In [58]:
```
# VIVEK-CHAUHAN-ADVANCED-DATA-ANALYTICS-SWARMPLOT-CATPLOT
```

In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

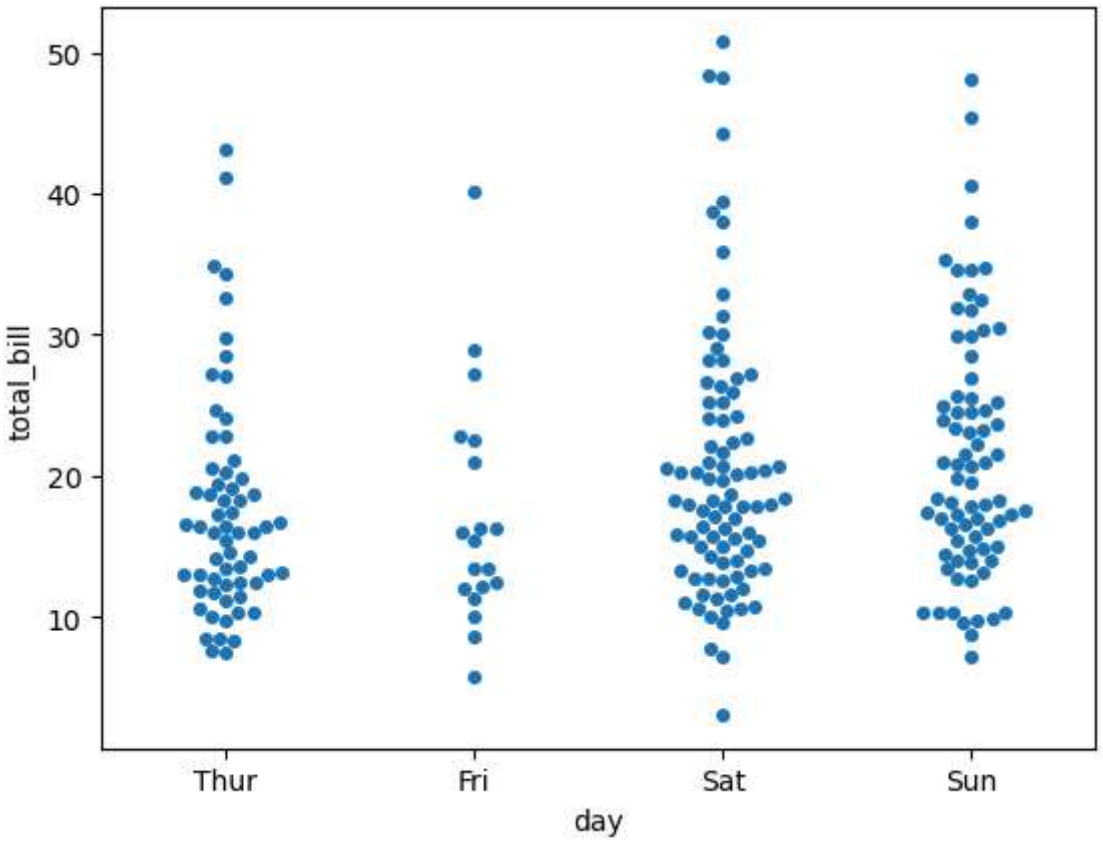
In [3]:
```
# load dataset
df = sns.load_dataset("tips")
df
```

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 |

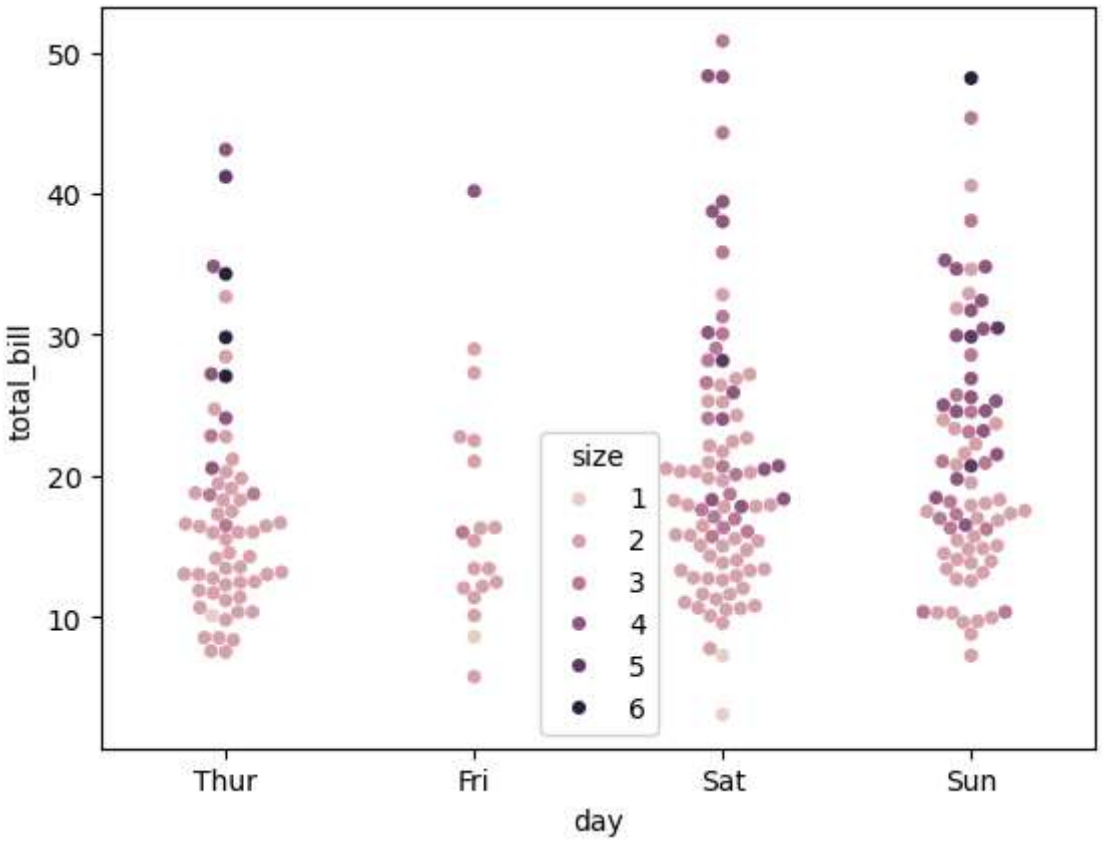
244 rows × 7 columns

In [15]:
```
# plot the swarmplot
sns.swarmplot(x="day",y="total_bill",data=df,size=5) # size = marker size
plt.show()
```



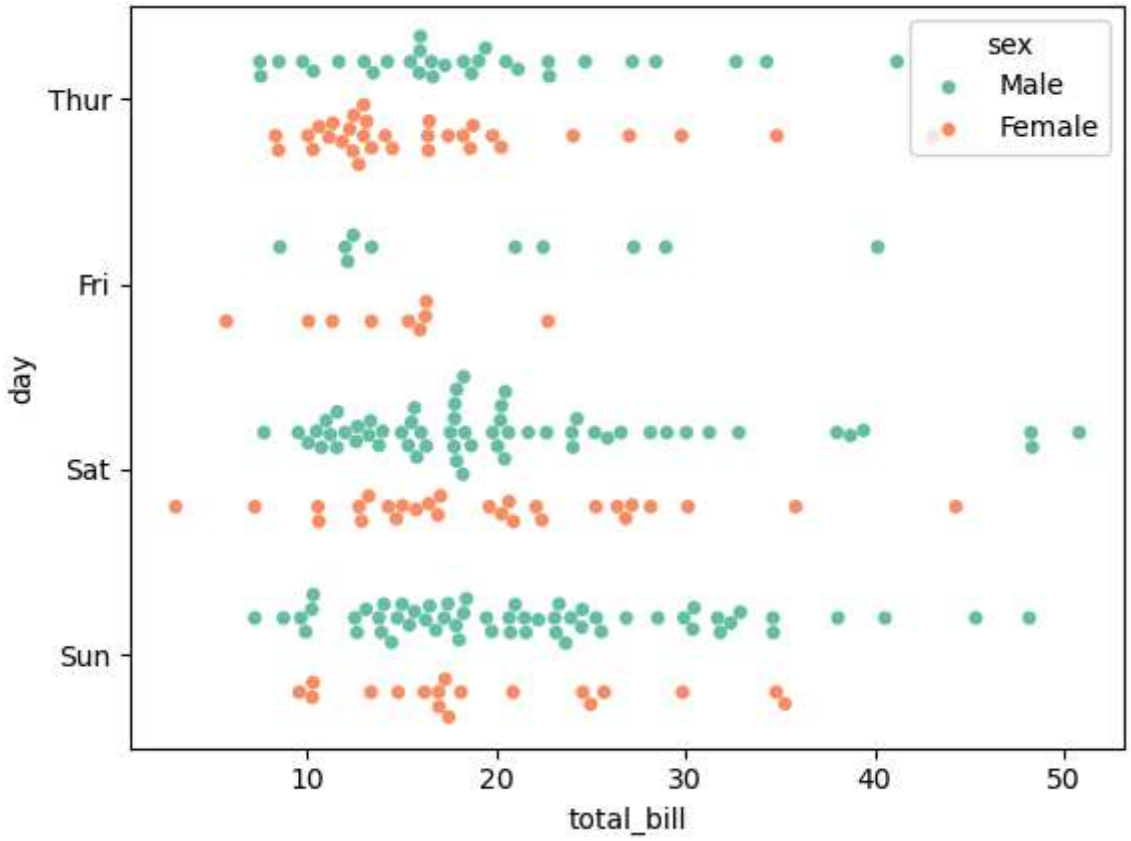

In [17]:
```
# let's diffrentiate with hue
sns.swarmplot(x="day",y="total_bill",hue="size",data=df)
```

Out[17]: <Axes: xlabel='day', ylabel='total_bill'>



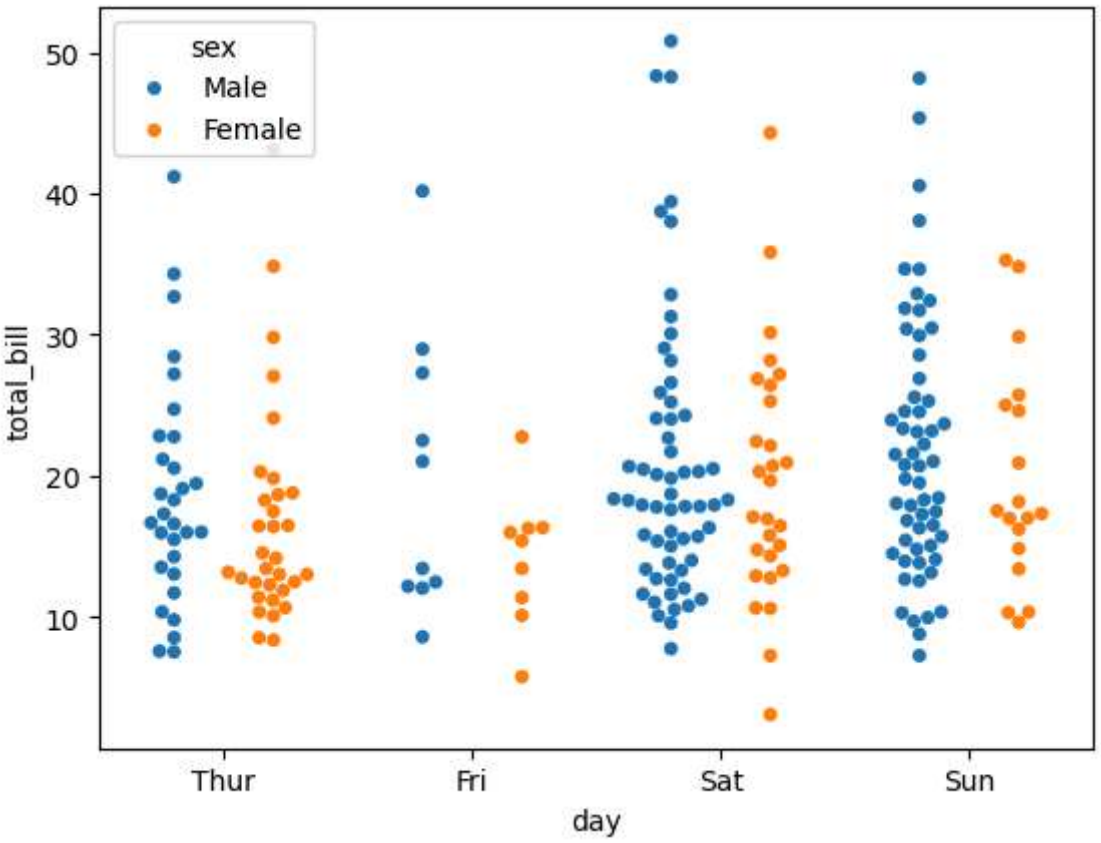

In [15]:
```
# horizontal swarmplot with the help of orient = h
# we don't need to give orient if we swap the axis
sns.swarmplot(y="day",x="total_bill",hue="sex",data=df,orient="h",palette="Set2",do
```

Out[15]: <Axes: xlabel='total_bill', ylabel='day'>




In [38]:
```
# To separate the strips for different hue levels along the categorical axis
sns.swarmplot(x="day",y="total_bill",data=df,hue="sex",dodge=True)
```

Out[38]: <Axes: xlabel='day', ylabel='total_bill'>




In [24]:
```
# load the dataset
df = sns.load_dataset("tips")
df
```

Out[24]:

| | 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 |
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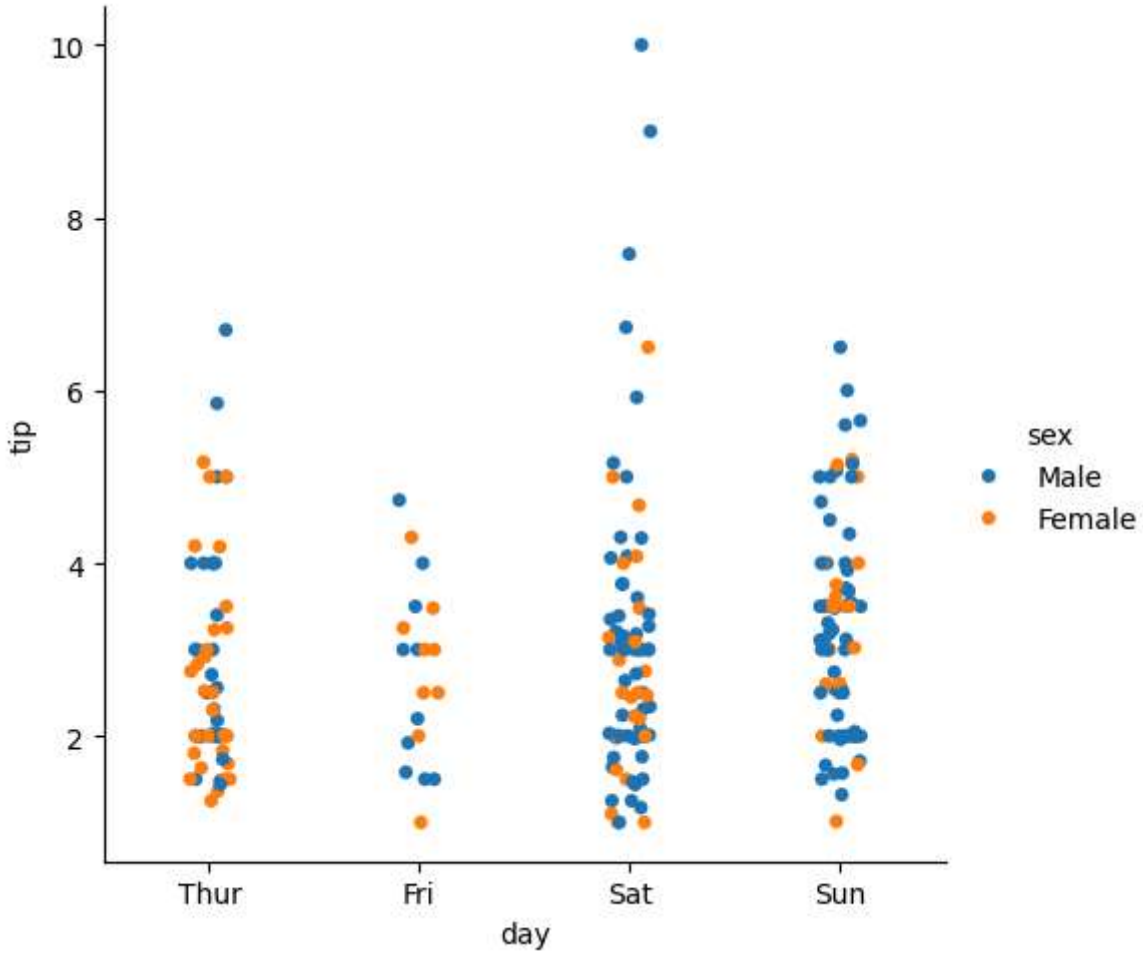
| **242** | 17.82 | 1.75 | Male | No | Sat | Dinner | 2 |
| **243** | 18.78 | 3.00 | Female | No | Thur | Dinner | 2 |

244 rows × 7 columns

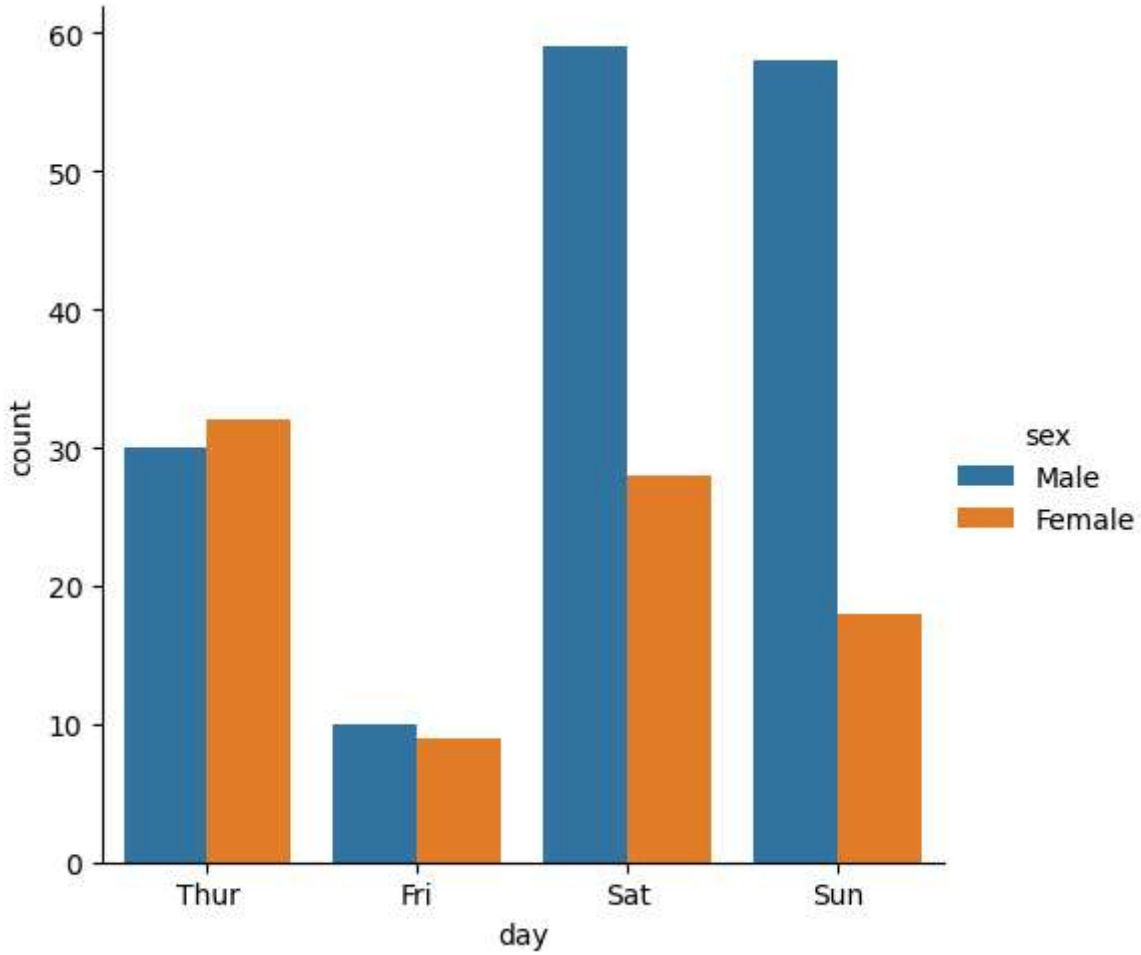
In [46]:
```
# let's create the cat-plot
sns.catplot(x="day",y="tip",data=df,hue="sex")
```

Out[46]: <seaborn.axisgrid.FacetGrid at 0x19e8d214b60>




In [56]:
```
# in the catplot we have diffrent types of kind for plotting
# “strip”, “swarm”, “box”, “violin”, “boxen”, “point”, “bar”, or “count”.
sns.catplot(x="day",data=df,kind="count",hue="sex")
```

Out[56]: <seaborn.axisgrid.FacetGrid at 0x19e8f7cac00>




In [ ]: