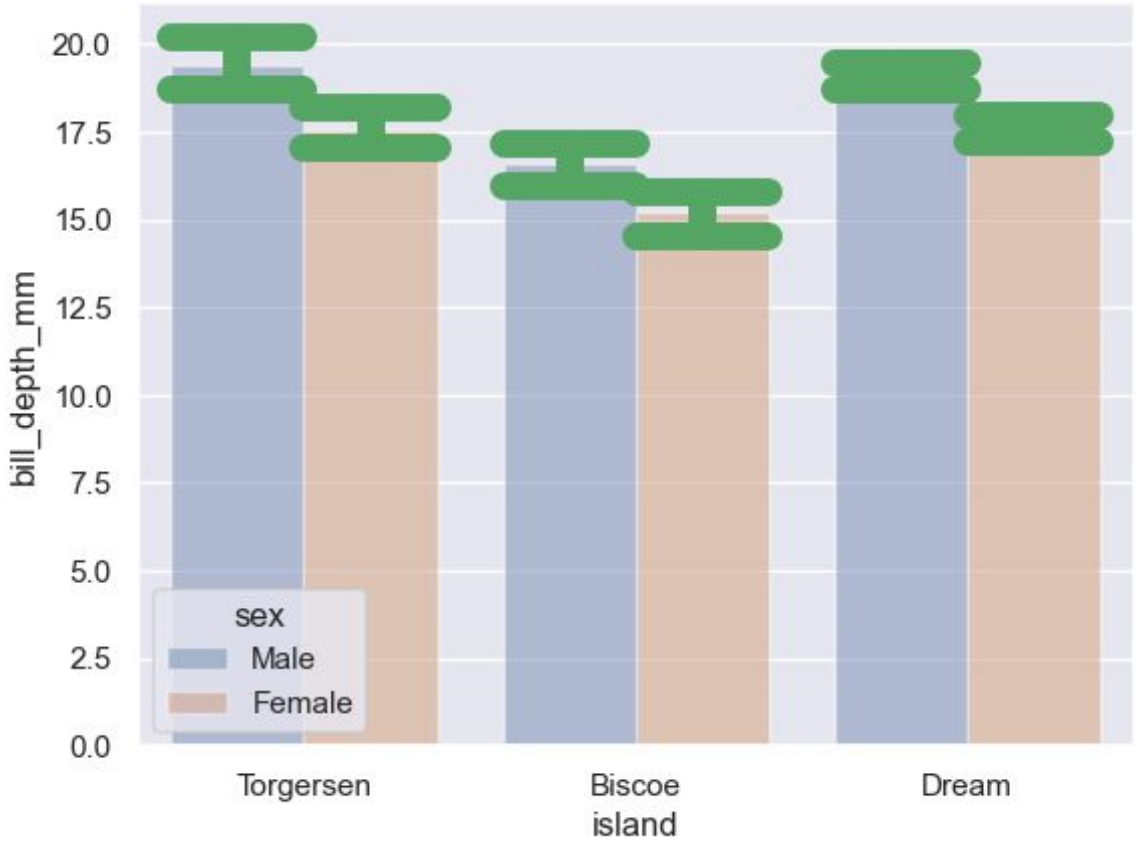
In [107…

```
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,errcolor="g",err
plt.show()
```



In [108…

```
sns.set(style="darkgrid")
sns.barplot(x="island",y="bill_depth_mm",data=y_1,hue="sex",ci=100,errcolor="g",err
plt.show()
```



histplot

In [113...
```
y_1
```

Out[113]:

	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
...	...	...	...	...	...	...	...
339	Gentoo	Biscoe	NaN	NaN	NaN	NaN	NaN
340	Gentoo	Biscoe	46.8	14.3	215.0	4850.0	Female
341	Gentoo	Biscoe	50.4	15.7	222.0	5750.0	Male
342	Gentoo	Biscoe	45.2	14.8	212.0	5200.0	Female
343	Gentoo	Biscoe	49.9	16.1	213.0	5400.0	Male

344 rows × 7 columns

In [118...
```
sns.displot(var["sex"],kde=True,rug=True,color="g",log_scale=True)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_23396\1168818150.py in <module>
----> 1 sns.displot(var["sex"],kde=True,rug=True,color="g",log_scale=True)

TypeError: list indices must be integers or slices, not str
```

In [122...
```
sns.displot(var["sex"])
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_23396\3841985890.py in <module>
----> 1 sns.displot(var["sex"])

TypeError: list indices must be integers or slices, not str
```

scatter plot

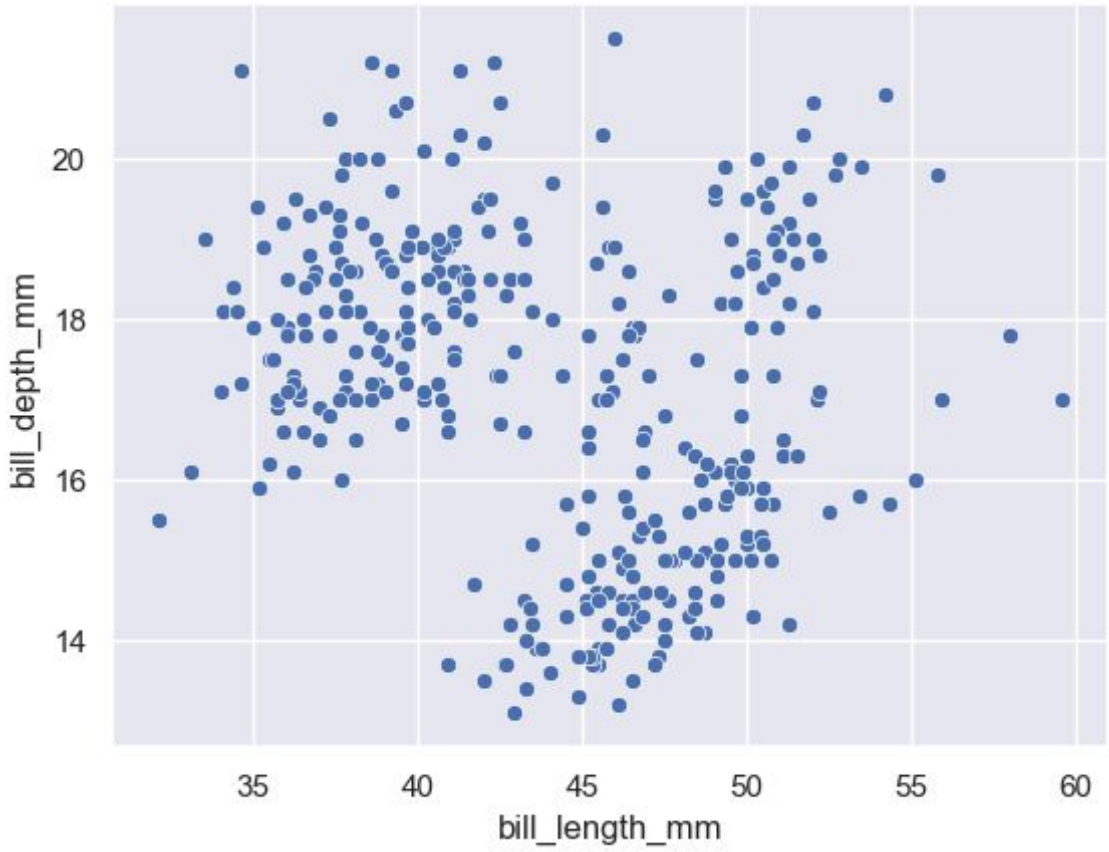
In [128...
```
y_1.head(20)
```

Out[128]:

	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
5	Adelie	Torgersen	39.3	20.6	190.0	3650.0	Male
6	Adelie	Torgersen	38.9	17.8	181.0	3625.0	Female
7	Adelie	Torgersen	39.2	19.6	195.0	4675.0	Male
8	Adelie	Torgersen	34.1	18.1	193.0	3475.0	NaN
9	Adelie	Torgersen	42.0	20.2	190.0	4250.0	NaN
10	Adelie	Torgersen	37.8	17.1	186.0	3300.0	NaN
11	Adelie	Torgersen	37.8	17.3	180.0	3700.0	NaN
12	Adelie	Torgersen	41.1	17.6	182.0	3200.0	Female
13	Adelie	Torgersen	38.6	21.2	191.0	3800.0	Male
14	Adelie	Torgersen	34.6	21.1	198.0	4400.0	Male
15	Adelie	Torgersen	36.6	17.8	185.0	3700.0	Female
16	Adelie	Torgersen	38.7	19.0	195.0	3450.0	Female
17	Adelie	Torgersen	42.5	20.7	197.0	4500.0	Male
18	Adelie	Torgersen	34.4	18.4	184.0	3325.0	Female
19	Adelie	Torgersen	46.0	21.5	194.0	4200.0	Male

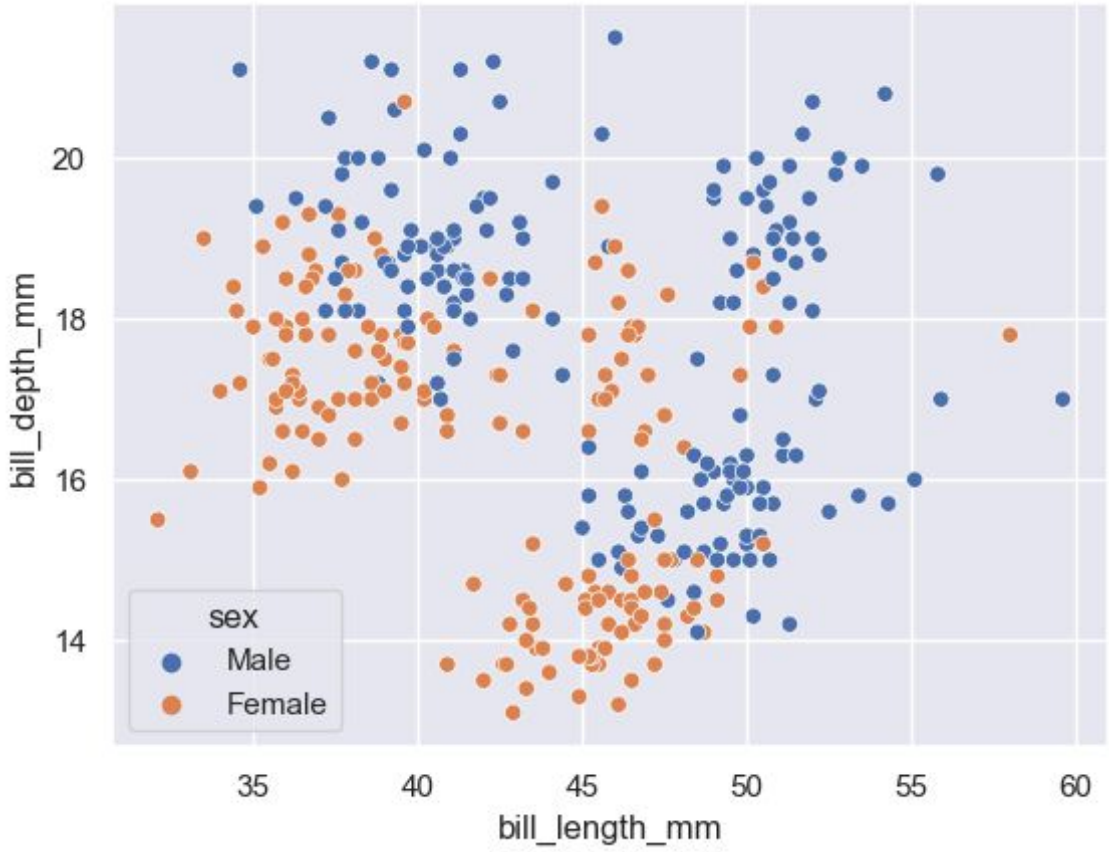
In [131…

```
sns.scatterplot(x="bill_length_mm",y="bill_depth_mm",data=y_1)
plt.show()
```



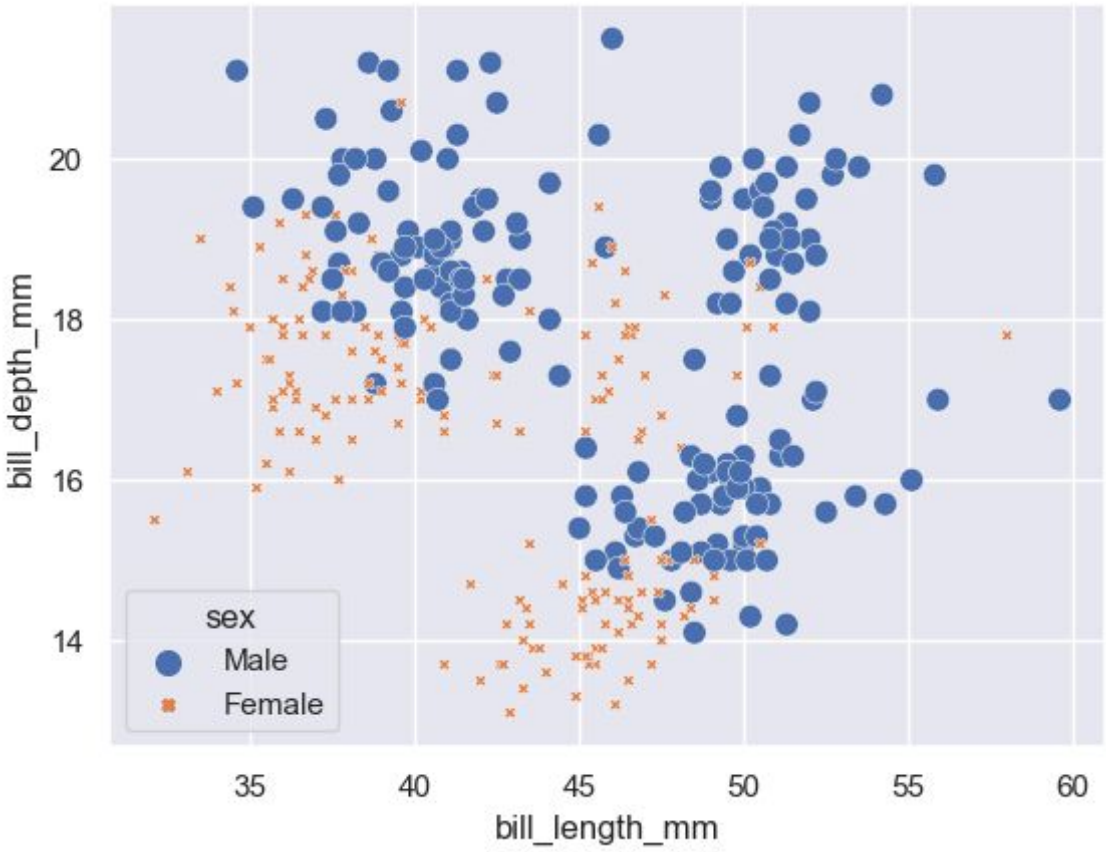
In [132…

```
sns.scatterplot(x="bill_length_mm",y="bill_depth_mm",data=y_1,hue="sex")  #hue use
plt.show()
```



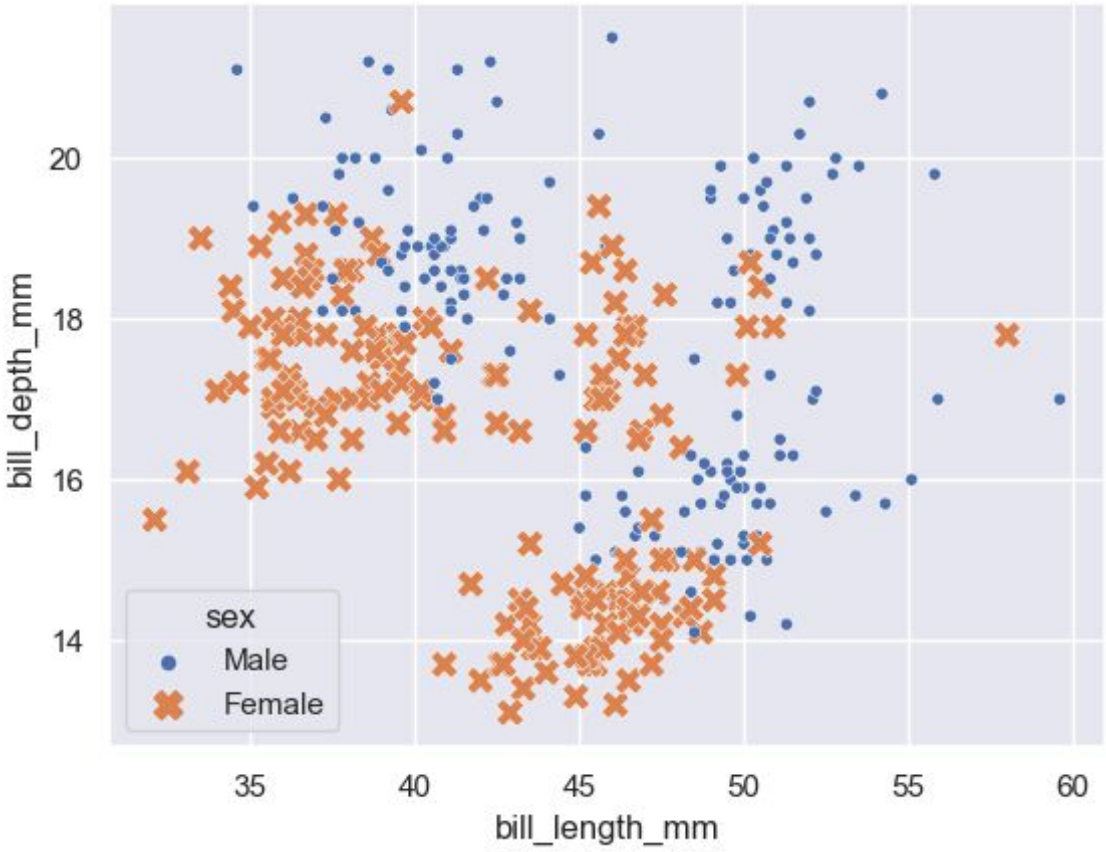
In [135…

```
sns.scatterplot(x="bill_length_mm",y="bill_depth_mm",data=y_1,hue="sex",style="sex'
plt.show()
```



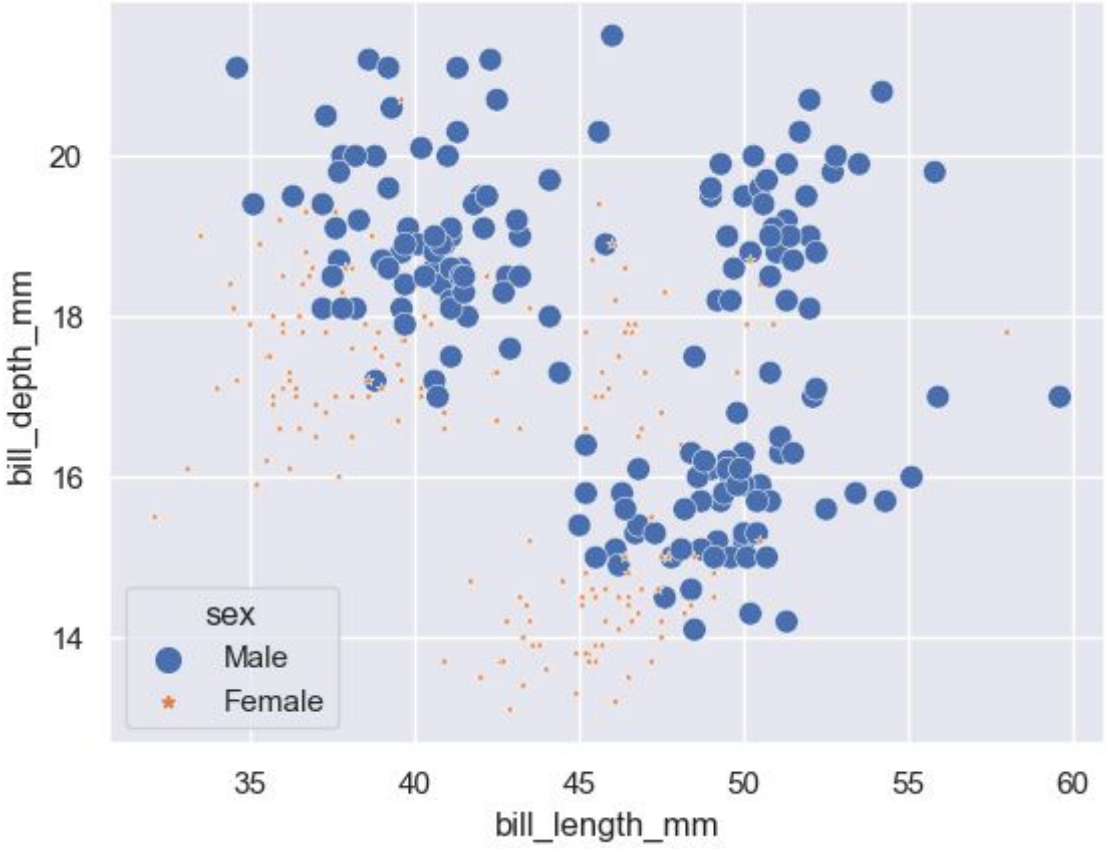
In [140…

```
sns.scatterplot(x="bill_length_mm",y="bill_depth_mm",data=y_1,hue="sex",style="sex"
plt.show()
```



In [141…

```
 m={"Male": "o", "Female": "*"}
sns.scatterplot(x="bill_length_mm",y="bill_depth_mm",data=y_1,hue="sex",style="sex"
plt.show()
```



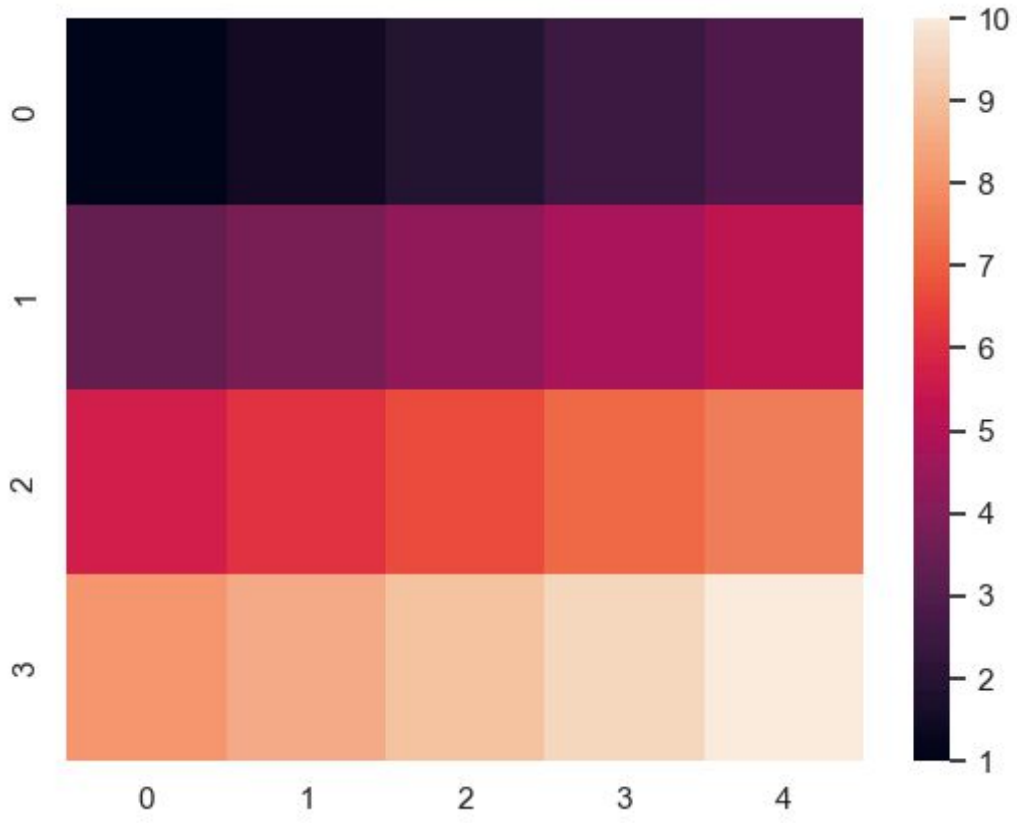
heatmap

In [142…
```
var=np.linspace(1,10,20).reshape(4,5)
var
```

Out[142]:
```
array([[ 1.        ,  1.47368421,  1.94736842,  2.42105263,  2.89473684],
       [ 3.36842105,  3.84210526,  4.31578947,  4.78947368,  5.26315789],
       [ 5.73684211,  6.21052632,  6.68421053,  7.15789474,  7.63157895],
       [ 8.10526316,  8.57894737,  9.05263158,  9.52631579, 10.        ]])
```

In [143…
```
sns.heatmap(var)
```

Out[143]:
```
<AxesSubplot:>
```



In [144…

```
hi=sns.load_dataset("anagrams")
hi
```

Out[144]:

	subidr	attnr	num1	num2	num3
0	1	divided	2	4.0	7
1	2	divided	3	4.0	5
2	3	divided	3	5.0	6
3	4	divided	5	7.0	5
4	5	divided	4	5.0	8
5	6	divided	5	5.0	6
6	7	divided	5	4.5	6
7	8	divided	5	7.0	8
8	9	divided	2	3.0	7
9	10	divided	6	5.0	6
10	11	focused	6	5.0	6
11	12	focused	8	9.0	8
12	13	focused	6	5.0	9
13	14	focused	8	8.0	7
14	15	focused	8	8.0	7
15	16	focused	6	8.0	7
16	17	focused	7	7.0	6
17	18	focused	7	8.0	6
18	19	focused	5	6.0	6
19	20	focused	6	6.0	5

In [146…

```
x=hi.drop(columns=["attnr"],axis=1)
x
```

Out[146]:

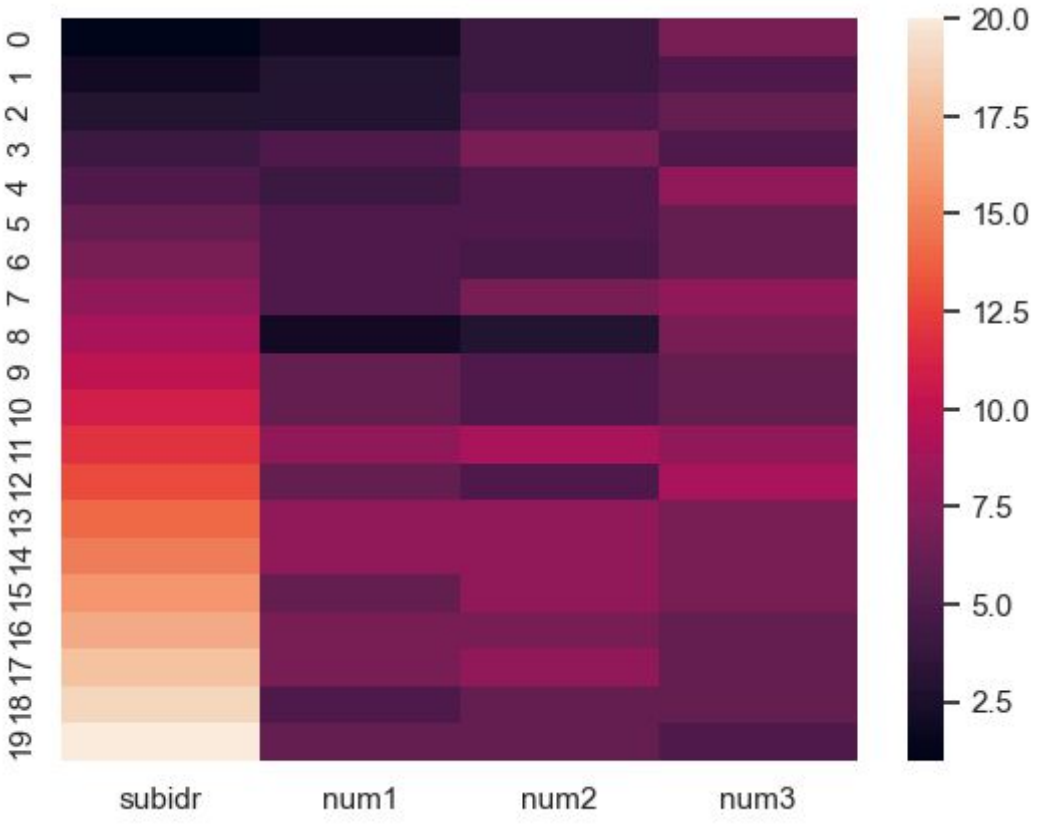
	subidr	num1	num2	num3
0	1	2	4.0	7
1	2	3	4.0	5
2	3	3	5.0	6
3	4	5	7.0	5
4	5	4	5.0	8
5	6	5	5.0	6
6	7	5	4.5	6
7	8	5	7.0	8
8	9	2	3.0	7
9	10	6	5.0	6
10	11	6	5.0	6
11	12	8	9.0	8
12	13	6	5.0	9
13	14	8	8.0	7
14	15	8	8.0	7
15	16	6	8.0	7
16	17	7	7.0	6
17	18	7	8.0	6
18	19	5	6.0	6
19	20	6	6.0	5

In [147…

```
sns.heatmap(x)
```

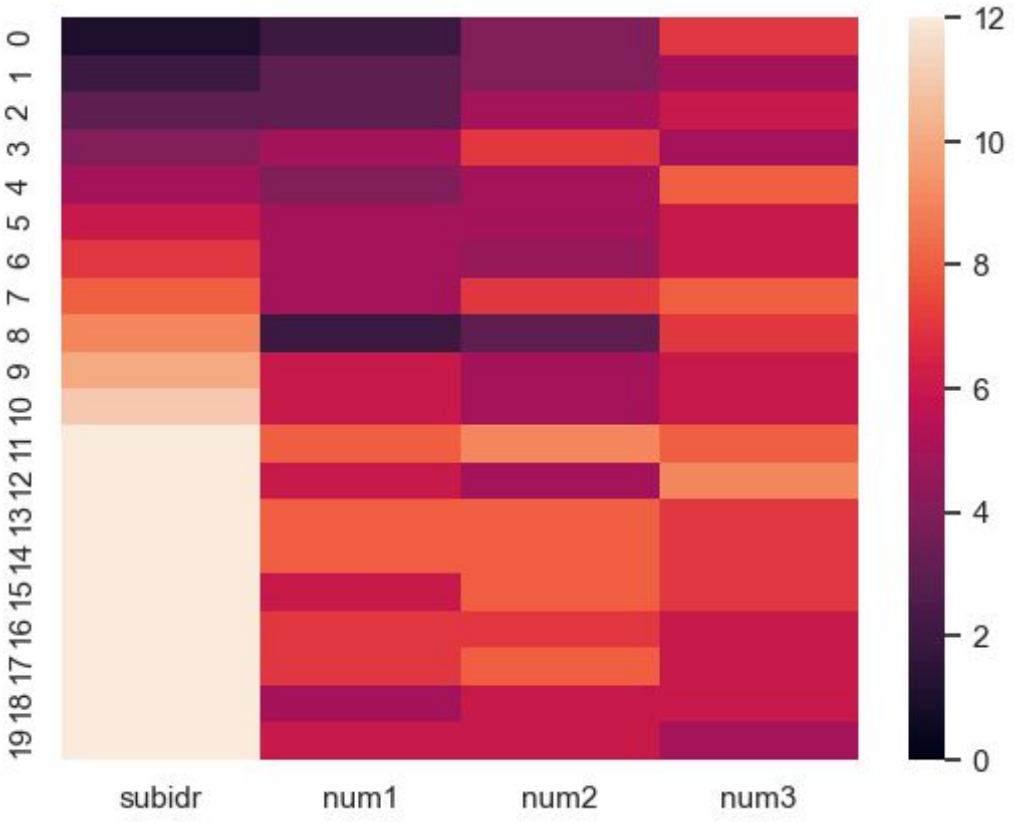
Out[147]:

```
<AxesSubplot:>
```

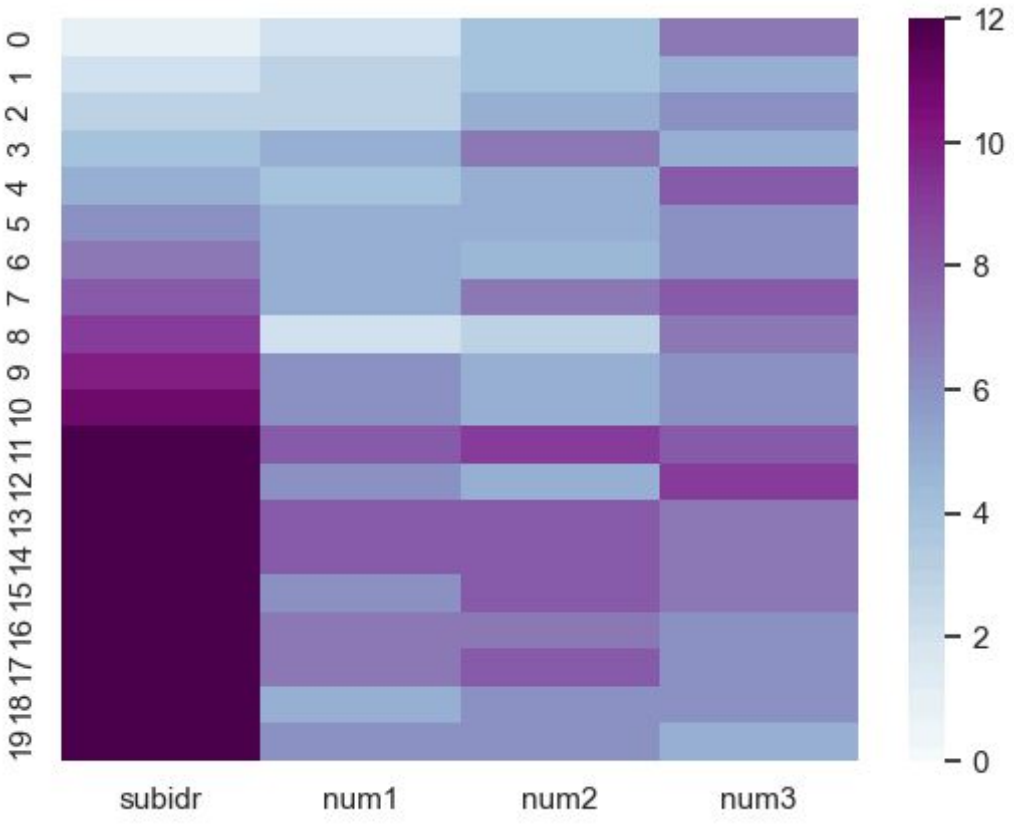


In [148…
```
sns.heatmap(x,vmin=0,vmax=12)
```

Out[148]:
```
<AxesSubplot:>
```

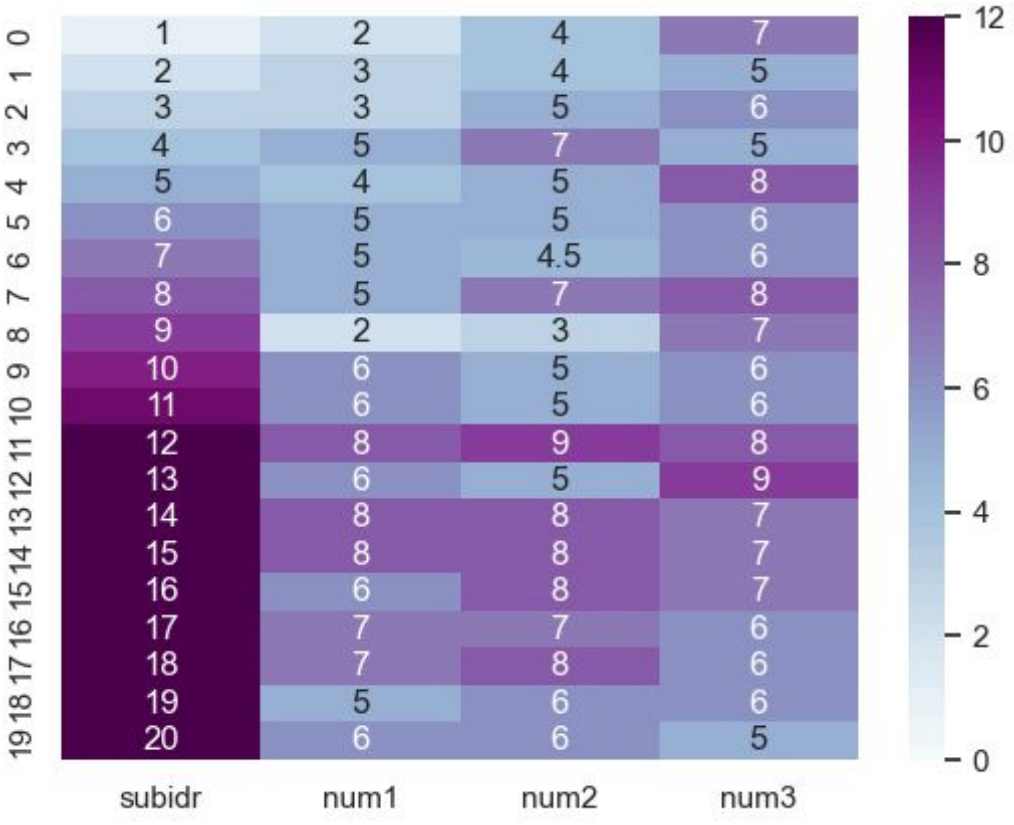


In [150…
```
sns.heatmap(x,vmin=0,vmax=12,cmap="BuPu")
plt.show()
```



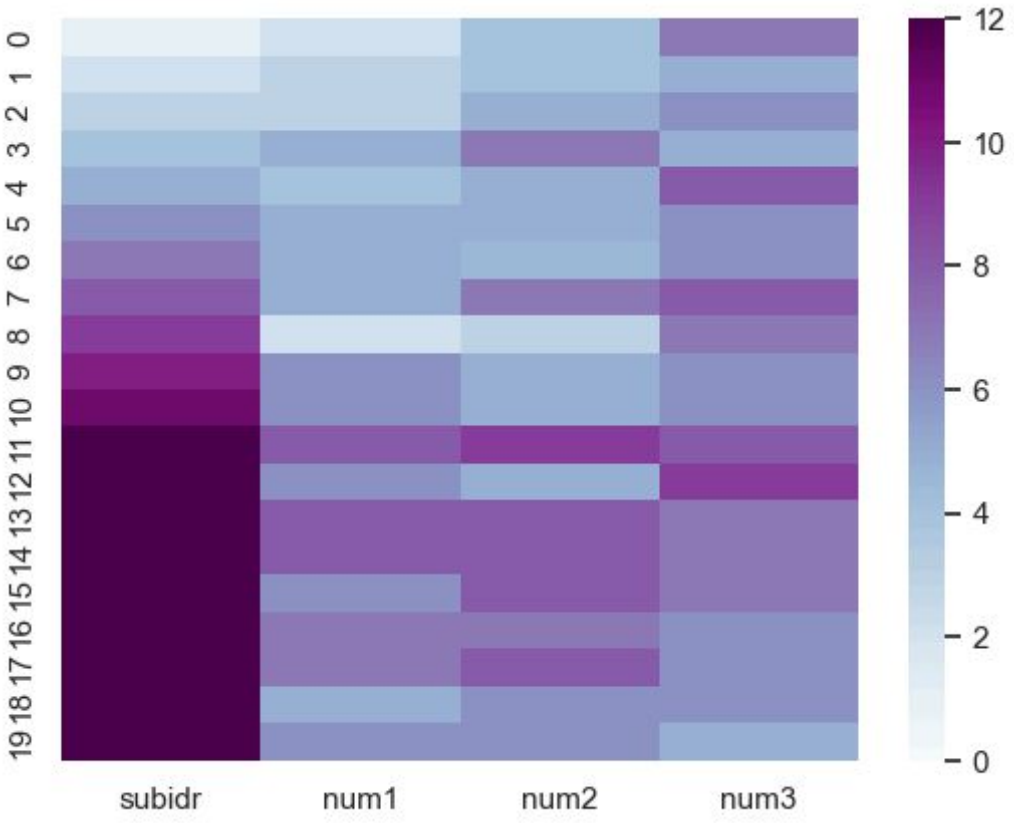
In [151…

```
sns.heatmap(x,vmin=0,vmax=12,cmap="BuPu",annot=True)
plt.show()
```



In [152…

```
sns.heatmap(x,vmin=0,vmax=12,cmap="BuPu",annot=False)
plt.show()
```



In [154…
```
var1=np.linspace(1,10,10).reshape(2,5)
var1
```

Out[154]:
```
array([[ 1.,  2.,  3.,  4.,  5.],
       [ 6.,  7.,  8.,  9., 10.]])
```

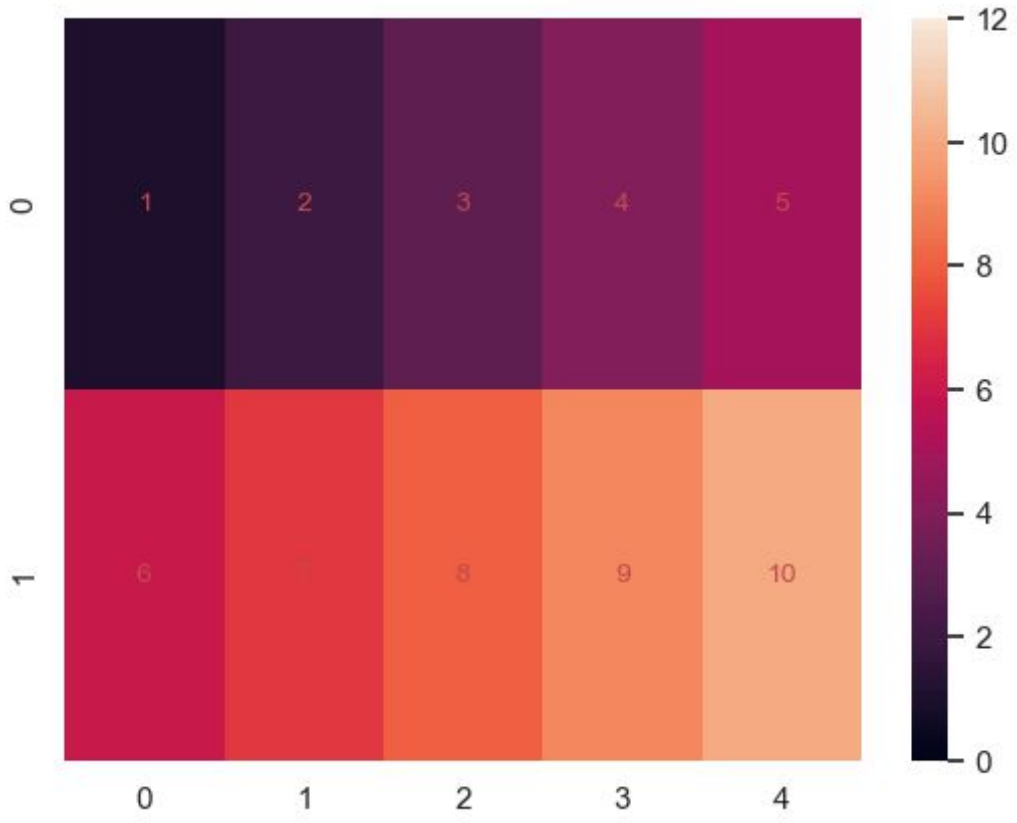
In [156…
```
sns.heatmap(var,vmin=0,vmax=12,annot=True)
plt.show()
```

In [158…
```
ar=np.array([["a0","a1","a2","a3","a4"],
             ["b0","b1","b2","b3","b4"]])
ar
```

Out[158]:
```
array([['a0', 'a1', 'a2', 'a3', 'a4'],
       ['b0', 'b1', 'b2', 'b3', 'b4']], dtype='<U2')
```

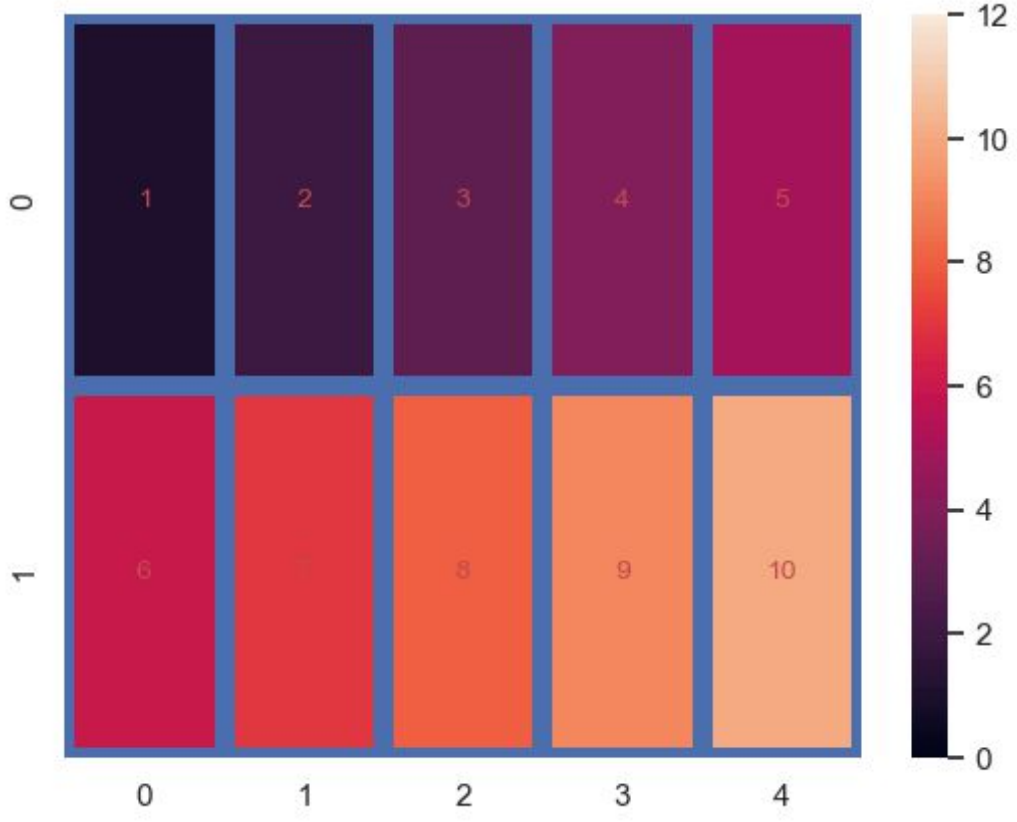
In [160…
```
sns.heatmap(var,vmin=0,vmax=12,annot=ar,fmt="s")  # when annot use then format uses
plt.show()
```

In [161…
```
y={"fontsize":10,"color":"r"}
sns.heatmap(var,vmin=0,vmax=12,annot=True,annot_kws=y)
plt.show()
```



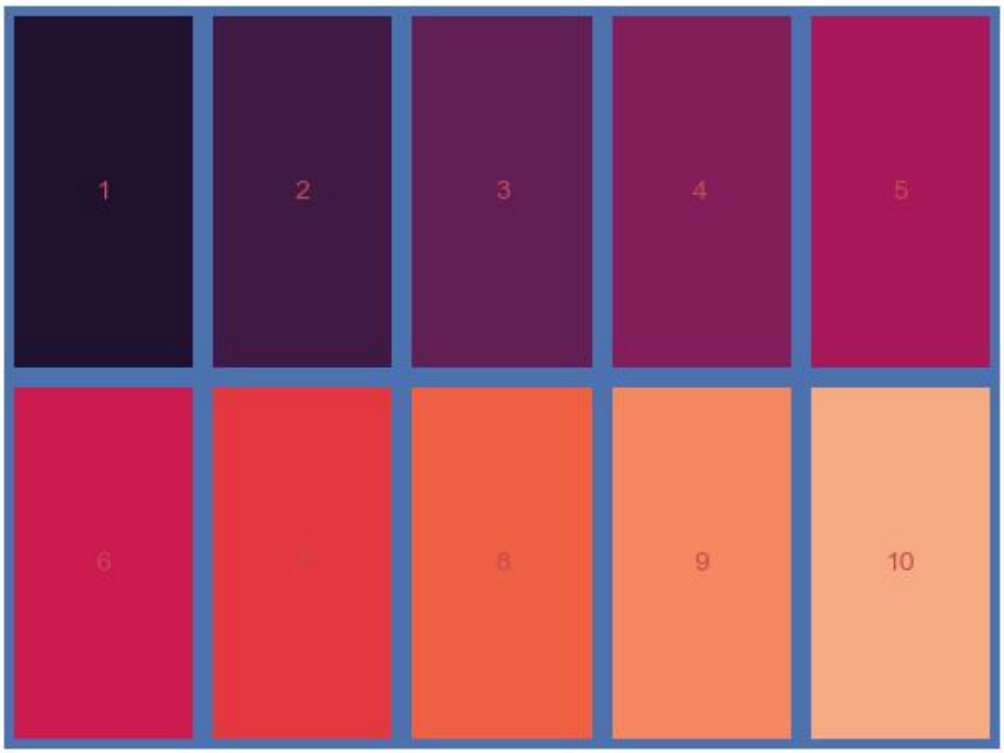
In [167…

```
y={"fontsize":10,"color":"r"}
sns.heatmap(var,vmin=0,vmax=12,annot=True,annot_kws=y,linewidth=6,linecolor="b")
plt.show()
```



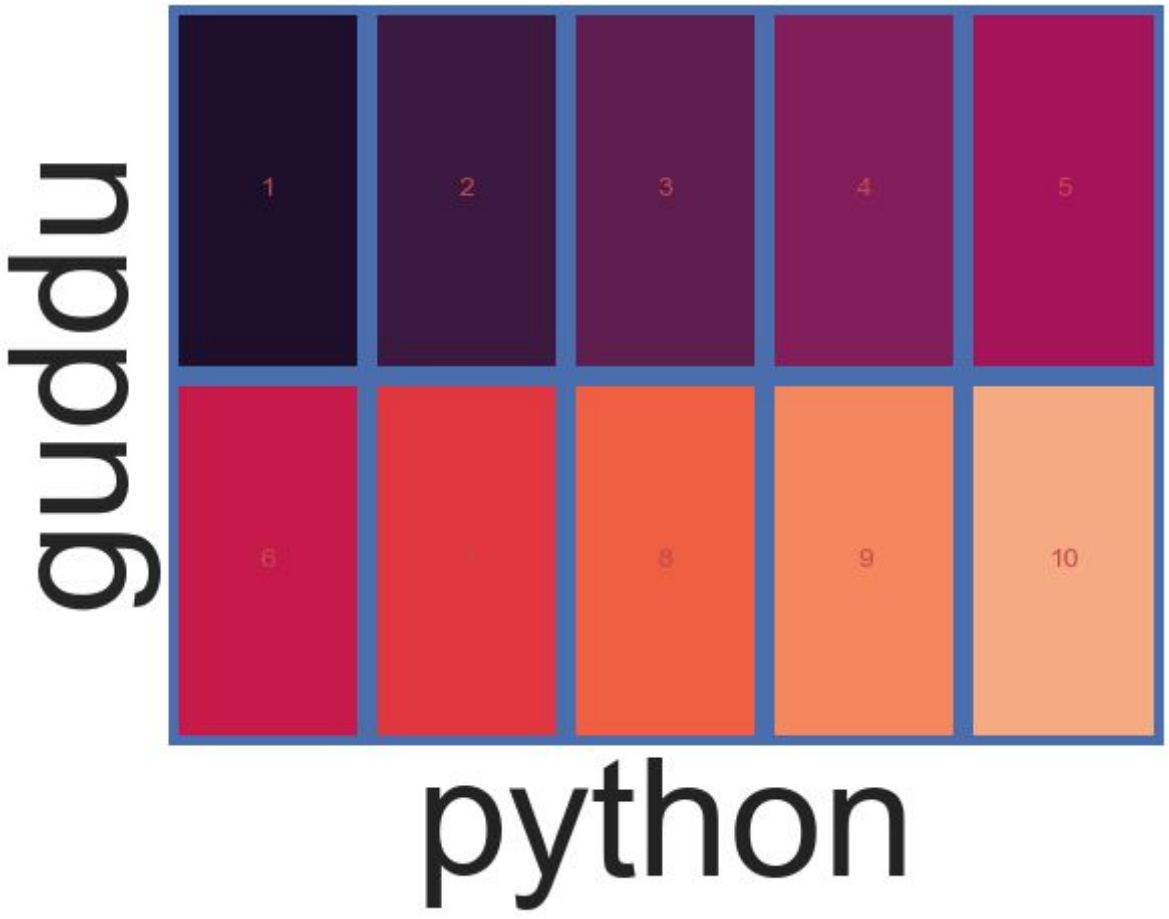
In [169…

```
y={"fontsize":10,"color":"r"}
sns.heatmap(var,vmin=0,vmax=12,annot=True,annot_kws=y,linewidth=6,linecolor="b",cba
plt.show()
```



In [183…

```
y={"fontsize":10,"color":"r"}
vf=sns.heatmap(var,vmin=0,vmax=12,annot=True,annot_kws=y,linewidth=6,linecolor="b",
               xticklabels=False,yticklabels=False)
vf.set(xlabel="python",ylabel="guddu")
#sns.set(font_scale=5)
plt.show()
```



In [ ]: