

# count plot

```
In [2]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

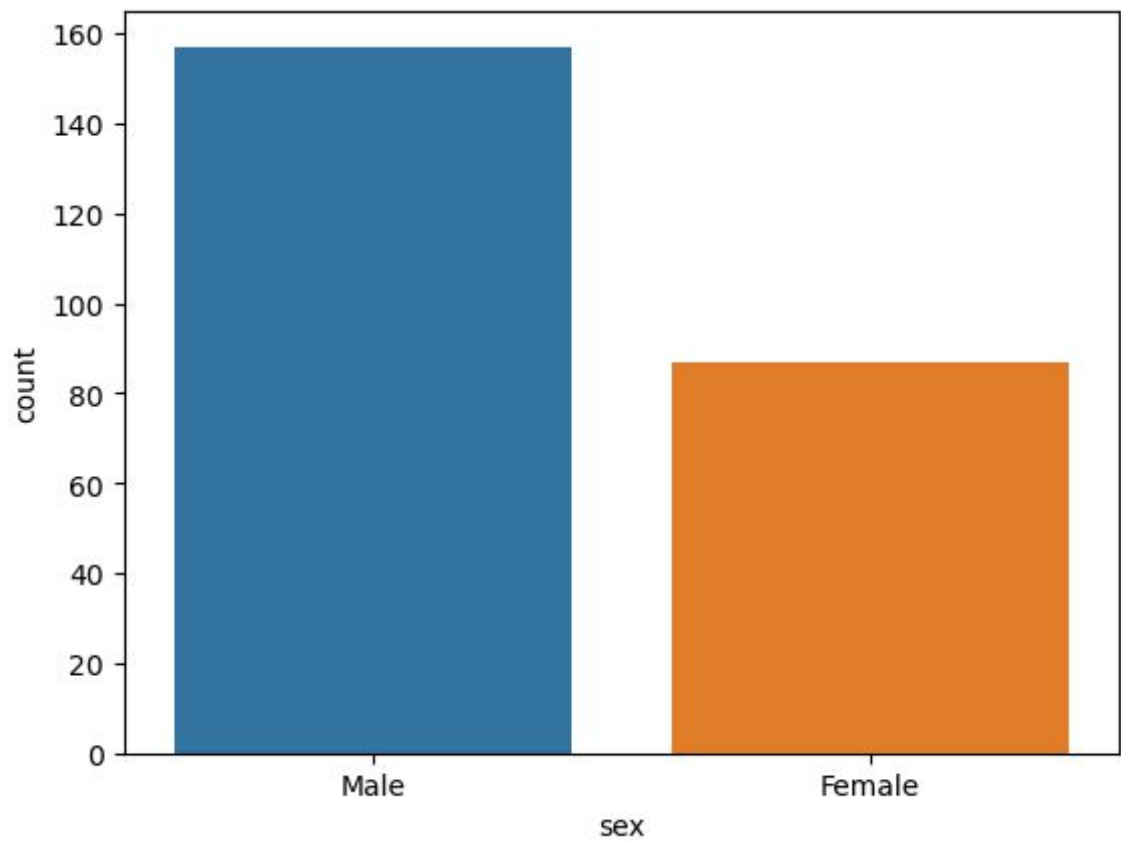
```
In [3]: yoo=sns.load_dataset("tips")
yoo
```

```
Out[3]:
```

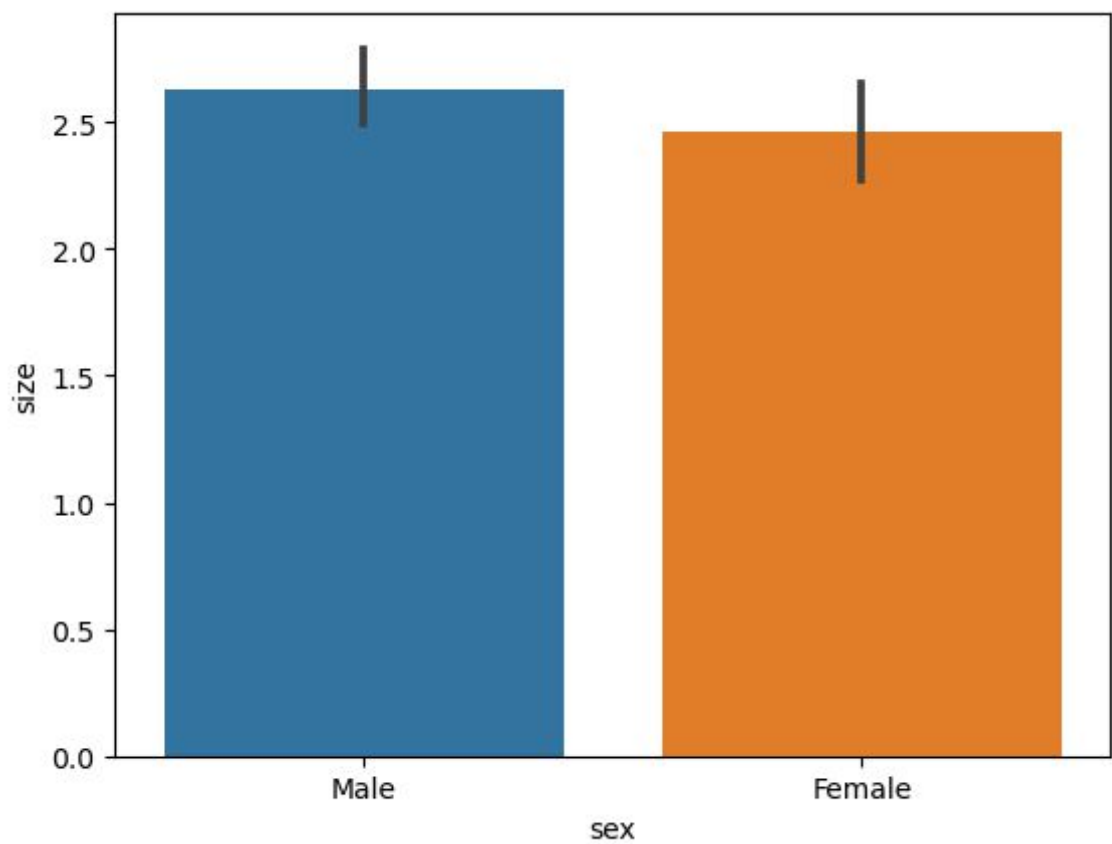
	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4
...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	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

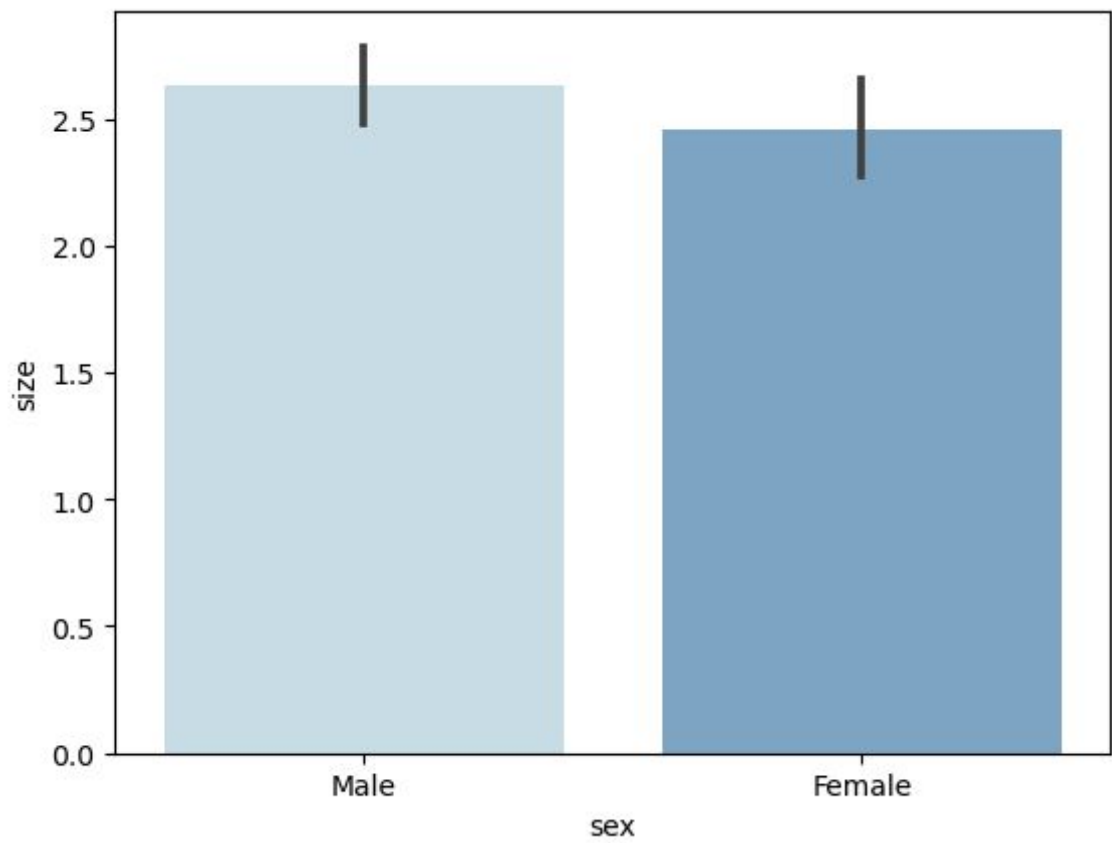
```
In [3]: sns.countplot(x="sex",data=yoo)
plt.show()
```



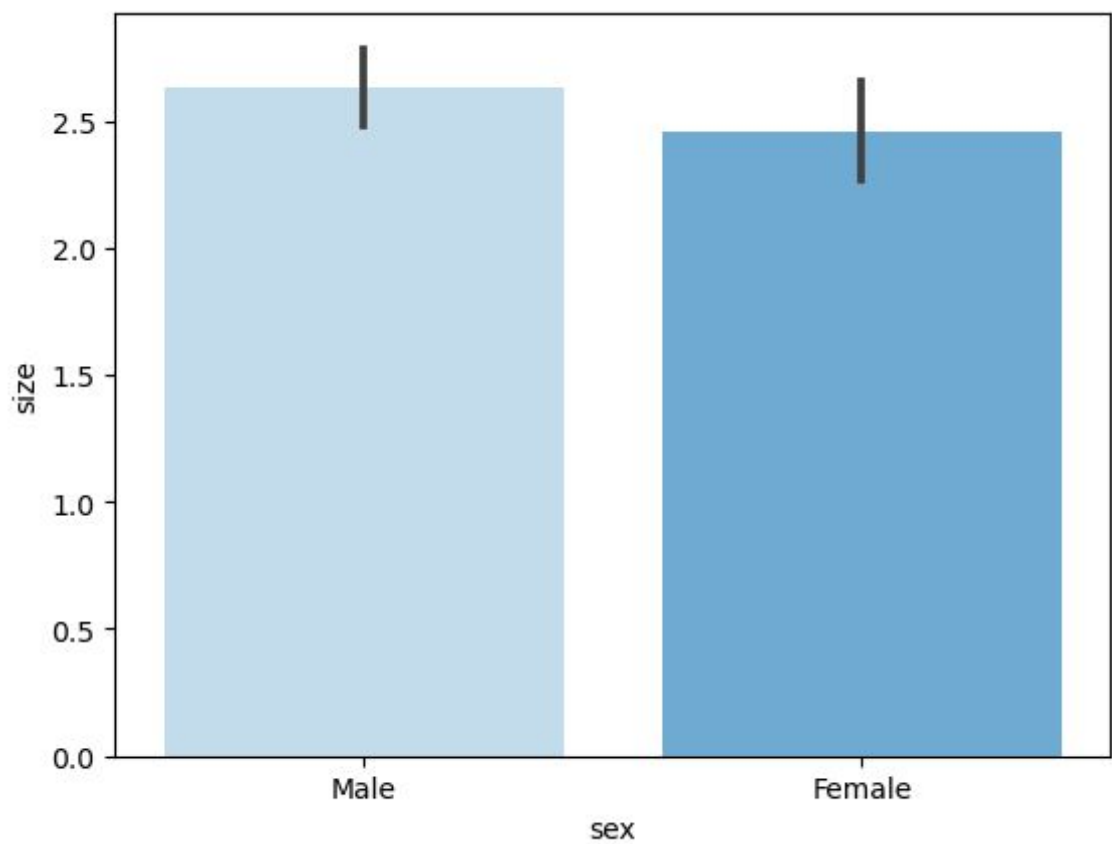
```
In [4]: sns.barplot(x="sex",y="size",data=yoo)  
plt.show()
```



```
In [39]: sns.barplot(x="sex",y="size",data=yoo,alpha=0.7,color="b",palette="Blues")  
plt.show()
```

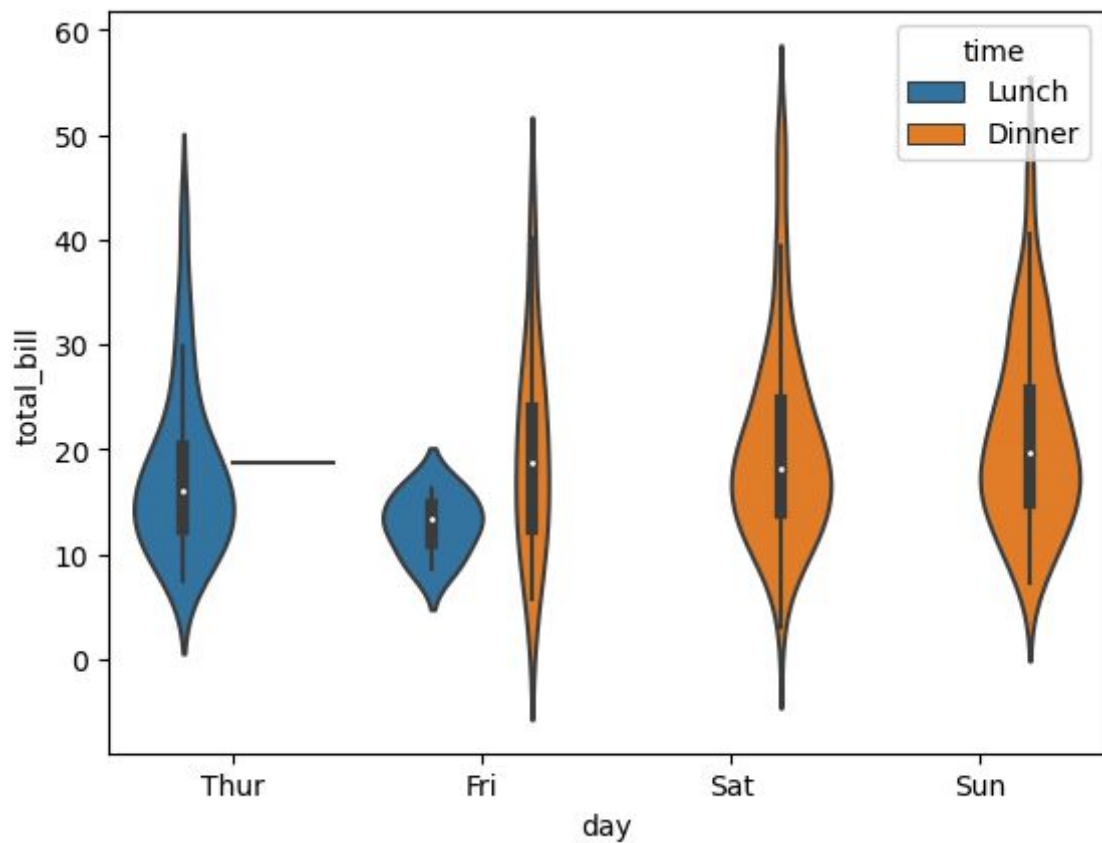


```
In [40]: sns.barplot(x="sex",y="size",data=yoo,alpha=0.7,color="b",palette="Blues",saturation=0.7,plt.show())
```

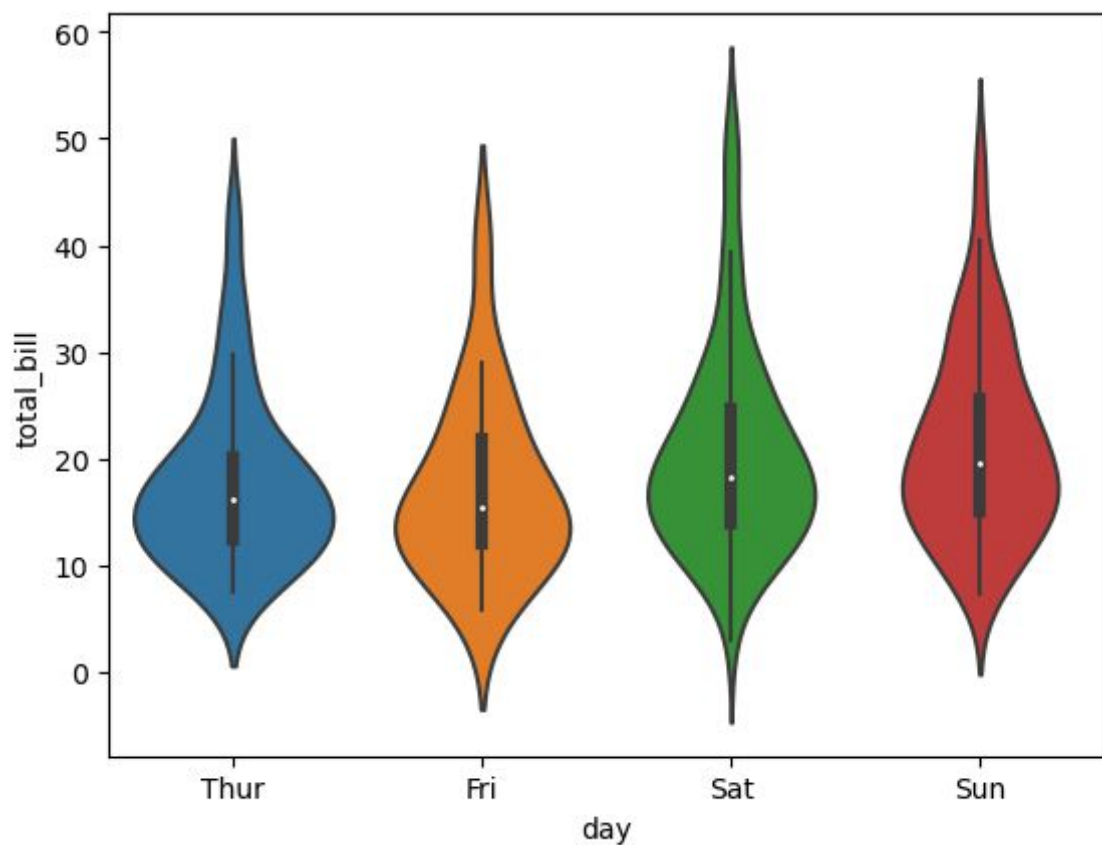


voilin plot

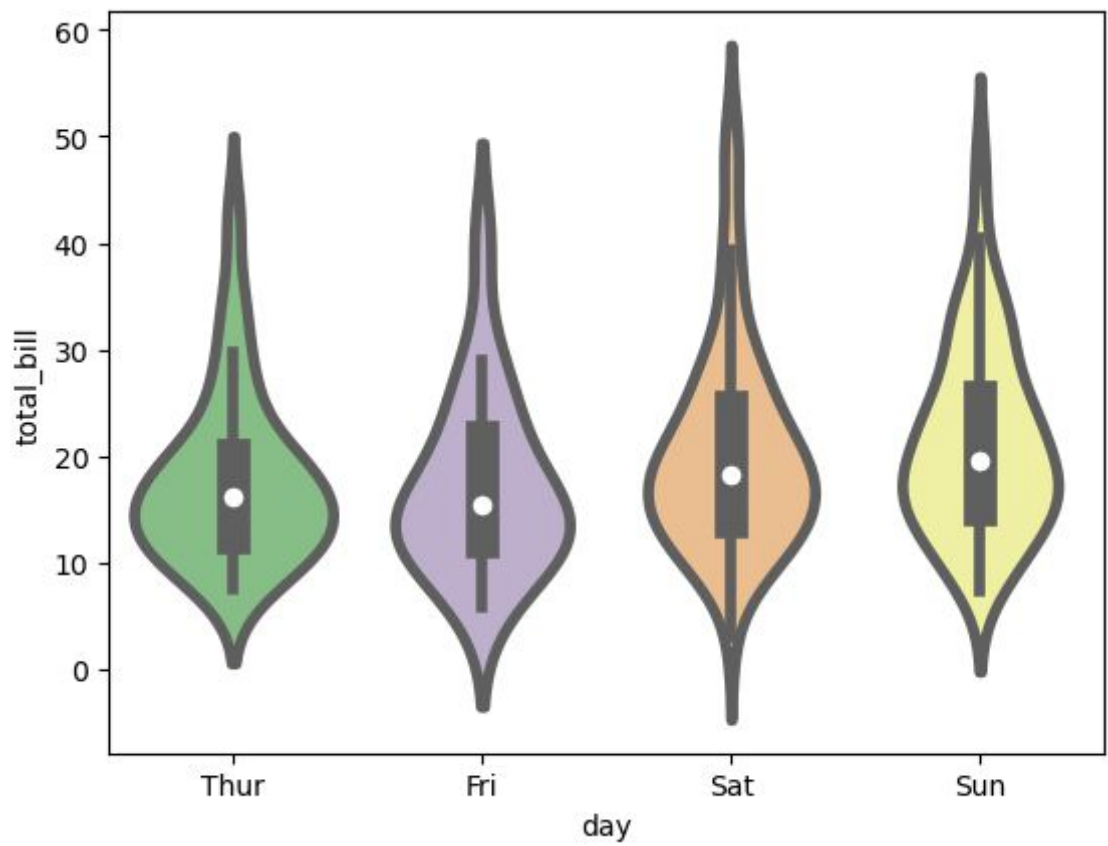
```
In [6]: sns.violinplot(x="day",y="total_bill",data=yoo,hue="time")
plt.show()
```



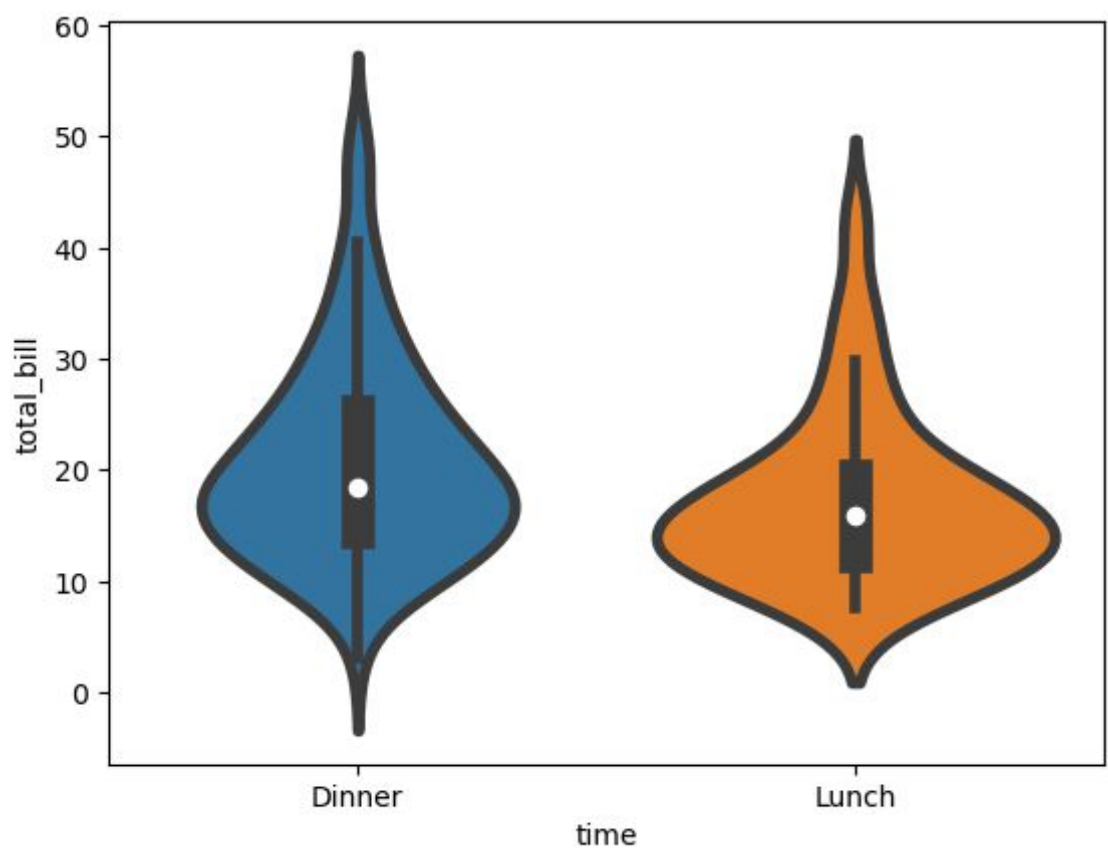
```
In [7]: sns.violinplot(x="day",y="total_bill",data=yoo,alpha=0.5)
plt.show()
```



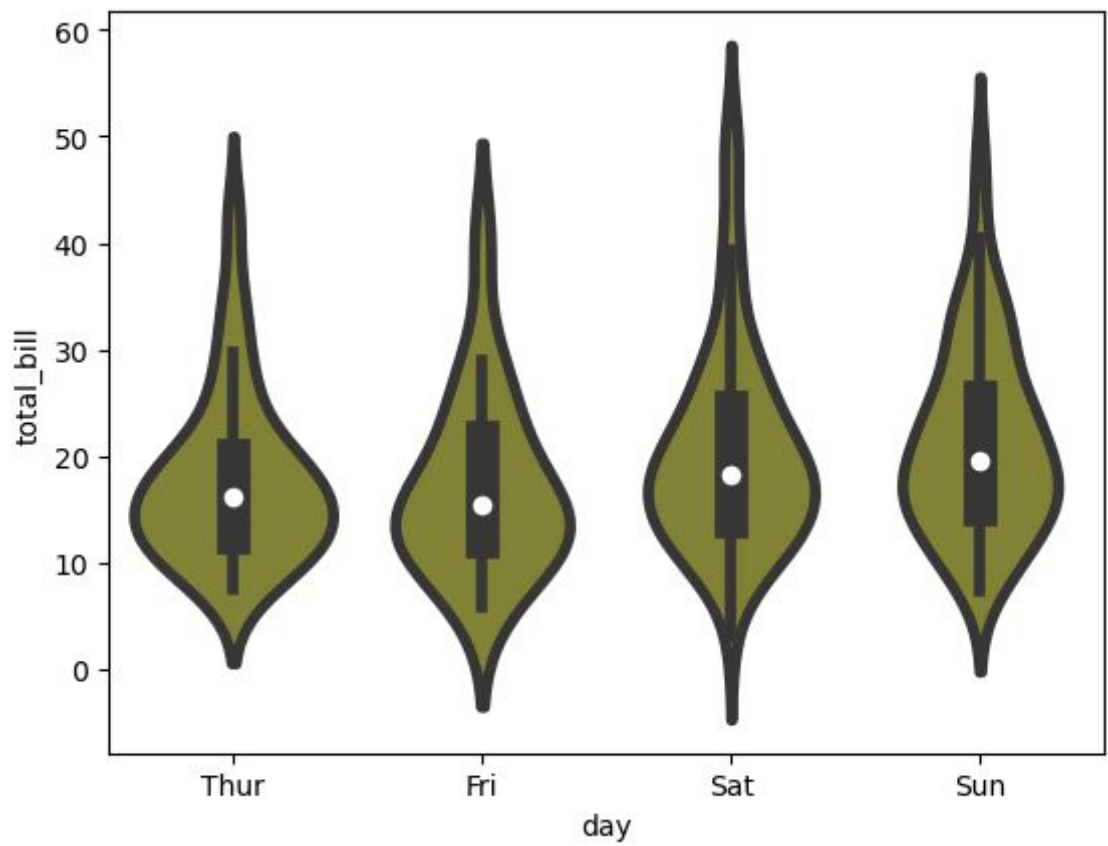
```
In [8]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,palette="Accent")
plt.show()
```



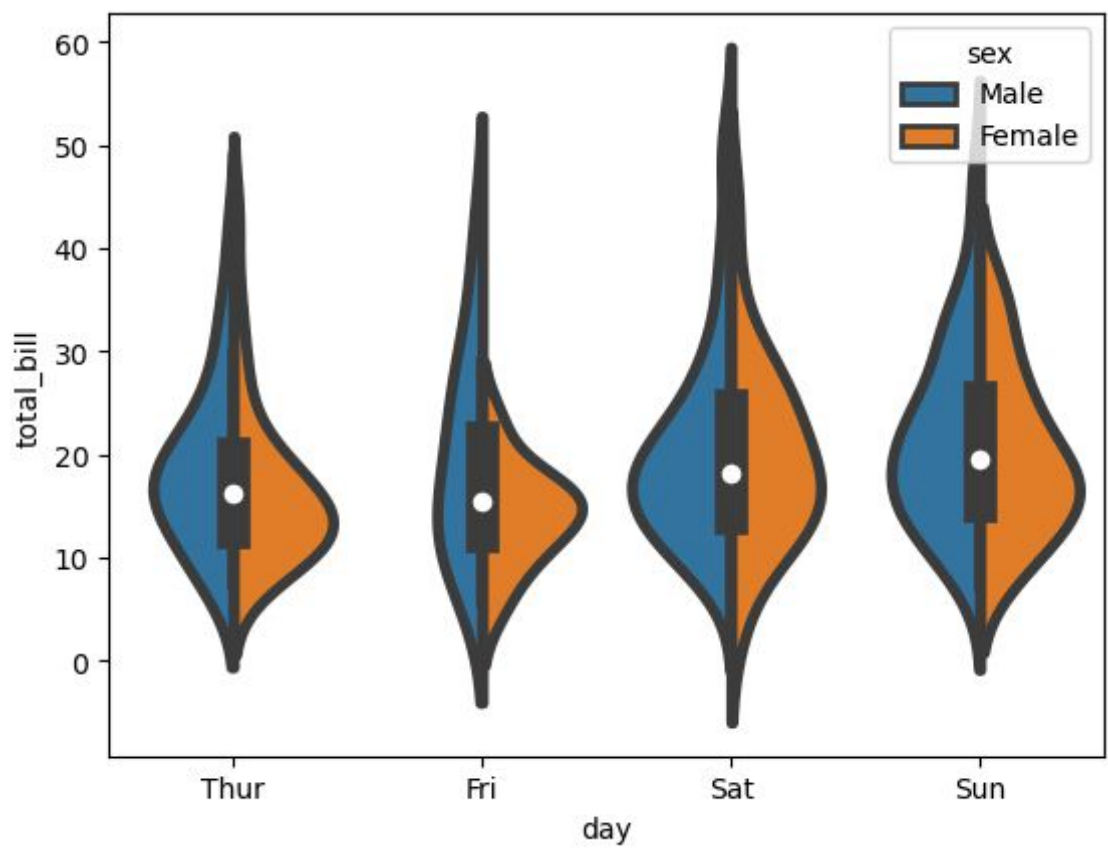
```
In [9]: sns.violinplot(x="time",y="total_bill",data=yoo,linewidth=4,order=["Dinner","Lunch"]
plt.show()
```



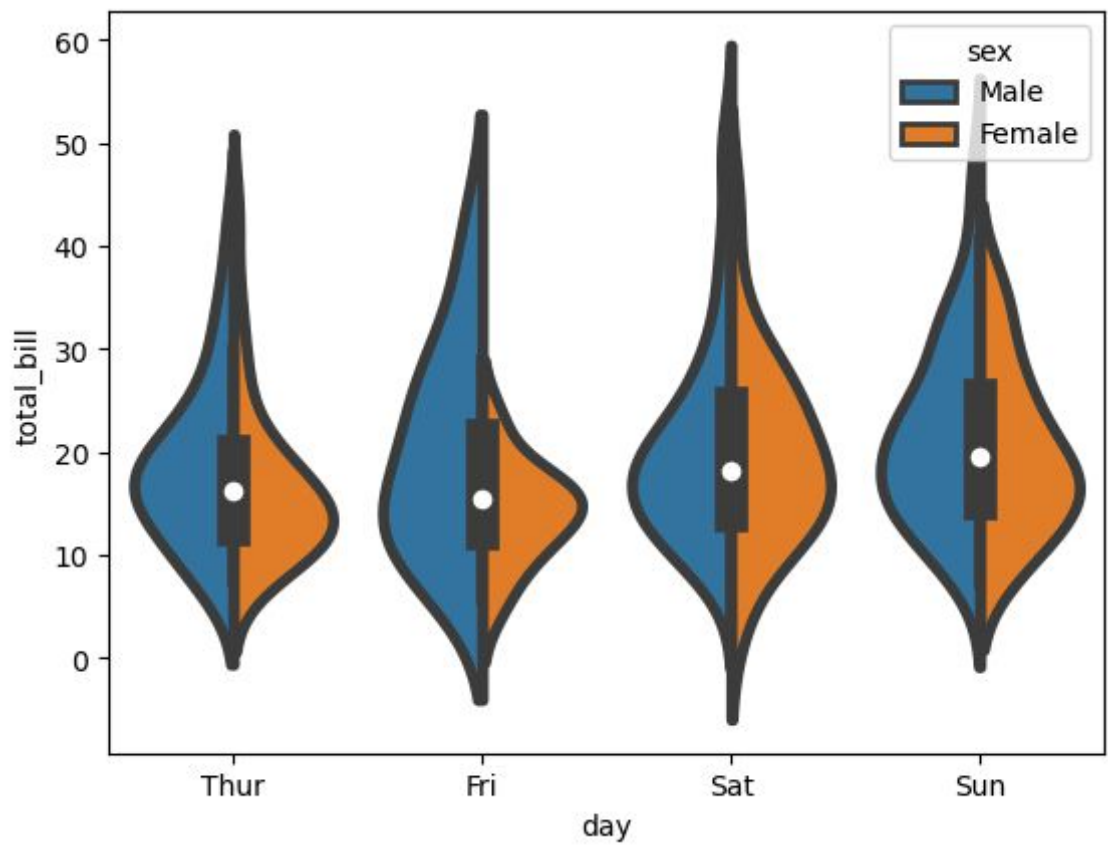
```
In [10]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,saturation=0.4,color="y"
plt.show()
```



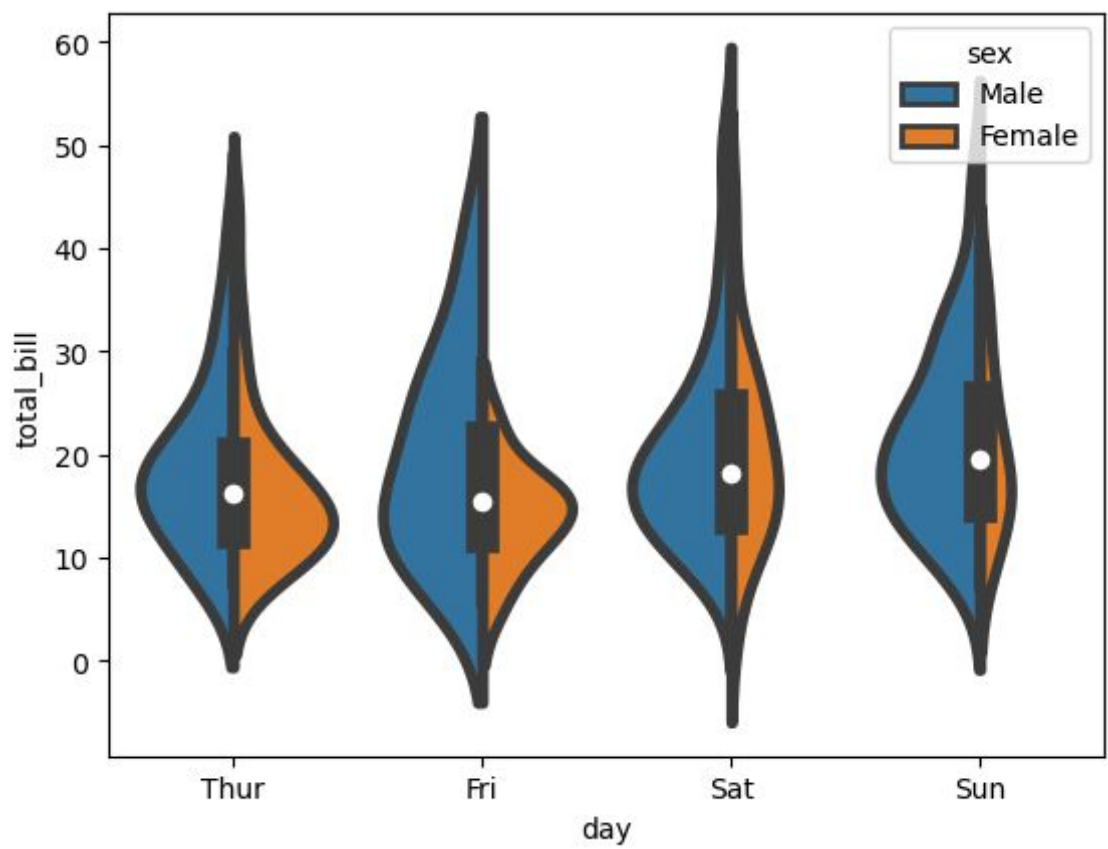
```
In [11]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,hue="sex",split=True)
plt.show()
```



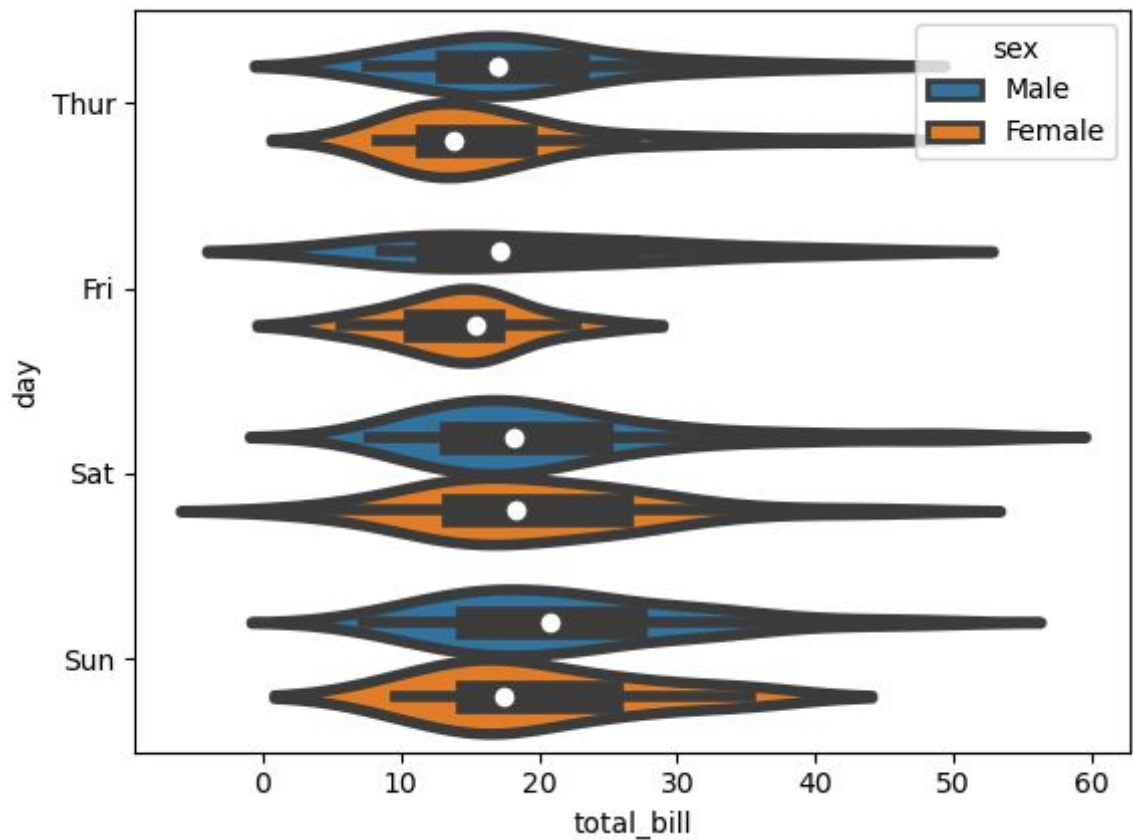
```
In [12]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,hue="sex",split=True,sc
plt.show()
```



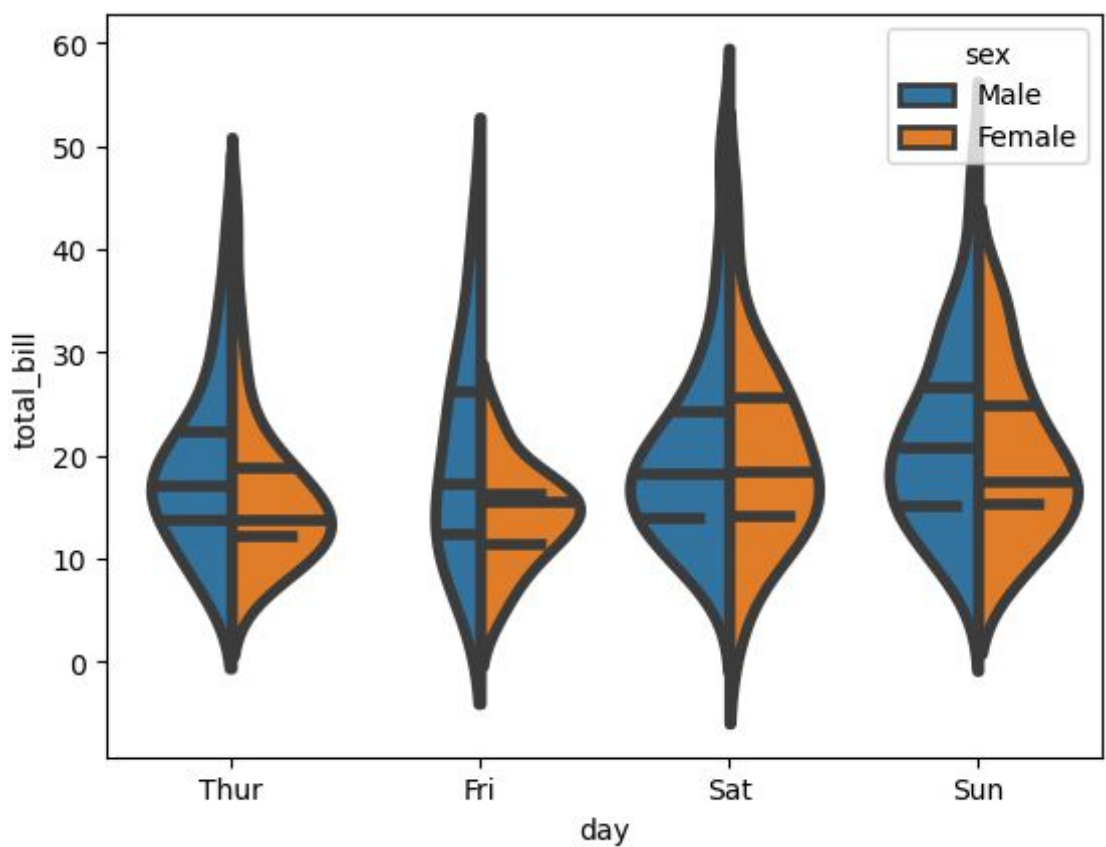
```
In [13]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,hue="sex",split=True,scs
plt.show()
```



```
In [14]: sns.violinplot(x="total_bill",y="day",data=yoo,linewidth=4,hue="sex")
plt.show()
```

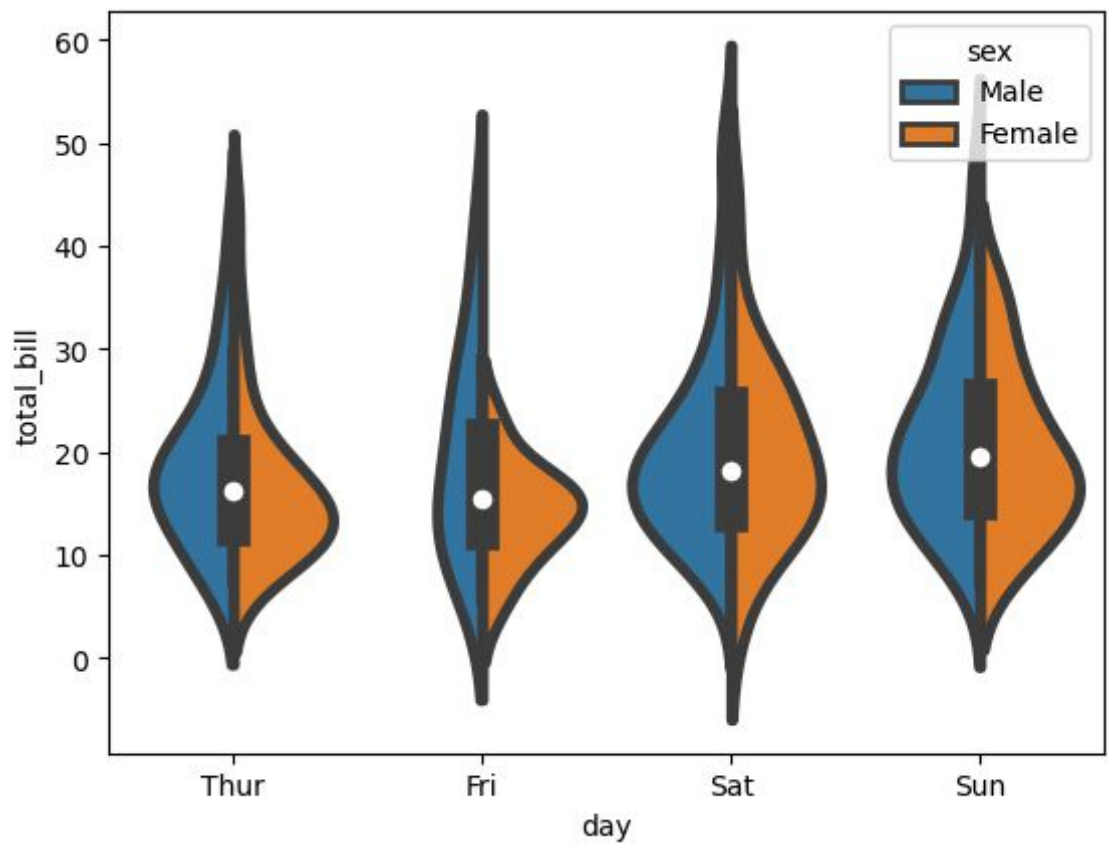


```
In [15]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,hue="sex",split=True,innerplt.show())
```

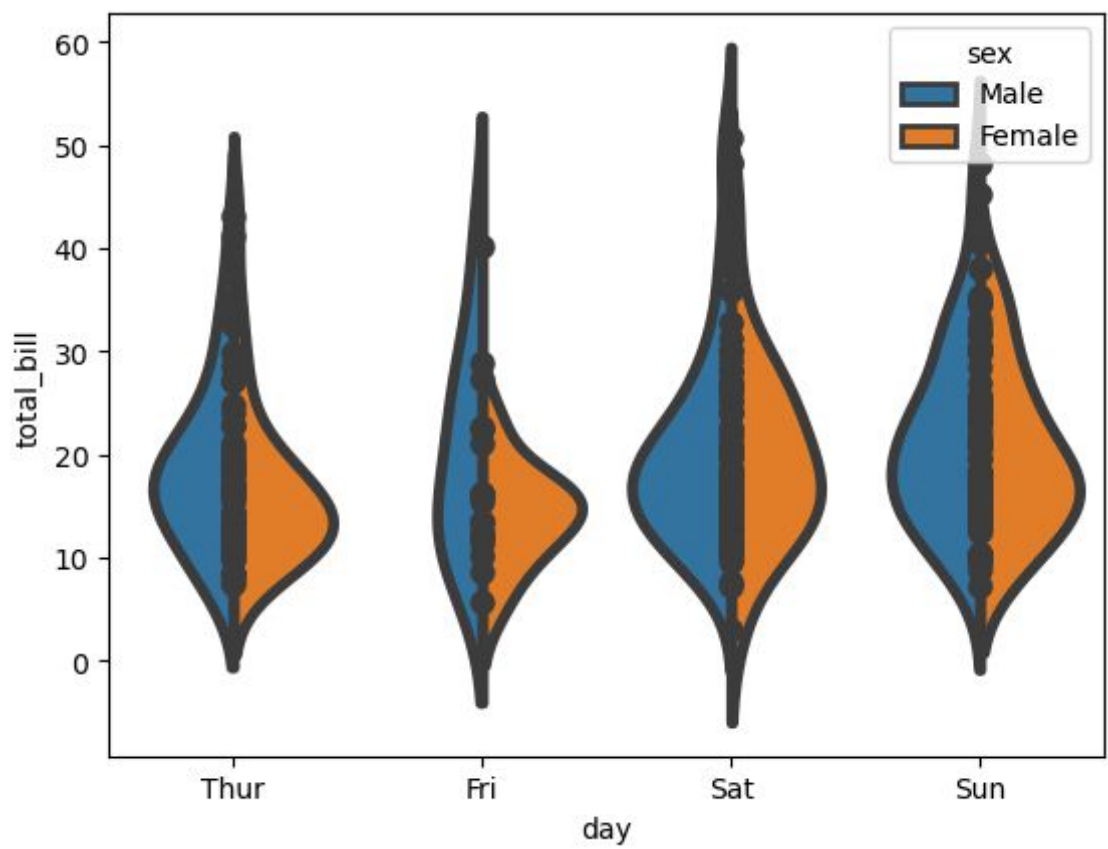


```
In [16]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,hue="sex",split=True,innerplt.show())
```

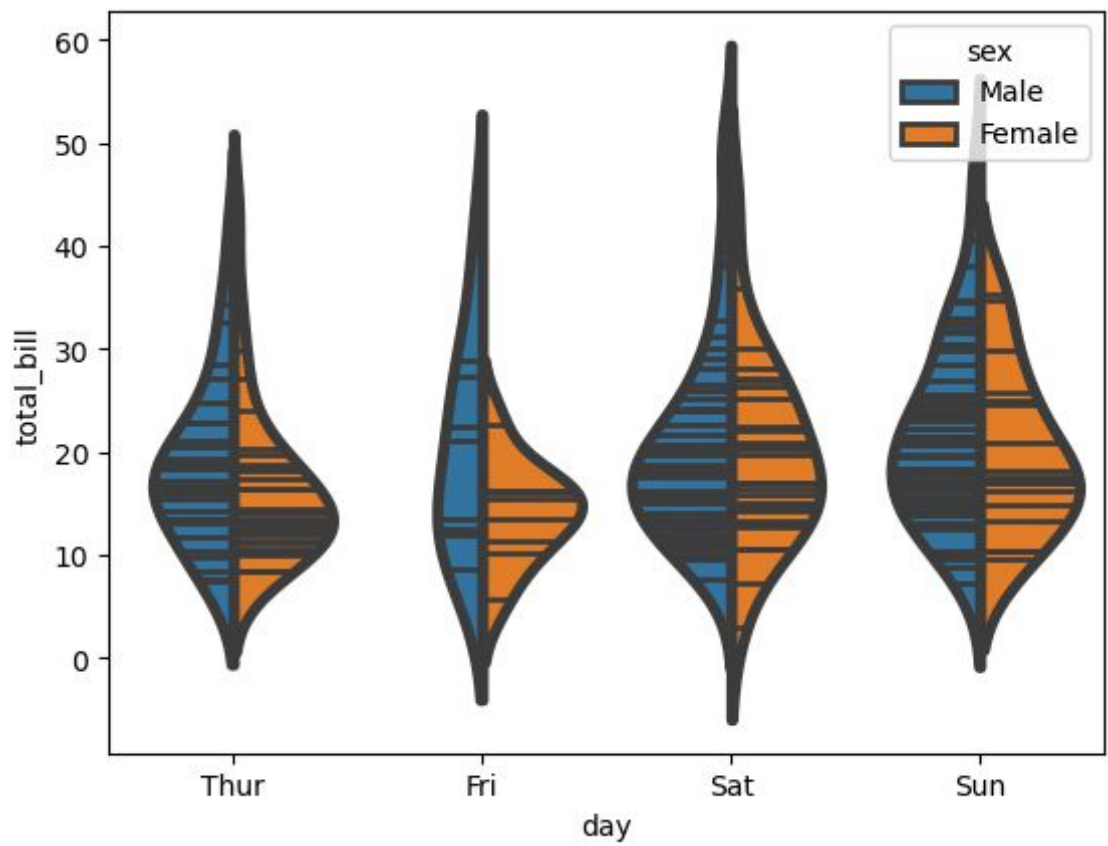




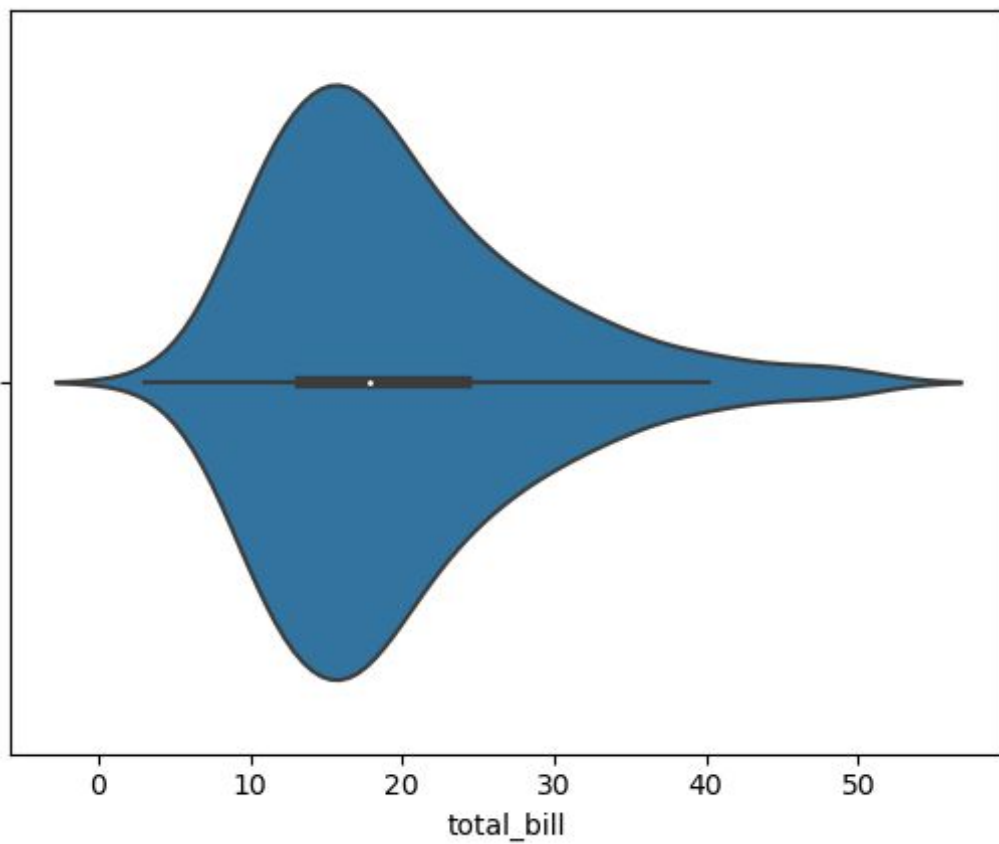
```
In [17]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,hue="sex",split=True,innerplt.show())
```



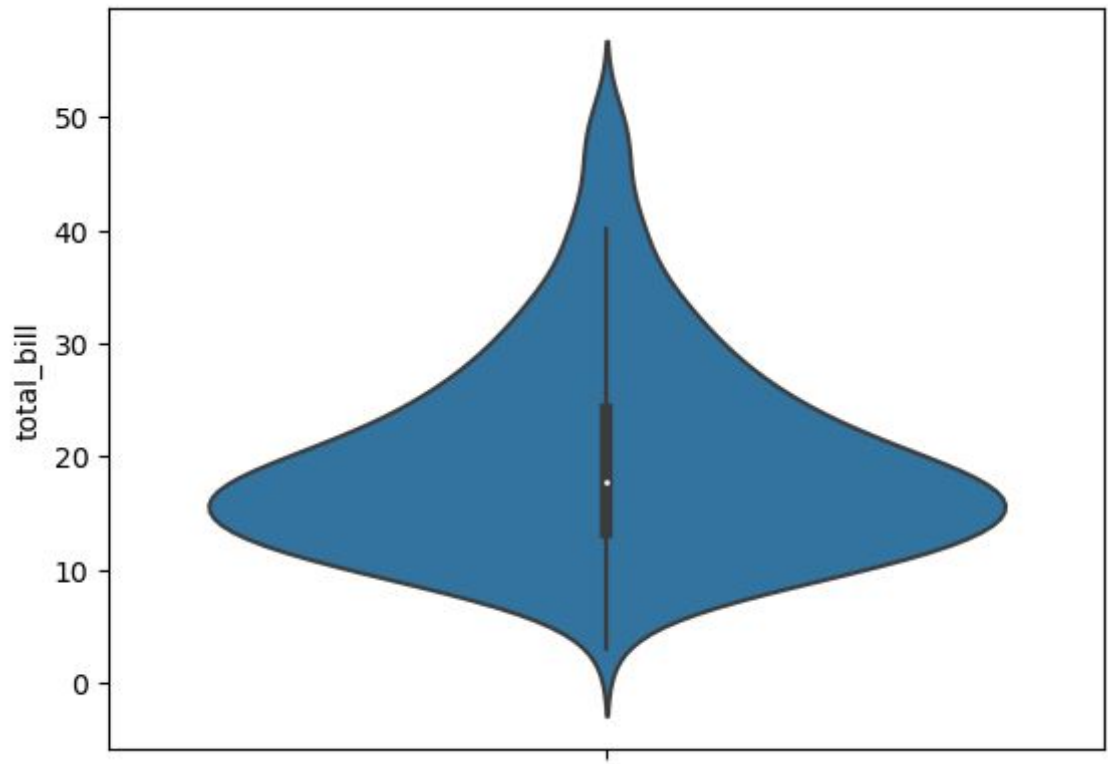
```
In [18]: sns.violinplot(x="day",y="total_bill",data=yoo,linewidth=4,hue="sex",split=True,innerplt.show())
```



```
In [19]: sns.violinplot(x=yoo["total_bill"])  
plt.show()
```

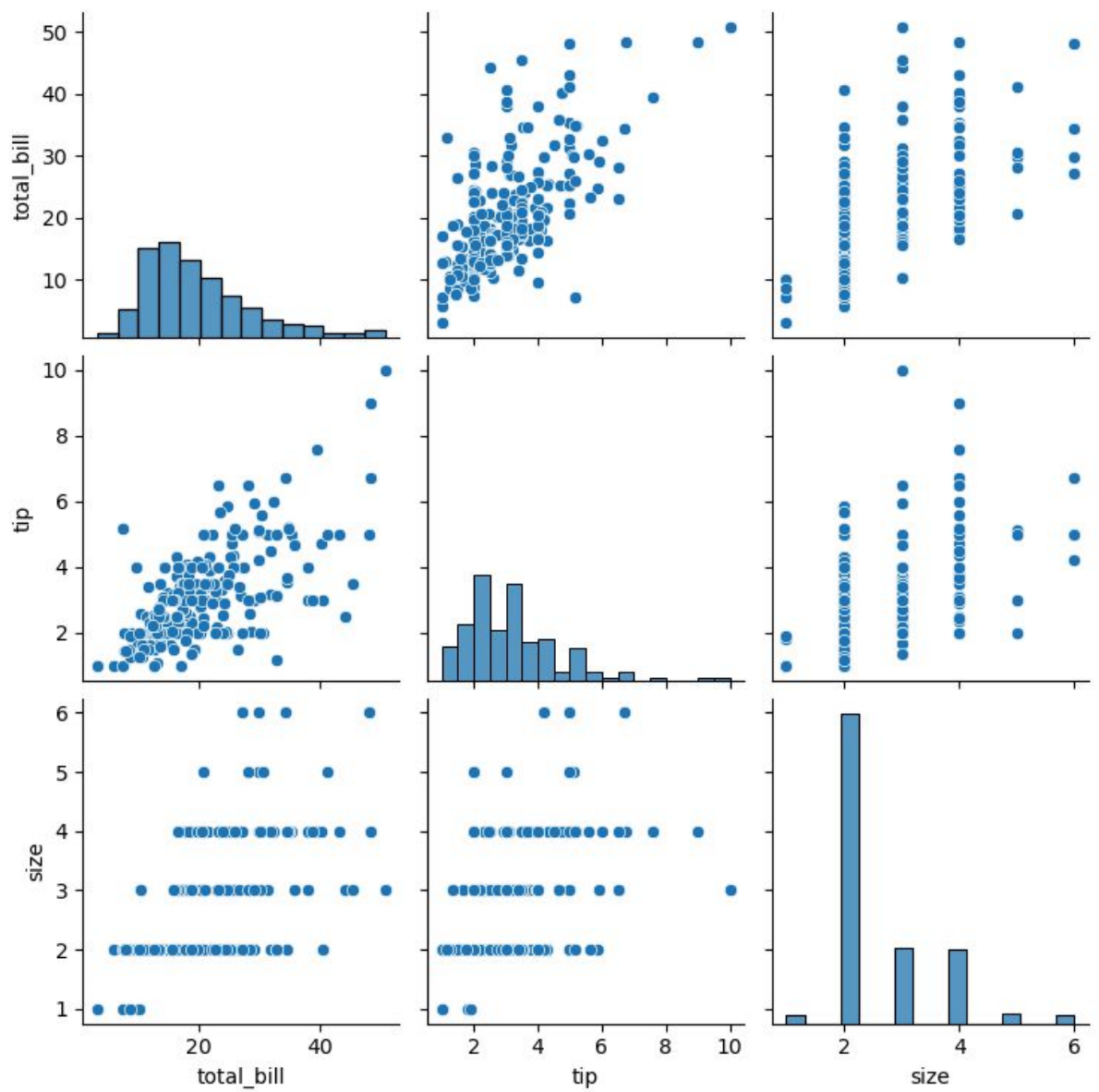


```
In [20]: sns.violinplot(y=yoo["total_bill"])  
plt.show()
```

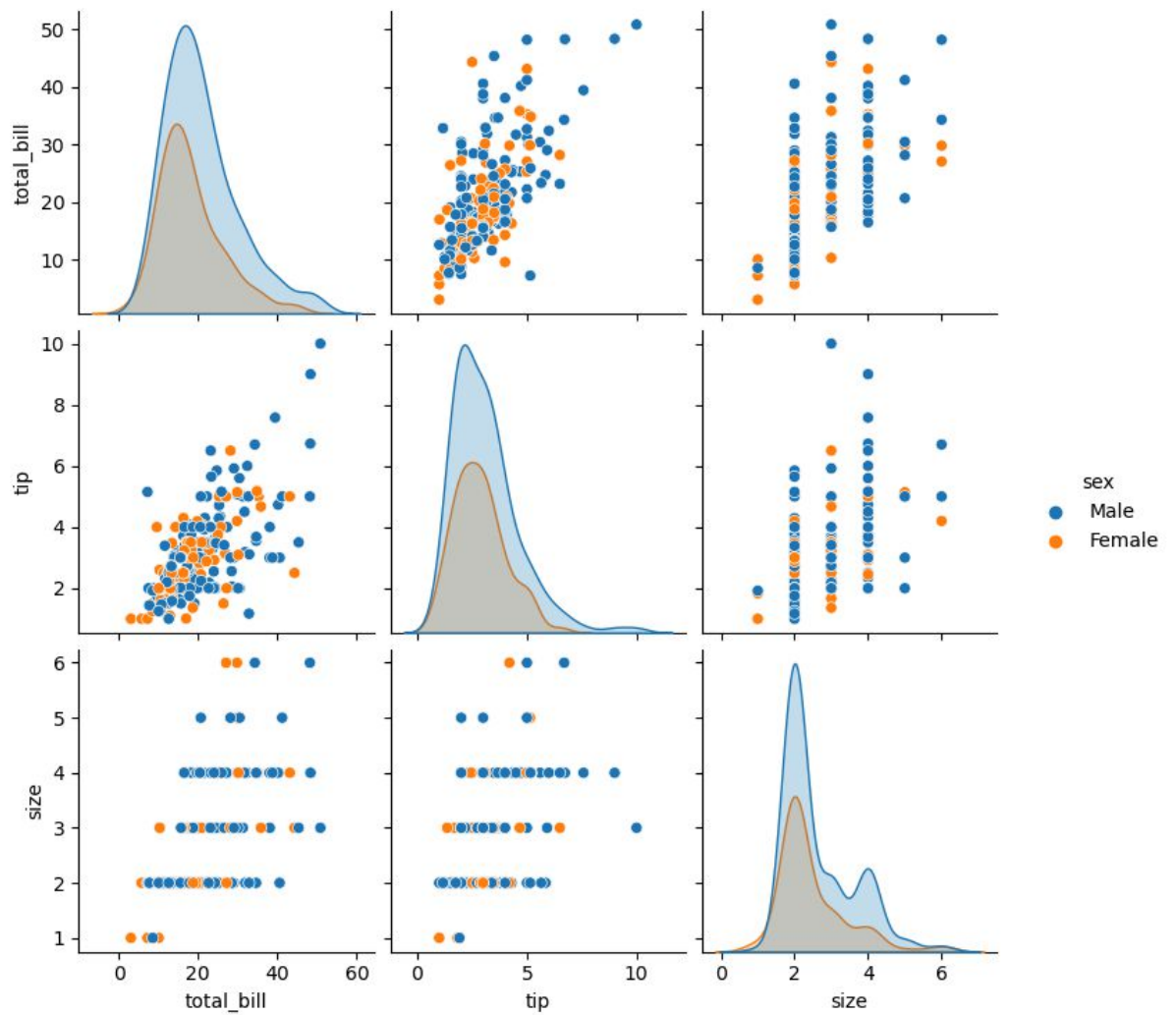


## pair plot

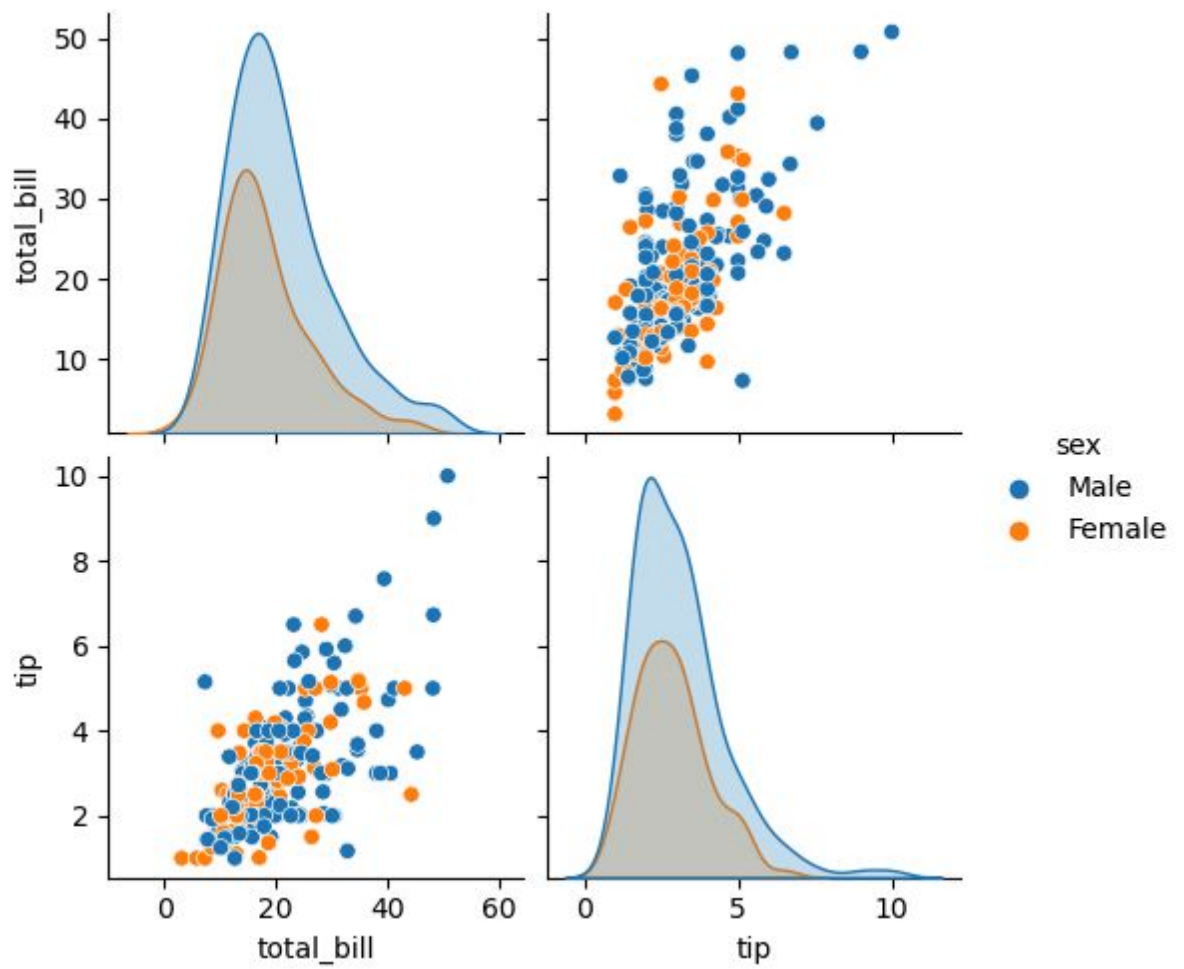
```
In [21]: sns.pairplot(yoo)  
plt.show()
```



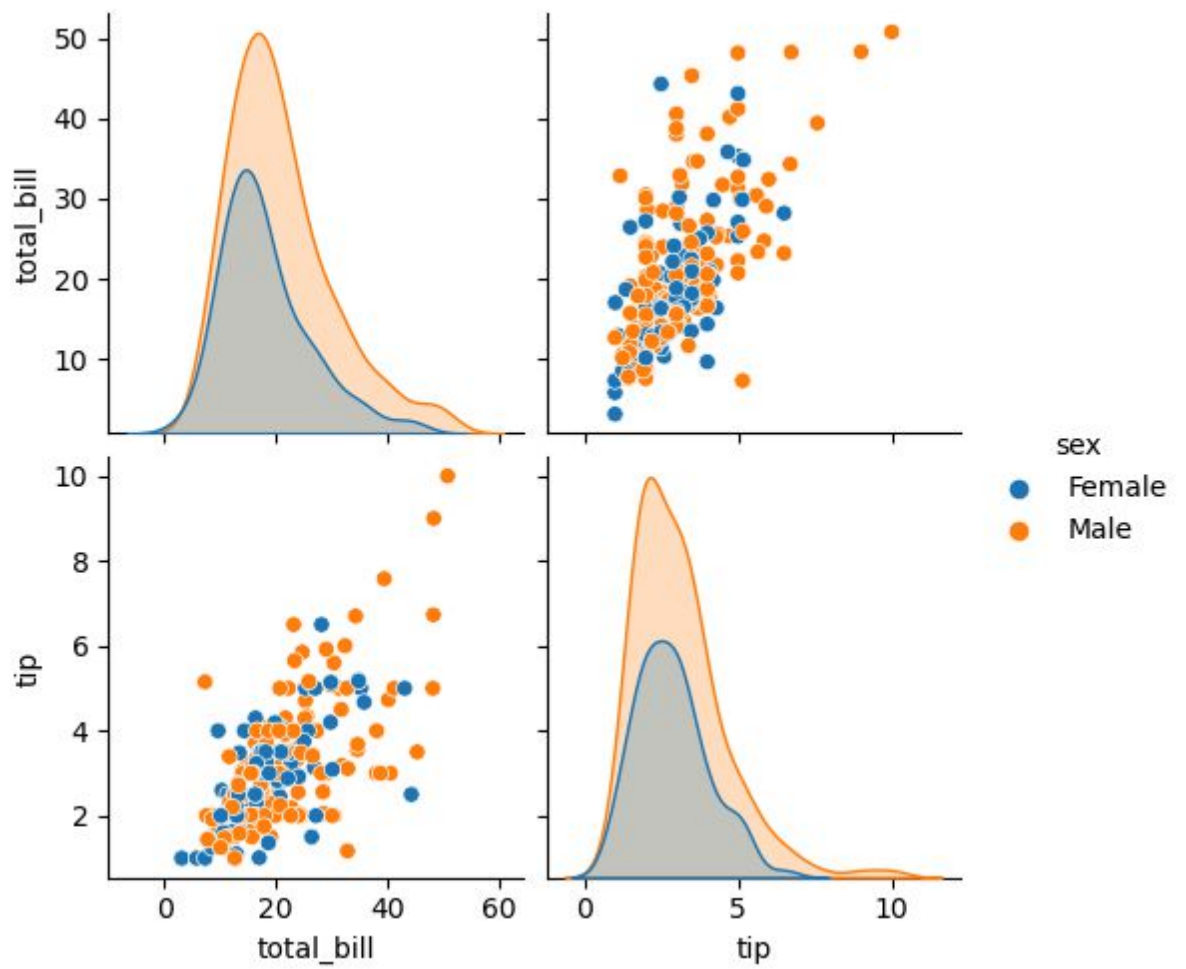
```
In [22]: sns.pairplot(yoo, hue="sex")
plt.show()
```



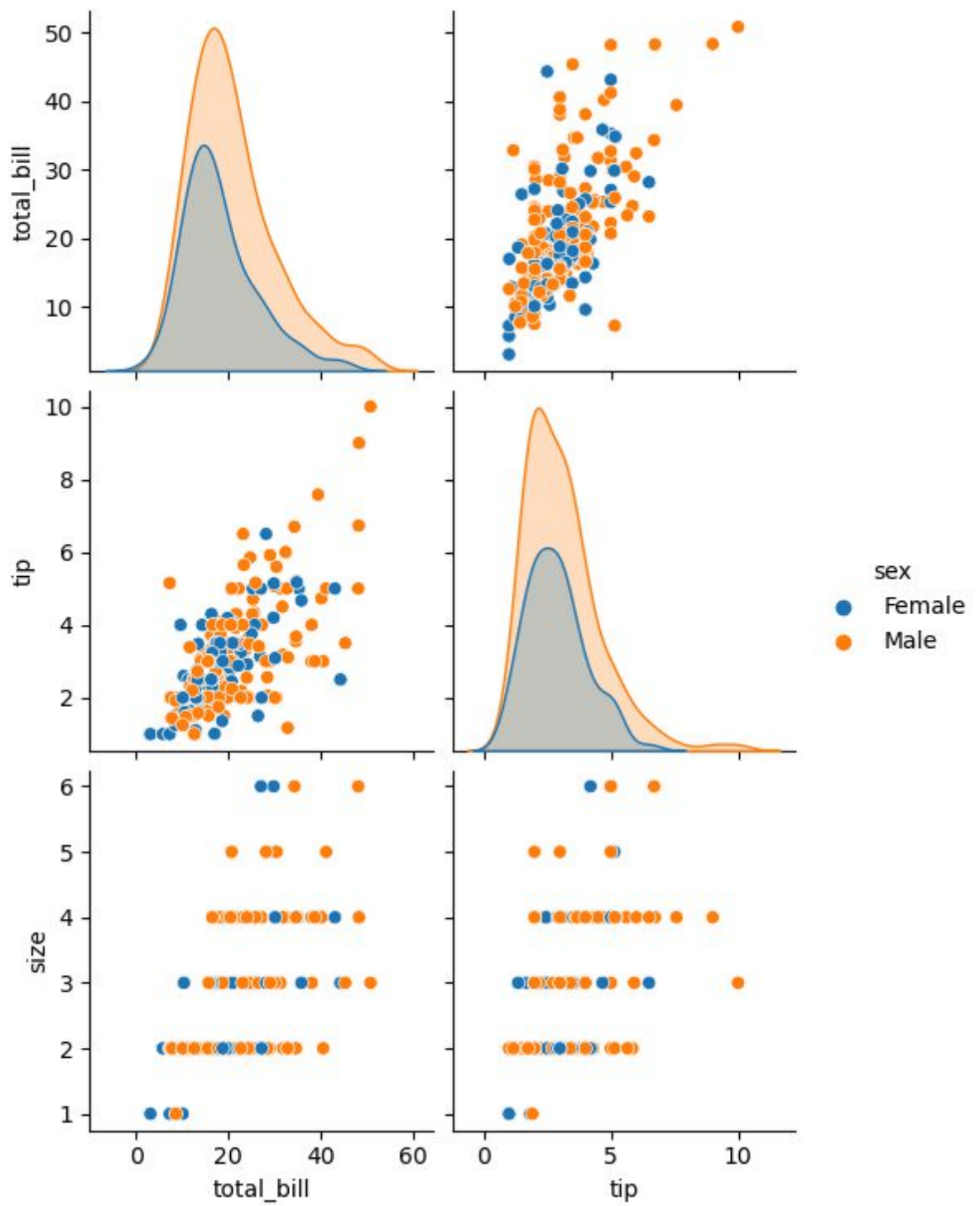
```
In [23]: sns.pairplot(yoo,vars=["total_bill","tip"],hue="sex")
plt.show()
```



```
In [24]: sns.pairplot(yoo,vars=["total_bill","tip"],hue="sex",hue_order=["Female","Male"])
plt.show()
```

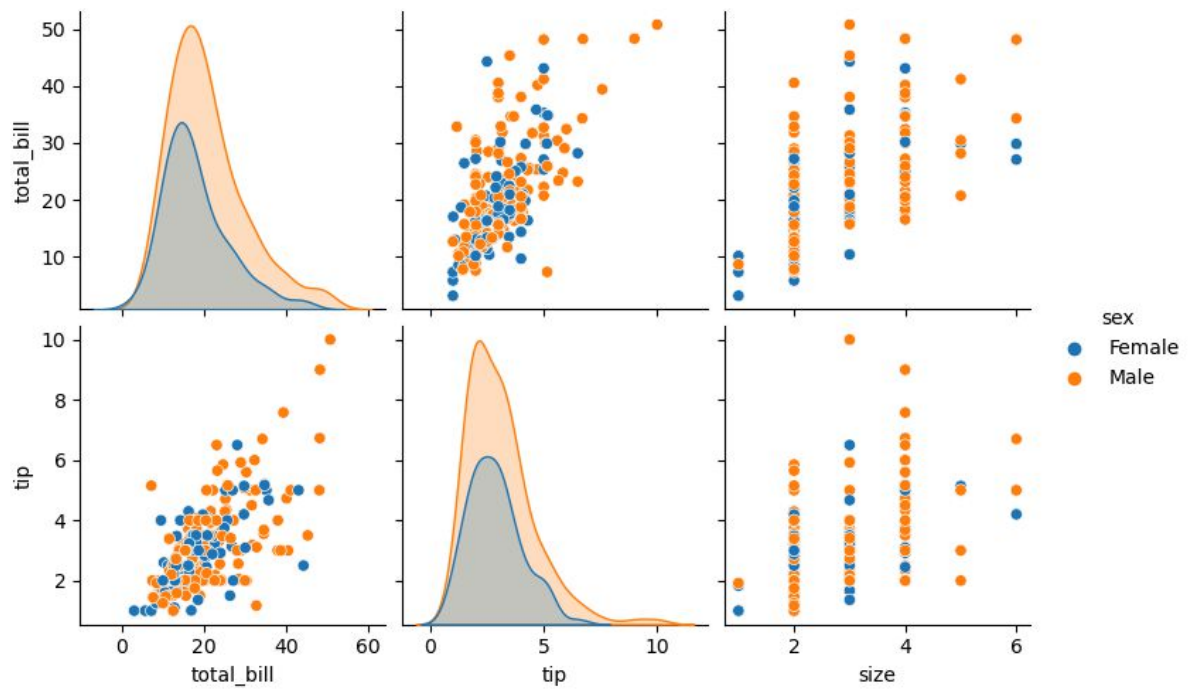


```
In [25]: sns.pairplot(yoo,hue="sex",hue_order=["Female","Male"],x_vars=["total_bill","tip"])
plt.show()
```

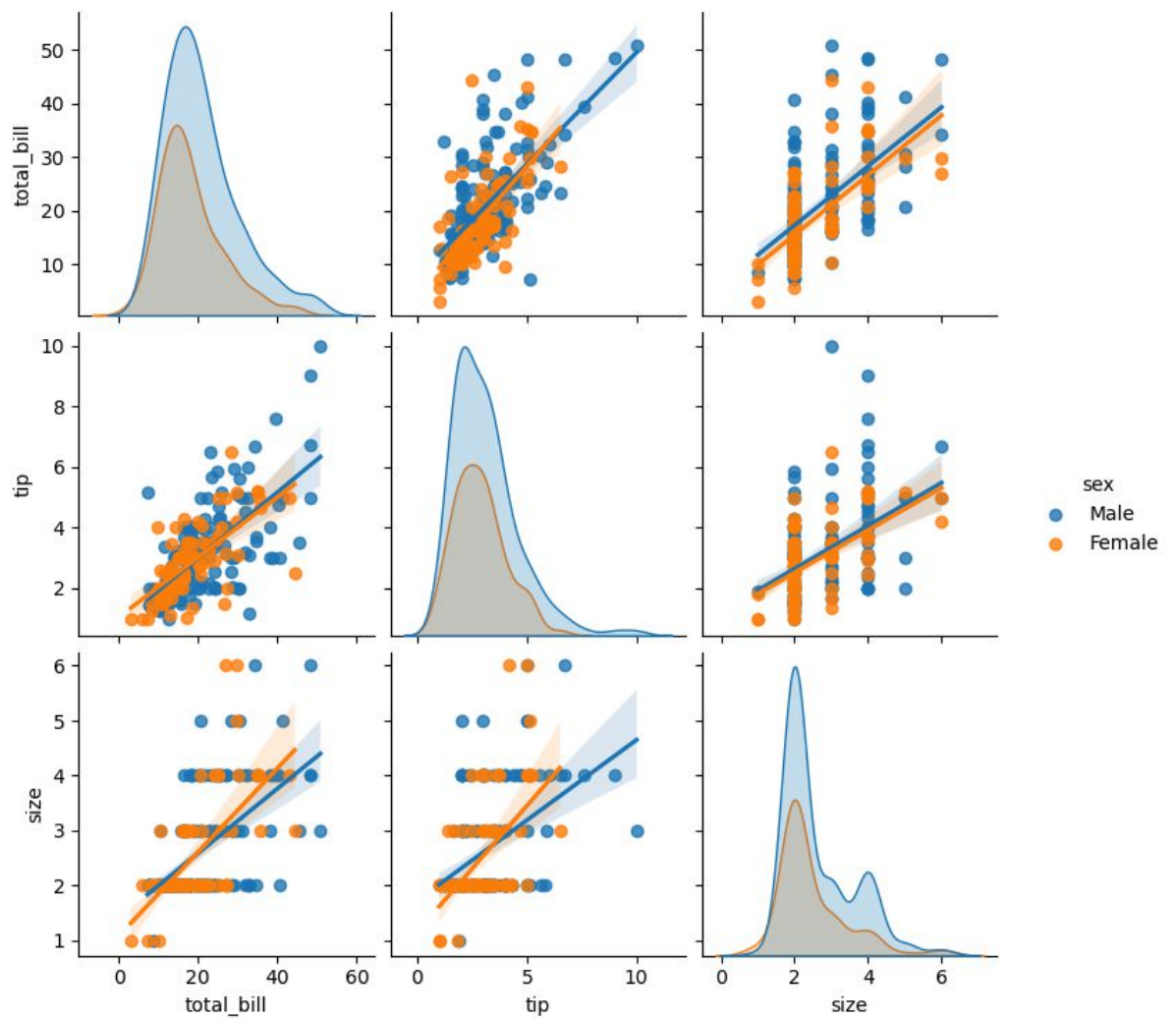


```
In [26]: sns.pairplot(yoo,hue="sex",hue_order=["Female","Male"],y_vars=["total_bill","tip"])
plt.show()
```

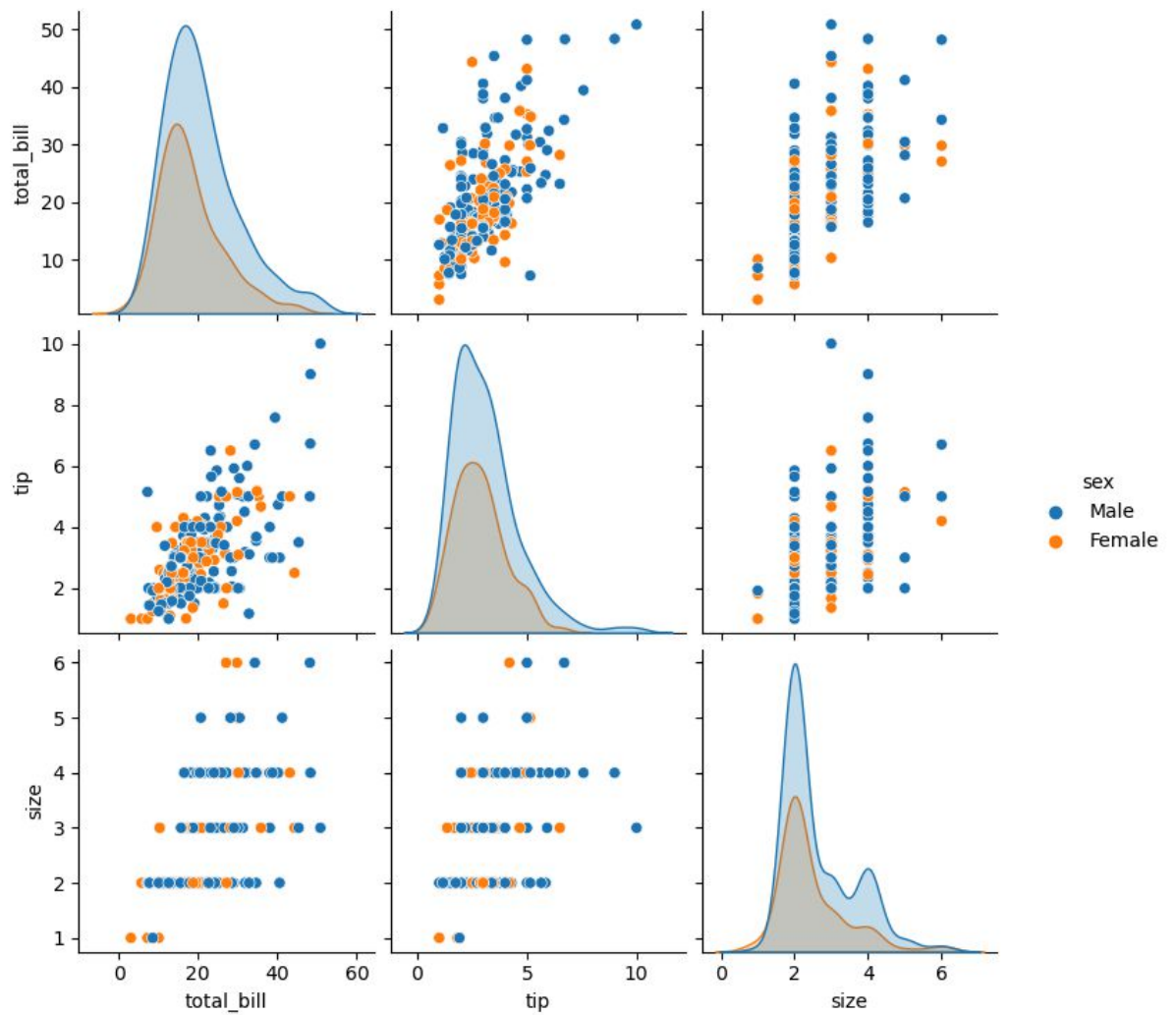




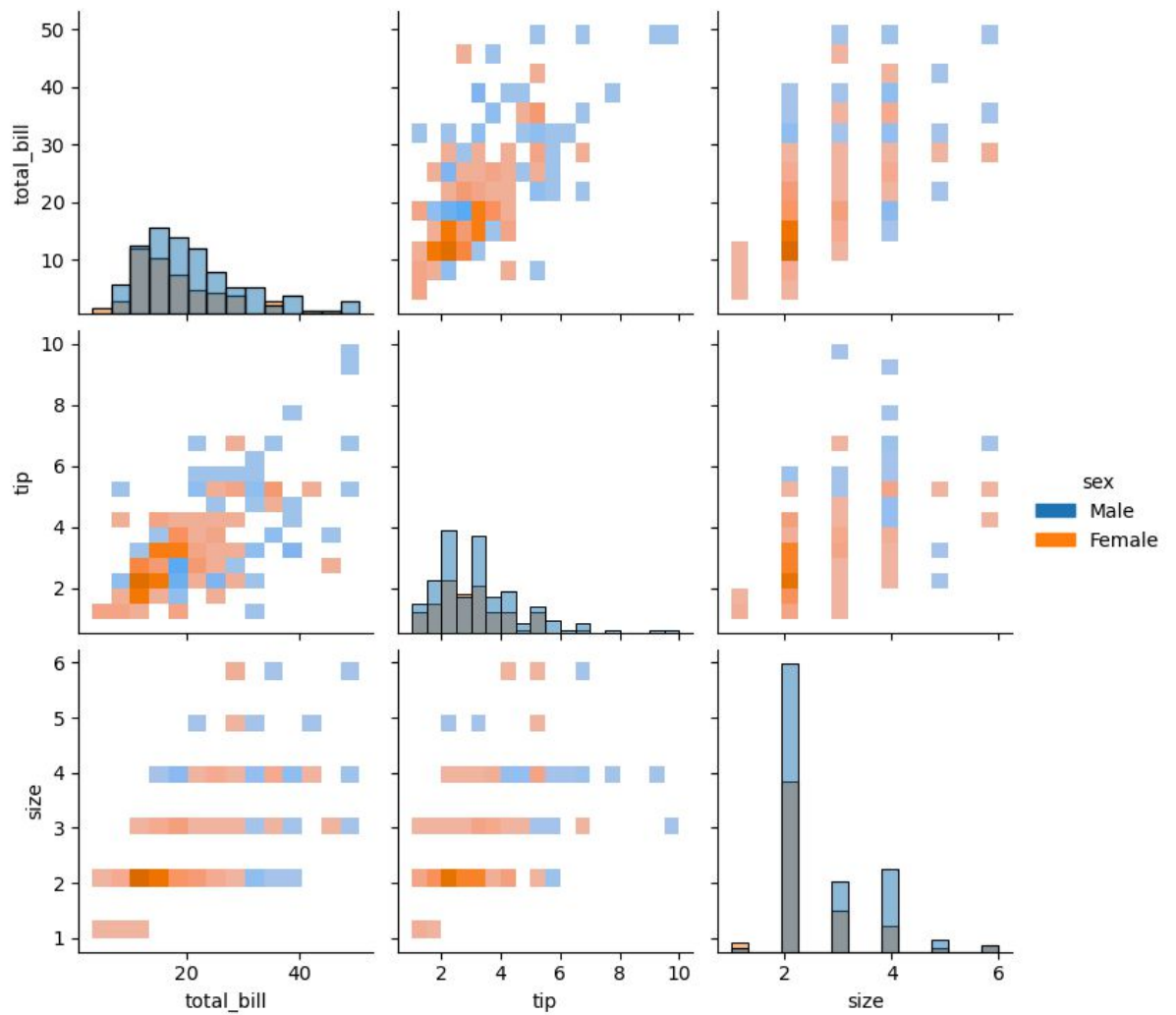
```
In [27]: sns.pairplot(yoo, hue="sex", kind="reg")
plt.show()
```



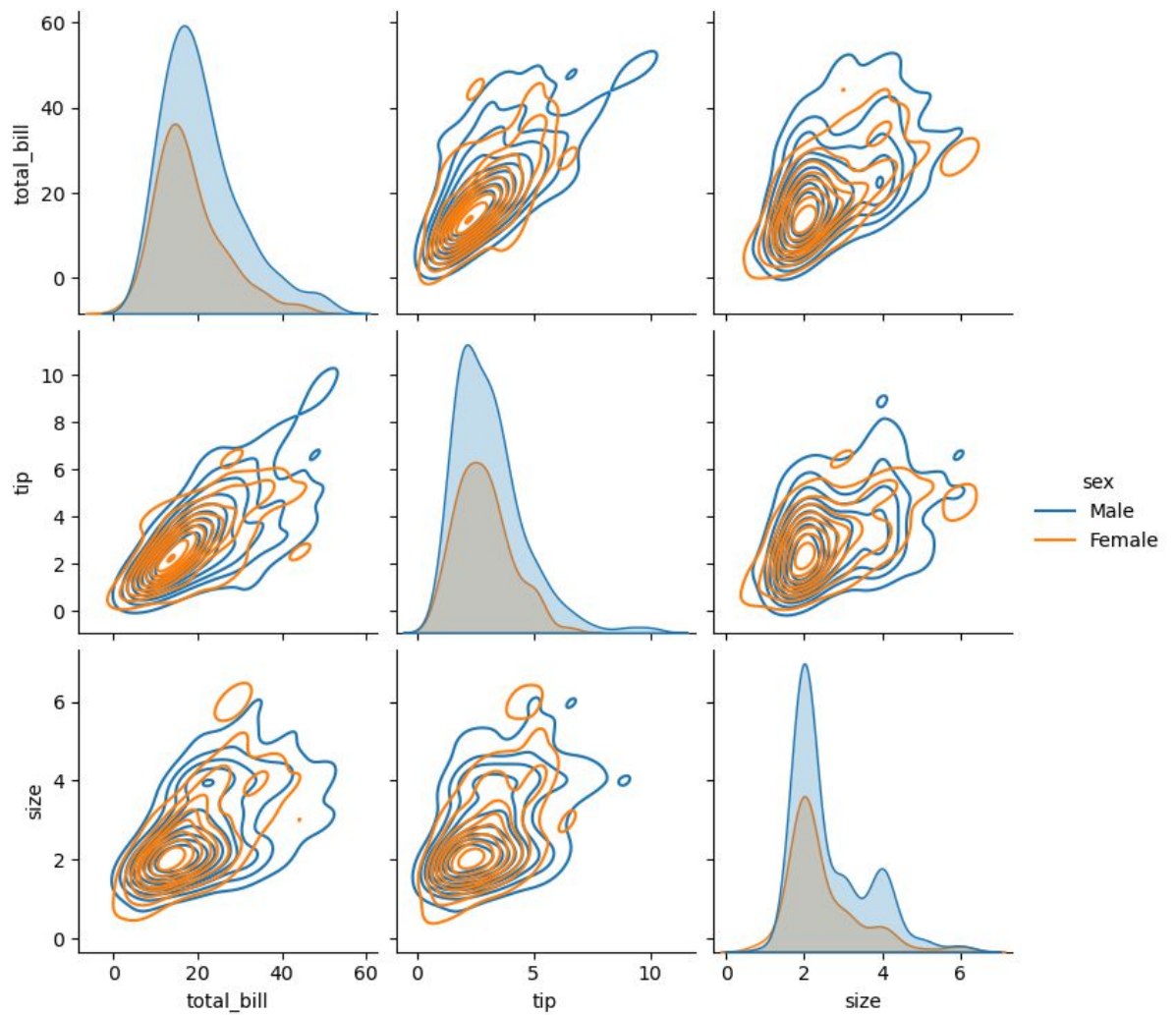
```
In [28]: sns.pairplot(yoo, hue="sex", kind="scatter")
plt.show()
```



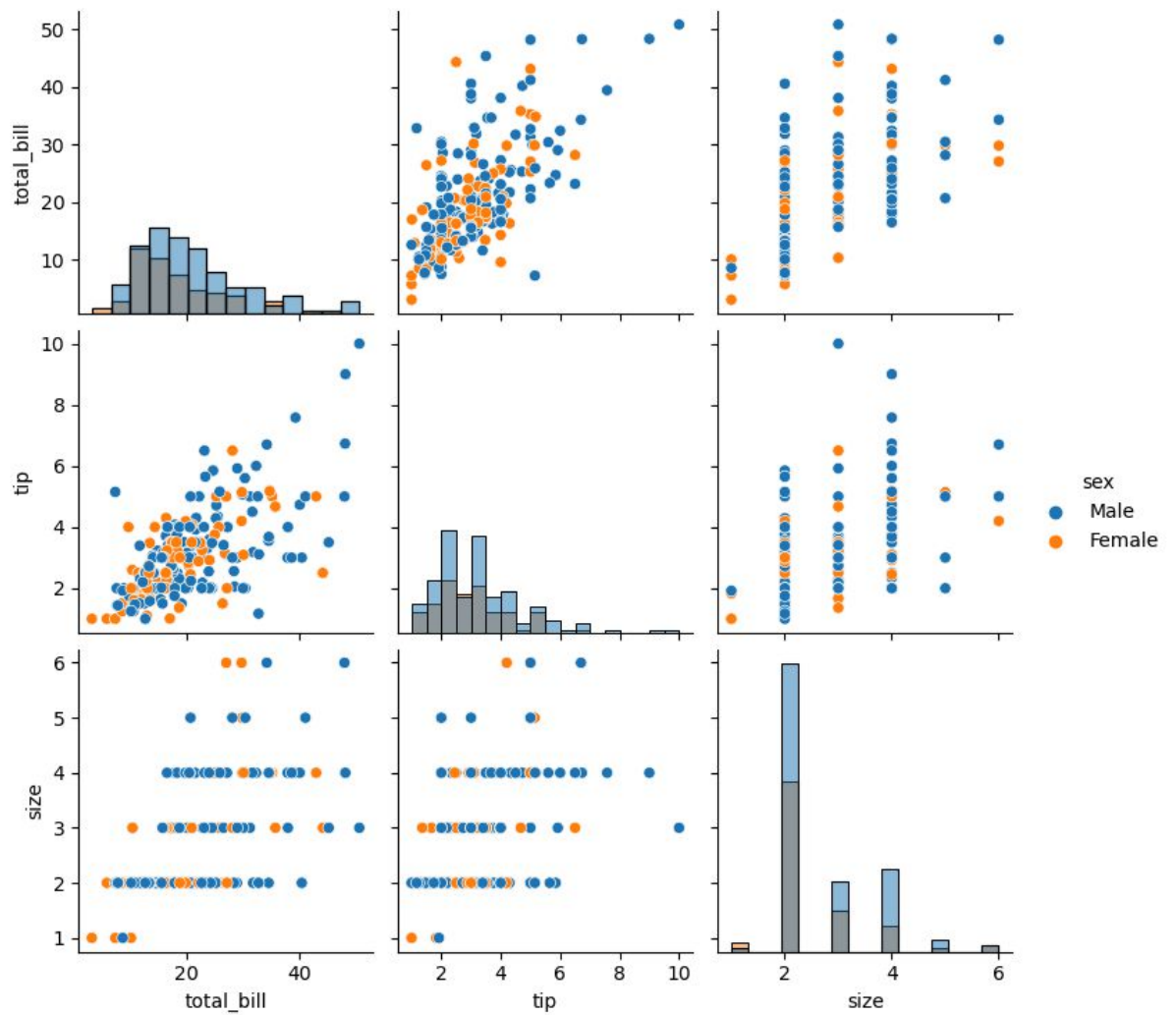
```
In [29]: sns.pairplot(yoo,hue="sex",kind="hist")
plt.show()
```



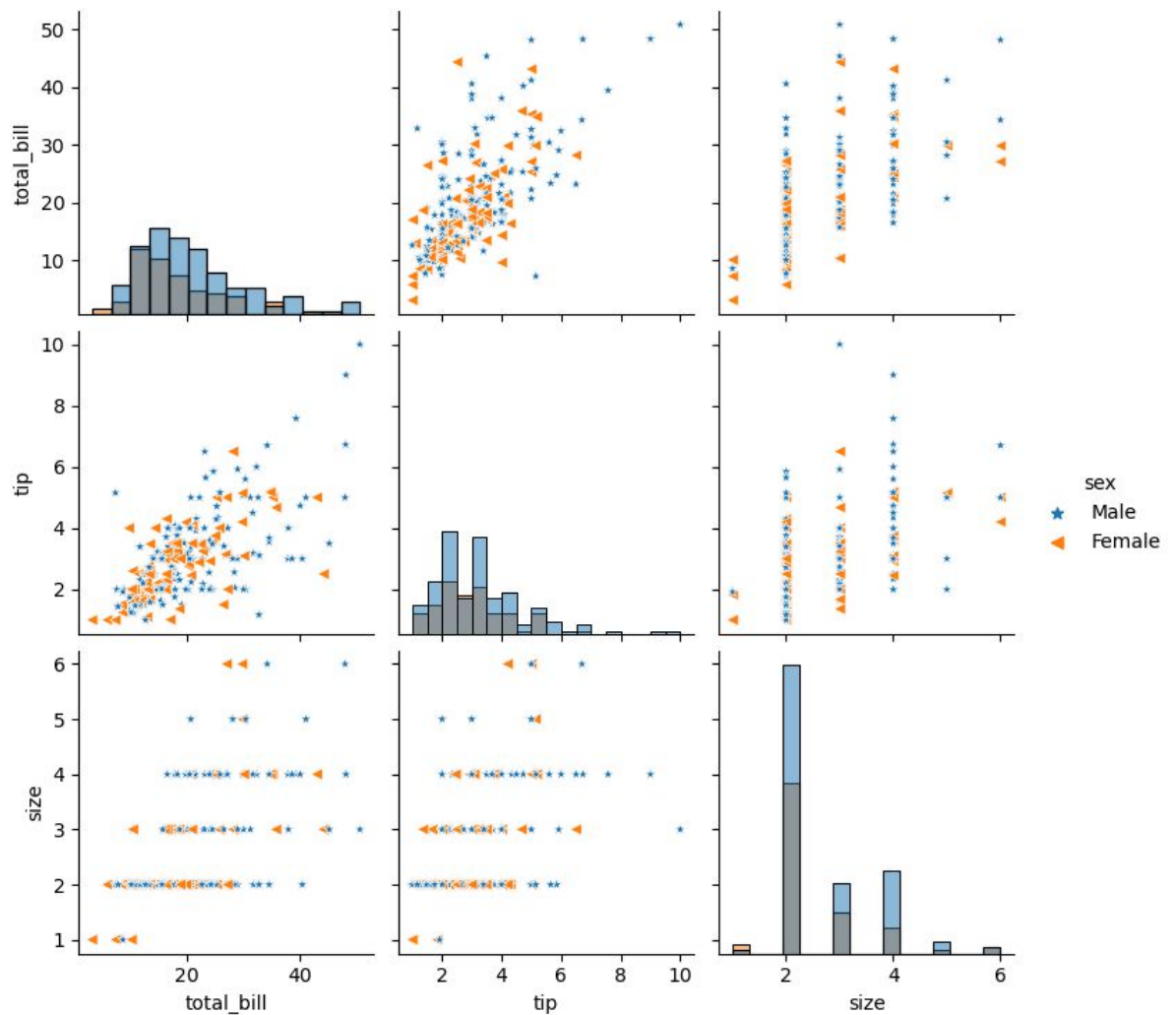
```
In [30]: sns.pairplot(yoo, hue="sex", kind="kde")
plt.show()
```



```
In [31]: sns.pairplot(yoo,hue="sex",diag_kind="hist")  
plt.show()
```



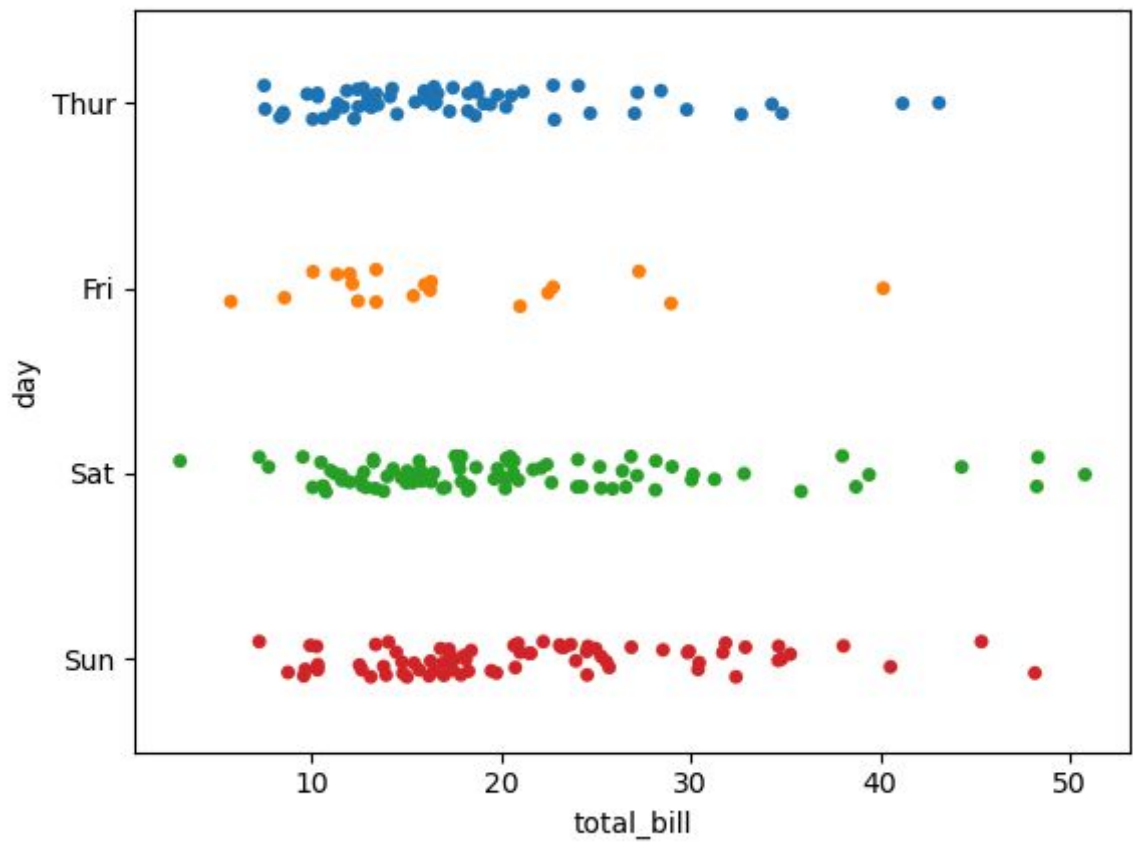
```
In [32]: sns.pairplot(yoo,hue="sex",diag_kind="hist",markers=["*", "<"])
plt.show()
```



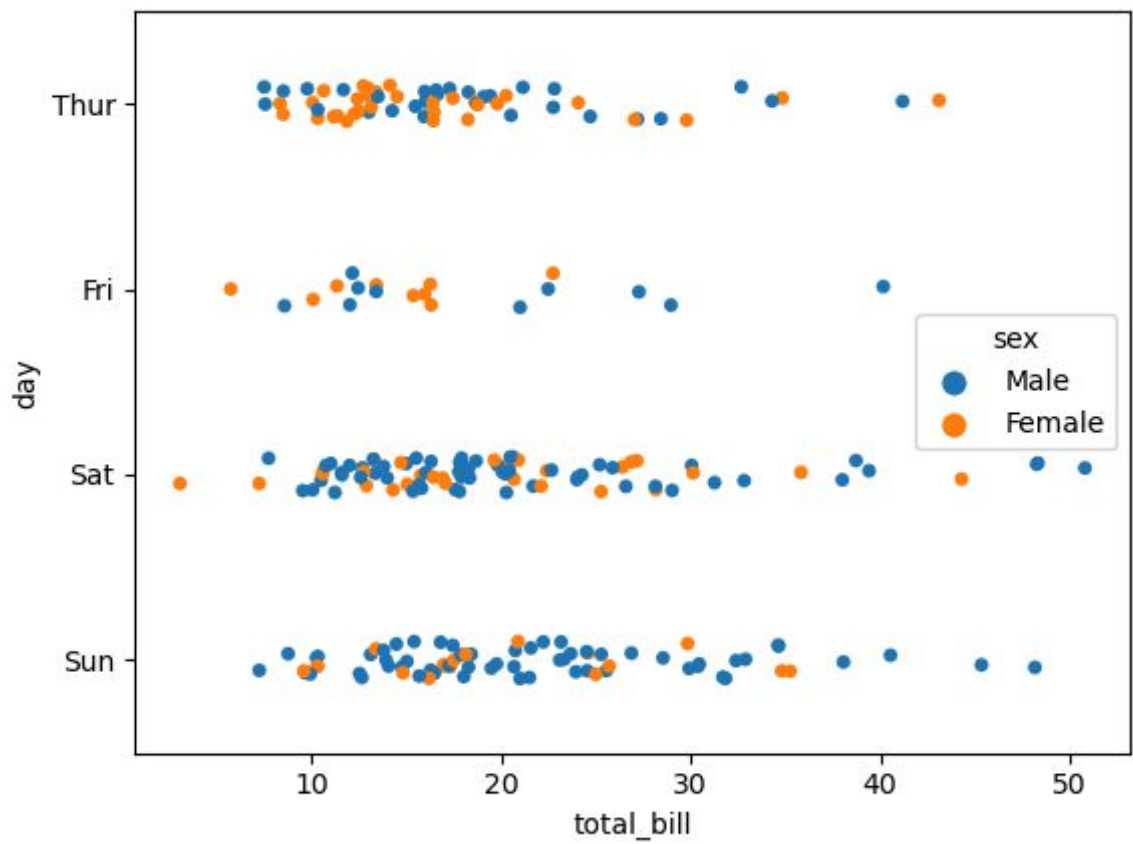
## strip plot

```
In [33]: sns.stripplot(x="total_bill",y="day",data=yoo)
plt.show()
```

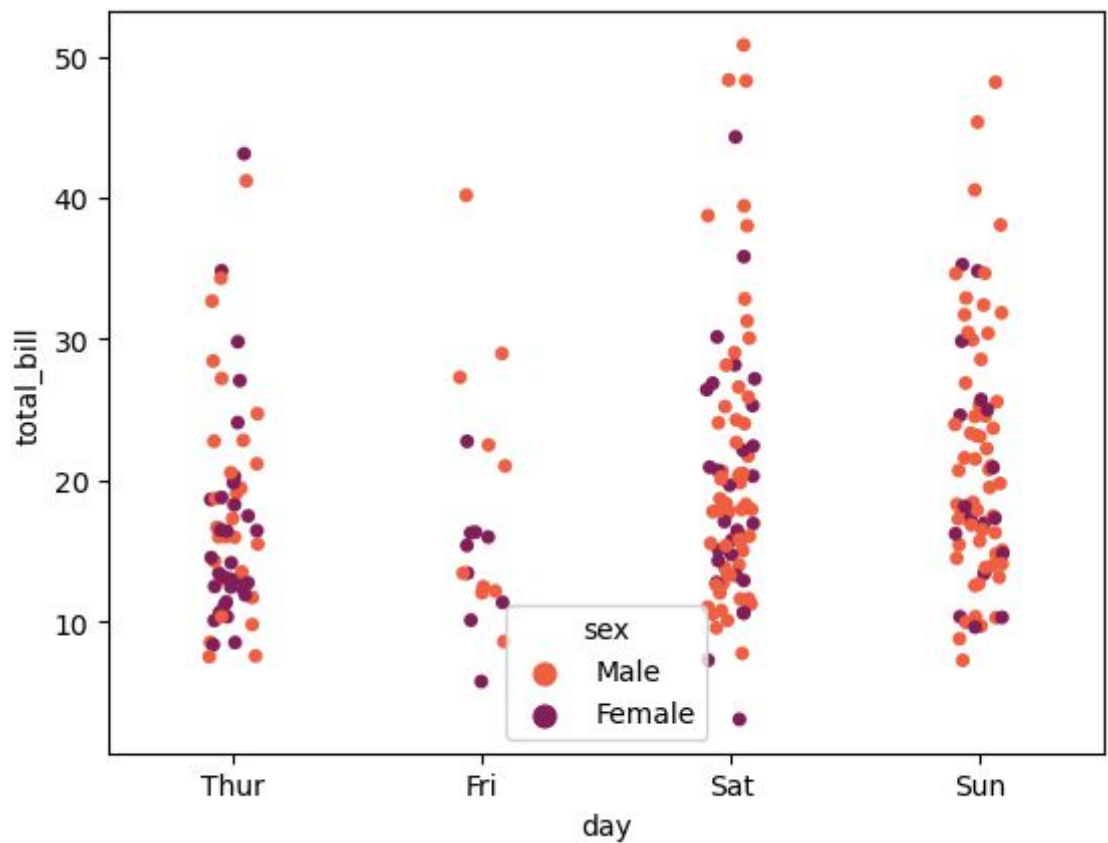




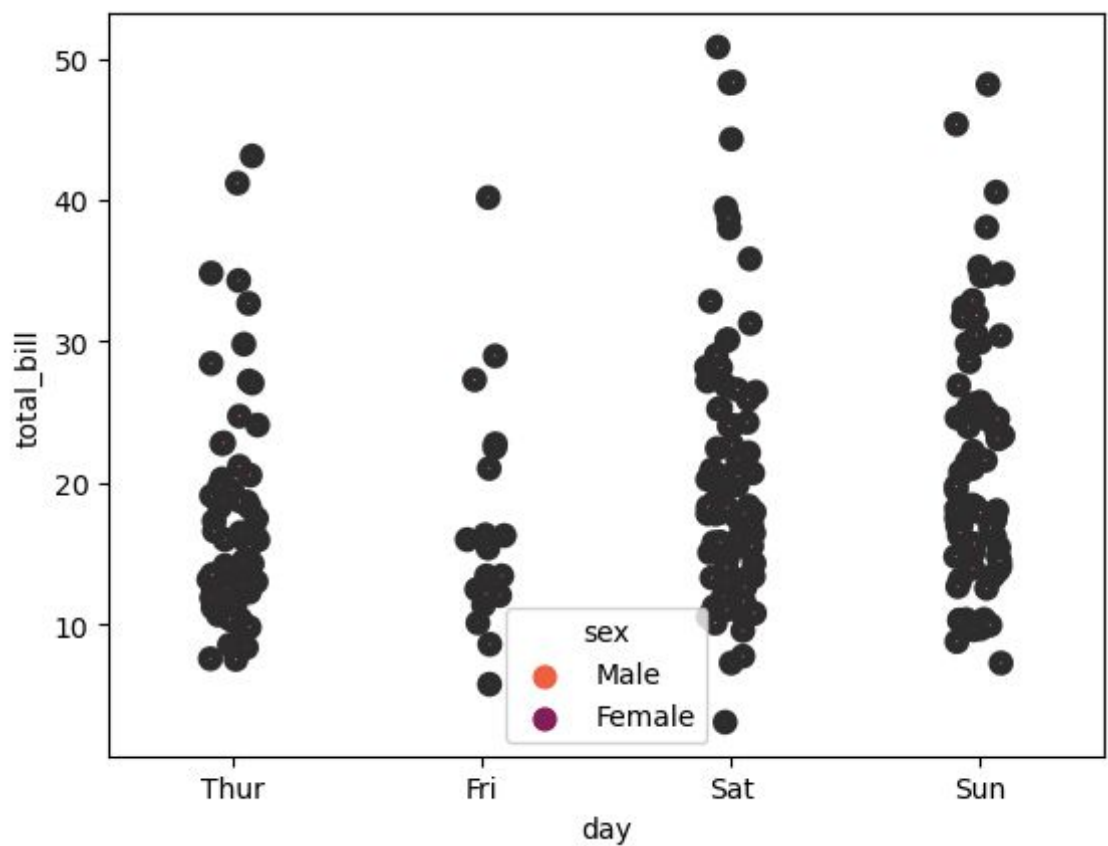
```
In [34]: sns.stripplot(x="total_bill",y="day",hue="sex", data=yoo)
plt.show()
```



```
In [35]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r")
plt.show()
```

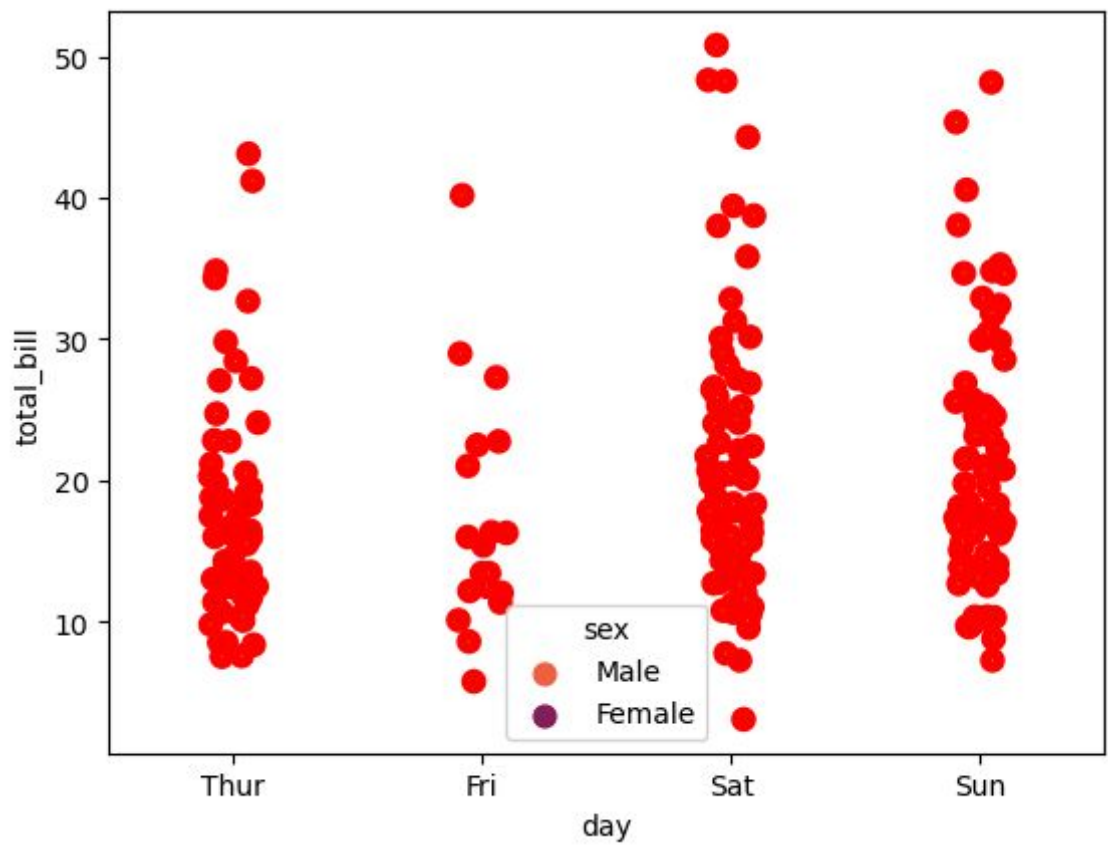


```
In [38]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth=1,plt.show())
```

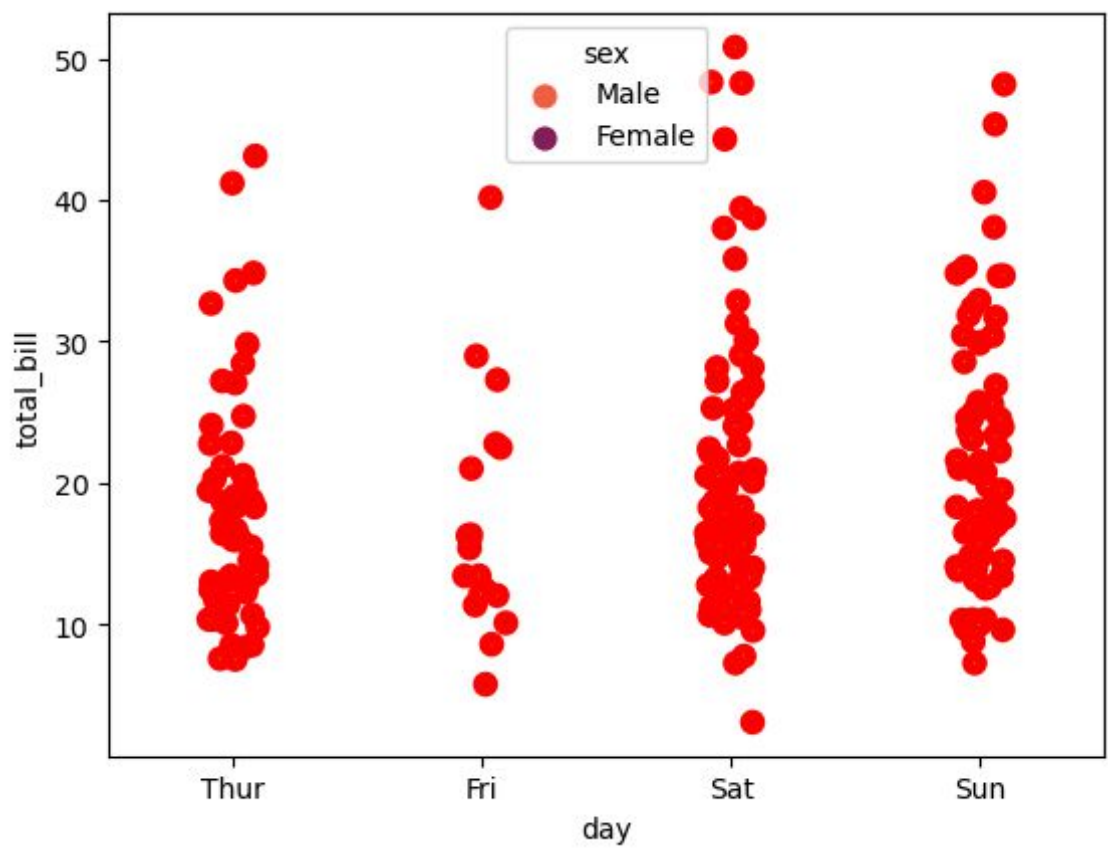


```
In [41]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth=1,plt.show())
```

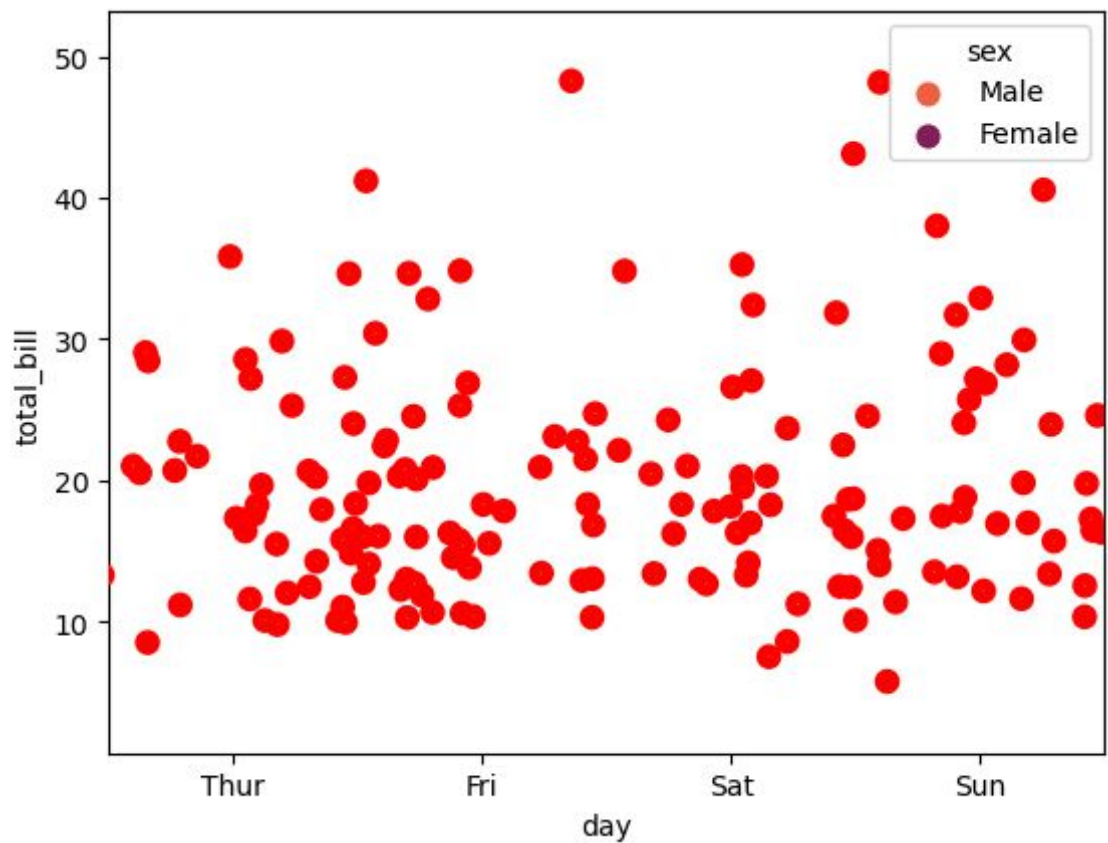




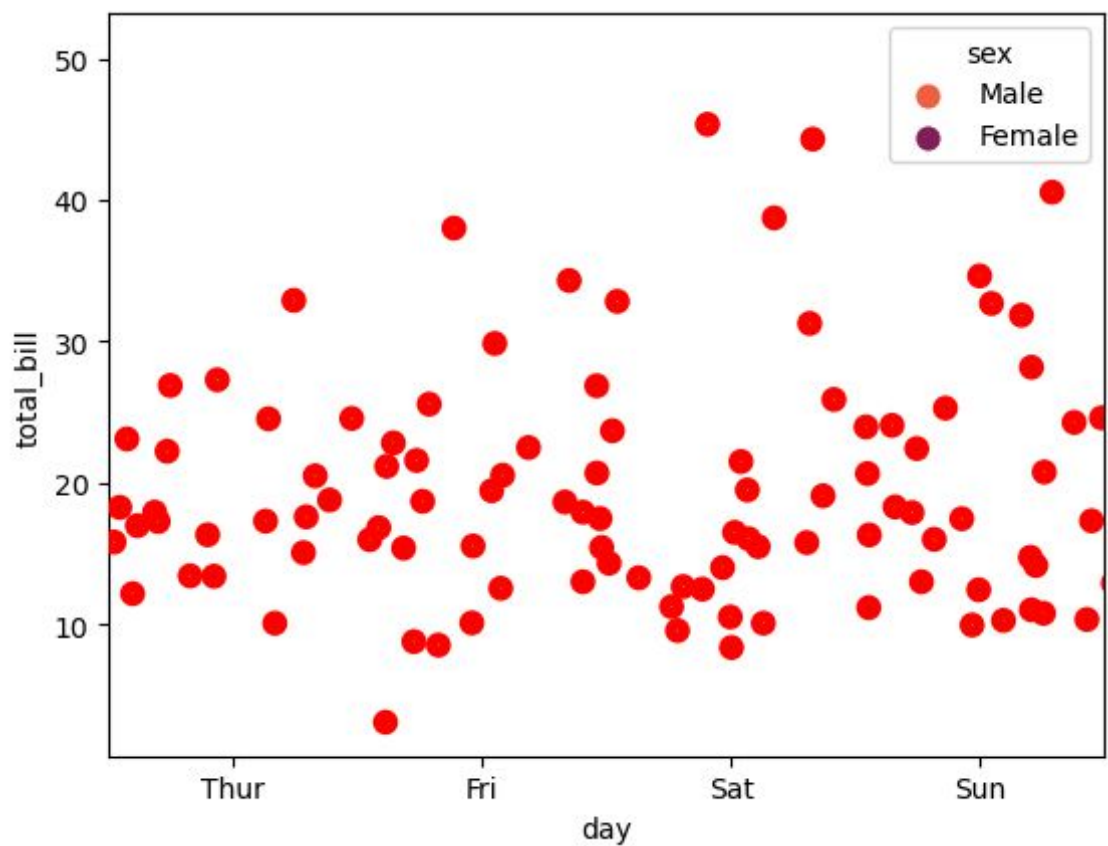
```
In [42]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth=1,plt.show())
```



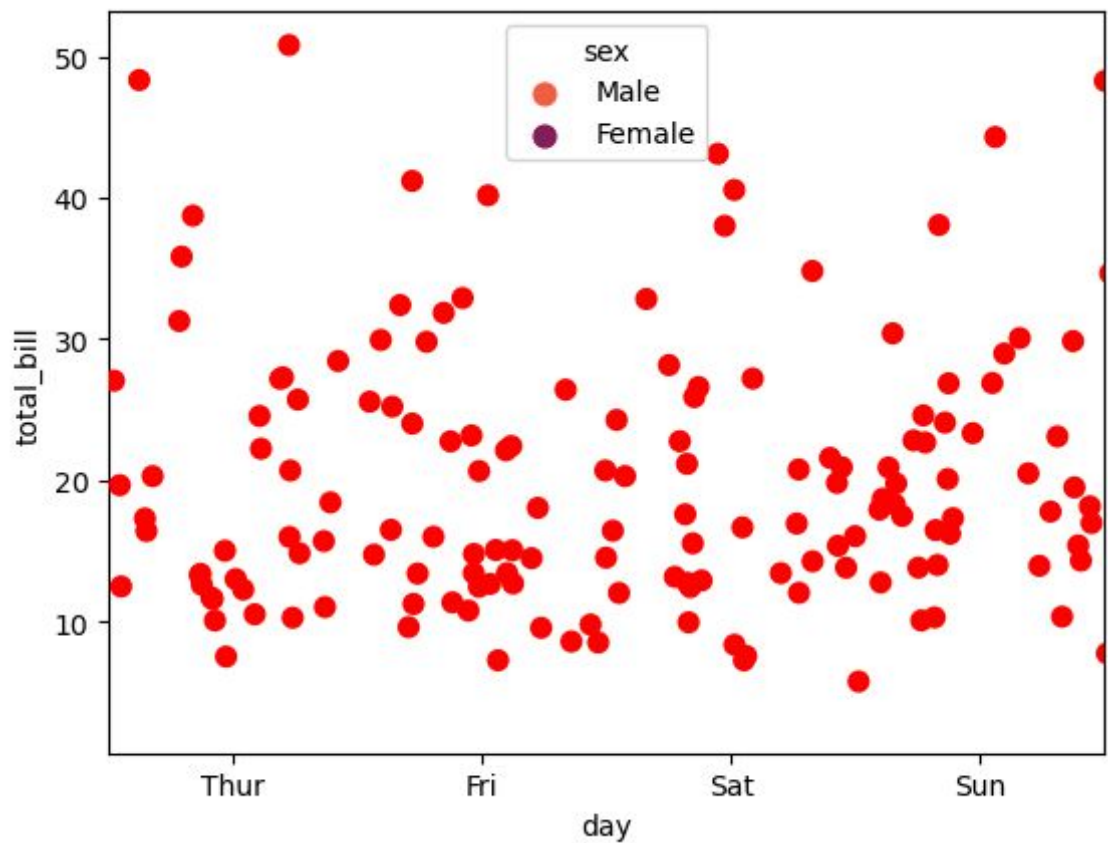
```
In [44]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth=1,plt.show())
```



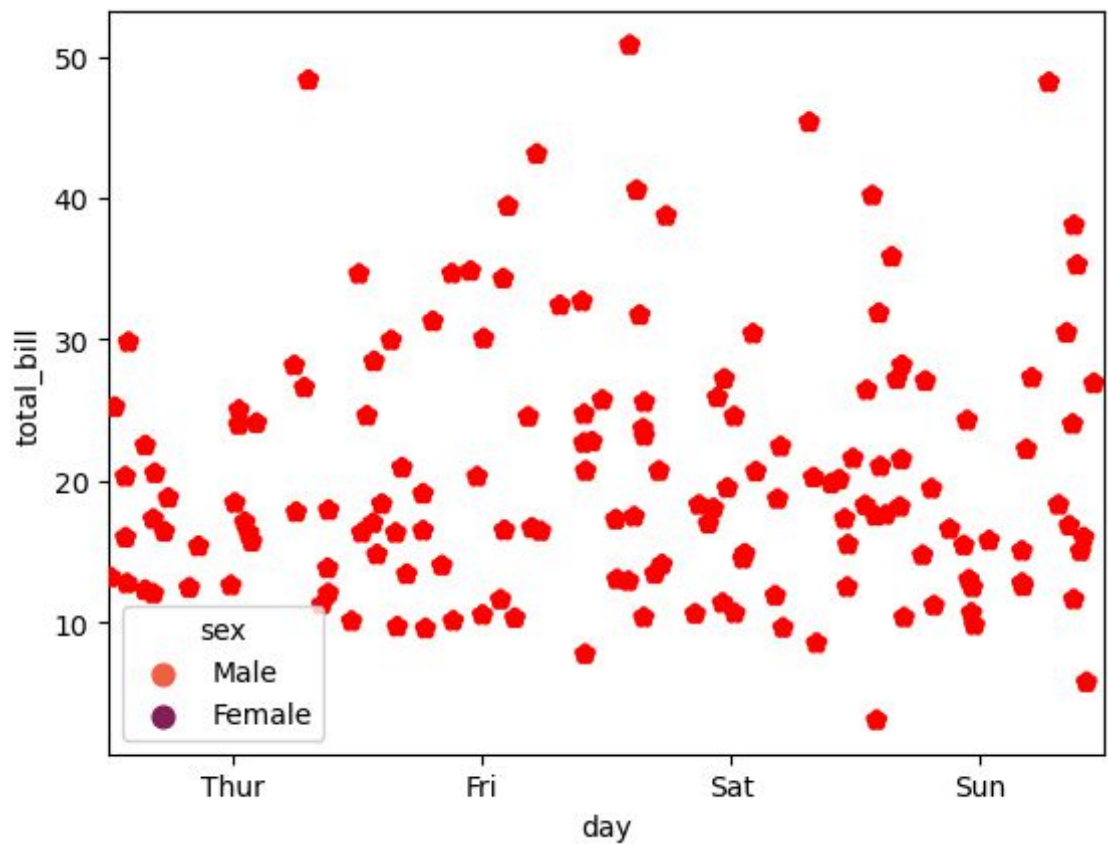
```
In [45]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth=1,
plt.show() #jitter use for displacement with points
```



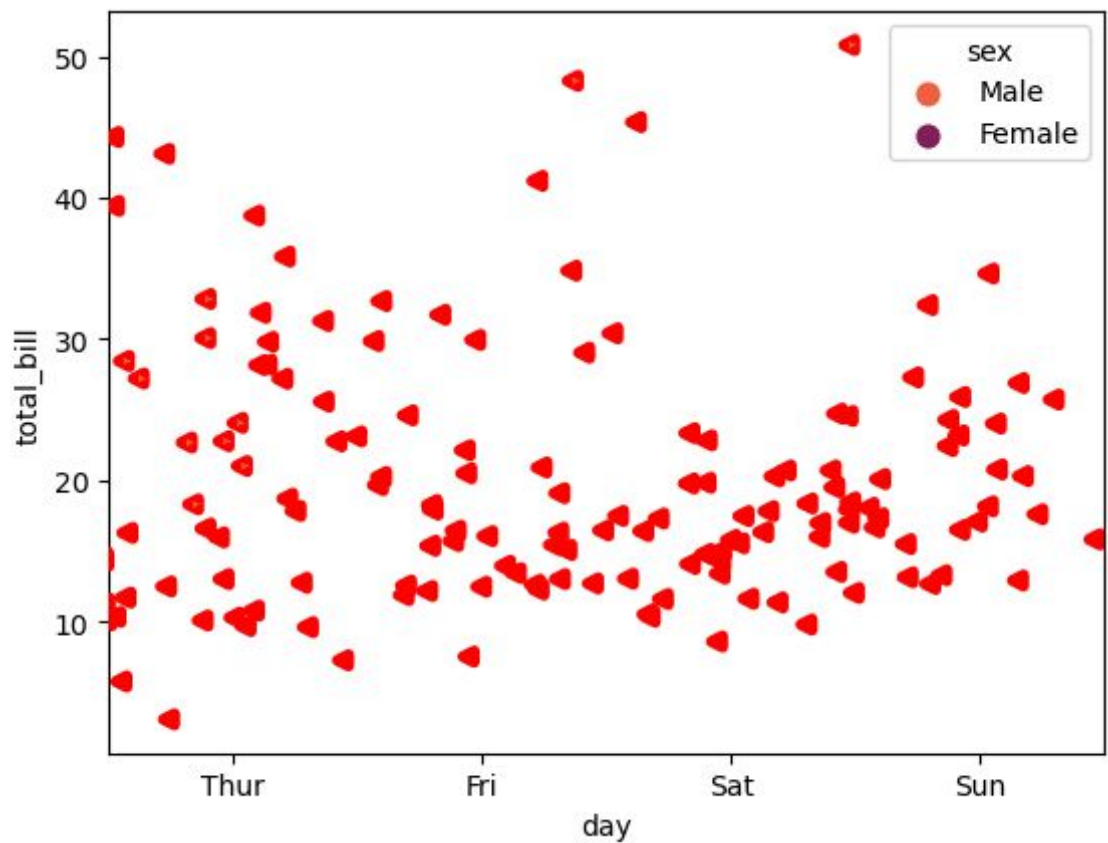
```
In [46]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth=1,
size=4)
plt.show()
```



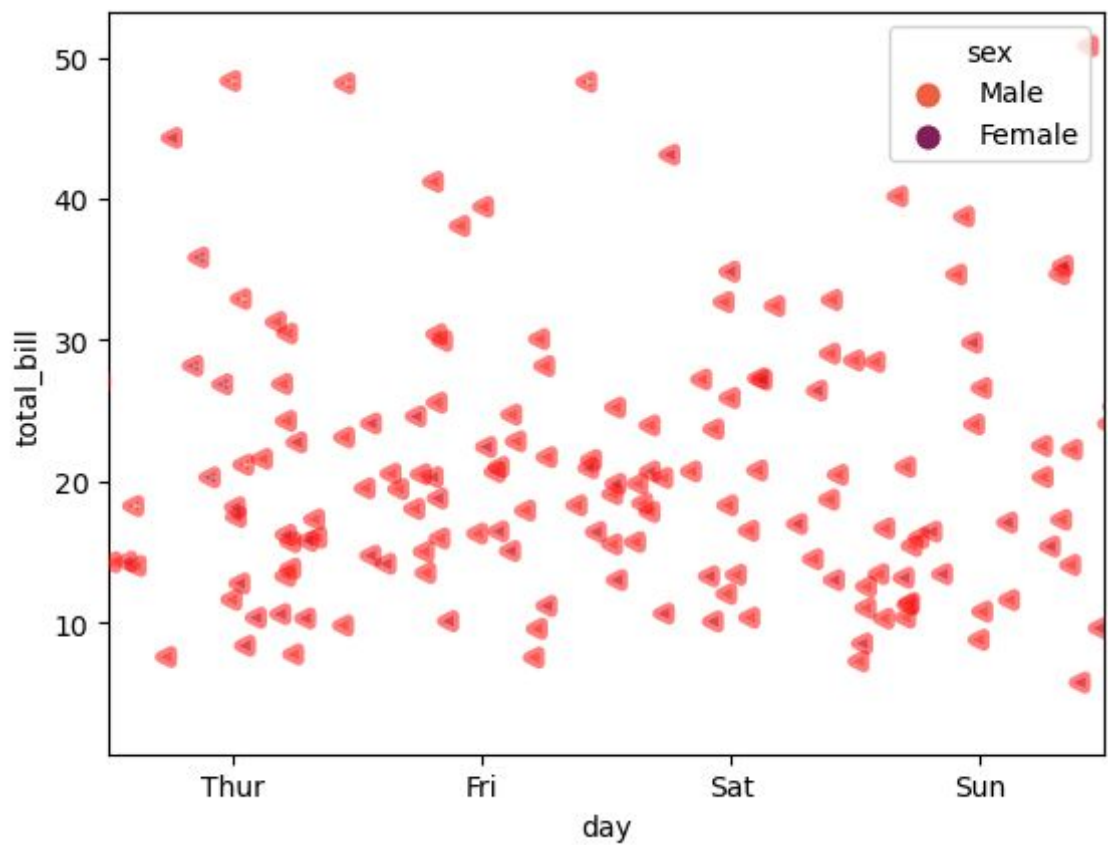
```
In [49]: sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth
size=4,marker="*")
plt.show()
```



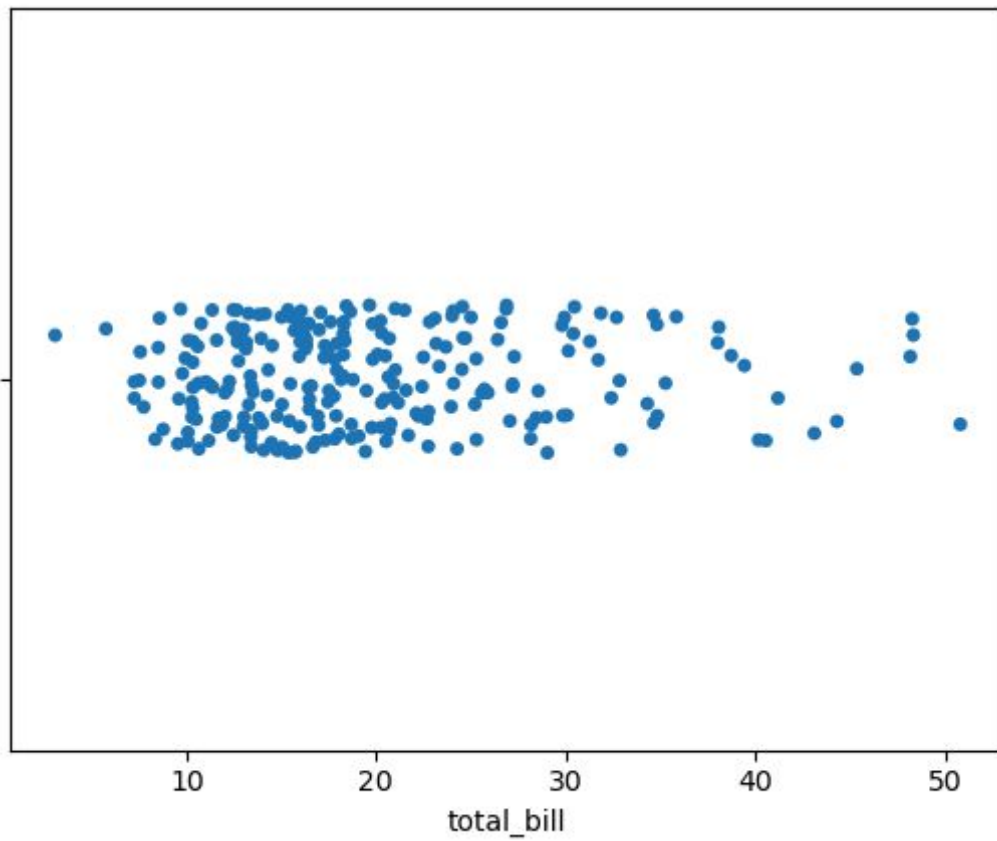
```
In [55]: m={"Female":"<", "Male":"*"}
sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewidth
size=4,marker="<")
plt.show()
```



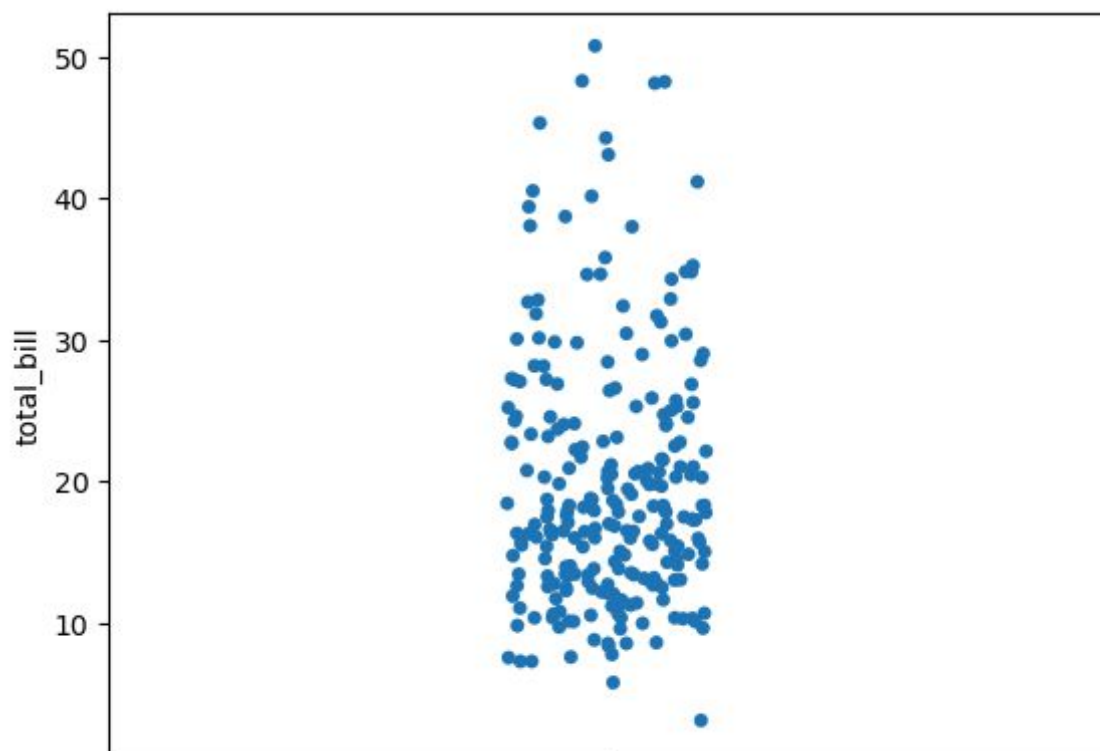
```
In [56]: m={"Female":"<", "Male":"*"}
sns.stripplot(x="day",y="total_bill",hue="sex", data=yoo,palette="rocket_r",linewid
size=4,marker="<",alpha=0.5)
plt.show()
```



```
In [58]: sns.stripplot(x=yoo["total_bill"])
plt.show()
```



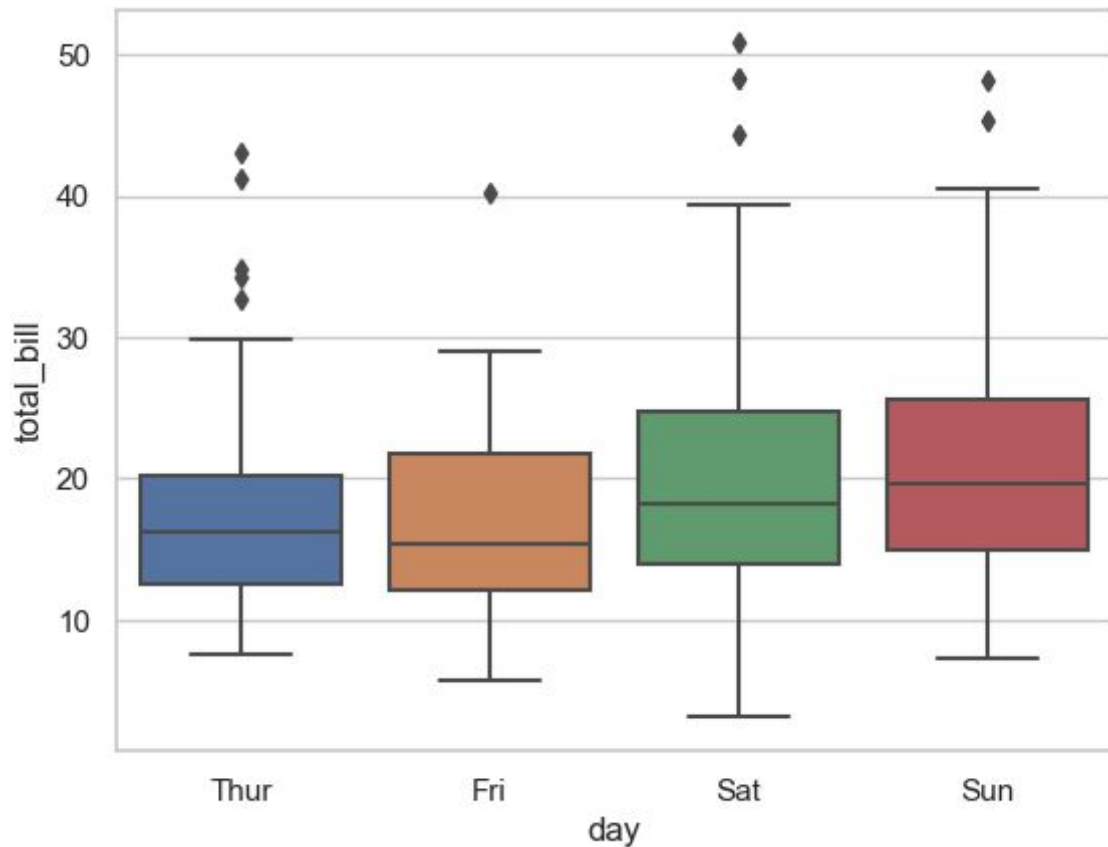
```
In [59]: sns.stripplot(y=yoo["total_bill"])  
plt.show()
```



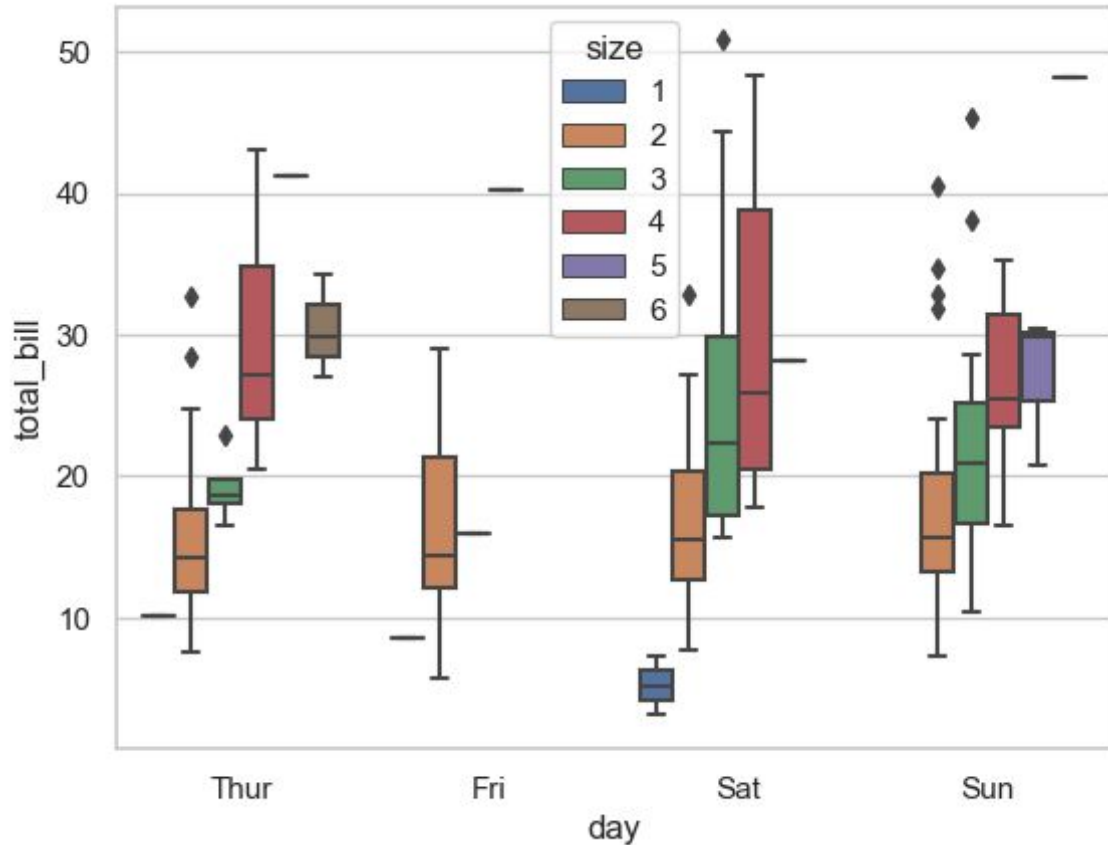
## box plot

```
In [61]: sns.set(style= "whitegrid")  
sns.boxplot(x="day",y="total_bill",data=yoo)  
plt.show()
```

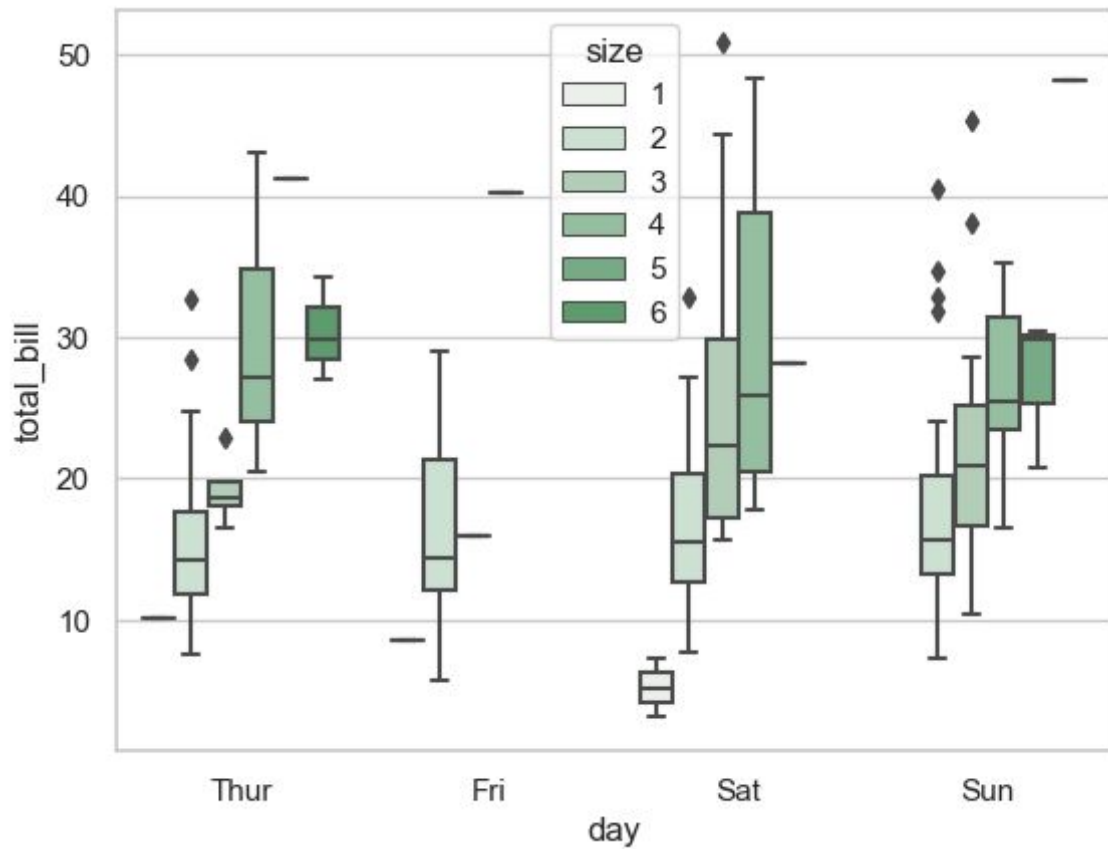




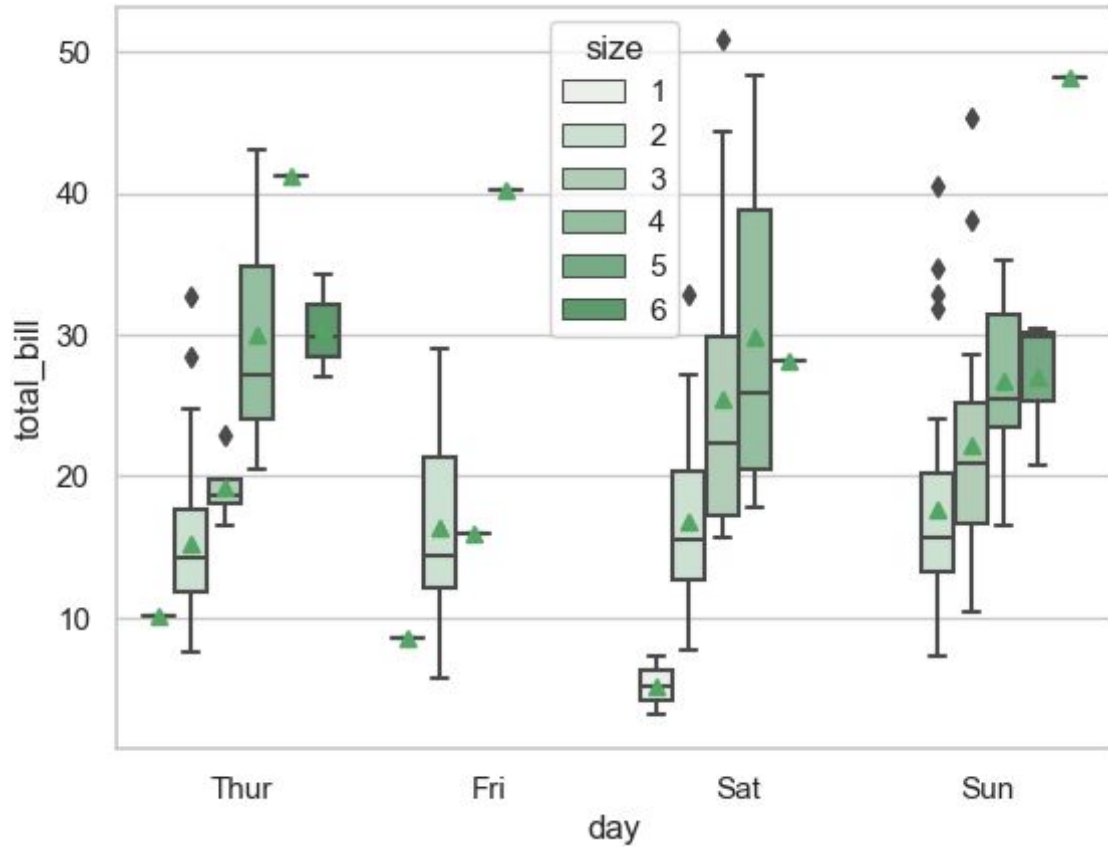
```
In [62]: sns.set(style= "whitegrid")
sns.boxplot(x="day",y="total_bill",data=yoo,hue="size")
plt.show()
```



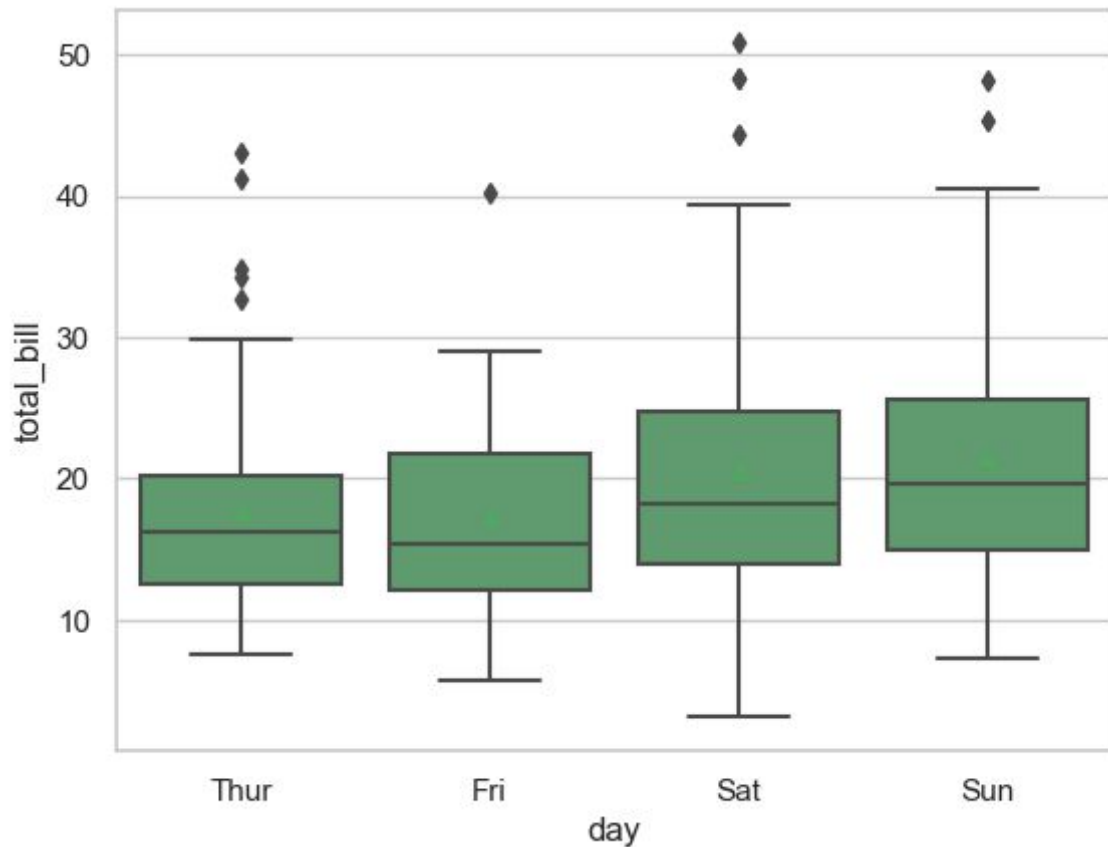
```
In [63]: sns.set(style= "whitegrid")
sns.boxplot(x="day",y="total_bill",data=yoo,hue="size",color="g")
plt.show()
```



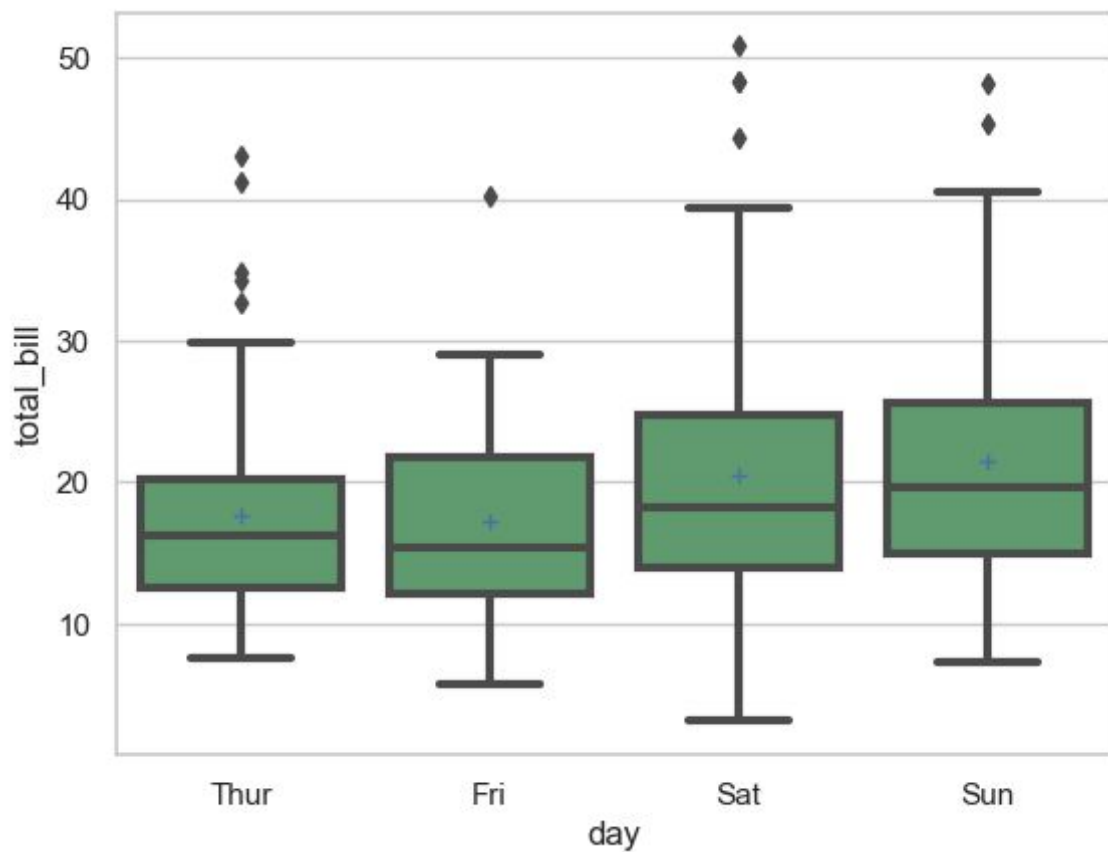
```
In [64]: sns.set(style= "whitegrid")
sns.boxplot(x="day",y="total_bill",data=yoo,hue="size",color="g",showmeans=True)
plt.show()
```



```
In [65]: sns.set(style= "whitegrid")
sns.boxplot(x="day",y="total_bill",data=yoo,color="g",showmeans=True)
plt.show()
```



```
In [67]: sns.set(style= "whitegrid")
sns.boxplot(x="day",y="total_bill",data=yoo,color="g",showmeans=True,meanprops={"ma
,linewidth=3)
plt.show()
```



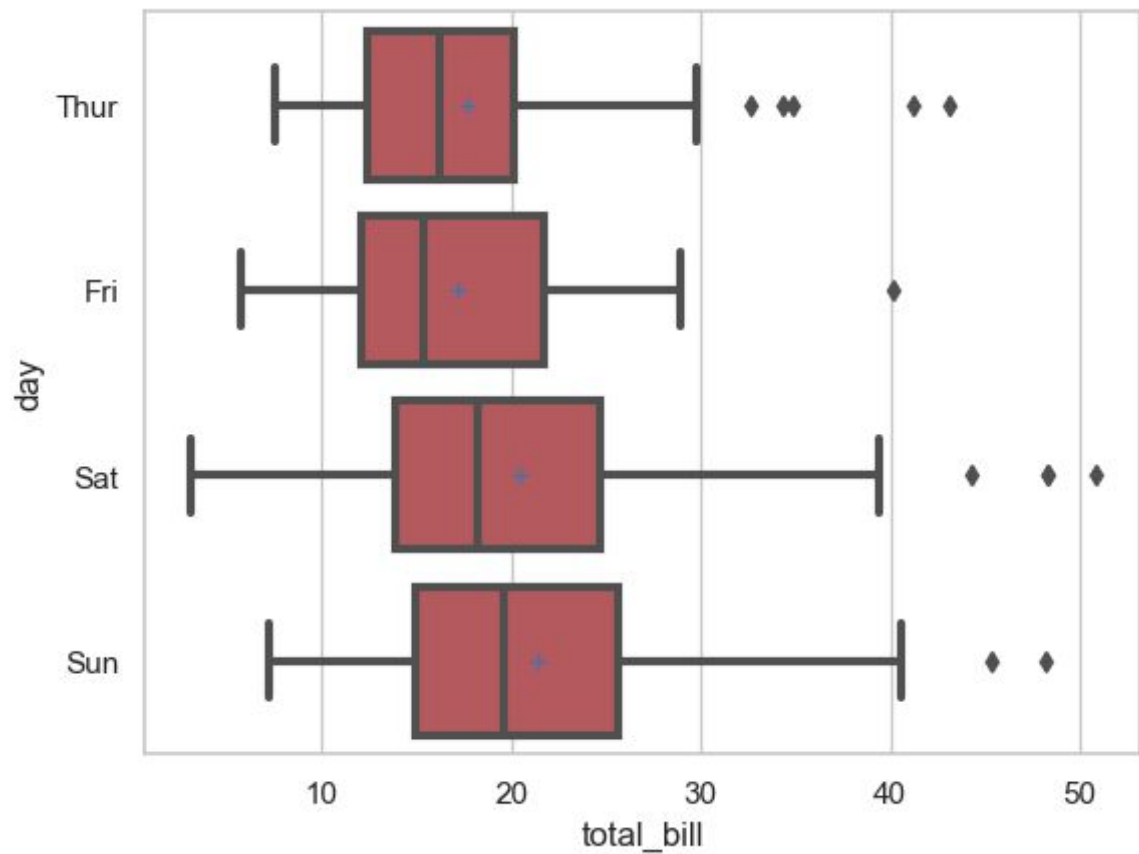
```
In [70]: sns.set(style= "whitegrid")
sns.boxplot(x="total_bill",y="day",data=yoo,color="r",showmeans=True,meanprops={"ma
```



```

,linewidth=3)
plt.show()

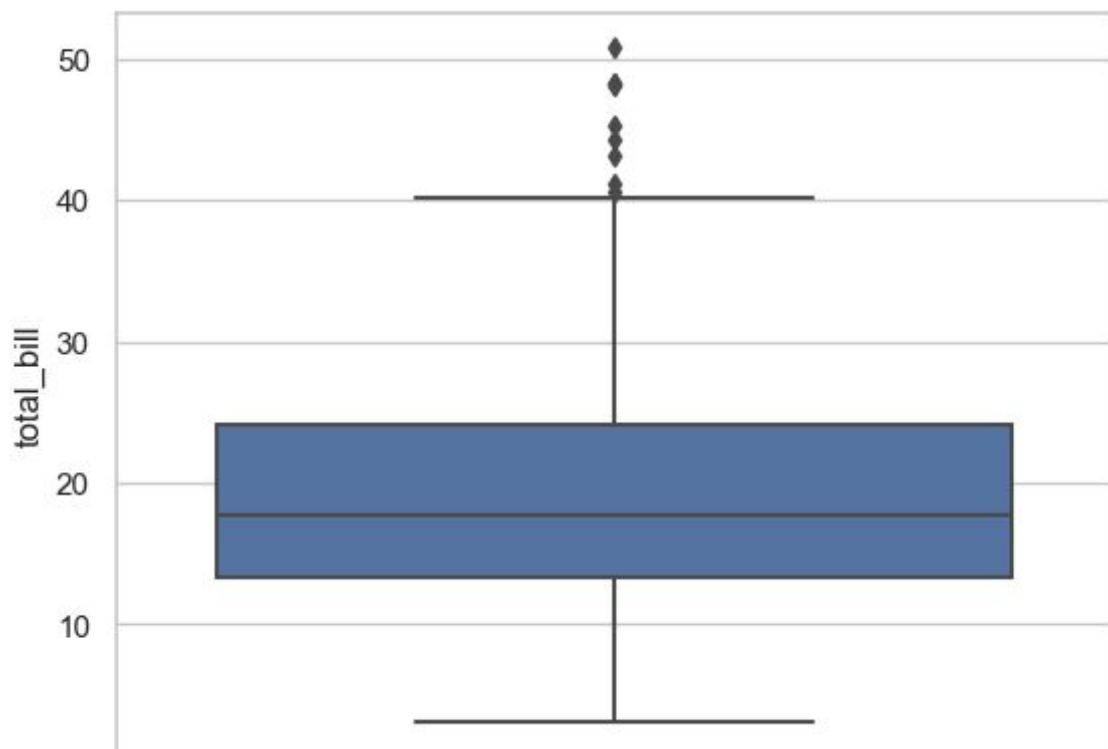
```



```

In [72]: sns.set(style="whitegrid")
sns.boxplot(y=yoo["total_bill"])
plt.show()

```



factor plot

```
In [73]: yoo
```

```
Out[73]:
```

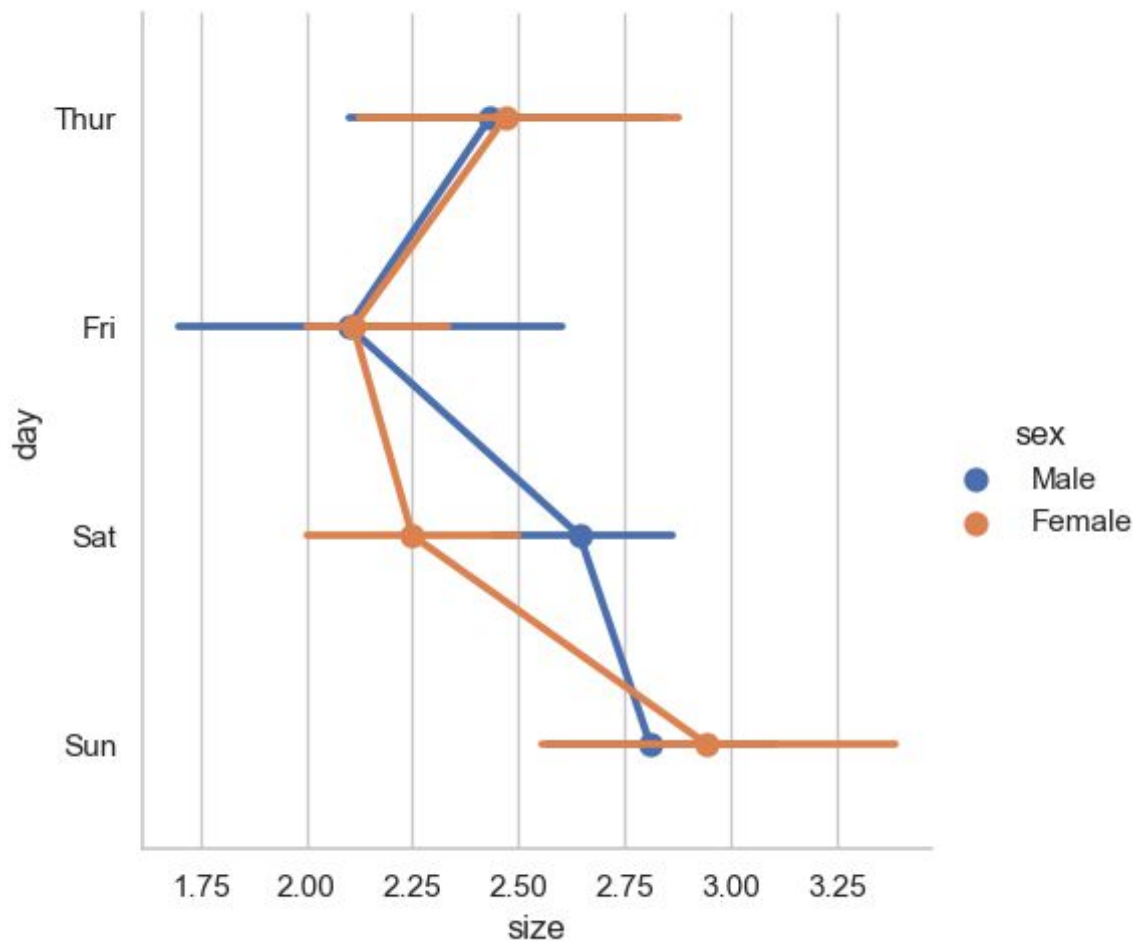
	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
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3	23.68	3.31	Male	No	Sun	Dinner	2
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...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
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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 [74]: sns.factorplot(x="size",y="day",hue="sex",data=yoo)
plt.show()
```

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:3717: UserWarning: The `factorplot` function has been renamed to `catplot`. The original name will be removed in a future release. Please update your code. Note that the default `kind` in `factorplot` (`'point'`) has changed to `strip` in `catplot`.

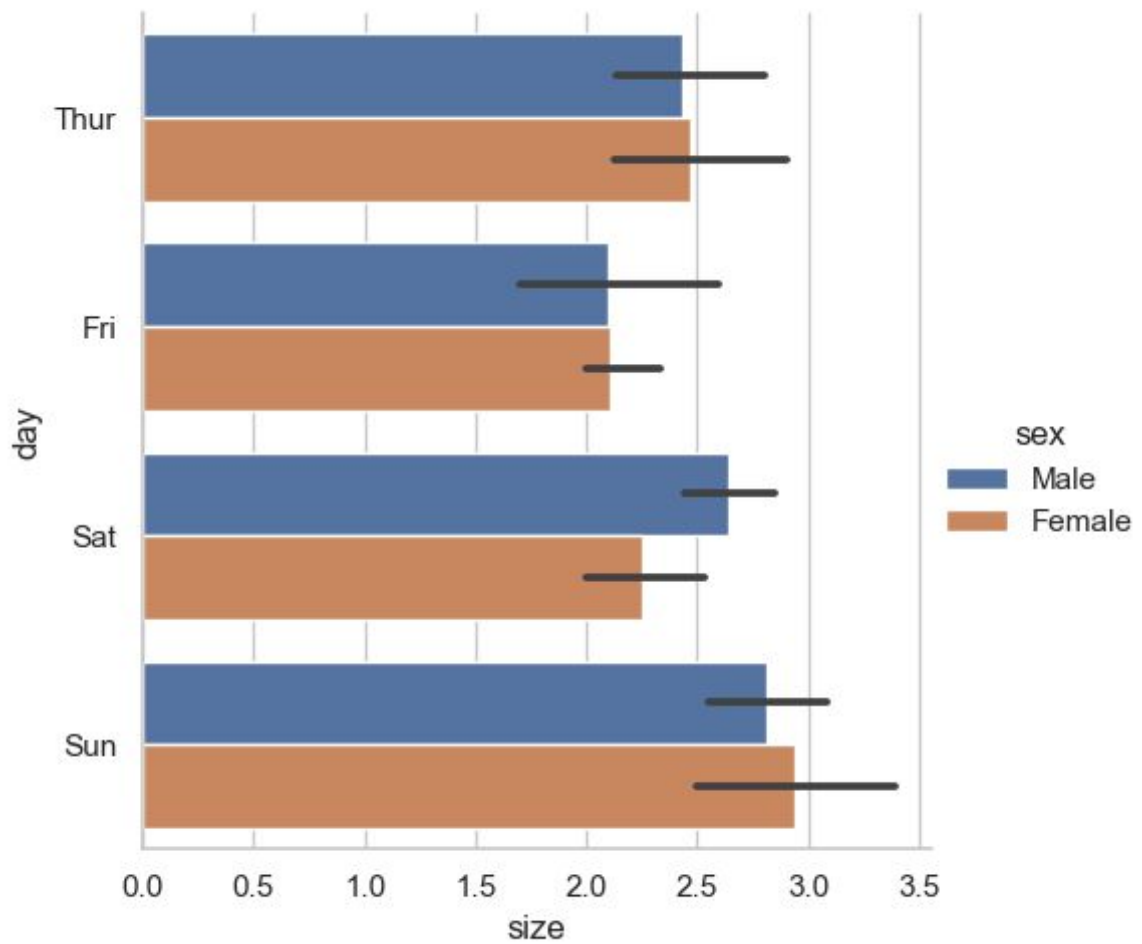
```
warnings.warn(msg)
```



```
In [75]: sns.factorplot(x="size",y="day",hue="sex",data=yoo,kind="bar")
plt.show()
```

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:3717: UserWarning: The `factorplot` function has been renamed to `catplot`. The original name will be removed in a future release. Please update your code. Note that the default `kind` in `factorplot` (`'point'`) has changed to `strip` in `catplot`.

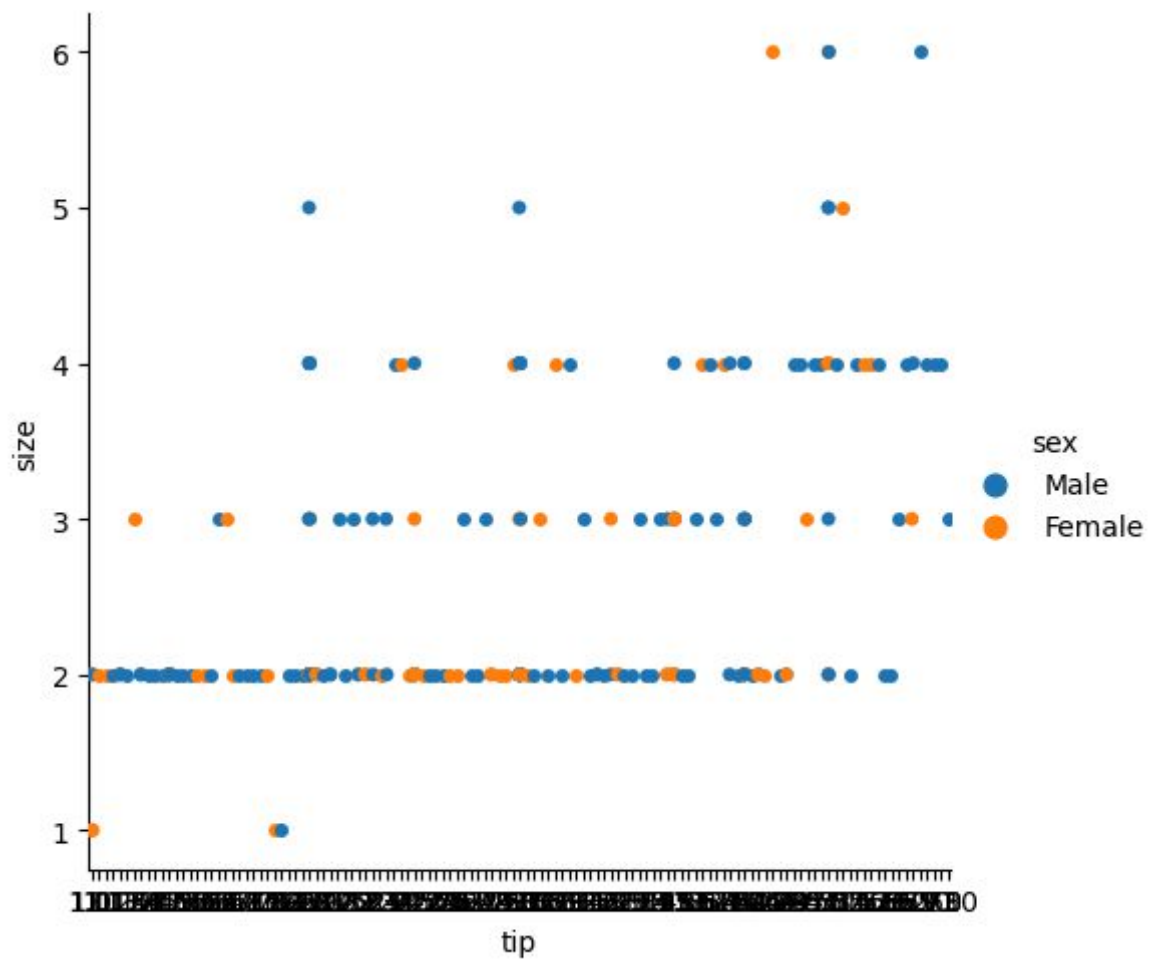
warnings.warn(msg)



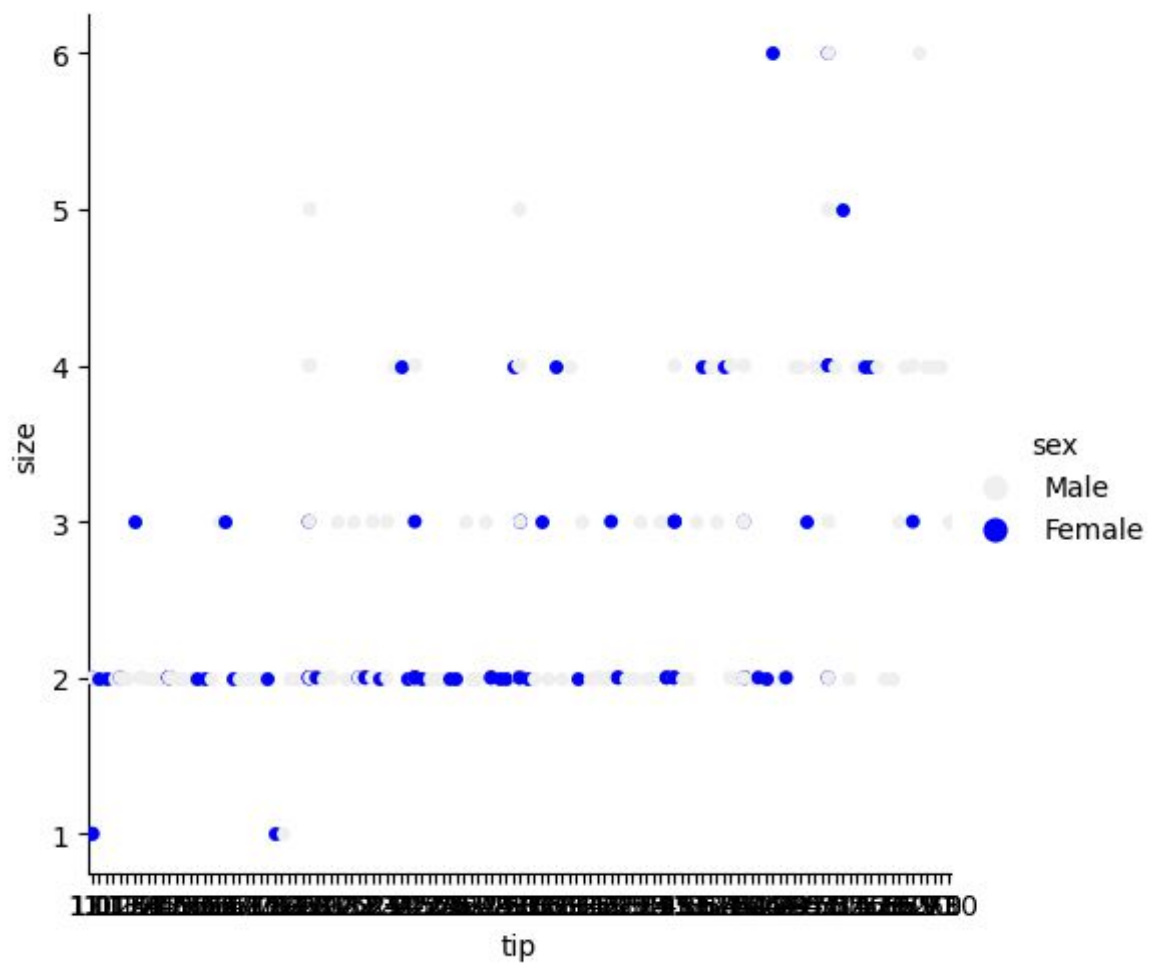
## CAT PLOT

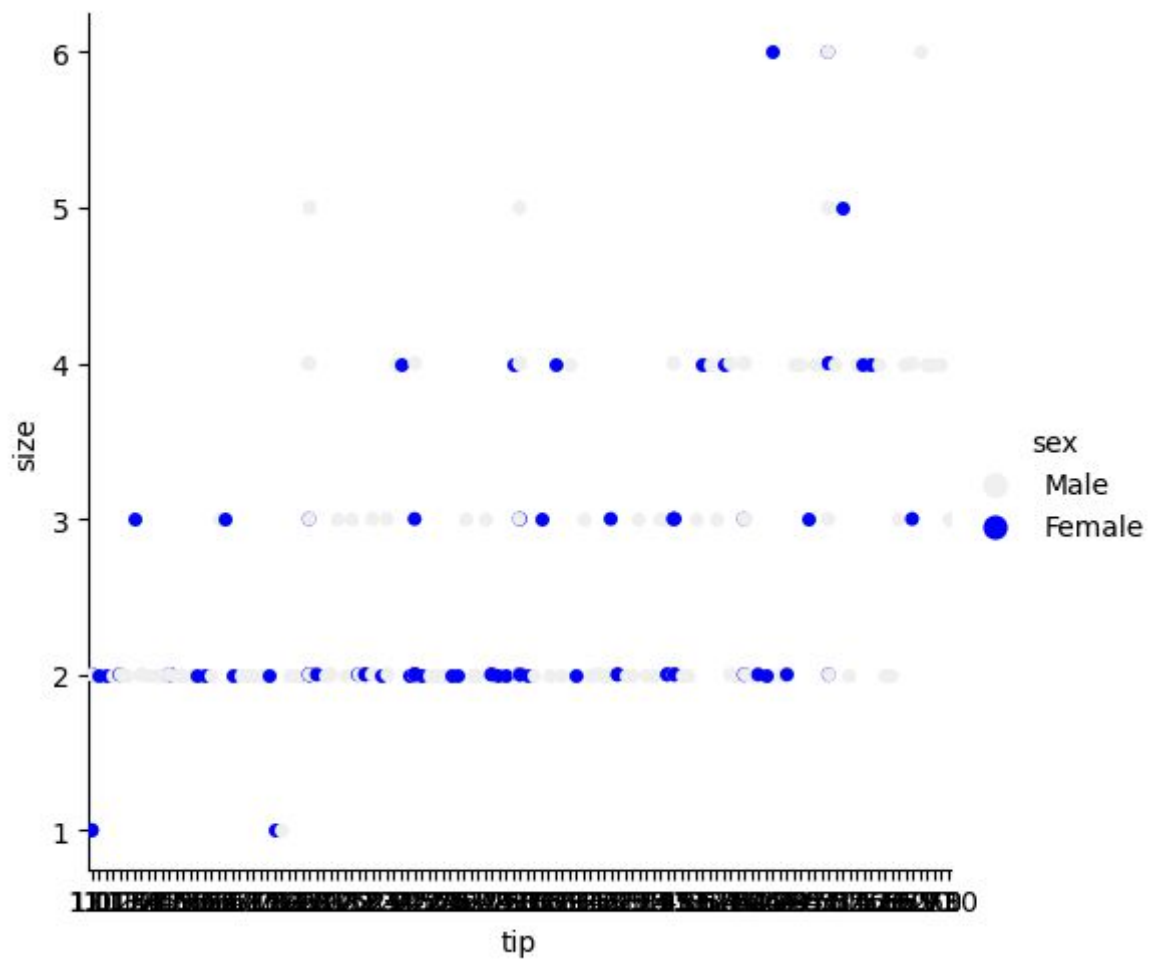
```
In [4]: sns.catplot(x="tip",y="size",data=yoo,hue="sex")
```

```
Out[4]: <seaborn.axisgrid.FacetGrid at 0x18bc09f76a0>
```

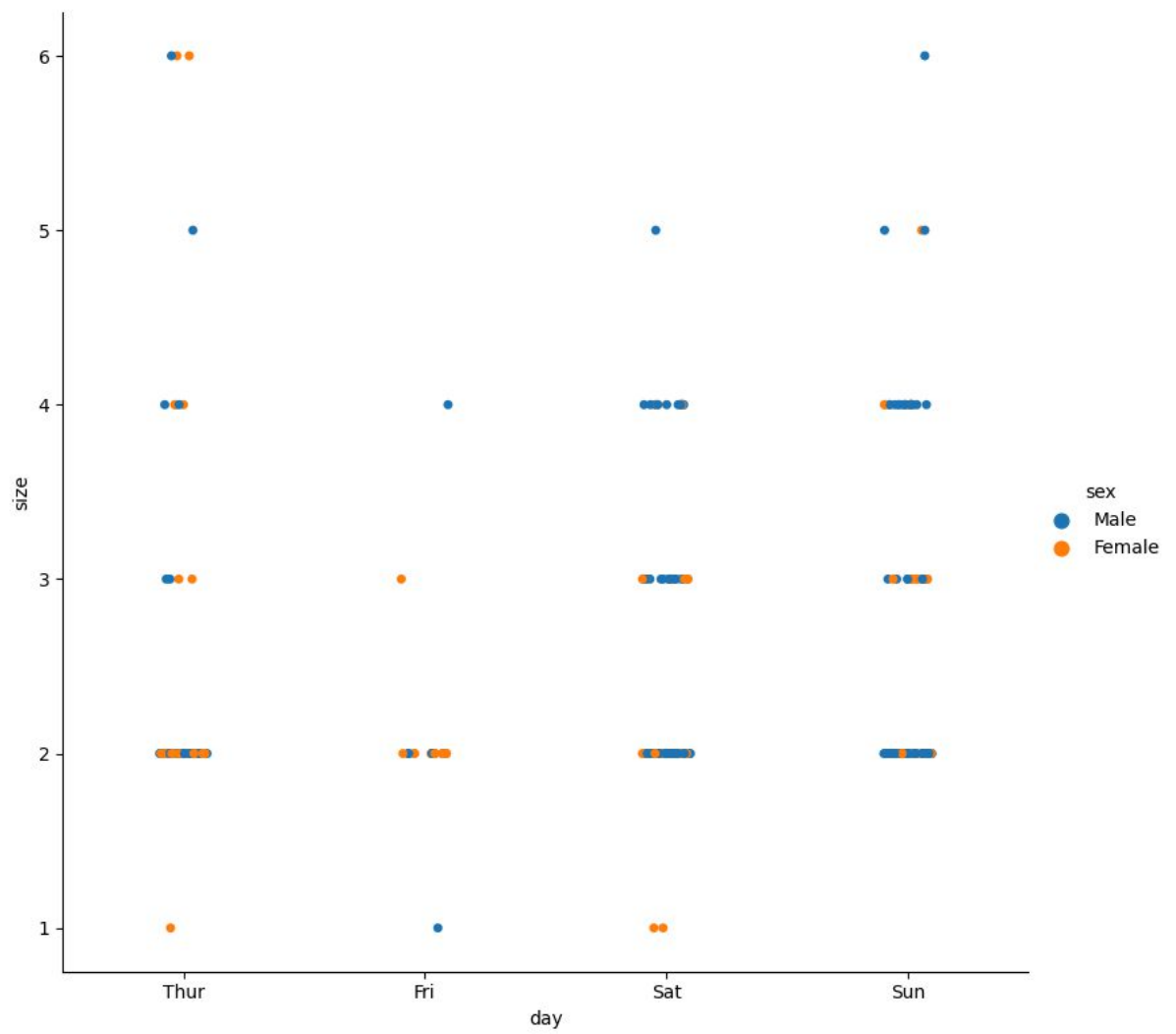


```
In [6]: sns.catplot(x="tip",y="size",data=yoo,hue="sex",color="b")
plt.show()
```

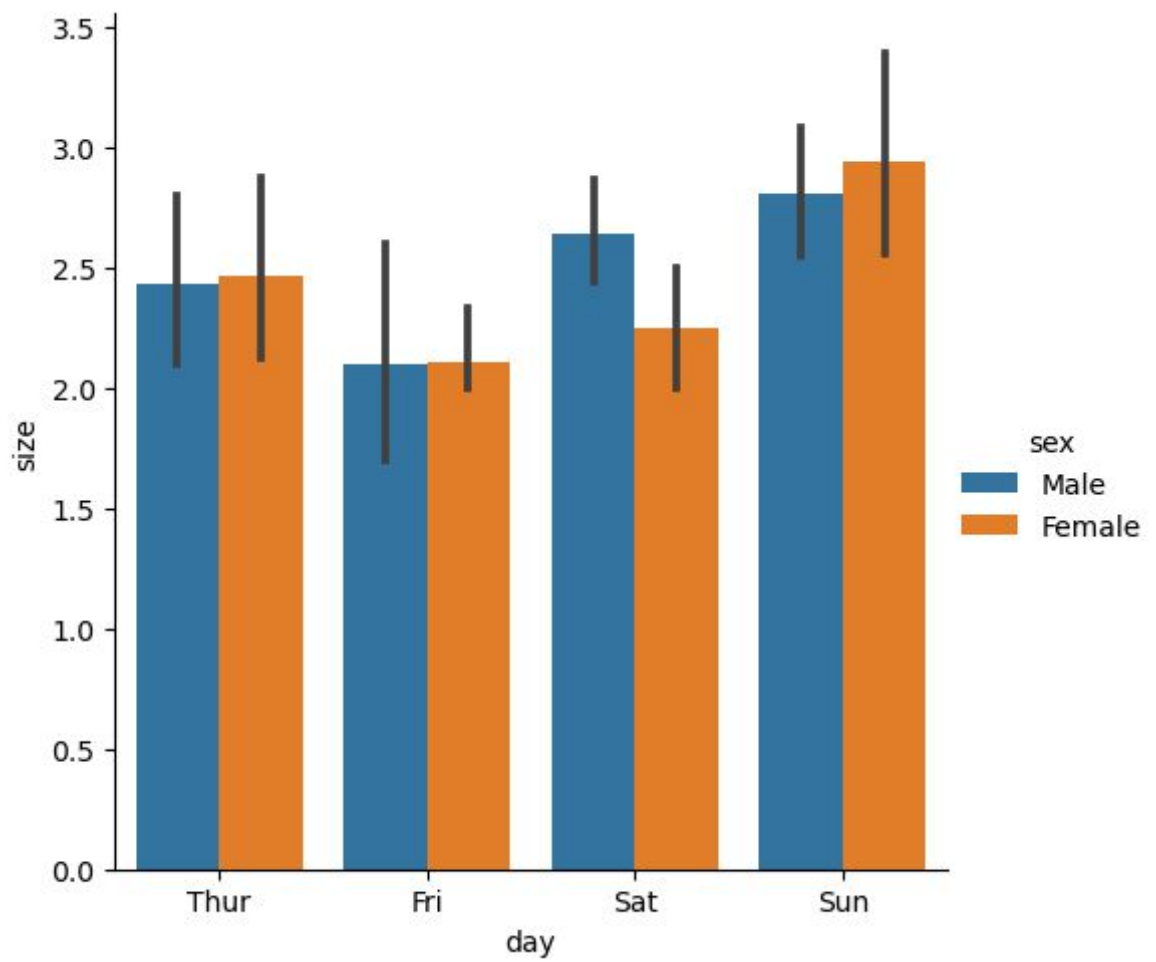




```
In [12]: sns.catplot(x="day",y="size",data=yoo,hue="sex",height=8)
plt.show()
```

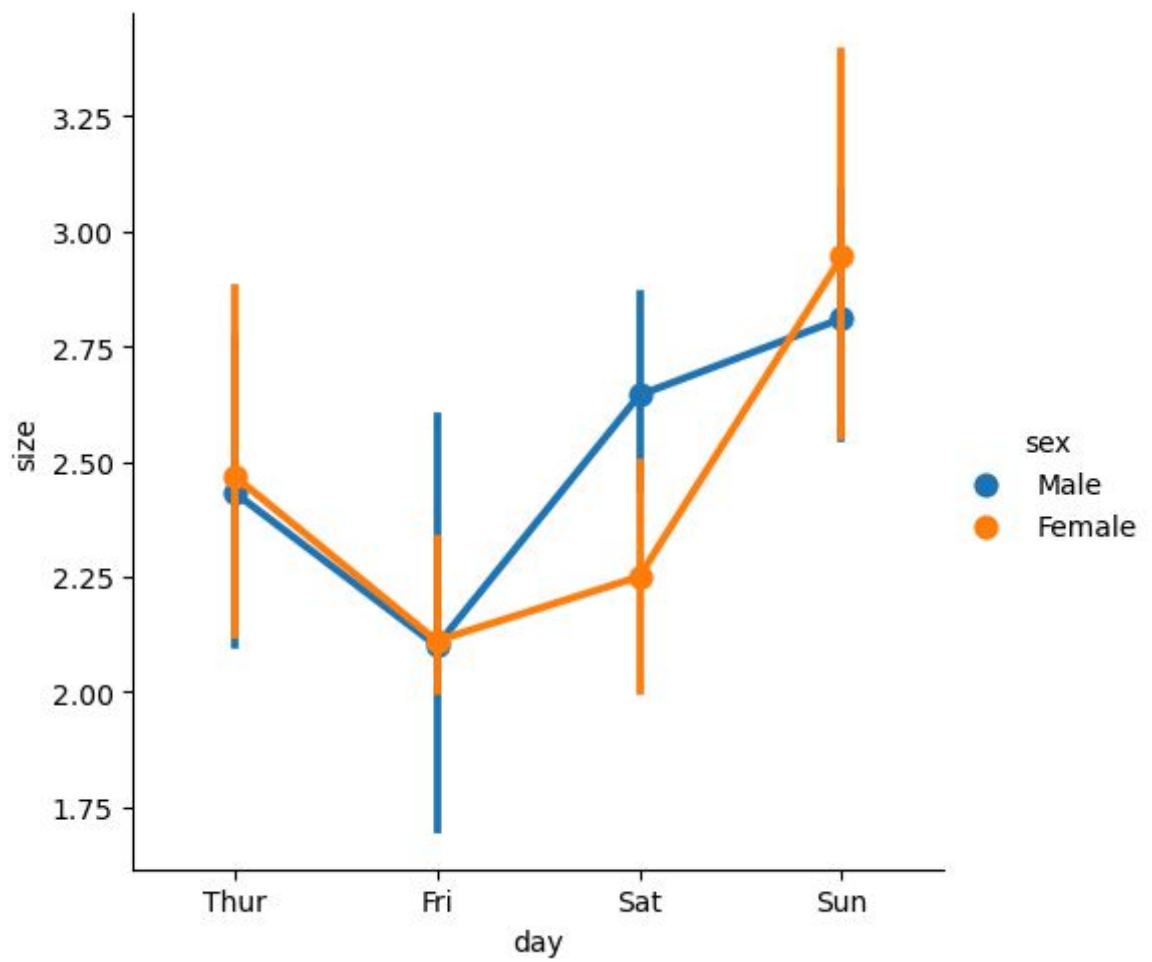


```
In [11]: sns.catplot(x="day",y="size",data=yoo,hue="sex",height=5,kind="bar")  
plt.show()
```

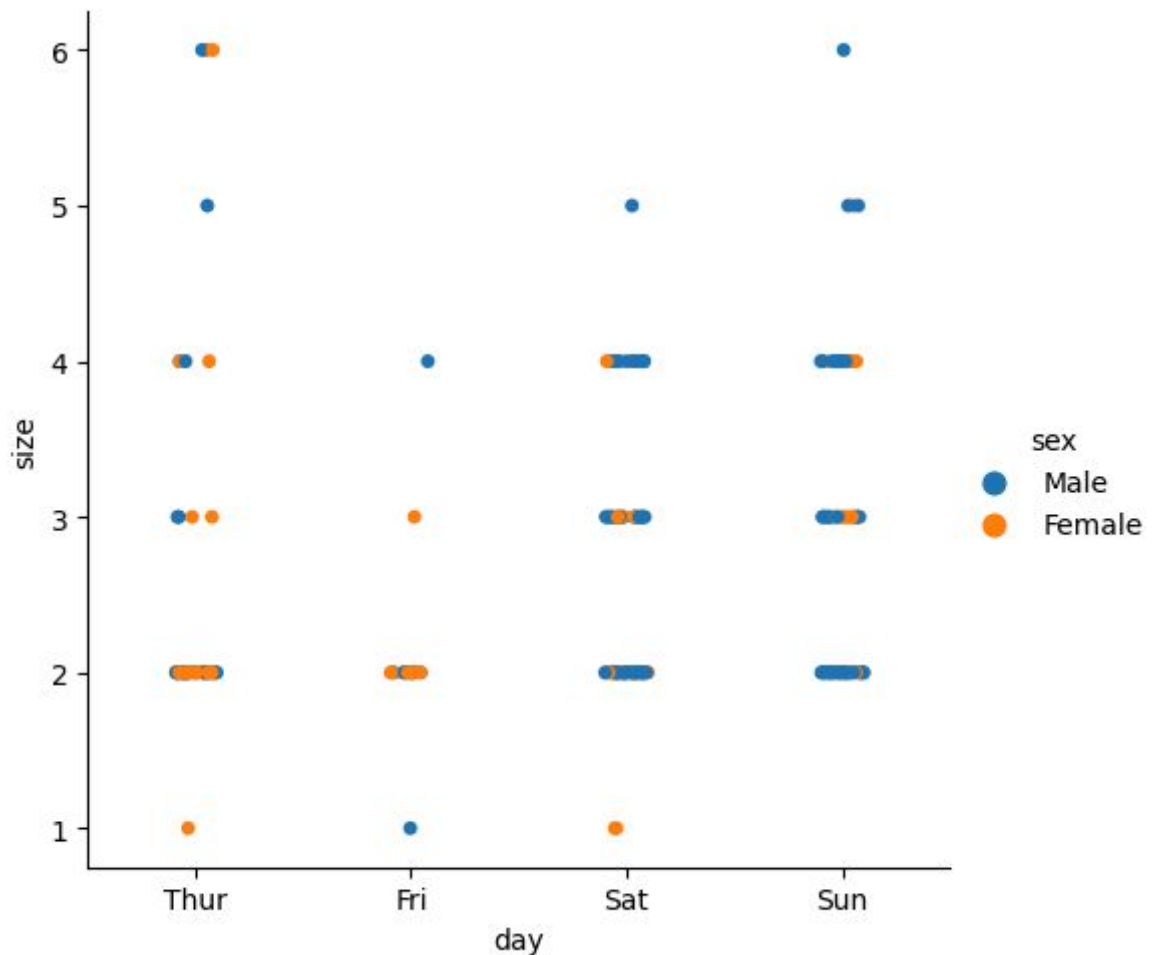


```
In [13]: sns.catplot(x="day",y="size",data=yoo,hue="sex",height=5,kind="point")  
plt.show()
```





```
In [15]: sns.catplot(x="day",y="size",data=yoo,hue="sex",height=5,kind="strip")  
plt.show()
```



```
In [17]: sns.catplot(x="size",y="day",data=yoo,hue="sex",height=5,kind="swarm")
plt.show()
```

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 56.5% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

warnings.warn(msg, UserWarning)

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 15.8% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

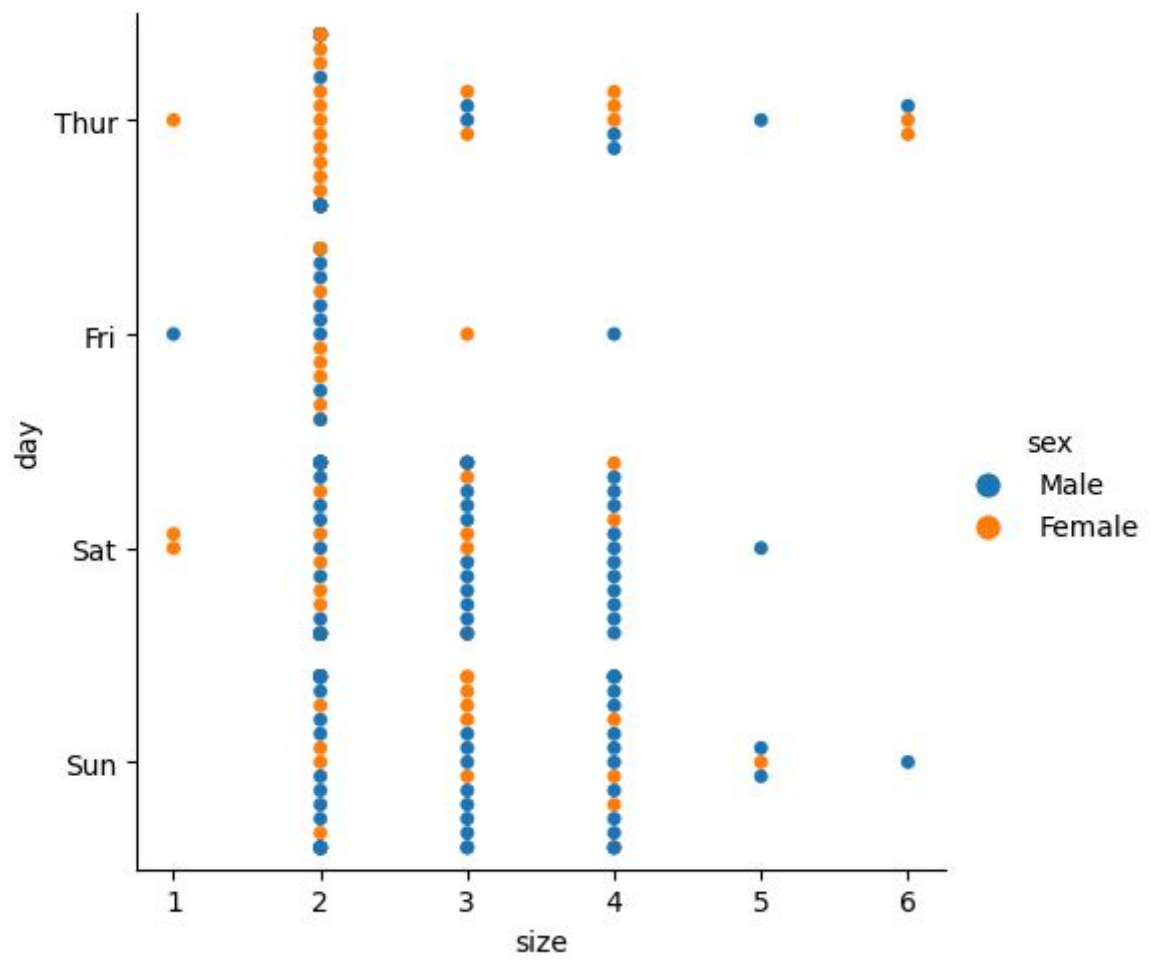
warnings.warn(msg, UserWarning)

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 51.7% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

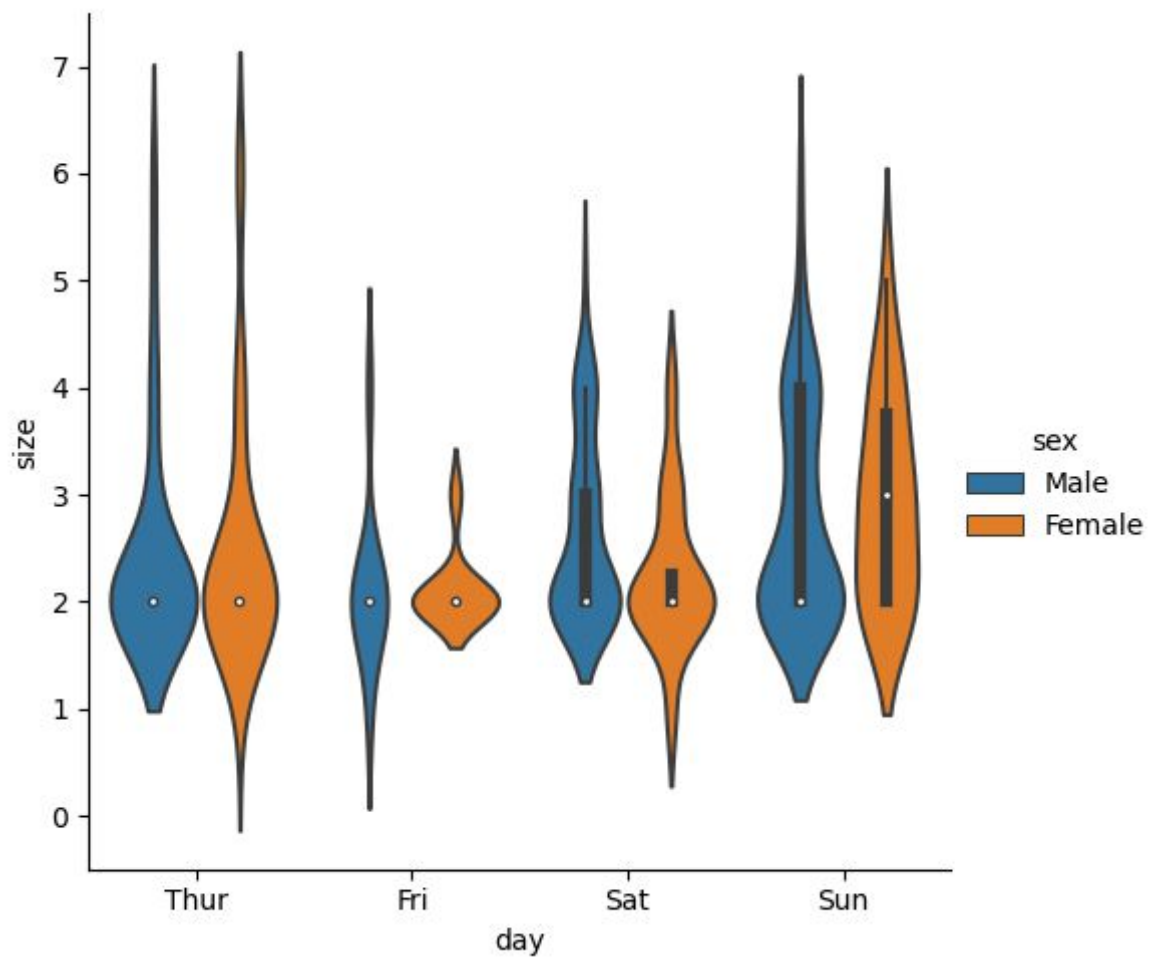
warnings.warn(msg, UserWarning)

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 43.4% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

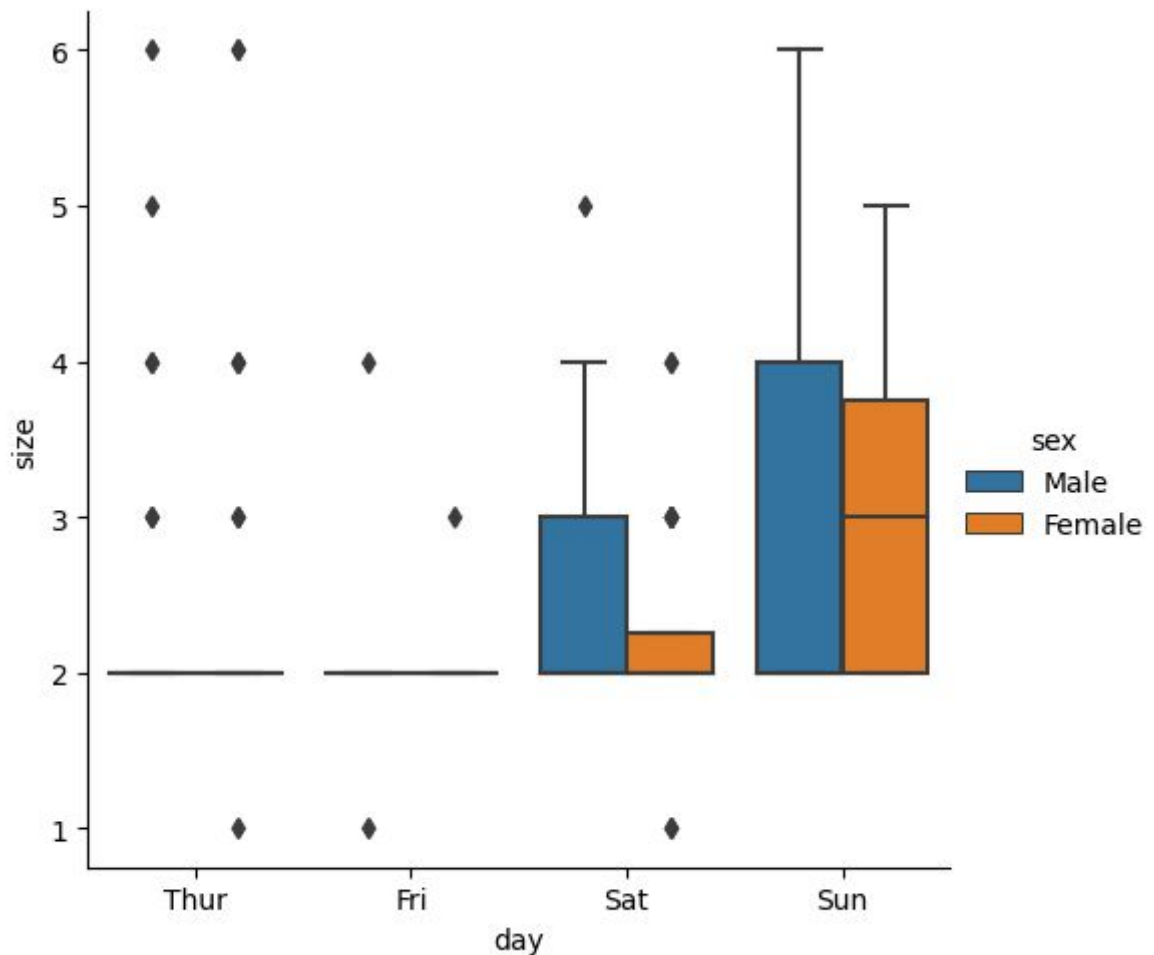
warnings.warn(msg, UserWarning)



```
In [18]: sns.catplot(x="day",y="size",data=yoo,hue="sex",height=5,kind="violin")
plt.show()
```



```
In [19]: sns.catplot(x="day",y="size",data=yoo,hue="sex",height=5,kind="box")
plt.show()
```



## SWARM PLOT

its like update of strip plot

```
In [23]: sns.swarmplot(x="day",y="size",data=yoo)
plt.show()
```

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 56.5% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

warnings.warn(msg, UserWarning)

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 15.8% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

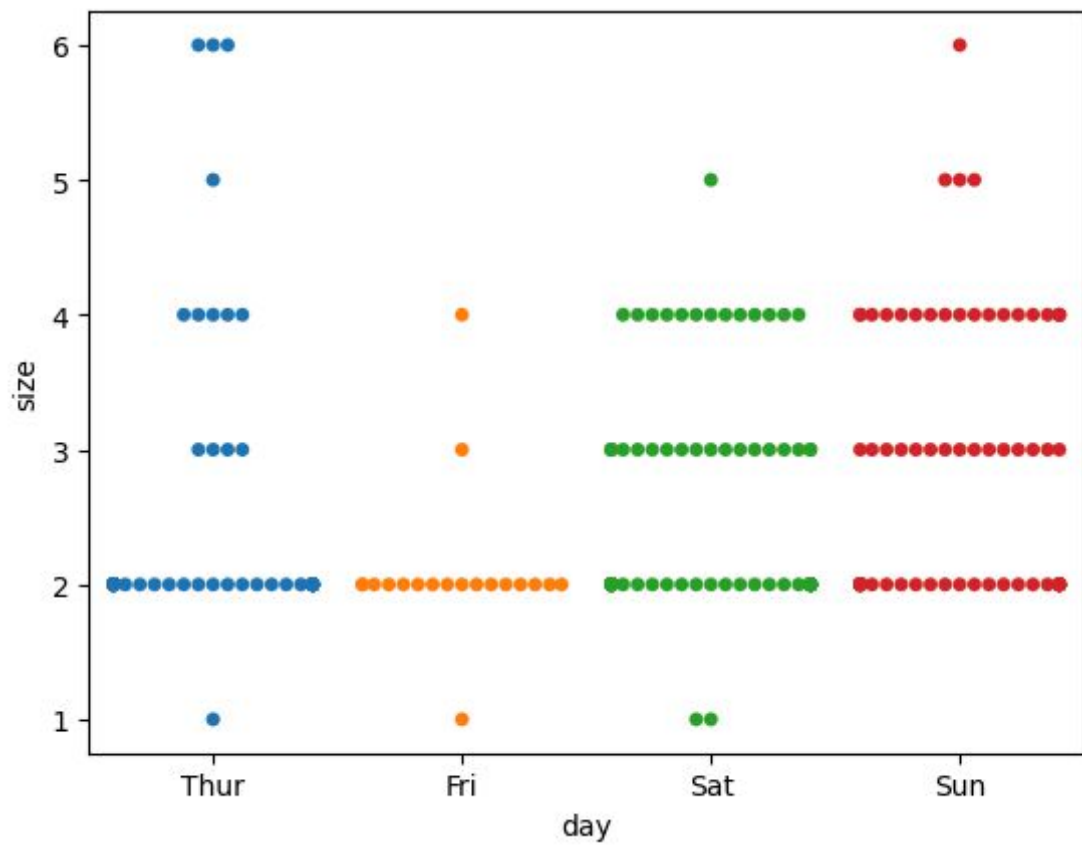
warnings.warn(msg, UserWarning)

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 51.7% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

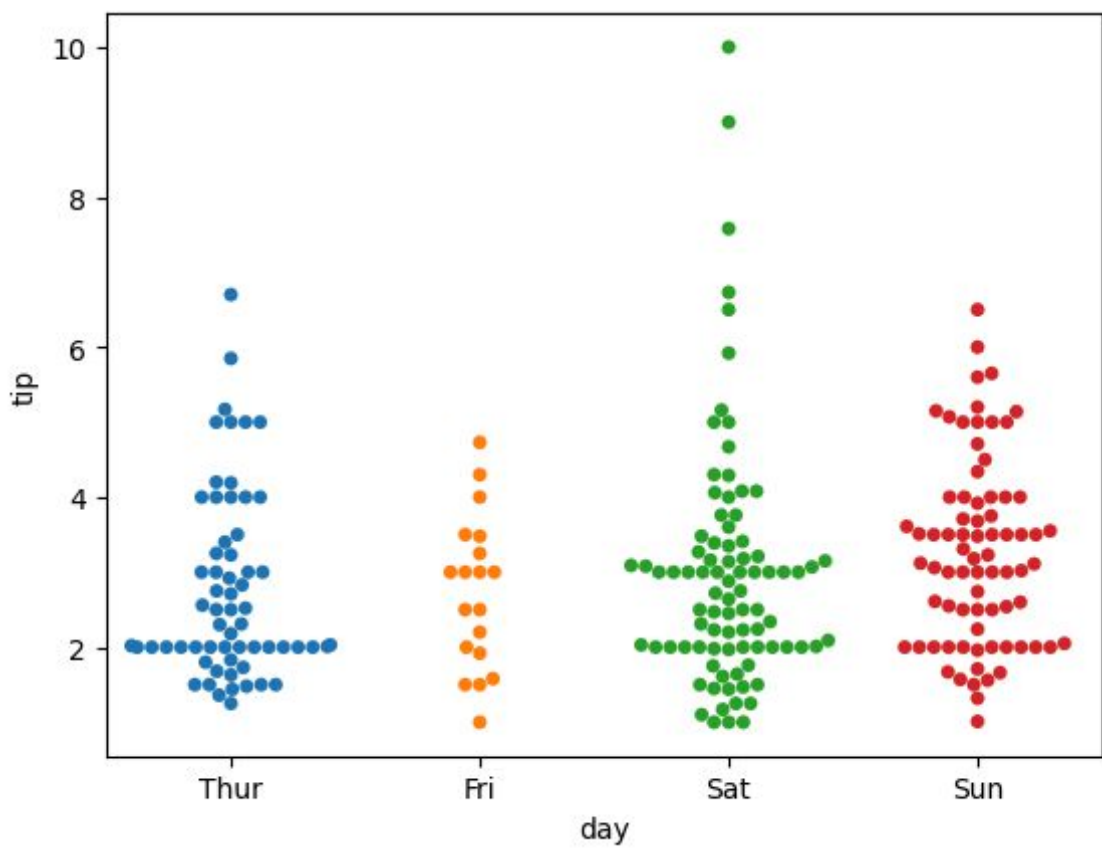
warnings.warn(msg, UserWarning)

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 43.4% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

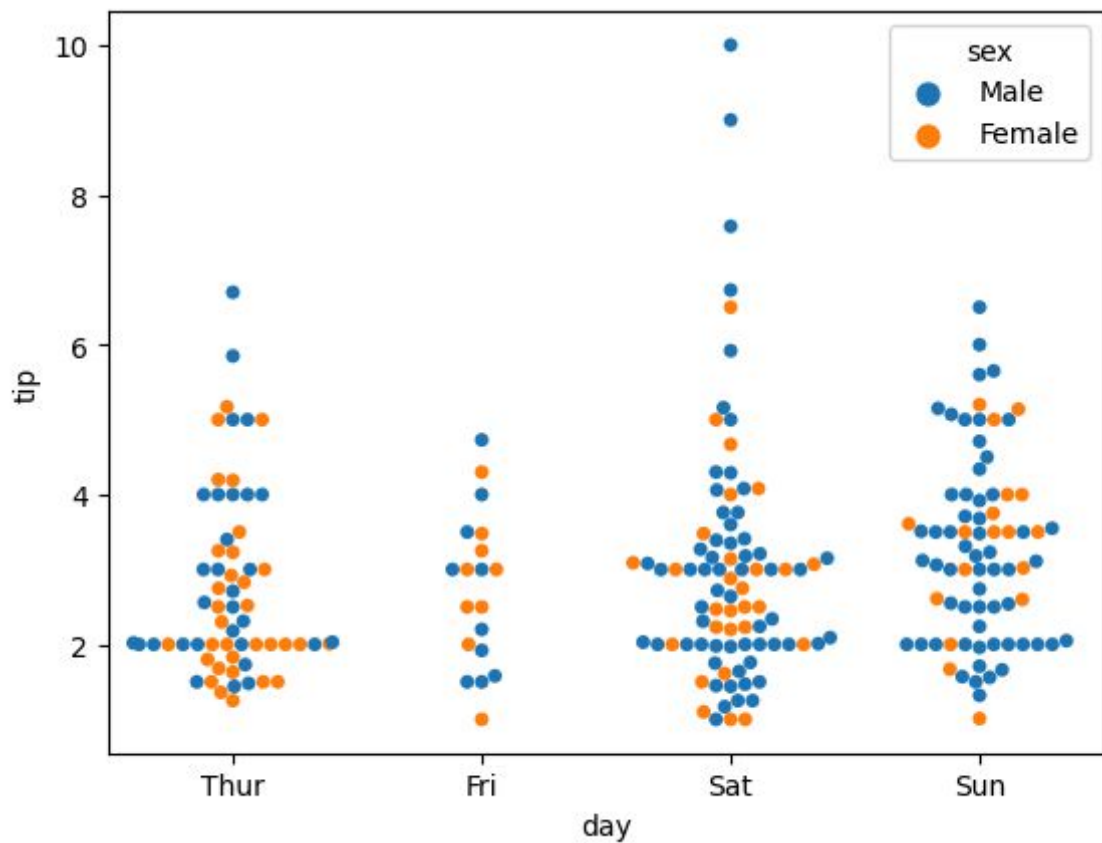
warnings.warn(msg, UserWarning)



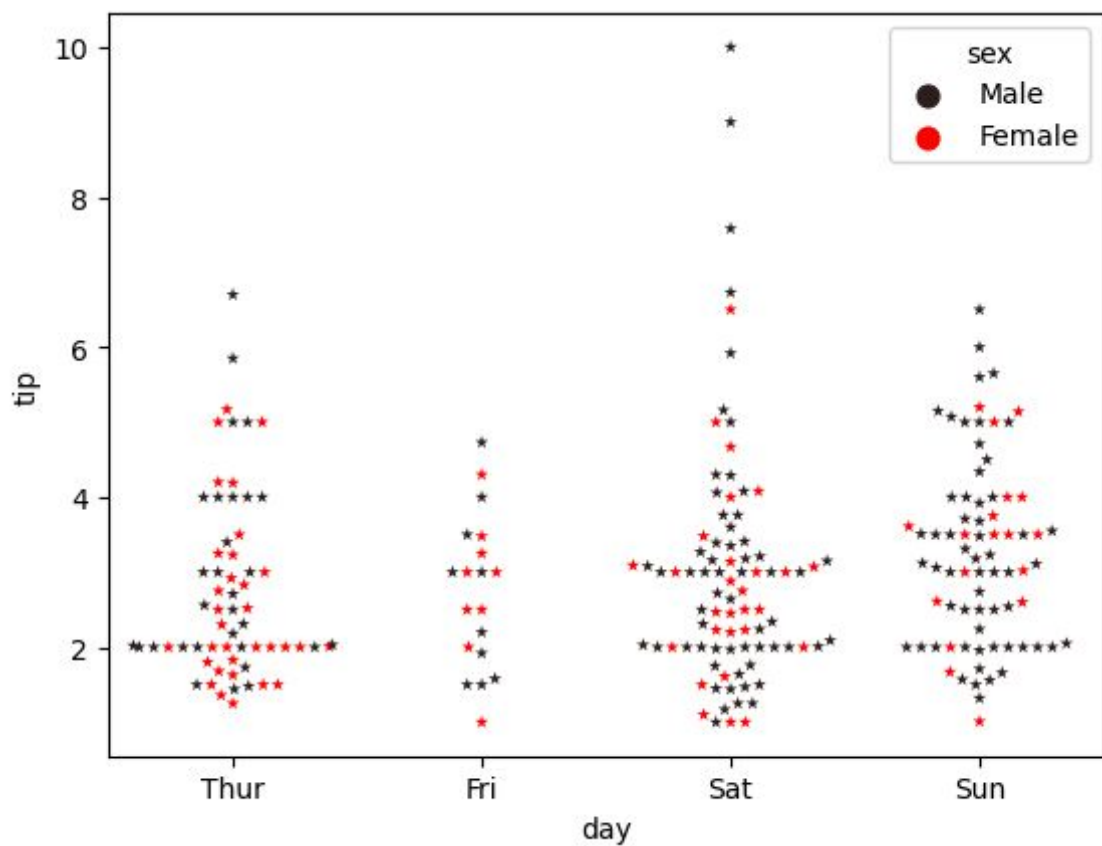
```
In [24]: sns.swarmplot(x="day",y="tip",data=yoo)
plt.show()
```



```
In [25]: sns.swarmplot(x="day",y="tip",data=yoo,hue="sex")
plt.show()
```

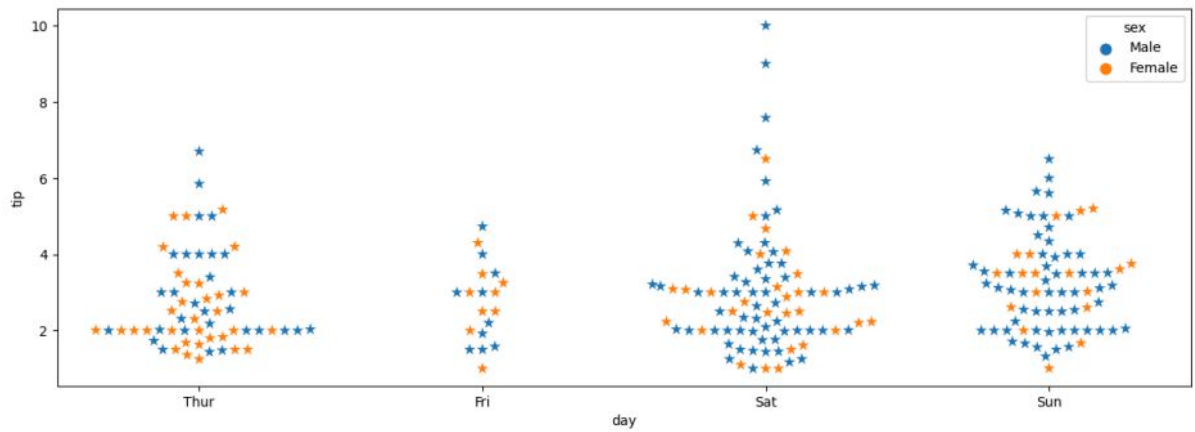


```
In [27]: sns.swarmplot(x="day",y="tip",data=yoo,hue="sex",marker="*",size=5,color="r")
plt.show()
```



```
In [29]: plt.figure(figsize=(15,5))
sns.swarmplot(x="day",y="tip",data=yoo,hue="sex",marker="*",size=9)
plt.show()
```





```
In [30]: sns.swarmplot(x="day",y="tip",data=yoo,hue="sex",marker="*",size=9,edgecolor="red",
plt.show())
```

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 19.4% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

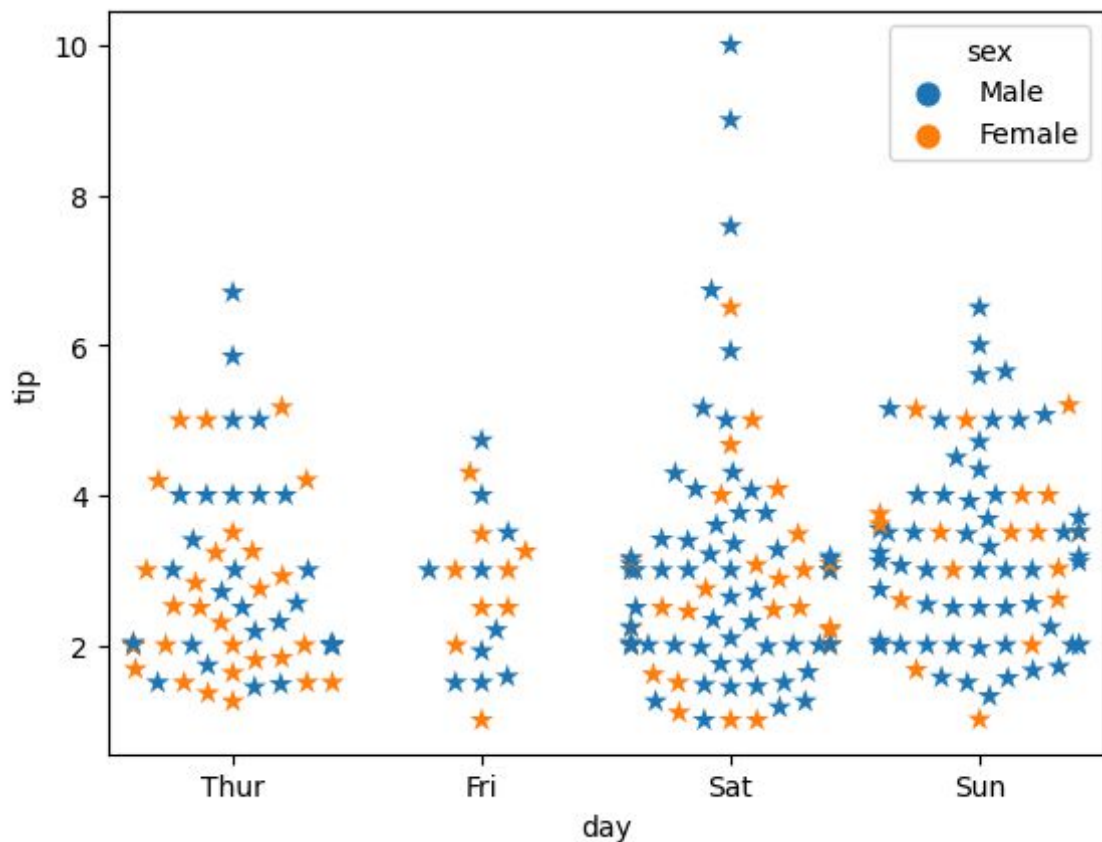
warnings.warn(msg, UserWarning)

C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 25.3% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

warnings.warn(msg, UserWarning)

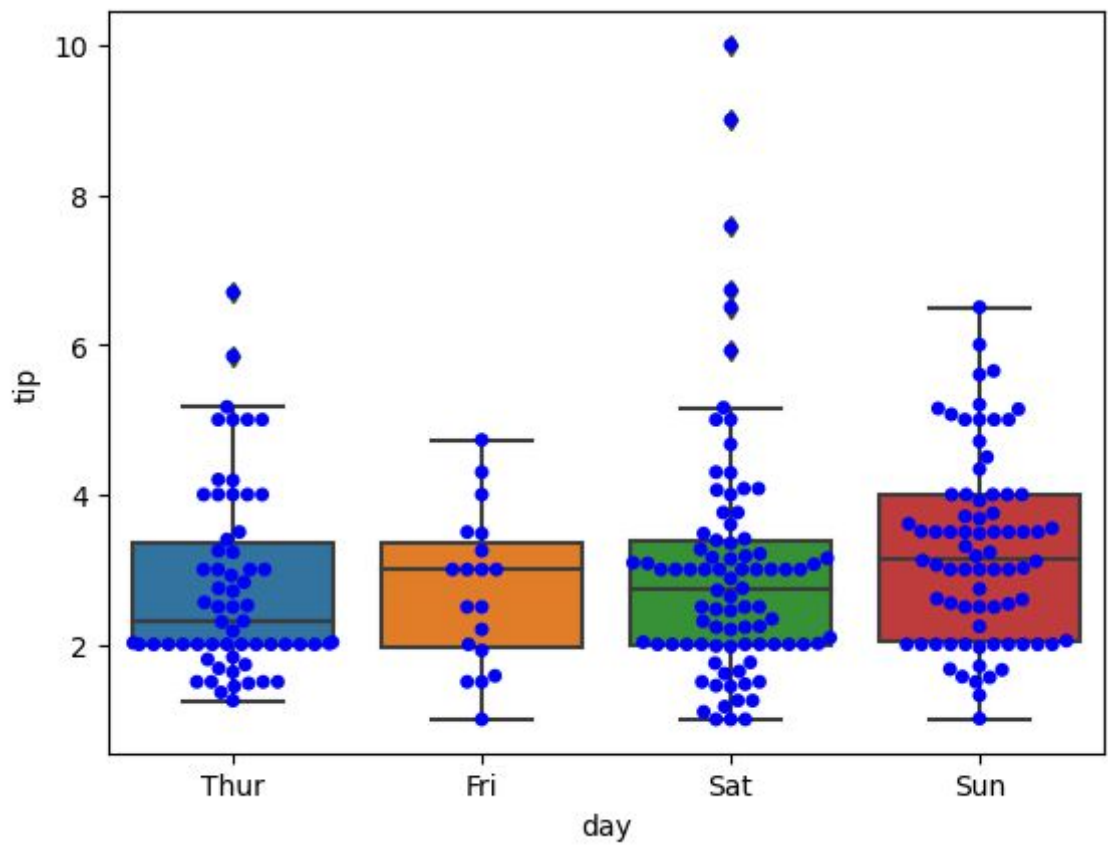
C:\Users\shaw3\anaconda3\lib\site-packages\seaborn\categorical.py:1296: UserWarning: 21.1% of the points cannot be placed; you may want to decrease the size of the markers or use stripplot.

warnings.warn(msg, UserWarning)

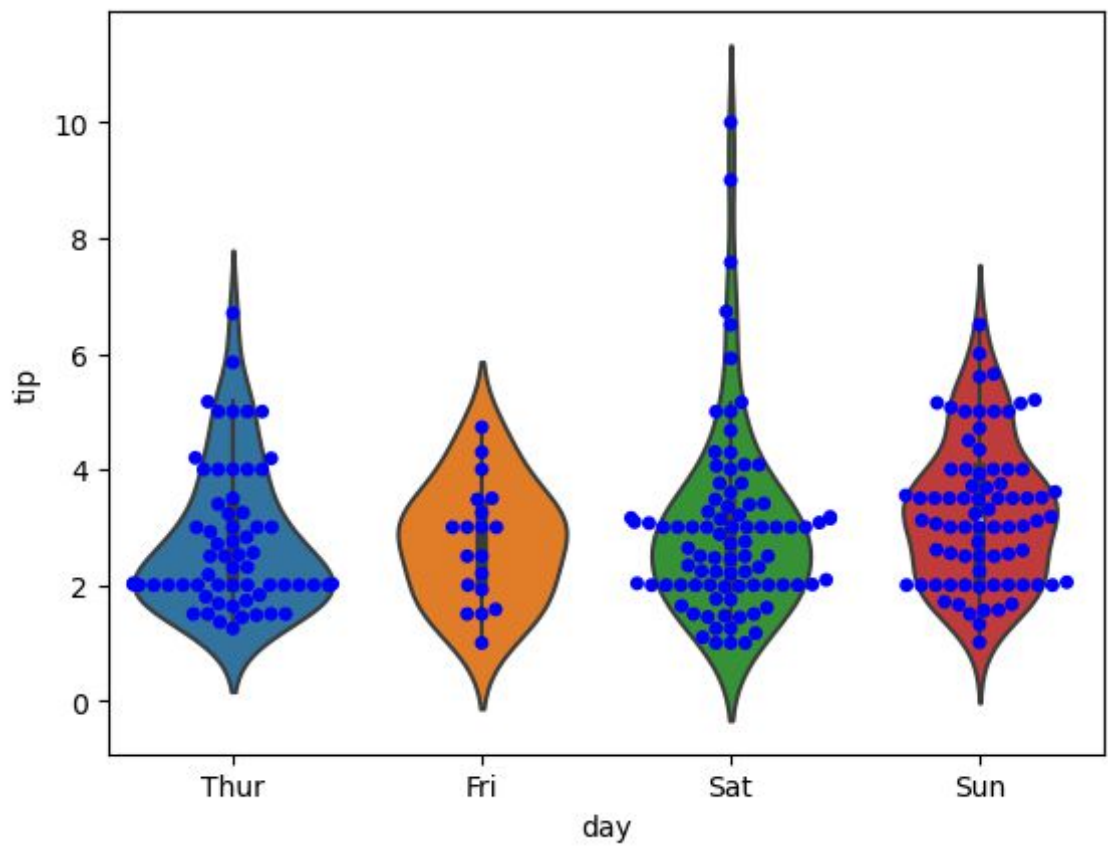


```
In [33]: sns.boxplot(x="day",y="tip",data=yoo)
sns.swarmplot(x="day",y="tip",data=yoo,color="b")
plt.show()
```





```
In [34]: sns.violinplot(x="day",y="tip",data=yoo)
sns.swarmplot(x="day",y="tip",data=yoo,color="b")
plt.show()
```



```
In [ ]:
```