In [1]:

```
import seaborn as sns
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
```

# LINE PLOT

In [2]:

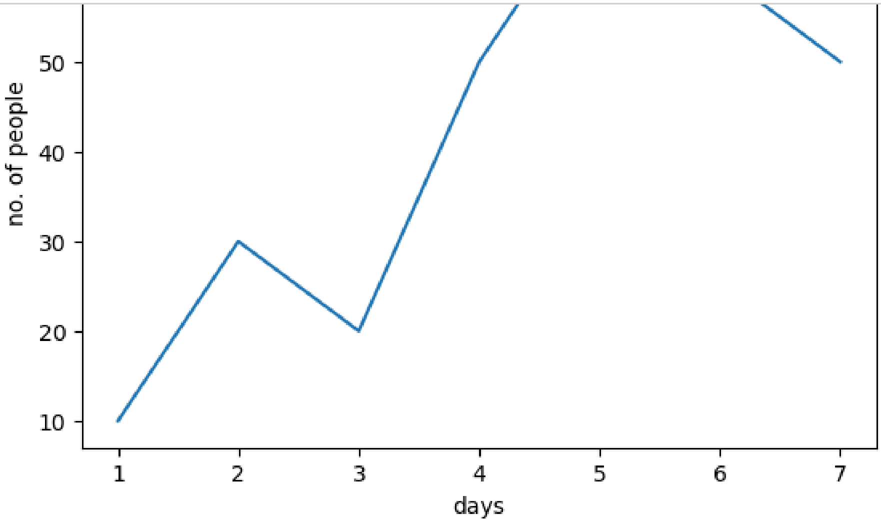
```


x=[1,2,3,4,5,6,7]
y=[10,30,20,50,70,60,50]
df=pd.DataFrame({'days':x,'no. of people':y})
df
```

Out[2]:

|   | days | no. of people |
|---|---|---|
| **0** | 1 | 10 |
| **1** | 2 | 30 |
| **2** | 3 | 20 |
| **3** | 4 | 50 |
| **4** | 5 | 70 |
| **5** | 6 | 60 |
| **6** | 7 | 50 |

In [3]:

```
sns.lineplot(x='days',y='no. of people',data=df)
plt.show()
#plt.style.use('dark_background')
```



In [4]:

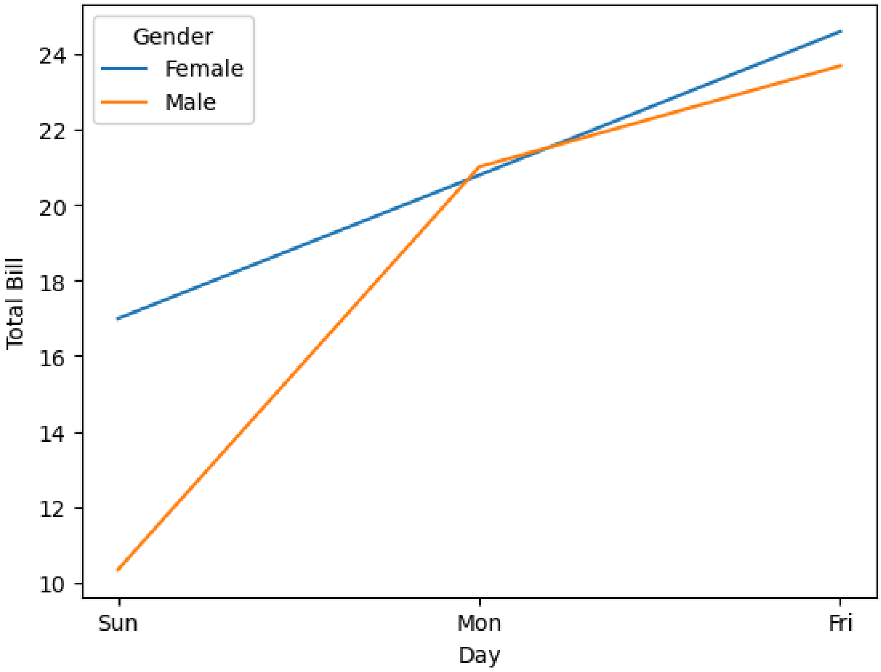
```
df=pd.read_excel("C:\\Users\\Asus\\Downloads\\Meal.xlsx")
df
```

Out[4]:

|   | Total Bill | Tip | Gender | Drinks | Day | Time | Size |
|---|---|---|---|---|---|---|---|
| **0** | 16.99 | 1.01 | Female | Yes | Sun | Dinner | 2 |
| **1** | 10.34 | 1.66 | Male | No | Sun | Lunch | 3 |
| **2** | 21.01 | 3.51 | Male | No | Mon | Dinner | 5 |
| **3** | 23.68 | 3.31 | Male | Yes | Fri | Lunch | 2 |
| **4** | 24.59 | 3.61 | Female | Yes | Fri | Lunch | 3 |

In [5]:

```
#sns.lineplot(x='Day',y='Total Bill',data=df)
sns.lineplot(x='Day',y='Total Bill',data=df,hue='Gender')
#sns.lineplot(x='Day',y='Total Bill',data=df,hue='Gender',style='Time')
plt.show()
```



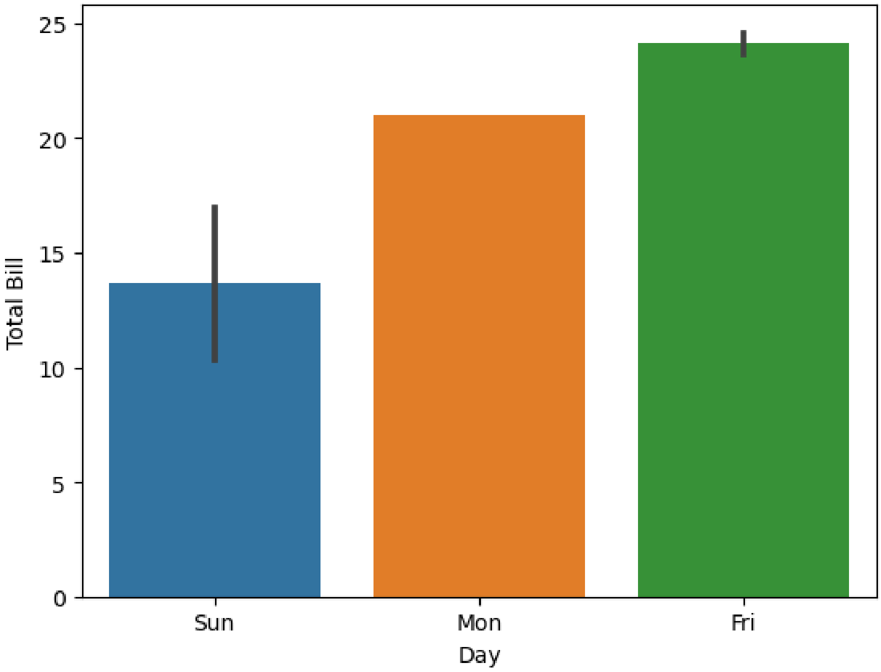
# BAR PLOT

In [6]:

```
sns.barplot(x='Day',y='Total Bill',data=df) #black line on top of bar represent 'MEDIAN'
```

Out[6]:

```
<Axes: xlabel='Day', ylabel='Total Bill'>
```

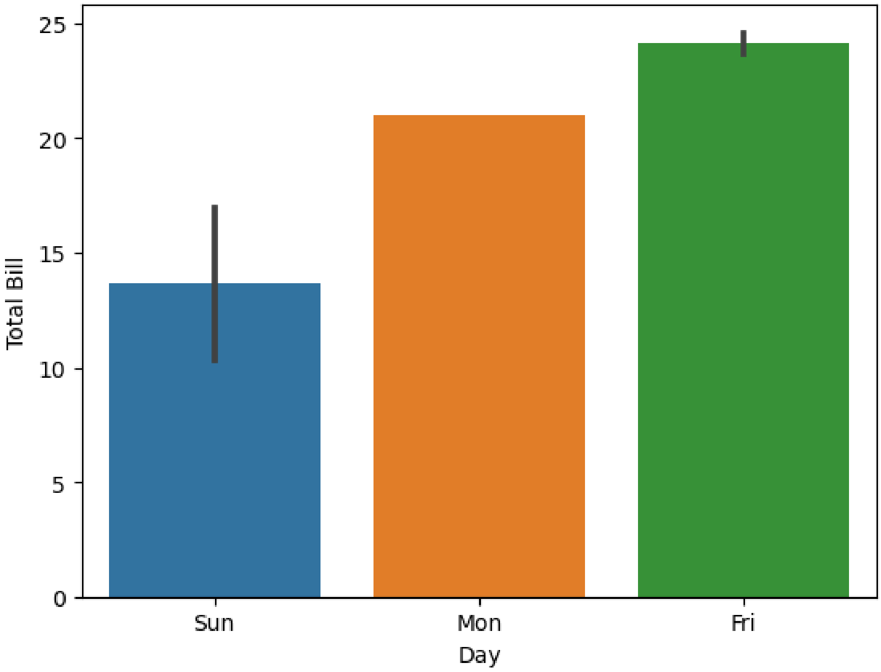


In [7]:

```
from numpy import mean
sns.barplot(x='Day',y='Total Bill',data=df,estimator=mean) #black line on top of bar represent 'MEAN'
```

Out[7]:

```
<Axes: xlabel='Day', ylabel='Total Bill'>
```

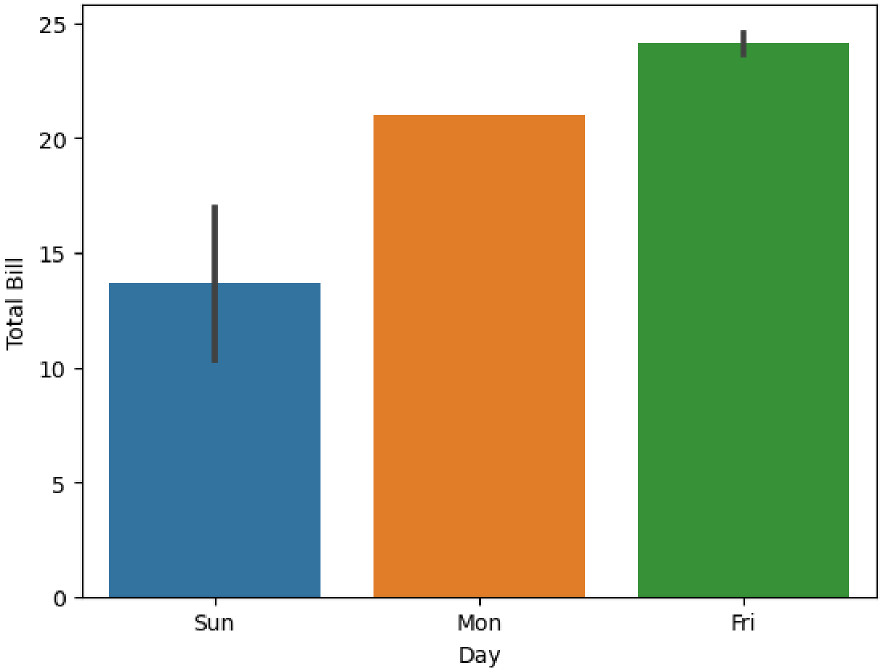


In [8]:

```
from numpy import median
sns.barplot(x='Day',y='Total Bill',data=df,estimator=median) #black line on top of bar represent 'MEDIAN'
#default is median
```

Out[8]:

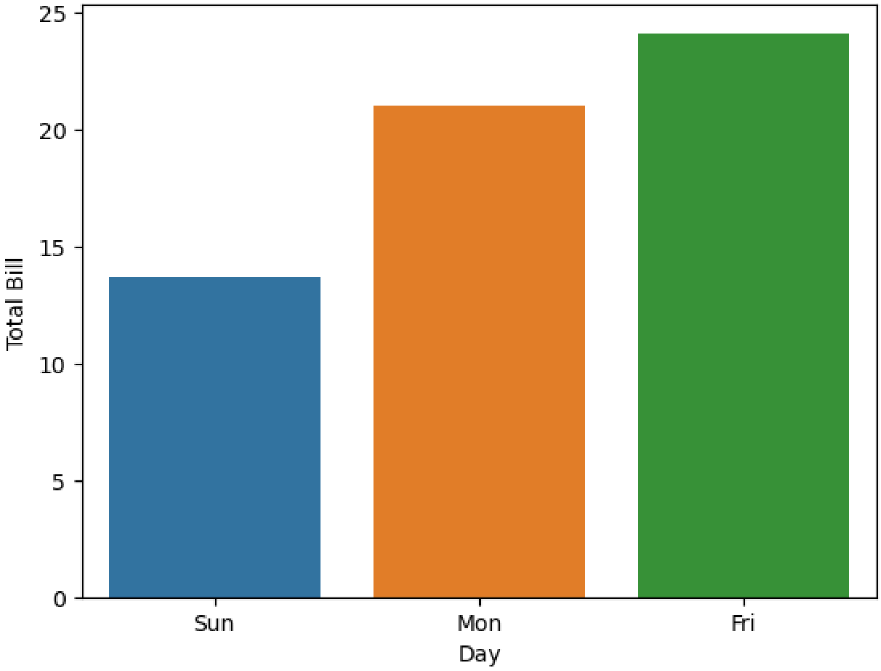
```
<Axes: xlabel='Day', ylabel='Total Bill'>
```



```
In [9]:  sns.barplot(x='Day',y='Total Bill',data=df,ci=False) #to remove black line on top of bar.
```

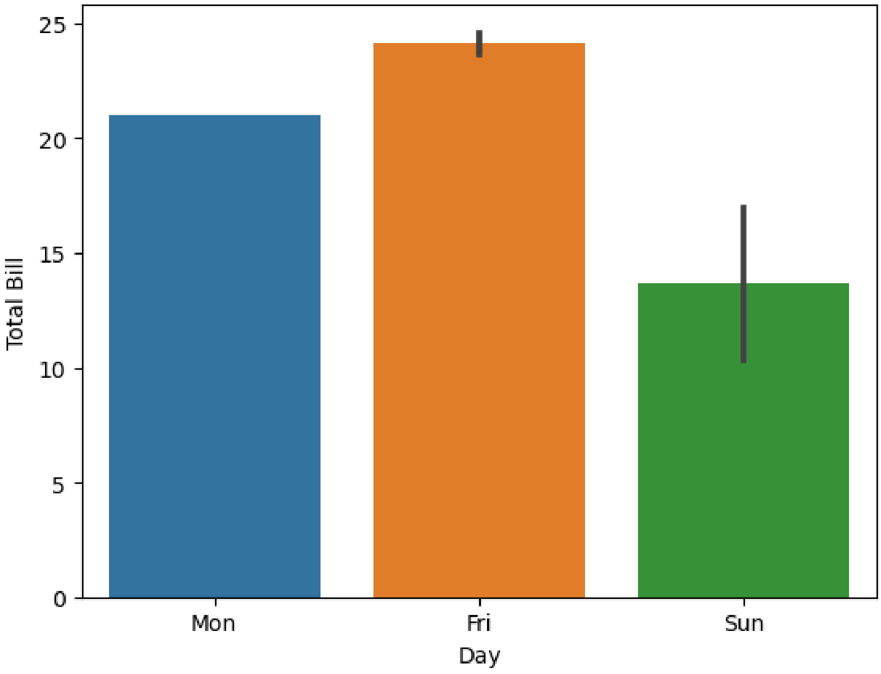
```
C:\Users\Asus\AppData\Local\Temp\ipykernel_2960\2546700023.py:1: FutureWarning:

The `ci` parameter is deprecated. Use `errorbar=('ci', False)` for the same effect.

  sns.barplot(x='Day',y='Total Bill',data=df,ci=False) #to remove black line on top of bar.
```

```
Out[9]: <Axes: xlabel='Day', ylabel='Total Bill'>
```



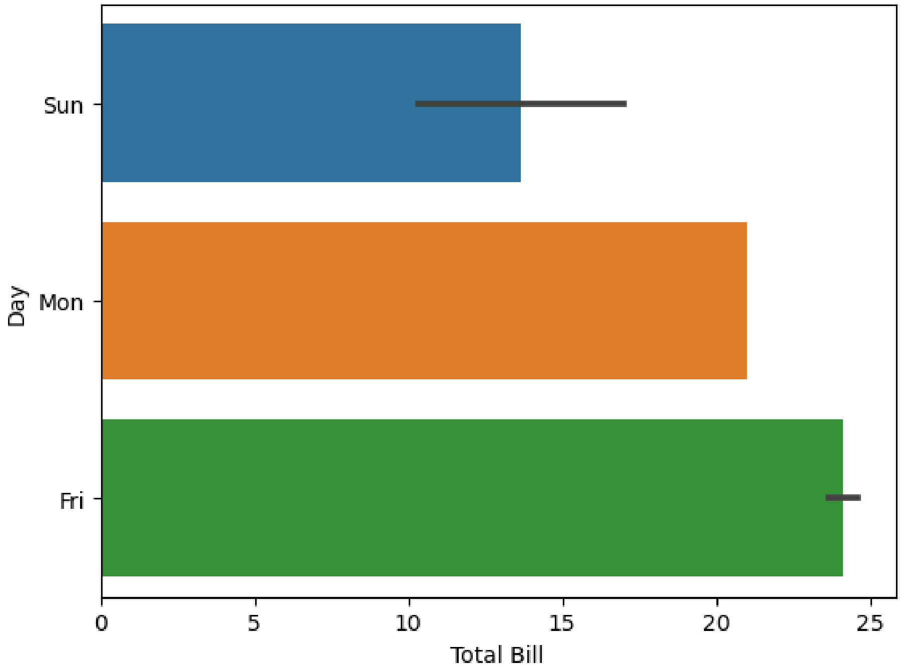
```
In [10]:  sns.barplot(x='Day',y='Total Bill',data=df,order=['Mon','Fri','Sun']) #to change the order
```

```
Out[10]: <Axes: xlabel='Day', ylabel='Total Bill'>
```



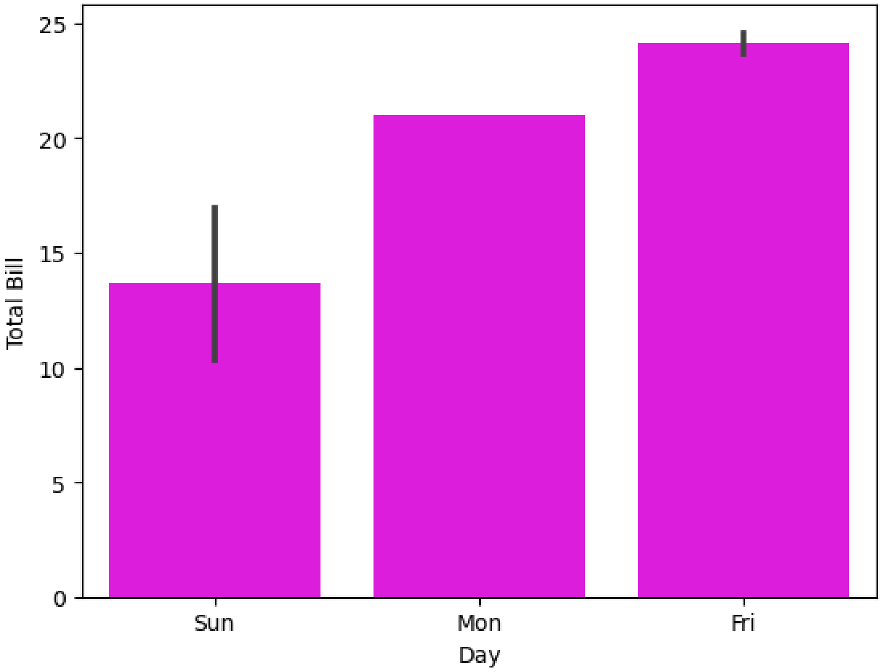
In [11]:

```
sns.barplot(x='Total Bill',y='Day',data=df) #horizontal bar
plt.show()
```



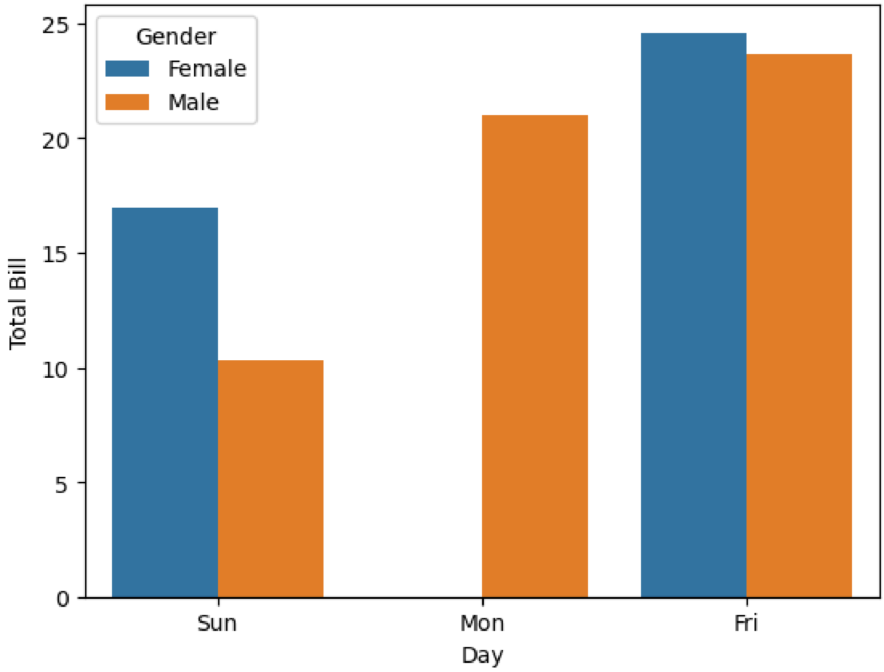
In [12]:

```
sns.barplot(x='Day',y='Total Bill',data=df,color='magenta')
plt.show()
```



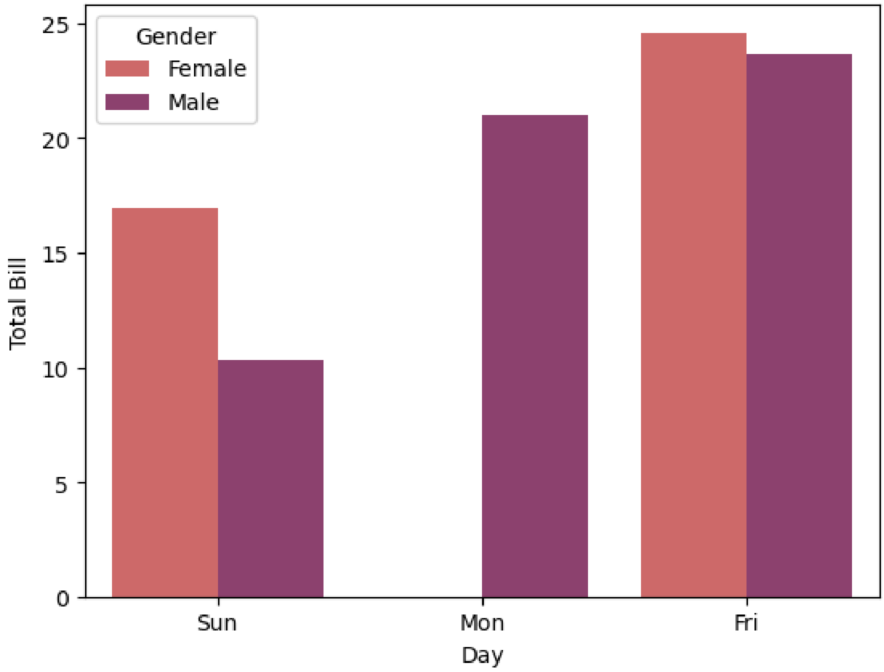
In [13]:

```
sns.barplot(x='Day',y='Total Bill',data=df,hue='Gender')
plt.show()
```



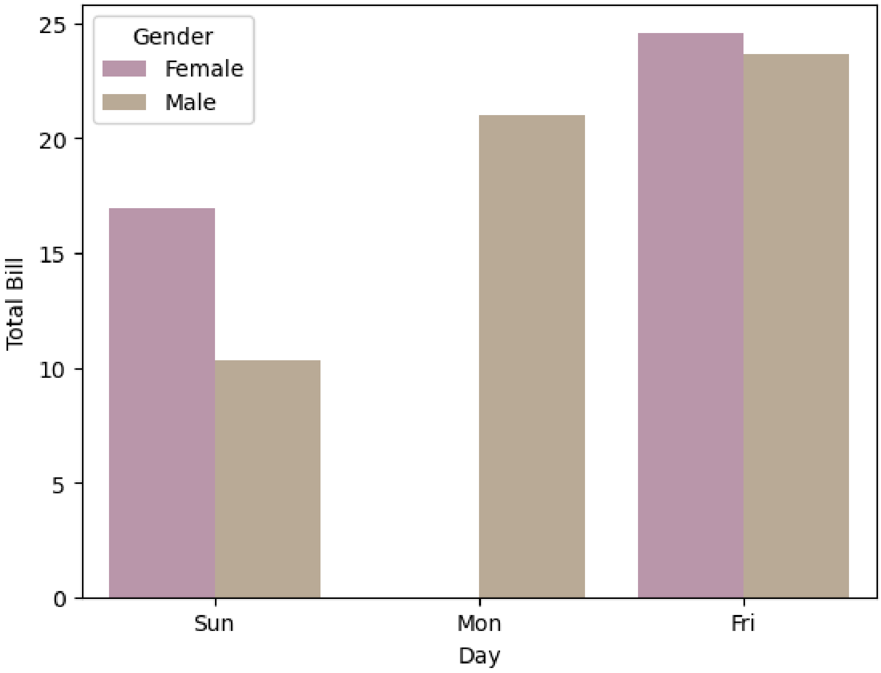
In [14]:

```
sns.barplot(x='Day',y='Total Bill',data=df,hue='Gender',palette='flare') #to change color
#sns.barplot(x='Day',y='Total Bill',data=df,hue='Gender',palette='spring')
plt.show()
```



In [15]:
```
sns.barplot(x='Day',y='Total Bill',data=df,hue='Gender',palette='spring',saturation=0.2) #sharpness
```

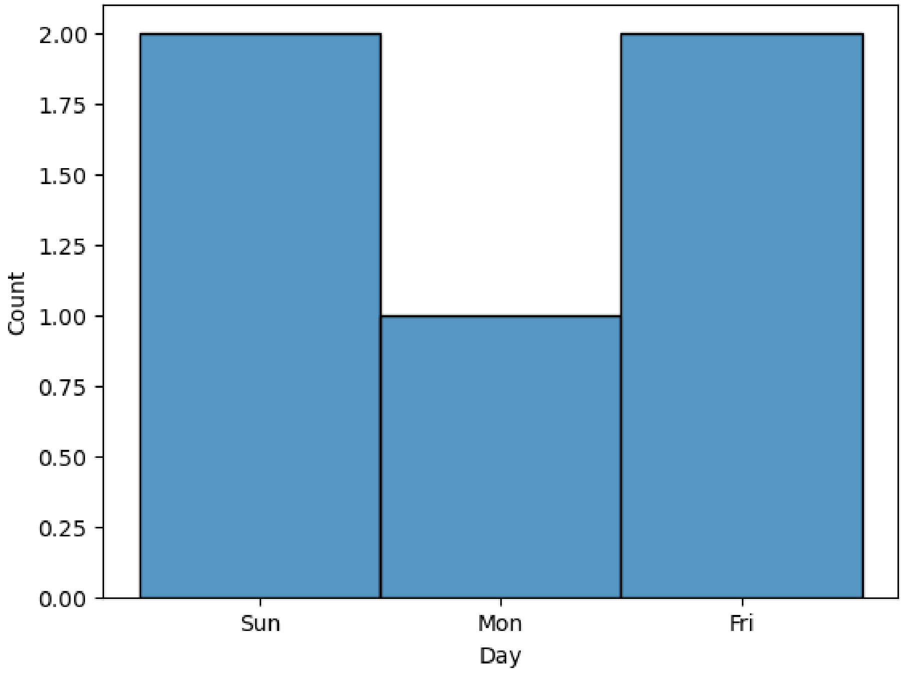
Out[15]:
```
<Axes: xlabel='Day', ylabel='Total Bill'>
```



## HISTOGRAM PLOT

In [16]:
```
sns.histplot(x='Day',data=df)
```

Out[16]:
```
<Axes: xlabel='Day', ylabel='Count'>
```

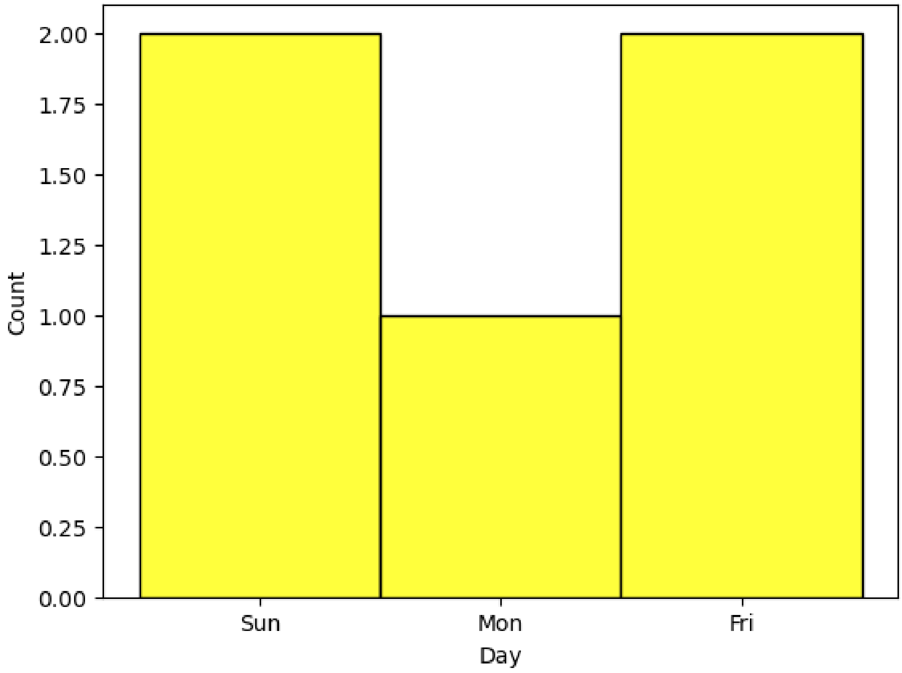


In [17]:

```
sns.histplot(x='Day',data=df,color='yellow')
```

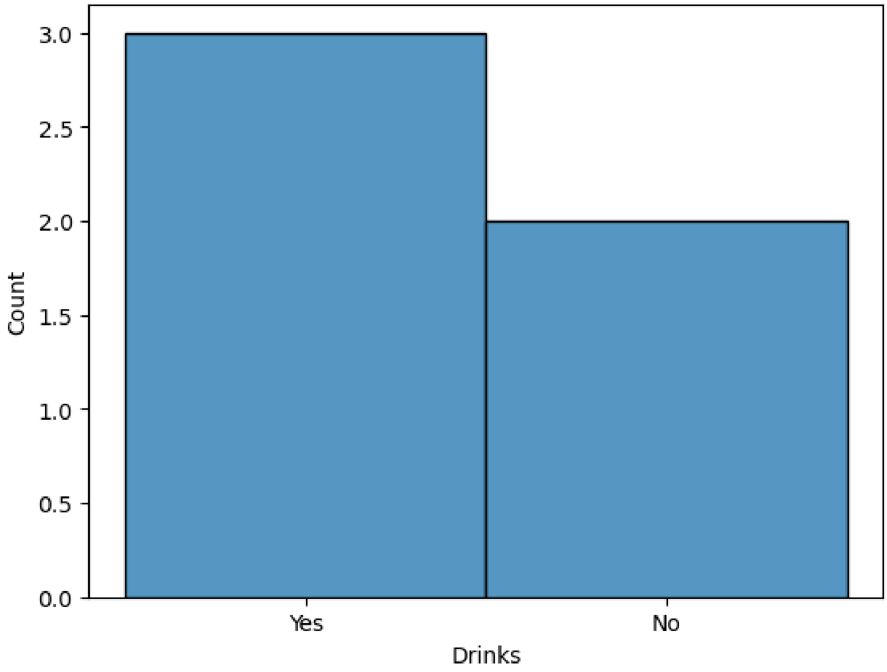
Out[17]:

```
<Axes: xlabel='Day', ylabel='Count'>
```



In [18]:

```
sns.histplot(x='Drinks',data=df)
plt.show()
```

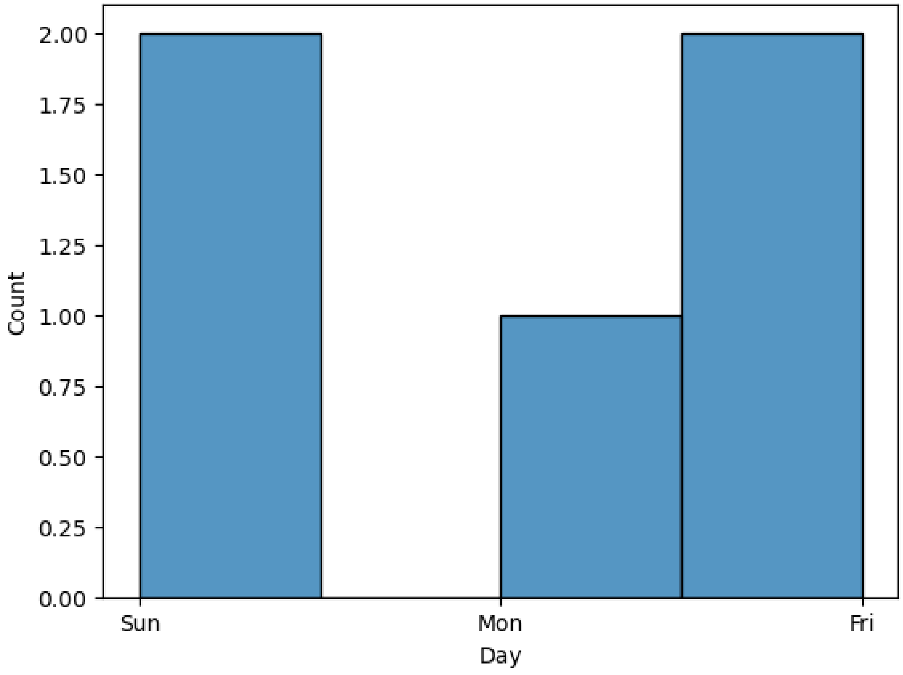


In [19]:

```
sns.histplot(x='Day',data=df,discrete=False) #to give space
```

Out[19]:

```
<Axes: xlabel='Day', ylabel='Count'>
```

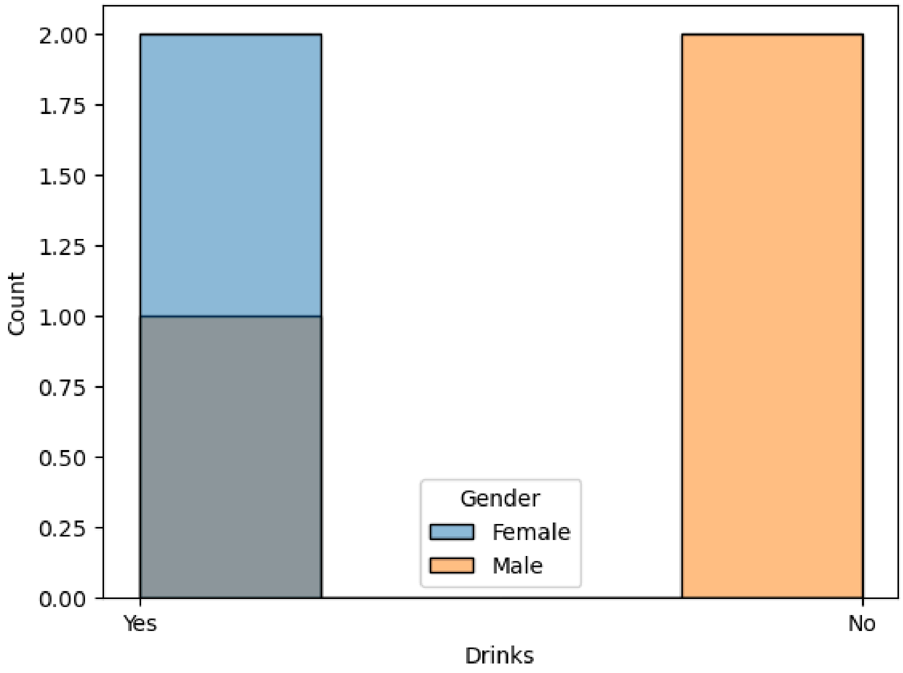


In [20]:

```
sns.histplot(x='Drinks',data=df,hue='Gender',discrete=False) #gray color is overlaping data
```

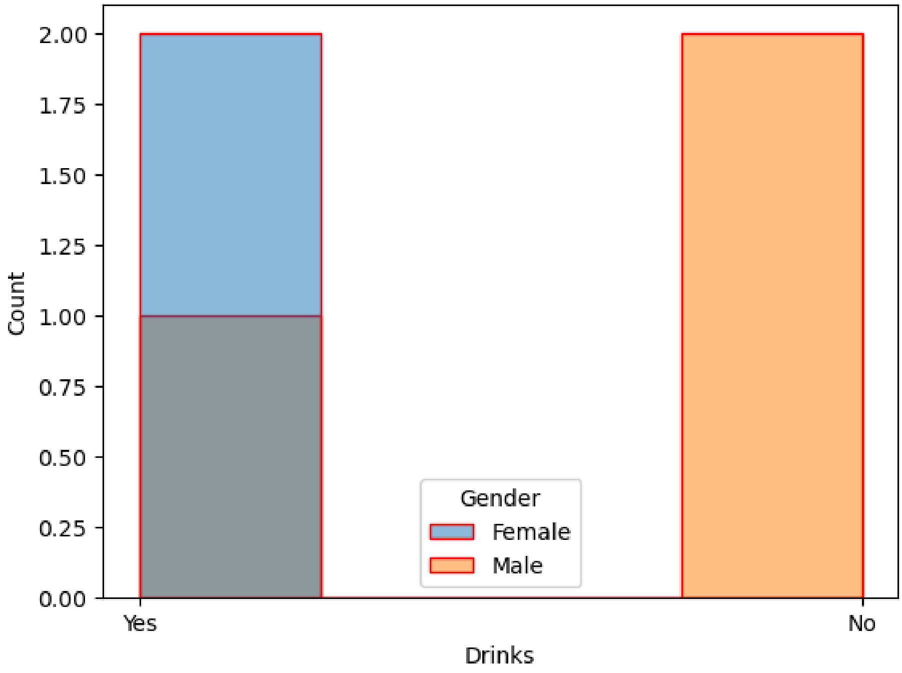
Out[20]:

```
<Axes: xlabel='Drinks', ylabel='Count'>
```



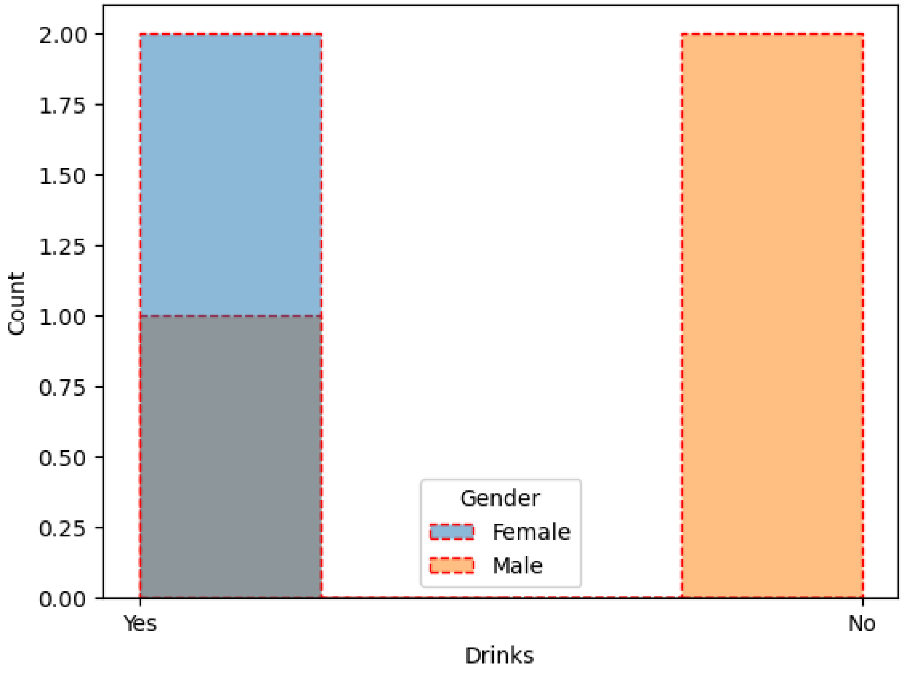
```
In [21]:  sns.histplot(x='Drinks',data=df,hue='Gender',discrete=False,edgecolor='red')
```

```
Out[21]: <Axes: xlabel='Drinks', ylabel='Count'>
```

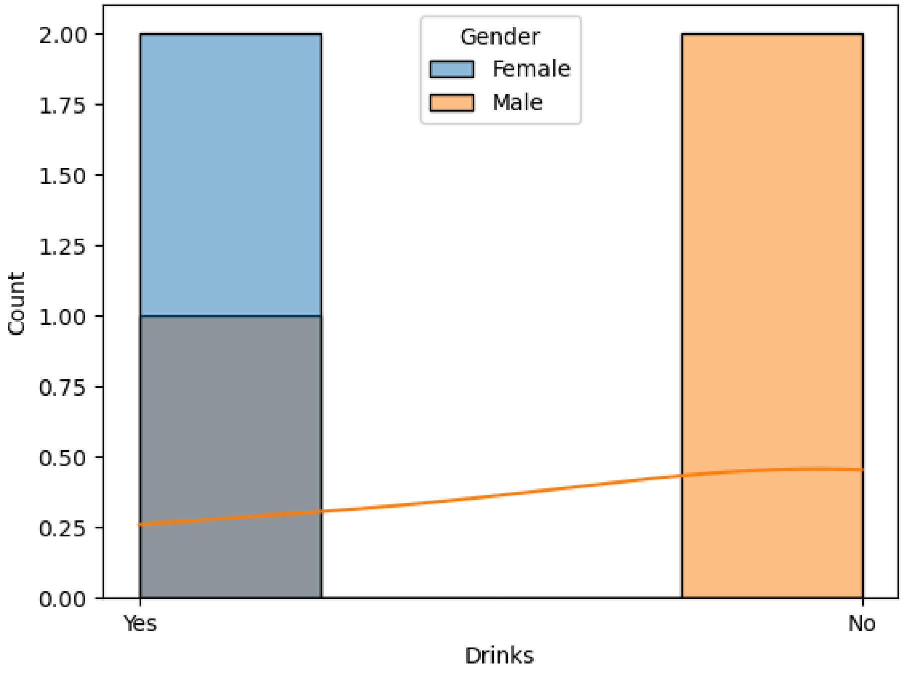


```
In [22]:  sns.histplot(x='Drinks',data=df,hue='Gender',discrete=False,linestyle='--',edgecolor='red')
```

```
Out[22]: <Axes: xlabel='Drinks', ylabel='Count'>
```

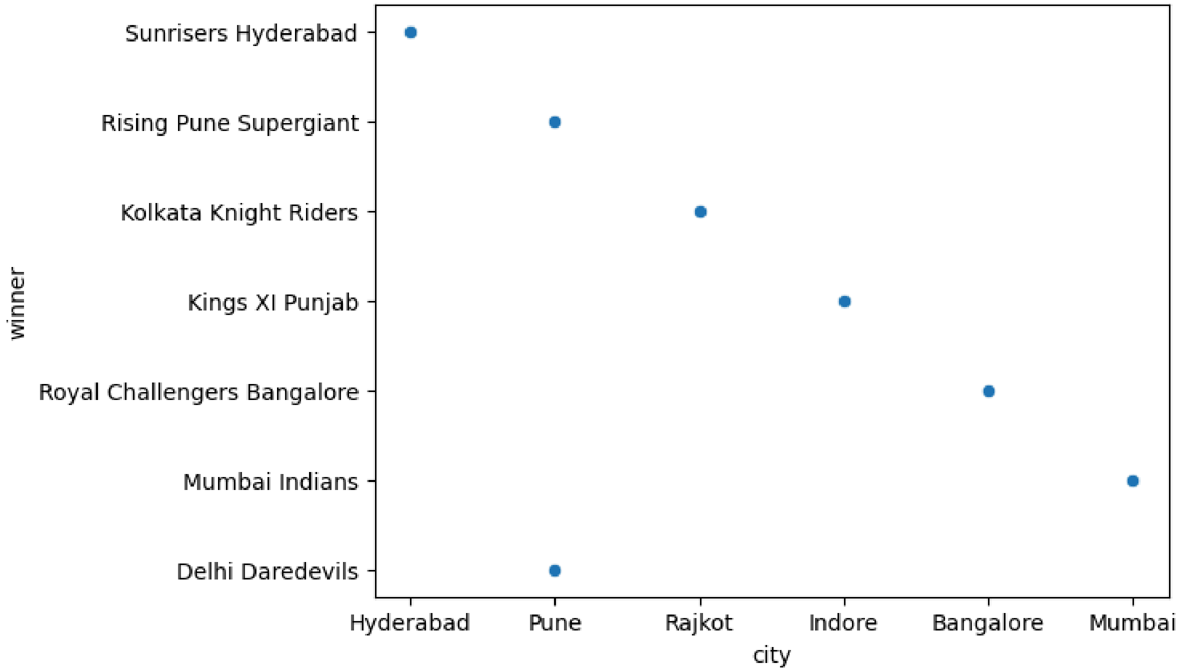


```
In [23]:  sns.histplot(x='Drinks',data=df,hue='Gender',discrete=False,kde=True)

Out[23]: <Axes: xlabel='Drinks', ylabel='Count'>
```

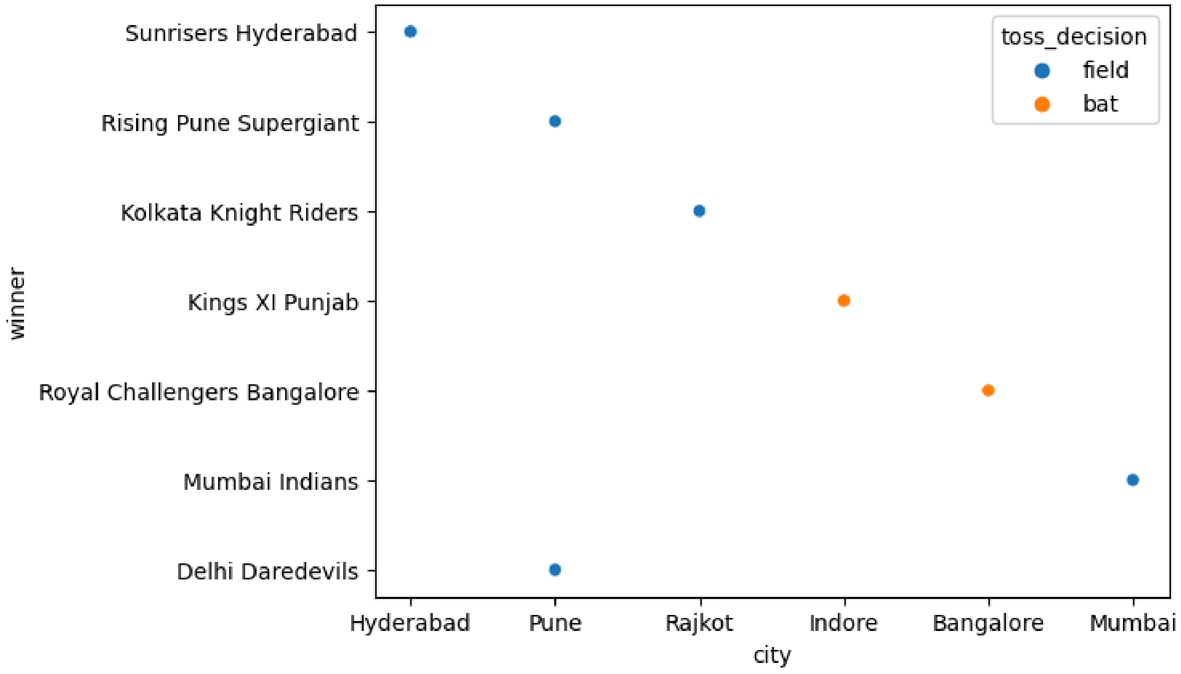


# SCATTER PLOT

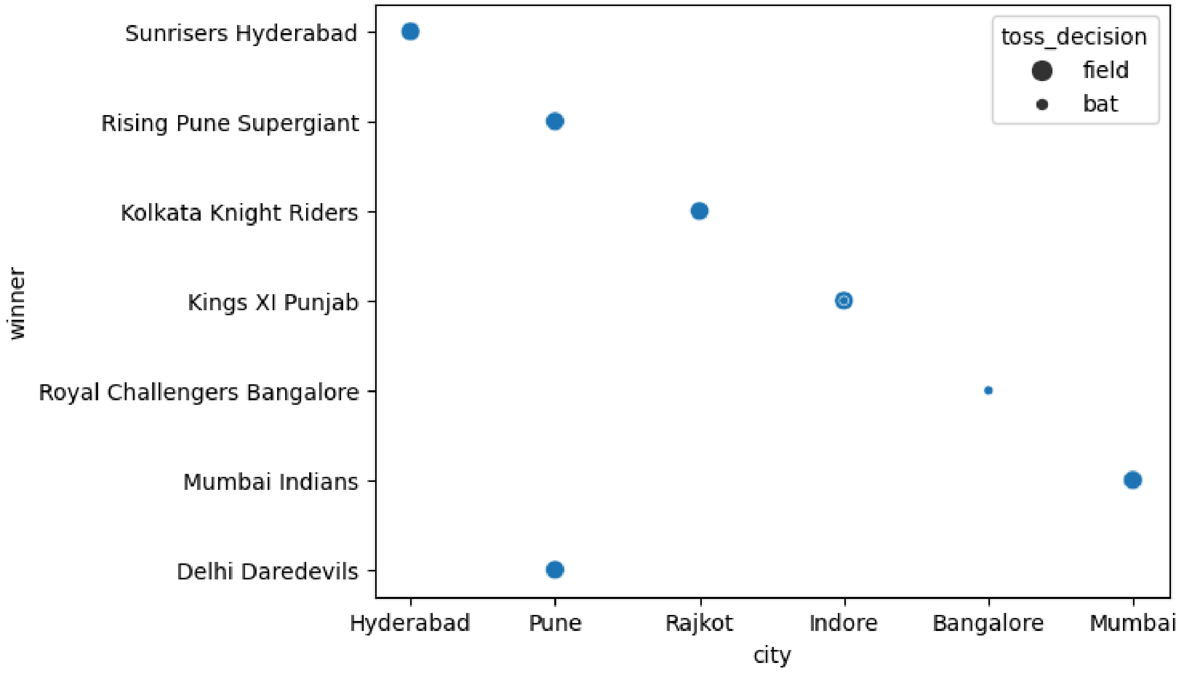
```
In [24]:  df1=pd.read_csv("C:\\Users\\Asus\\Downloads\\IPL.csv")
          df1
          sns.scatterplot(x='city',y='winner',data=df1)
          plt.show()
```



```
In [25]:  sns.scatterplot(x='city',y='winner',data=df1,hue='toss_decision')
          plt.show()
```

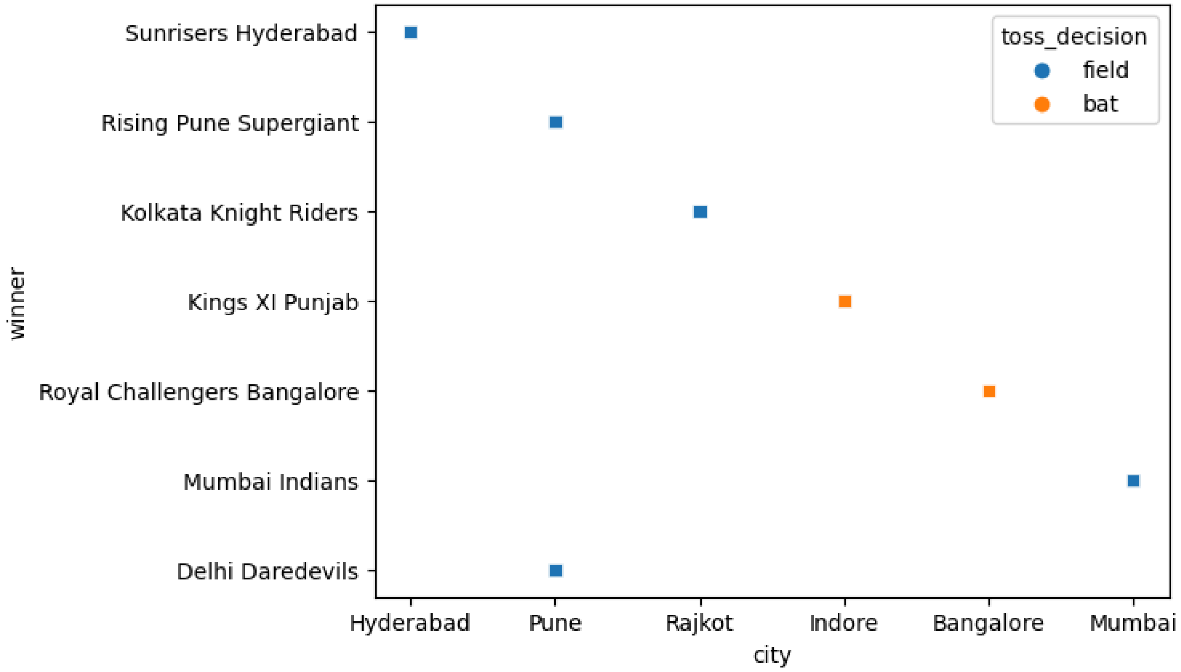


```
In [26]:  sns.scatterplot(x='city',y='winner',data=df1,size='toss_decision')
          plt.show()
```



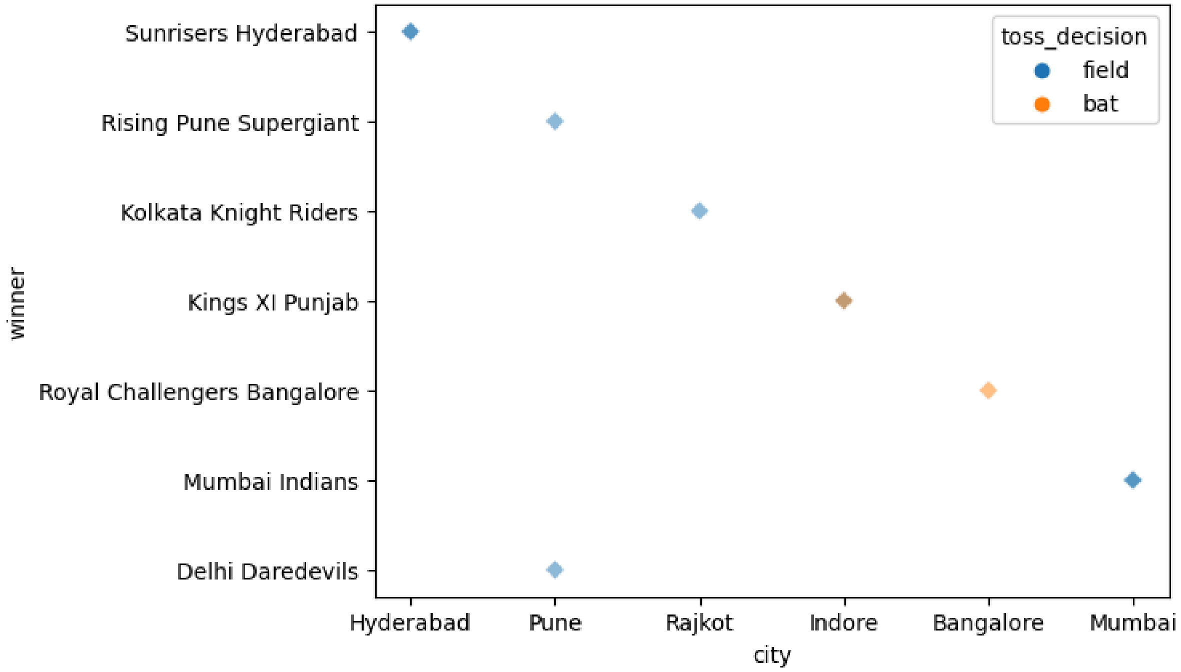
In [27]:

```
#sns.scatterplot(x='city',y='winner',data=df1,hue='toss_decision',marker='D') #DIAMOND
#sns.scatterplot(x='city',y='winner',data=df1,hue='toss_decision',marker='*') #star
sns.scatterplot(x='city',y='winner',data=df1,hue='toss_decision',marker='s') #square
plt.show()
```



In [28]:

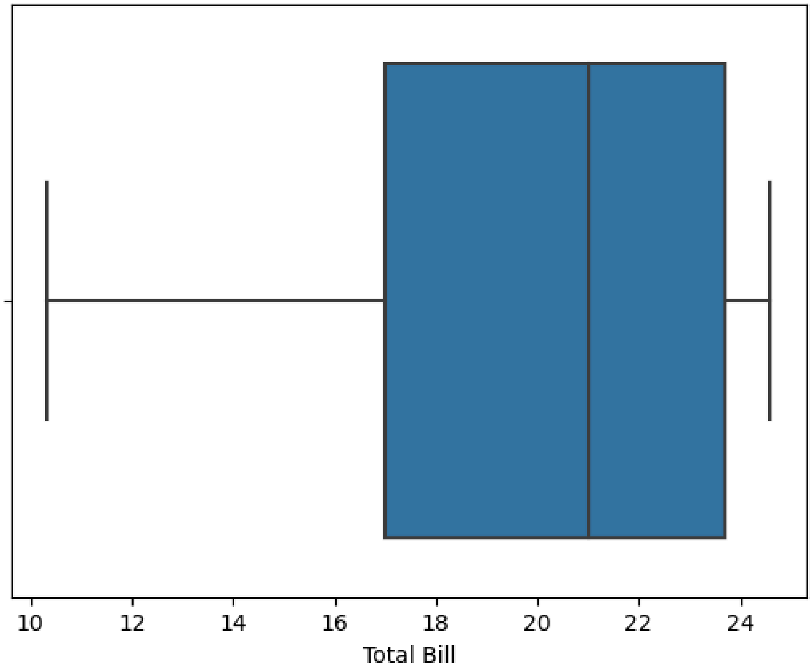
```
#sns.scatterplot(x='city',y='winner',data=df1,hue='toss_decision',marker='D',alpha=.1) #hazy color
sns.scatterplot(x='city',y='winner',data=df1,hue='toss_decision',marker='D',alpha=.5) #half transparent
plt.show()
```



# BOX PLOT

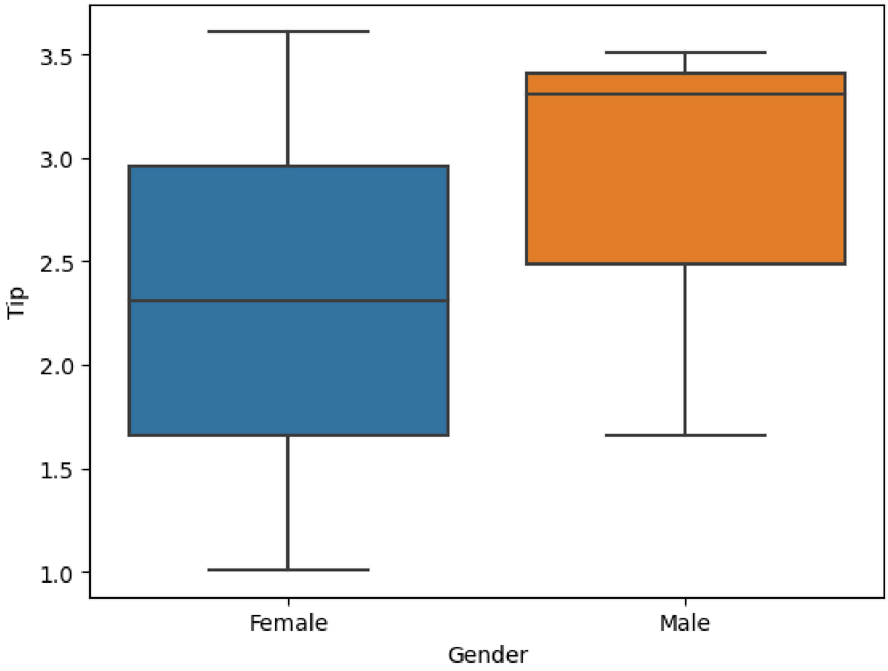
In [30]:

```
sns.boxplot(x=df['Total Bill'],data=df)
plt.show()
```



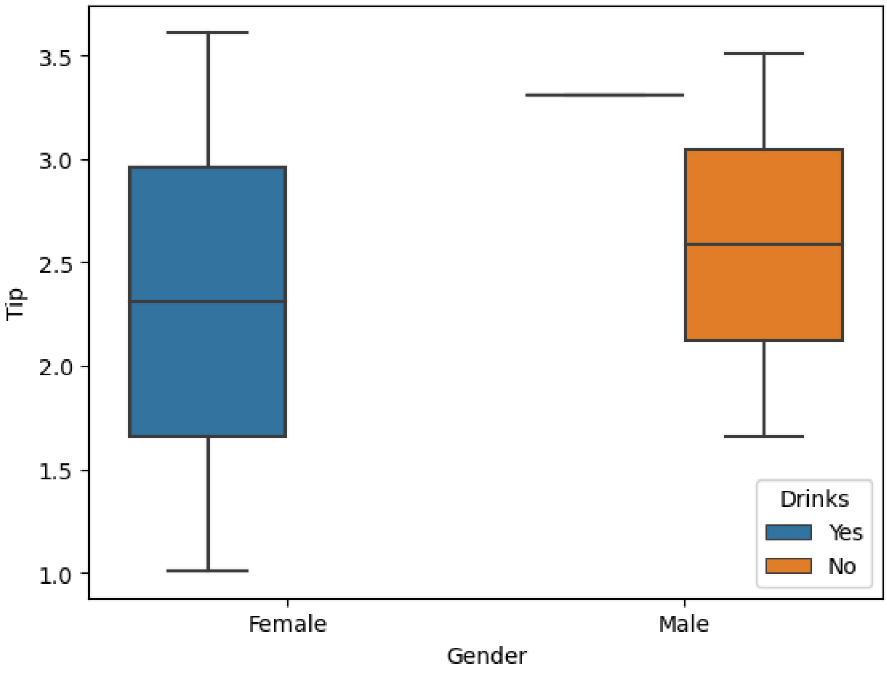
In [32]:

```
sns.boxplot(x='Gender',y='Tip',data=df)
plt.show()
```



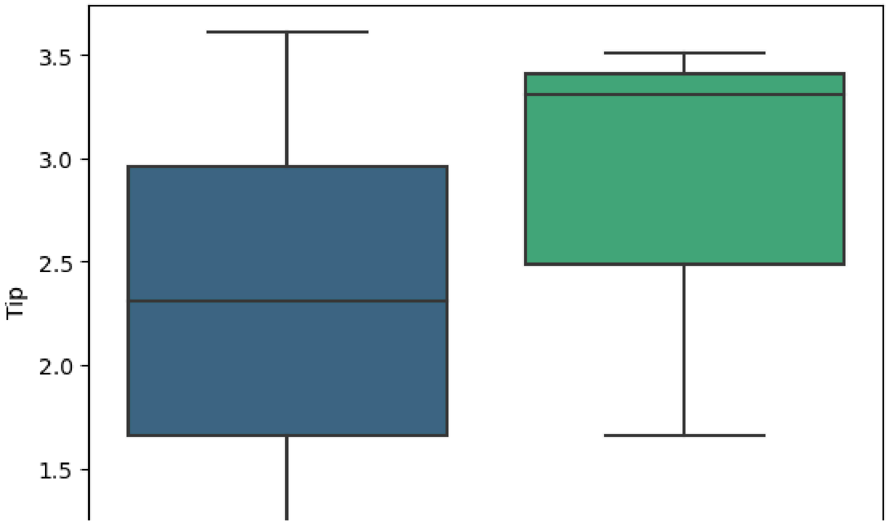
In [40]:

```
sns.boxplot(x='Gender',y='Tip',data=df,hue='Drinks')
plt.show()
```



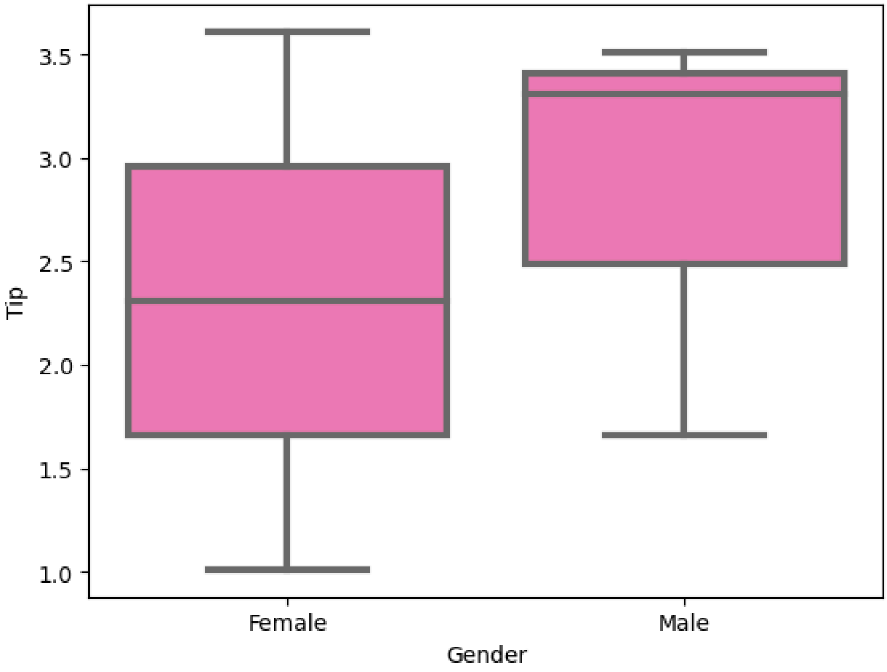
In [41]:

```
sns.boxplot(x='Gender',y='Tip',data=df,palette='viridis')
plt.show()
```



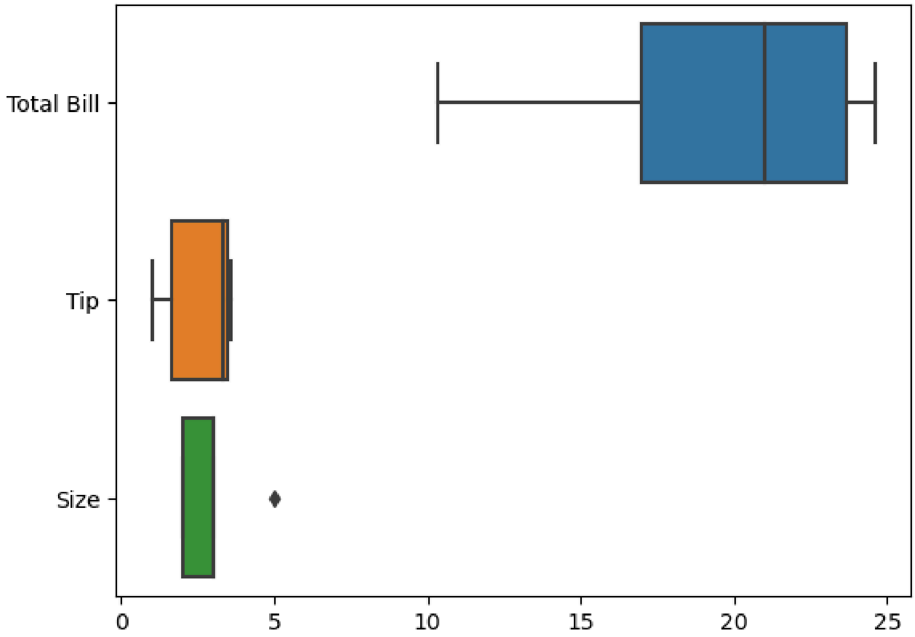
In [46]:

```
sns.boxplot(x='Gender',y='Tip',data=df,color='hotpink',linewidth=3)
plt.show()
```



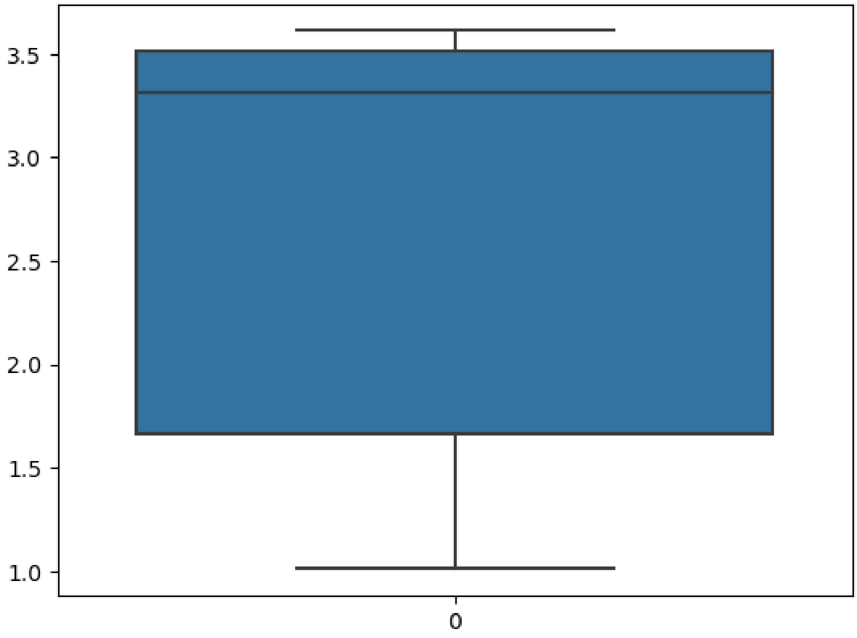
In [47]:

```
sns.boxplot(data=df,orient='h') #horizontal view
plt.show()
```



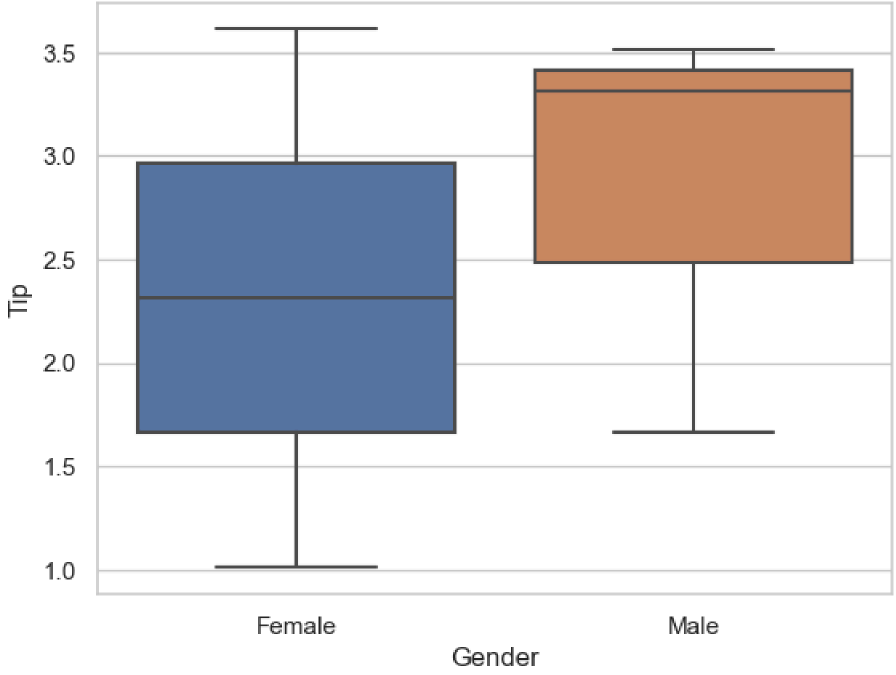
In [51]:

```
sns.boxplot(data=df['Tip'],orient='v') #vertical view
plt.show()
```



In [53]:

```
sns.set(style='whitegrid')
sns.boxplot(x='Gender',y='Tip',data=df)
plt.show()
```



## KERNEL DENSITY ESTIMATION (KDE)

In [58]:
```
sns.get_dataset_names() #to see the available dataset on internet.
```

```
 'attention',
 'brain_networks',
 'car_crashes',
 'diamonds',
 'dots',
 'dowjones',
 'exercise',
 'flights',
 'fmri',
 'geyser',
 'glue',
 'healthexp',
 'iris',
 'mpg',
 'penguins',
 'planets',
 'seaice',
 'taxis',
 'tips',
 'titanic']
```

In [62]:
```
df2=sns.load_dataset('tips').dropna() #to load available dataset
df2.head(7)
```

Out[62]:

| | 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 |
| **5** | 25.29 | 4.71 | Male | No | Sun | Dinner | 4 |
| **6** | 8.77 | 2.00 | Male | No | Sun | Dinner | 2 |

In [72]:
```
df3=sns.load_dataset('titanic') #to load available dataset
df3.head(7)
```

Out[72]:

| | survived | pclass | sex | age | sibsp | parch | fare | embarked | class | who | adult_male | deck | embark_town | alive | alone |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 0 | 3 | male | 22.0 | 1 | 0 | 7.2500 | S | Third | man | True | NaN | Southampton | no | False |
| **1** | 1 | 1 | female | 38.0 | 1 | 0 | 71.2833 | C | First | woman | False | C | Cherbourg | yes | False |
| **2** | 1 | 3 | female | 26.0 | 0 | 0 | 7.9250 | S | Third | woman | False | NaN | Southampton | yes | True |
| **3** | 1 | 1 | female | 35.0 | 1 | 0 | 53.1000 | S | First | woman | False | C | Southampton | yes | False |
| **4** | 0 | 3 | male | 35.0 | 0 | 0 | 8.0500 | S | Third | man | True | NaN | Southampton | no | True |
| **5** | 0 | 3 | male | NaN | 0 | 0 | 8.4583 | Q | Third | man | True | NaN | Queenstown | no | True |
| **6** | 0 | 1 | male | 54.0 | 0 | 0 | 51.8625 | S | First | man | True | E | Southampton | no | True |

In [73]:
```
df3.shape
```

Out[73]:
```
(891, 15)
```

In [79]:
```
titanic['age'].fillna(titanic['age'].mean(),inplace=True)
sns.displot(titanic['age'])
plt.show()
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[79], line 1
----> 1 titanic['age'].fillna(titanic['age'].mean(),inplace=True)
      2 sns.displot(titanic['age'])
      3 plt.show()

NameError: name 'titanic' is not defined
```

In [ ]: