



```
In [69]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import seaborn as sns
```

```
In [70]: df1=sns.load_dataset("penguins")
```

```
In [71]: df1
```

```
Out[71]:
```

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

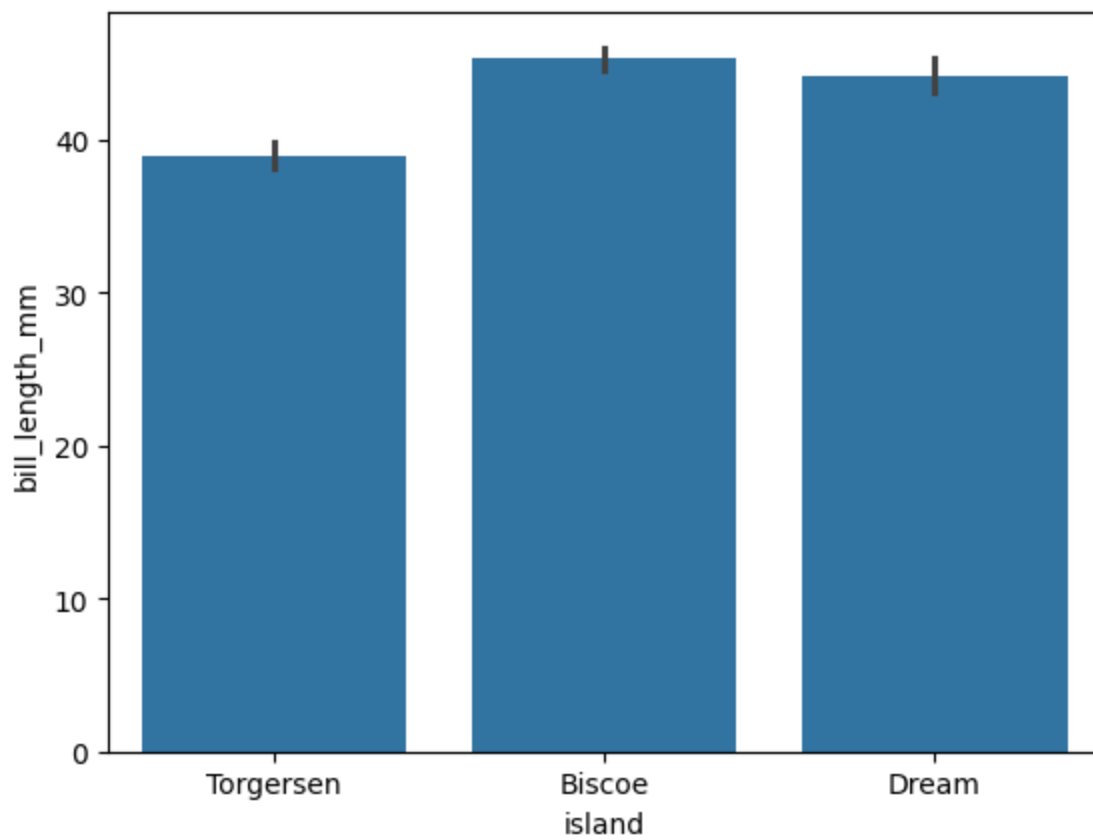
344 rows × 7 columns

```
In [72]: df1["island"]
```

```
Out[72]: 0      Torgersen
1      Torgersen
2      Torgersen
3      Torgersen
4      Torgersen
...
339     Biscoe
340     Biscoe
341     Biscoe
342     Biscoe
343     Biscoe
Name: island, Length: 344, dtype: object
```

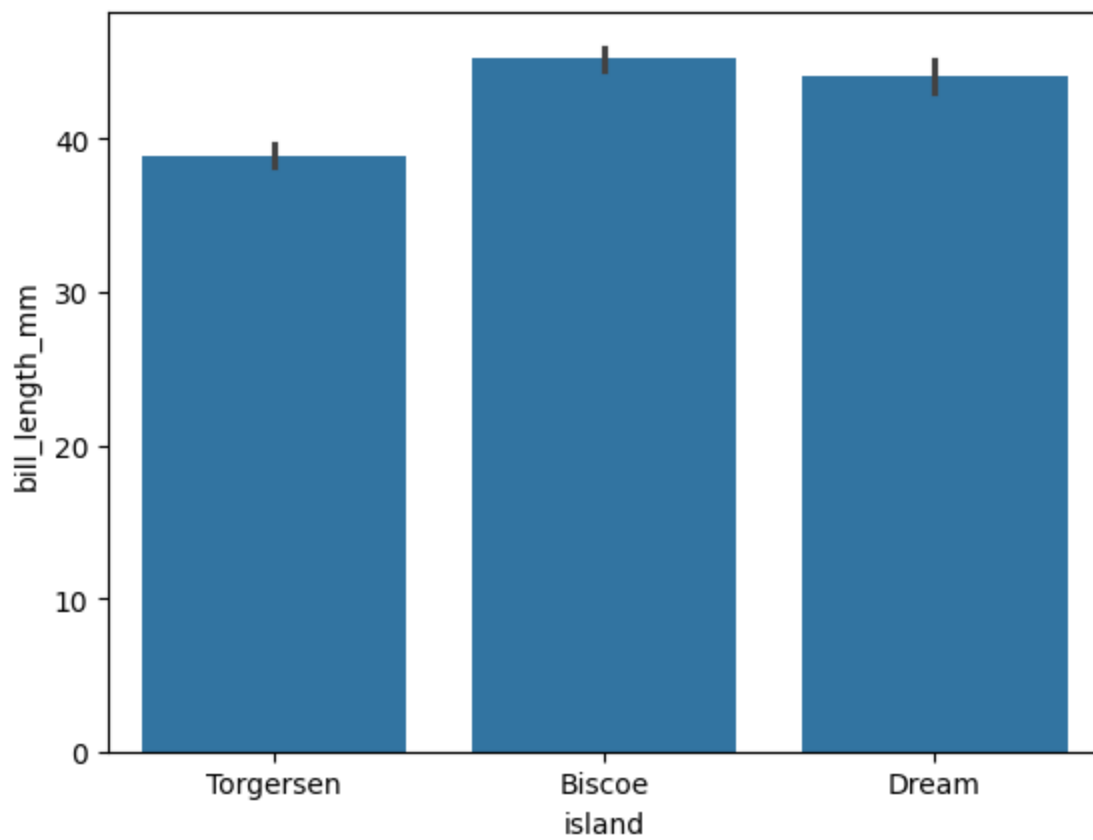
```
In [73]: sns.barplot(x='island', y='bill_length_mm' , data=df1)
```

```
Out[73]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



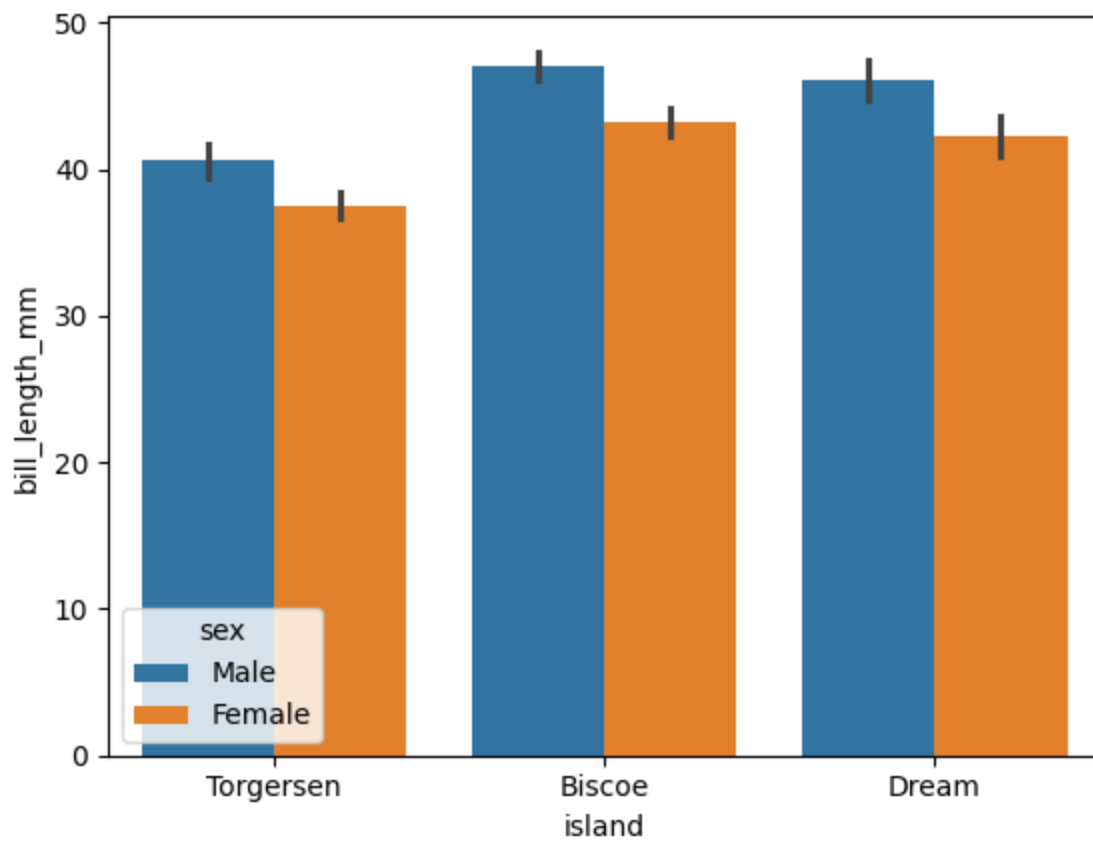
```
In [74]: sns.barplot(x= df1.island, y=df1.bill_length_mm )
```

```
Out[74]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



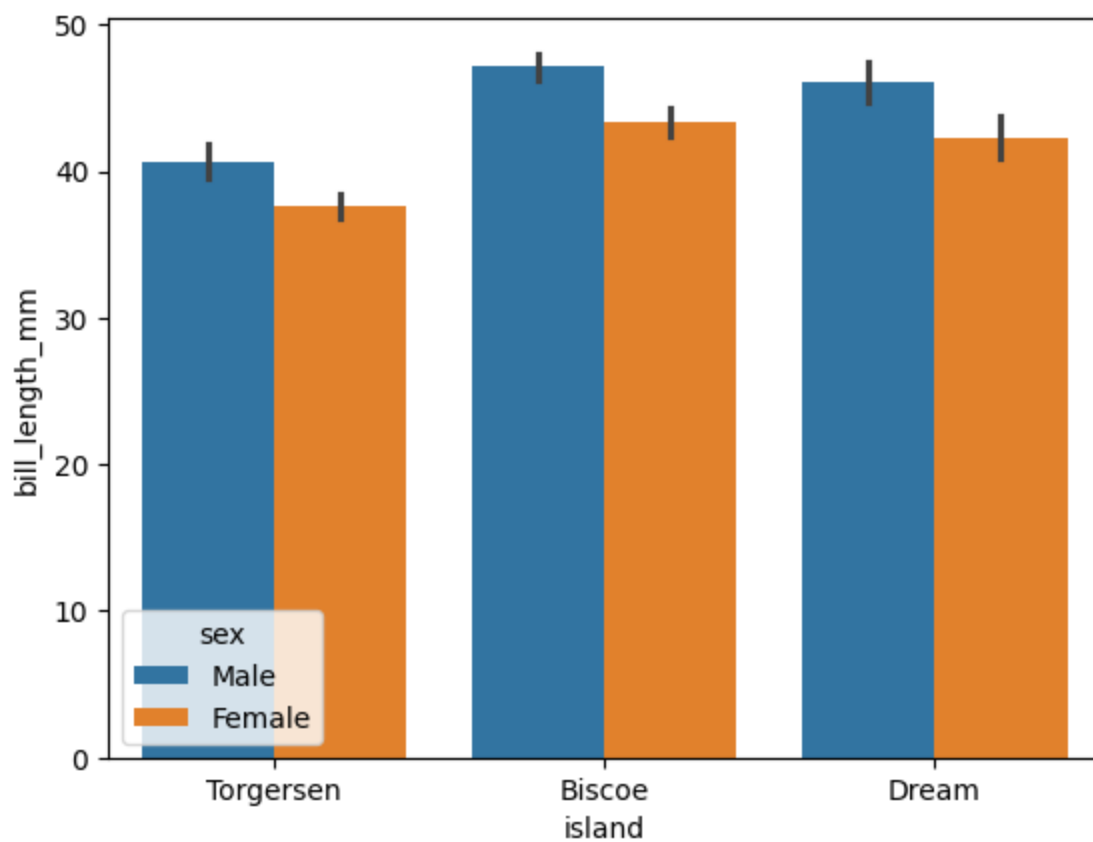
```
In [75]: sns.barplot(x='island', y='bill_length_mm' , hue='sex', data=df1)
```

```
Out[75]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



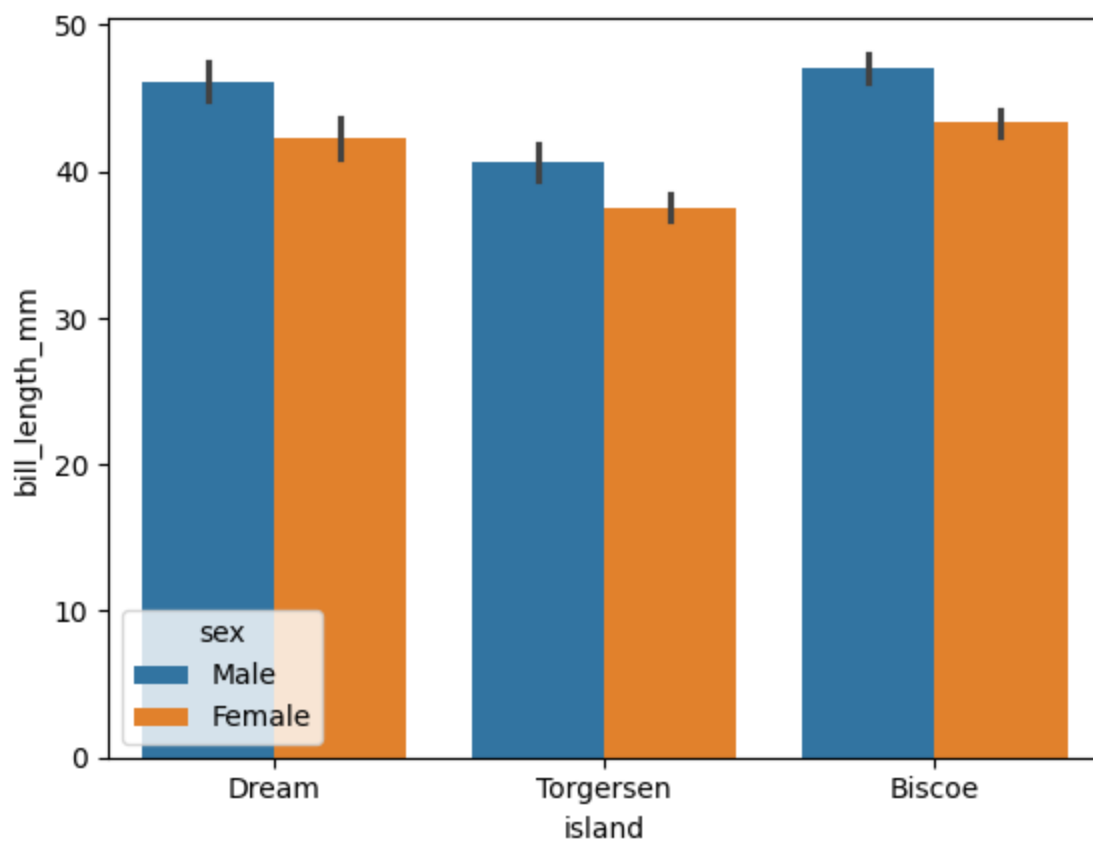
```
In [83]: sns.barplot(x= df1.island, y=df1.bill_length_mm , hue=df1.sex)
```

```
Out[83]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



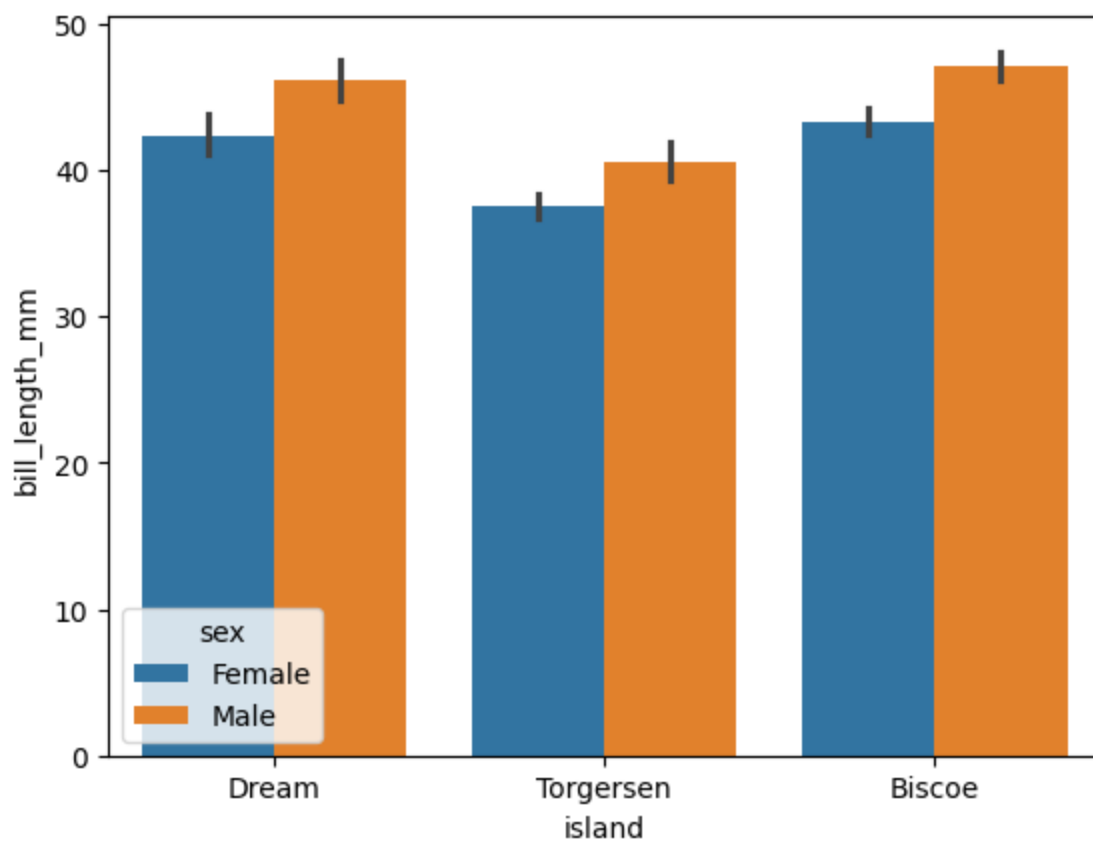
```
In [84]: order1=["Dream","Torgersen", "Biscoe"]  
sns.barplot(x= "island", y="bill_length_mm", data=df1, hue="sex" , order=order1)
```

```
Out[84]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



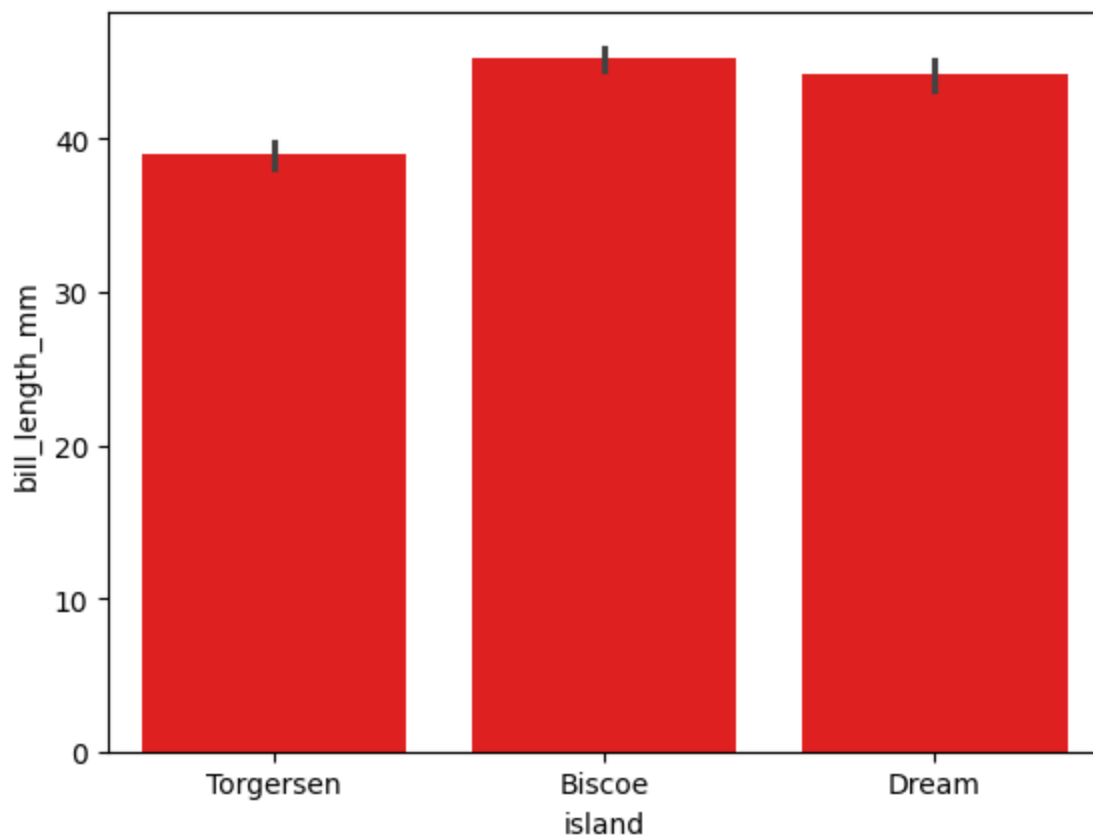
```
In [85]: order1=["Dream","Torgersen", "Biscoe"]  
hue_order_1=["Female","Male"]  
sns.barplot(x= "island", y="bill_length_mm", data=df1, hue="sex" , order=order1)
```

```
Out[85]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



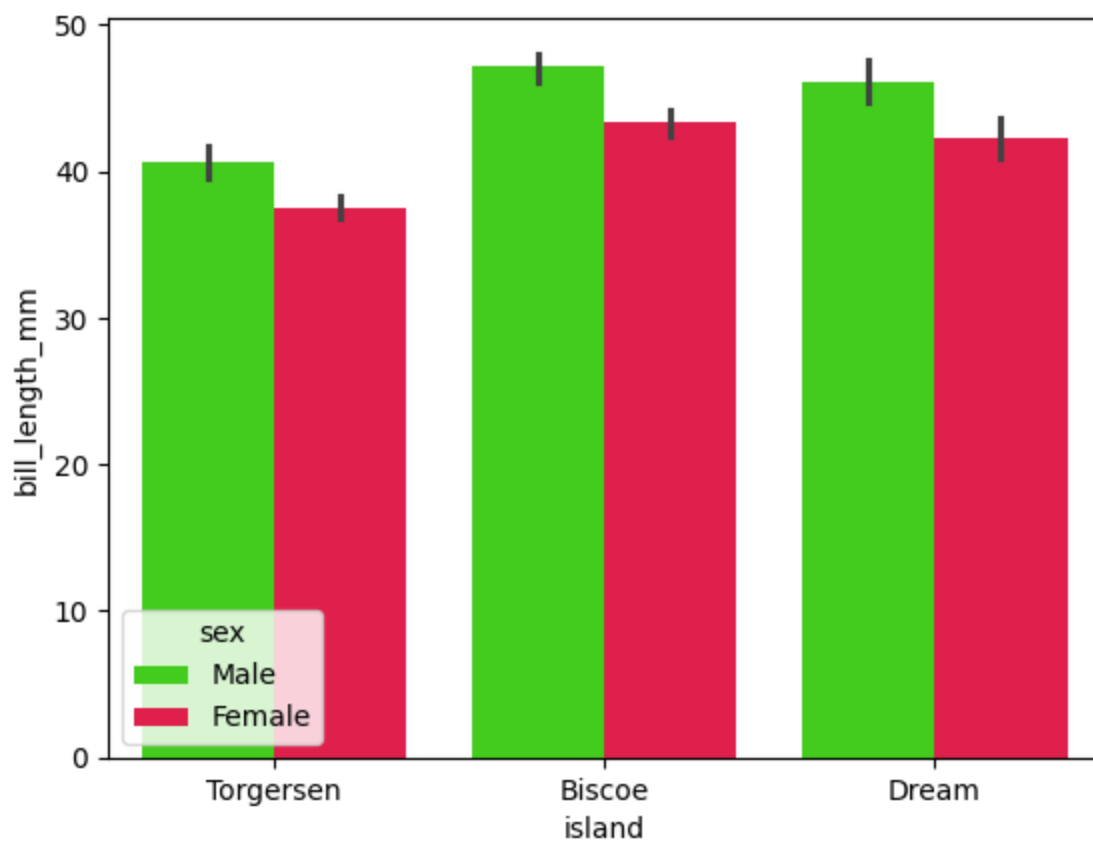
```
In [87]: order1=["Dream","Torgersen", "Biscoe"]  
hue_order_1=["Female","Male"]  
sns.barplot(x= "island", y="bill_length_mm", data=df1, color='red')
```

```
Out[87]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



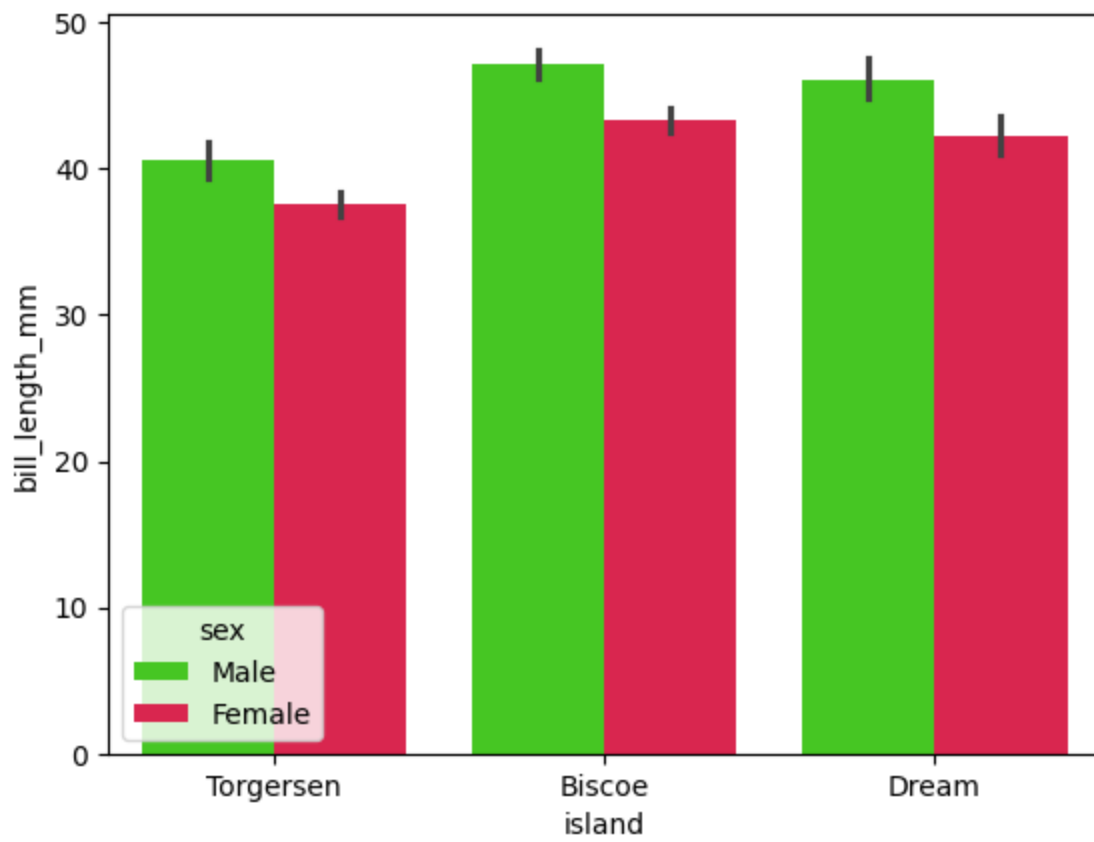
```
In [95]: order1=["Dream","Torgersen", "Biscoe"]  
hue_order_1=["Female","Male"]  
sns.barplot(x="island", y="bill_length_mm", data=df1, hue='sex',palette="prism")
```

```
Out[95]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



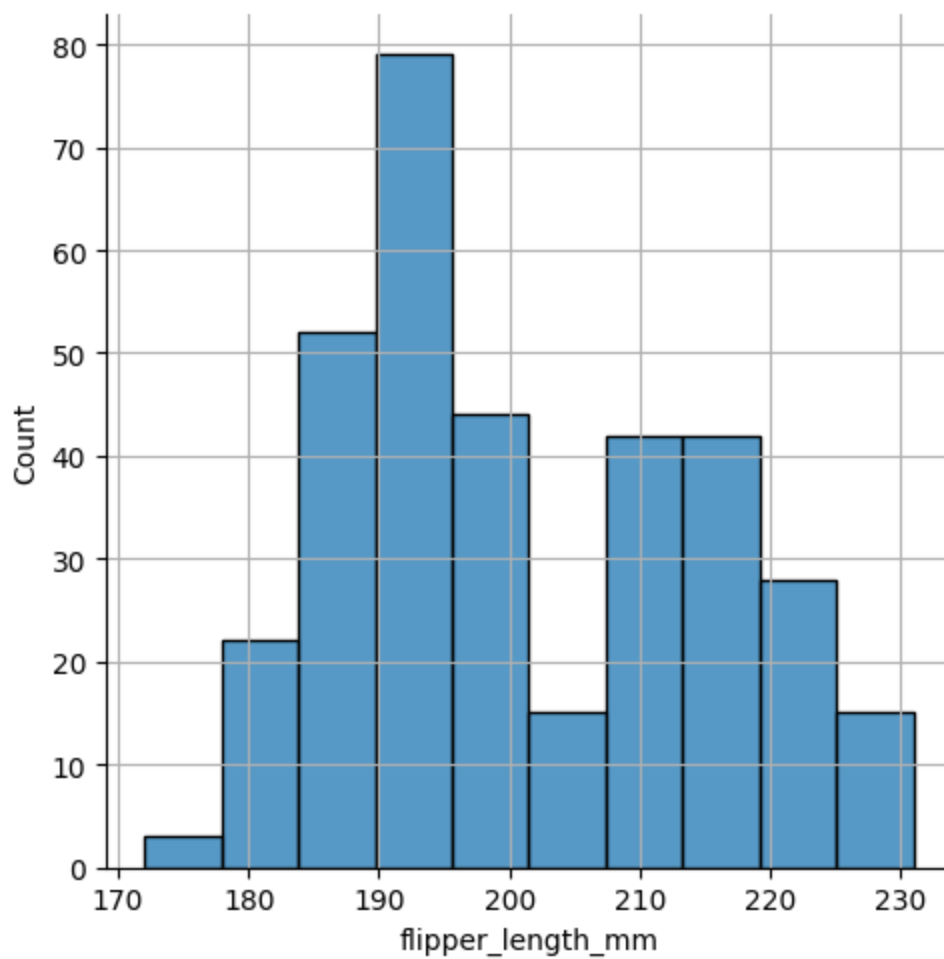
```
In [99]: order1=["Dream","Torgersen", "Biscoe"]  
hue_order_1=["Female","Male"]  
sns.barplot(x="island", y="bill_length_mm", data=df1, hue='sex',palette="prism")
```

```
Out[99]: <Axes: xlabel='island', ylabel='bill_length_mm'>
```



historam

```
In [105... sns.displot(df1["flipper_length_mm"])  
plt.grid()
```



In [100... df1

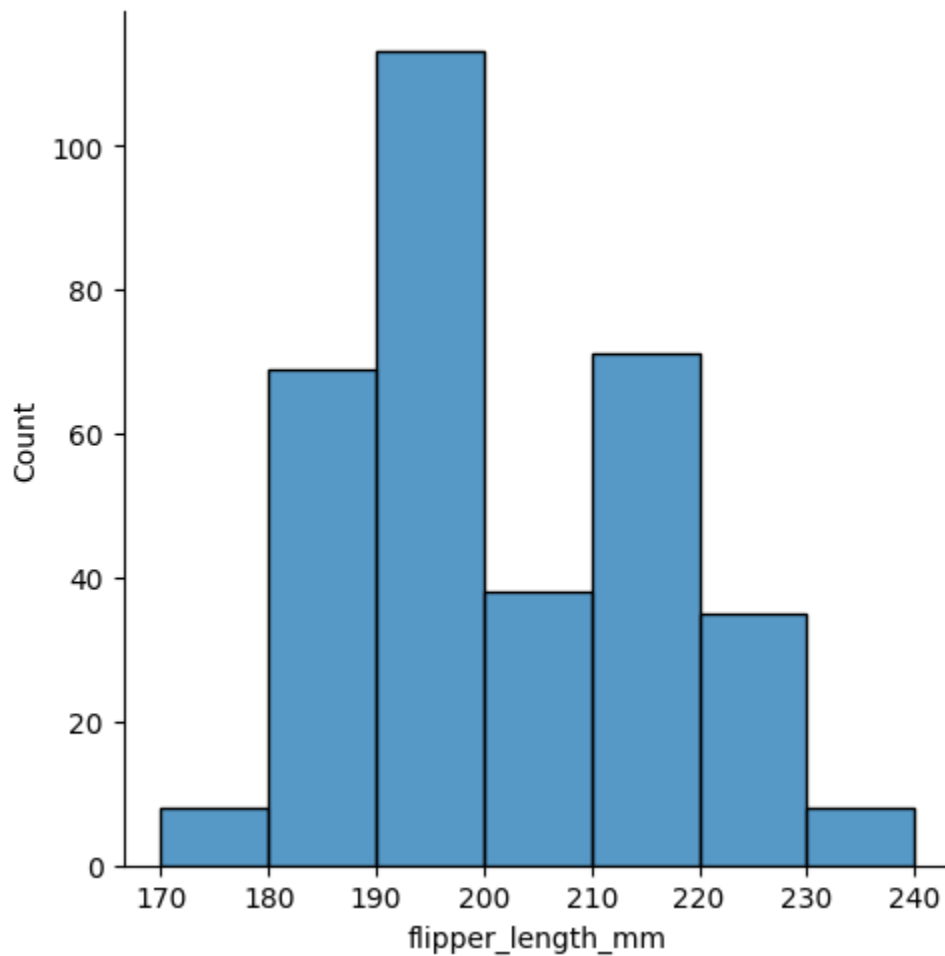
	species	island	bill_length_mm	bill_depth_mm	flipper_length_mm	body
0	Adelie	Torgersen	39.1	18.7	181.0	
1	Adelie	Torgersen	39.5	17.4	186.0	
2	Adelie	Torgersen	40.3	18.0	195.0	
3	Adelie	Torgersen	NaN	NaN	NaN	
4	Adelie	Torgersen	36.7	19.3	193.0	
...	...	...	...	...	...	...
339	Gentoo	Biscoe	NaN	NaN	NaN	
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342	Gentoo	Biscoe	45.2	14.8	212.0	
343	Gentoo	Biscoe	49.9	16.1	213.0	

344 rows × 7 columns

BIns

```
In [107...] sns.displot(df1["flipper_length_mm"],bins=[170,180,190,200,210,220,230,240])
```

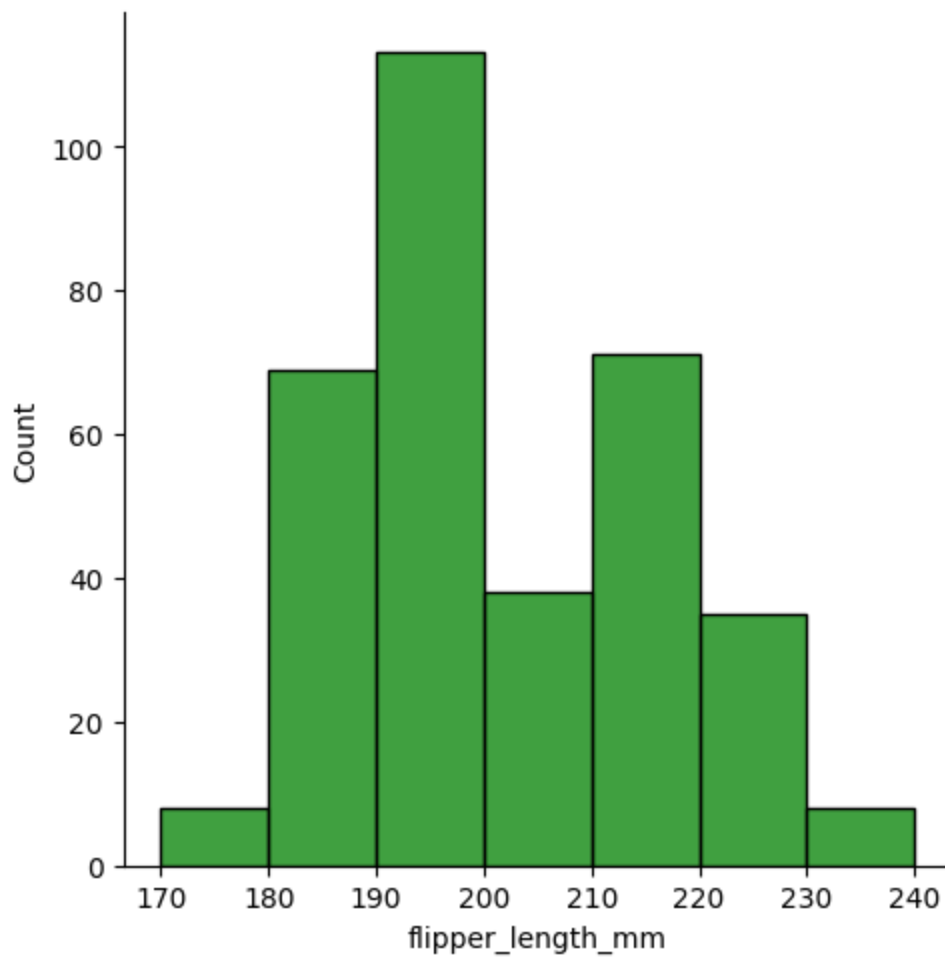
```
Out[107...] <seaborn.axisgrid.FacetGrid at 0x1fee410cf50>
```



color

```
In [112...] sns.displot(df1["flipper_length_mm"],bins=[170,180,190,200,210,220,230,240], c
```

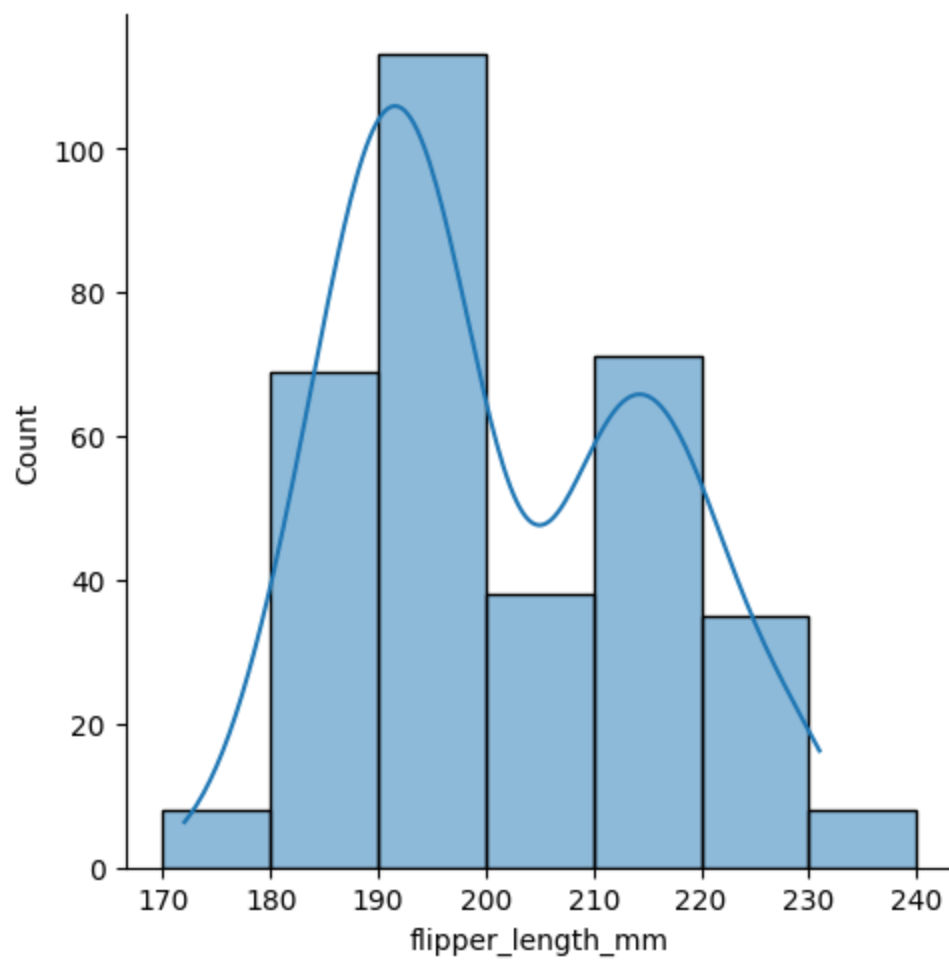
```
Out[112...] <seaborn.axisgrid.FacetGrid at 0x1fee57a25d0>
```



KDE is used to show density of the Histogram

```
In [114...] sns.displot(df1["flipper_length_mm"], bins=[170,180,190,200,210,220,230,240],
```

```
Out[114...] <seaborn.axisgrid.FacetGrid at 0x1fee133d450>
```



In []: