

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

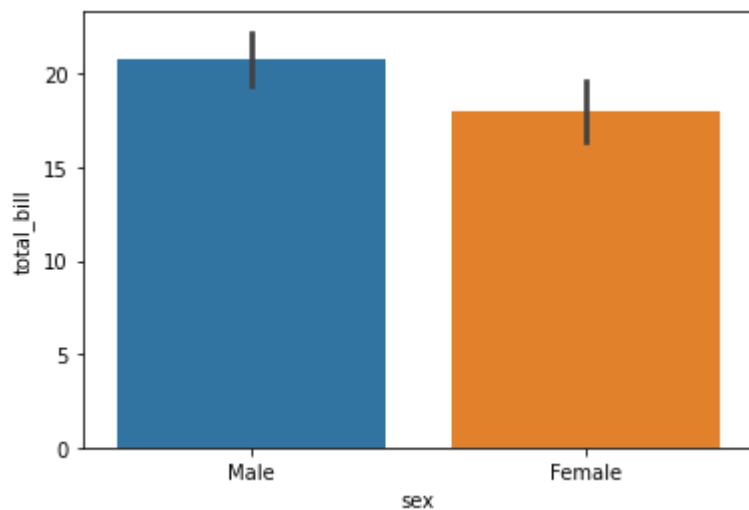
```
tips = sns.load_dataset('tips')
tips.head()
```

	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

[+ Code](#)[+ Text](#)

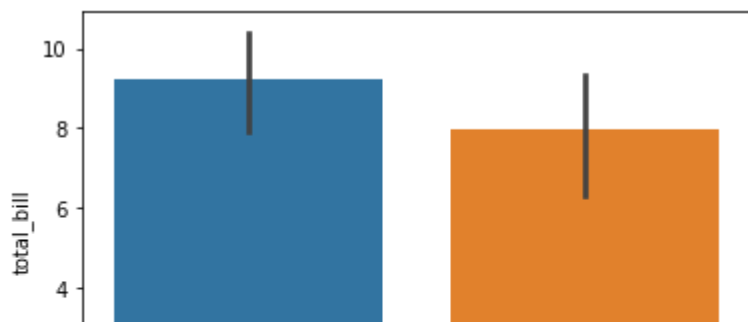
```
#bar plot n count plot
sns.barplot(x='sex',y='total_bill',data=tips)
```

<matplotlib.axes._subplots.AxesSubplot at 0x7f4f29048cd0>



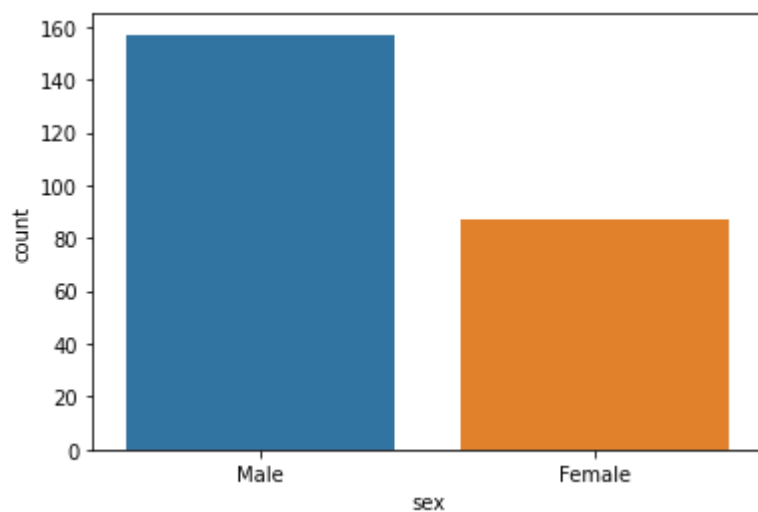
```
sns.barplot(x='sex',y='total_bill',data=tips,estimator=np.std)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab967d89d0>
```



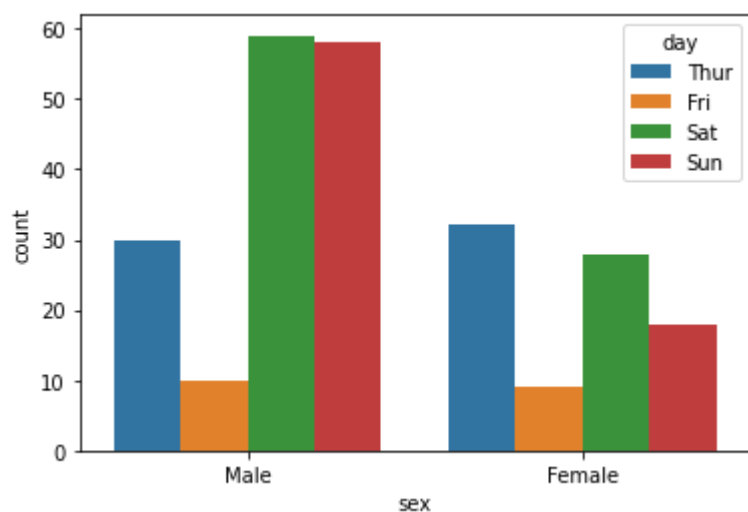
```
#Count the data
sns.countplot(x='sex',data=tips)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab964795d0>
```



```
sns.countplot(x='sex', hue = "day", data = tips)
```

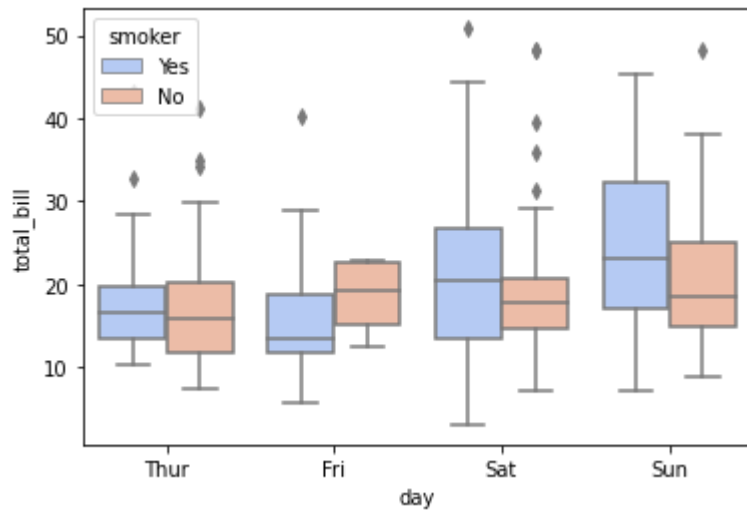
```
# Show the plot
plt.show()
```



```
#boxplot
```

```
sns.boxplot(x="day", y="total_bill", hue="smoker",data=tips,palette="coolwarm")
```

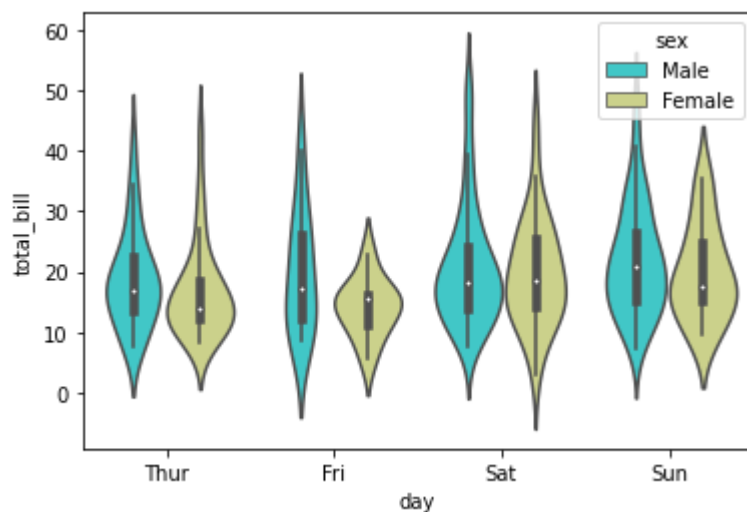
```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab963c9cd0>
```



```
#violinplot
```

```
sns.violinplot(x="day", y="total_bill", data=tips,palette='rainbow',hue='sex')
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab95f997d0>
```



```
#strip plot
```

```
sns.stripplot(x="day", y="total_bill", data=tips)
```

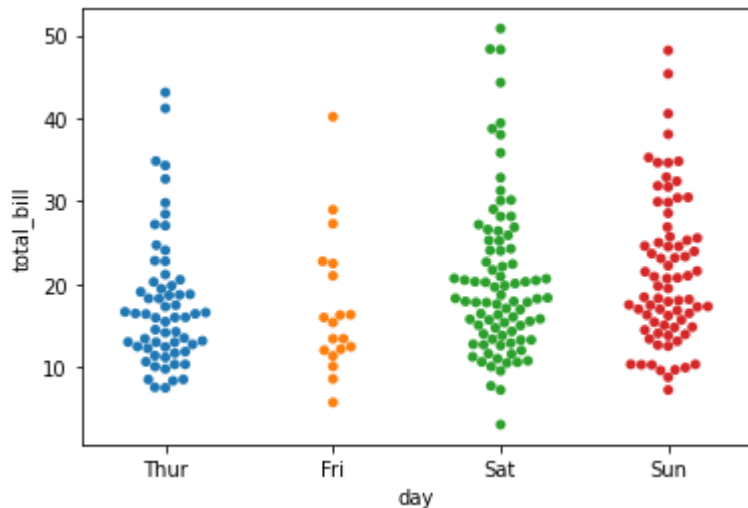
```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab962f7b90>
```



```
#swarm plot
```

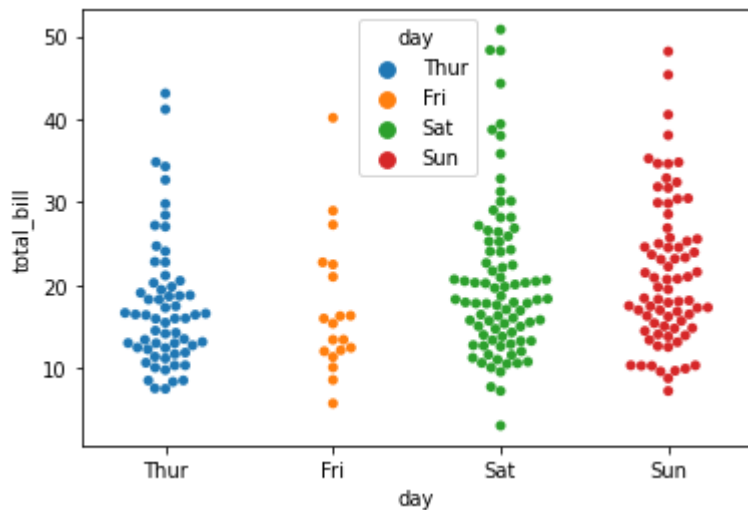
```
sns.swarmplot(x="day", y="total_bill", data=tips)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab9357ee90>
```



```
sns.swarmplot(x="day", y="total_bill", hue="day", data=tips)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab8abcca10>
```

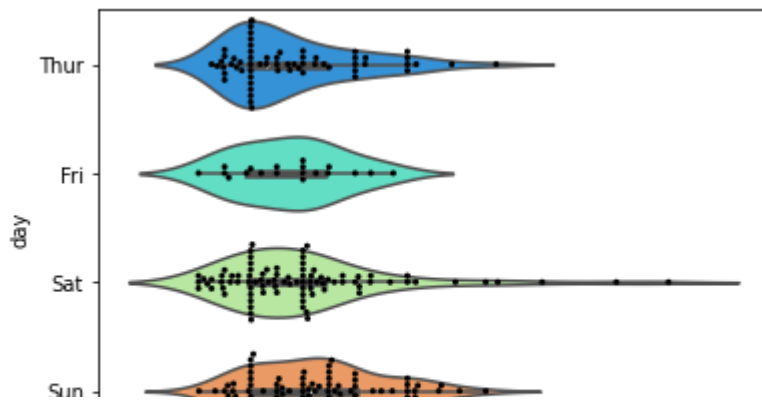


```
# Combining Categorical Plots
```

```
sns.violinplot(x="tip", y="day", data=tips,palette='rainbow')
```

```
sns.swarmplot(x="tip", y="day", data=tips,color='black',size=3)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7fab8ac83690>
```

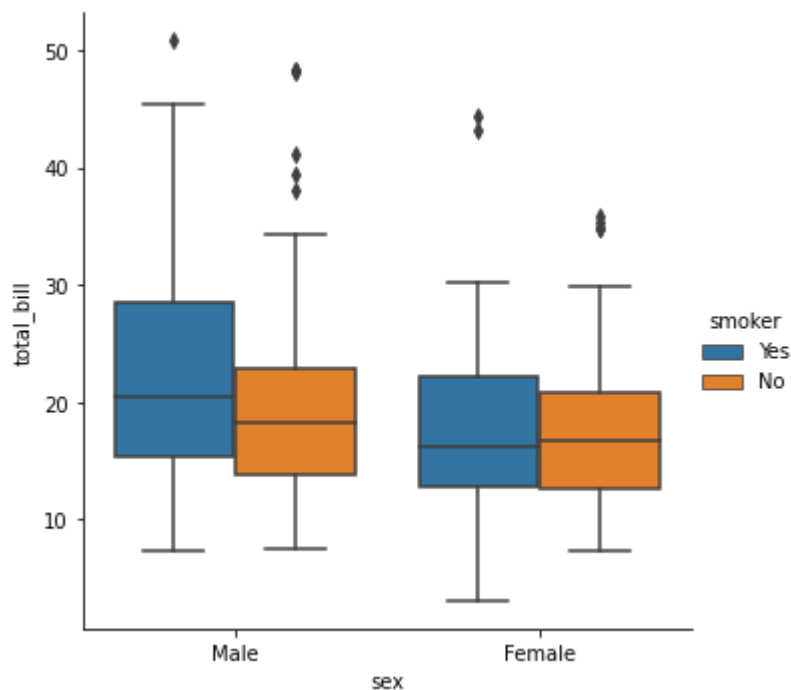


```
#factorplot
```

```
#Combination of all plot
```

```
sns.factorplot(x='sex',y='total_bill',hue="smoker",data=tips,kind='box')
```

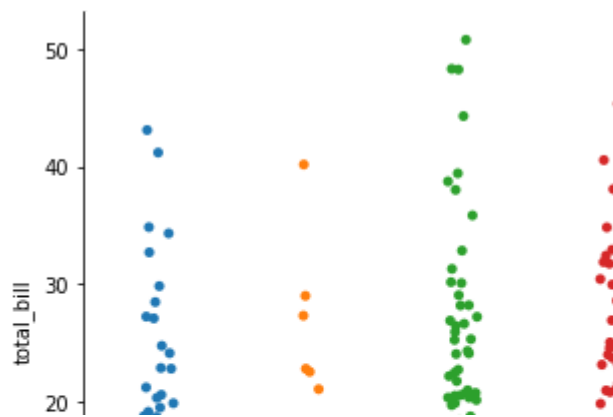
```
/usr/local/lib/python3.7/dist-packages/seaborn/categorical.py:3717: UserWarning: T
warnings.warn(msg)
<seaborn.axisgrid.FacetGrid at 0x7fab8a5f8250>
```



```
#catplot here also we can change any kind of plot
```

```
sns.catplot(x="day", y="total_bill", kind="strip", data=tips)
```

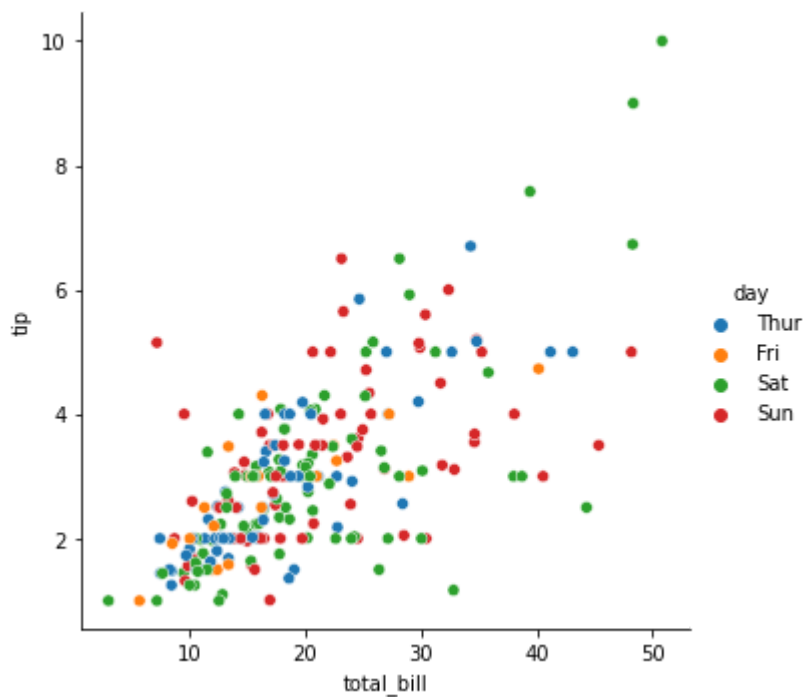
```
<seaborn.axisgrid.FacetGrid at 0x7fab8a4c4c50>
```



```
#relplot
```

```
sns.relplot(data=tips, x="total_bill", y="tip", hue="day", kind="scatter")
```

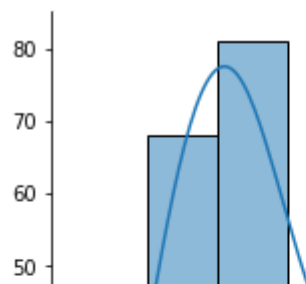
```
<seaborn.axisgrid.FacetGrid at 0x7f4f27ec4c50>
```



```
#Distribution Plots
```

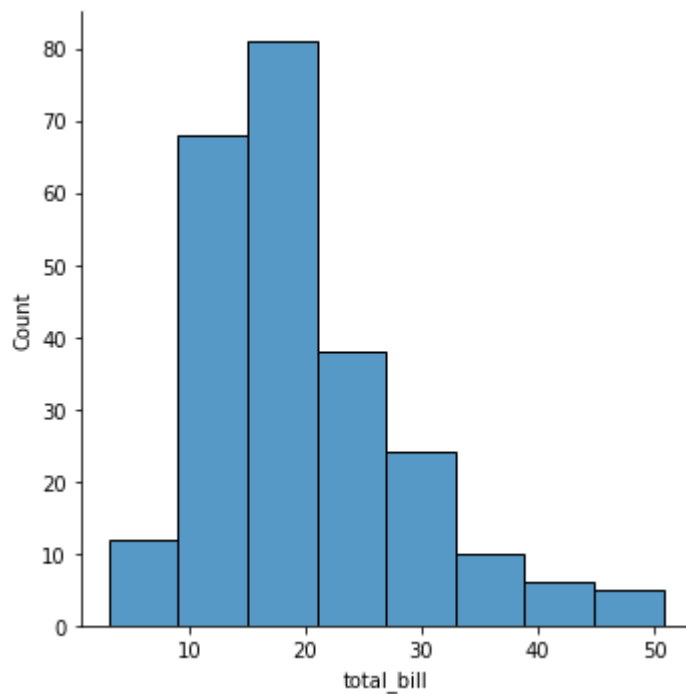
```
sns.displot(tips['total_bill'], kde=True, bins=8)
```

```
<seaborn.axisgrid.FacetGrid at 0x7f4f1ed9f0d0>
```



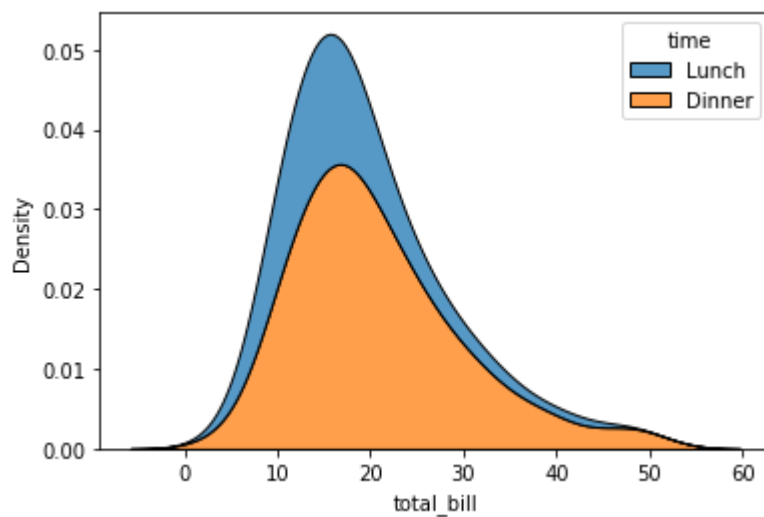
```
sns.displot(tips['total_bill'])
```

```
<seaborn.axisgrid.FacetGrid at 0x7f4f15cfd0d0>
```



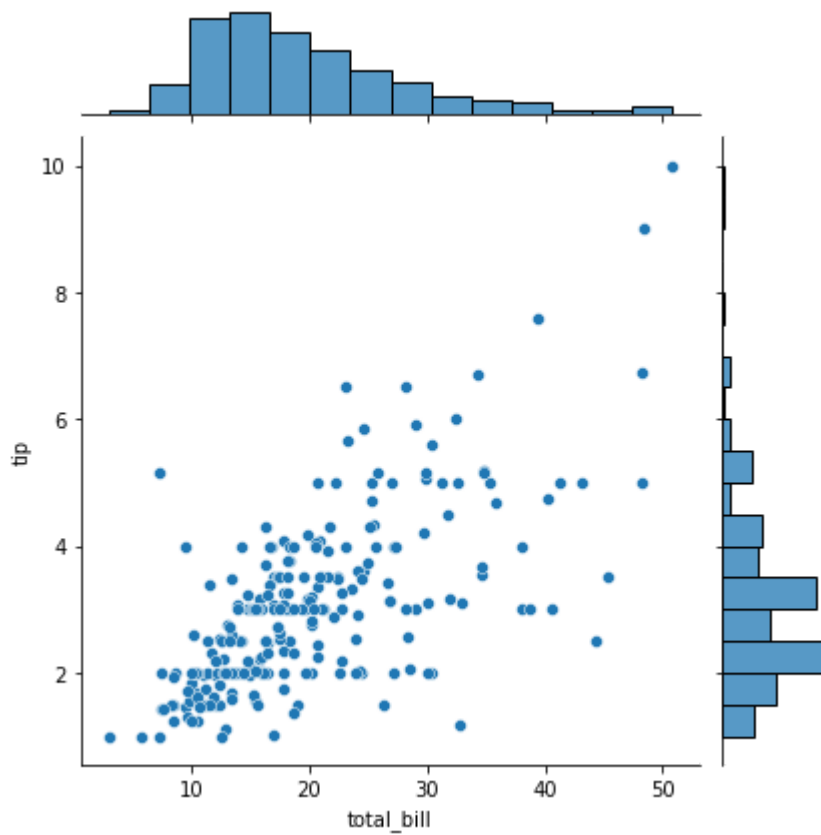
```
sns.kdeplot(data=tips, x="total_bill", hue="time", multiple="stack")
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f4f15b3b250>
```



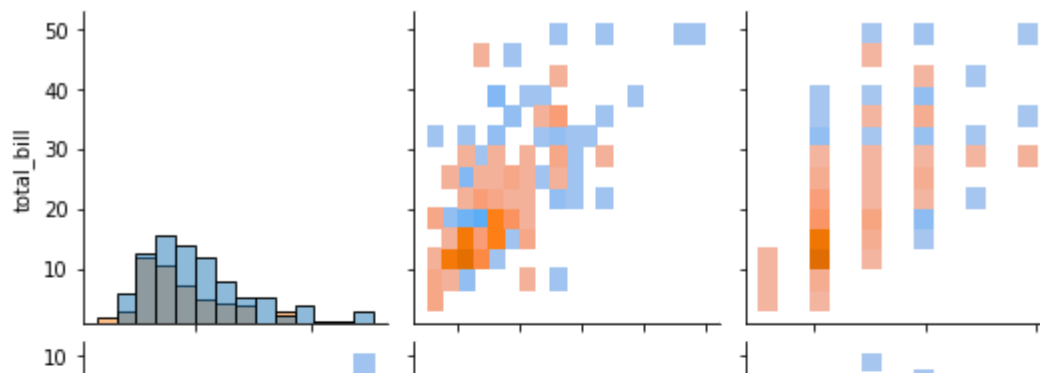
```
#jointplot  
sns.jointplot(x='total_bill',y='tip',data=tips,kind='scatter')
```

```
<seaborn.axisgrid.JointGrid at 0x7f4f1cd3e9d0>
```



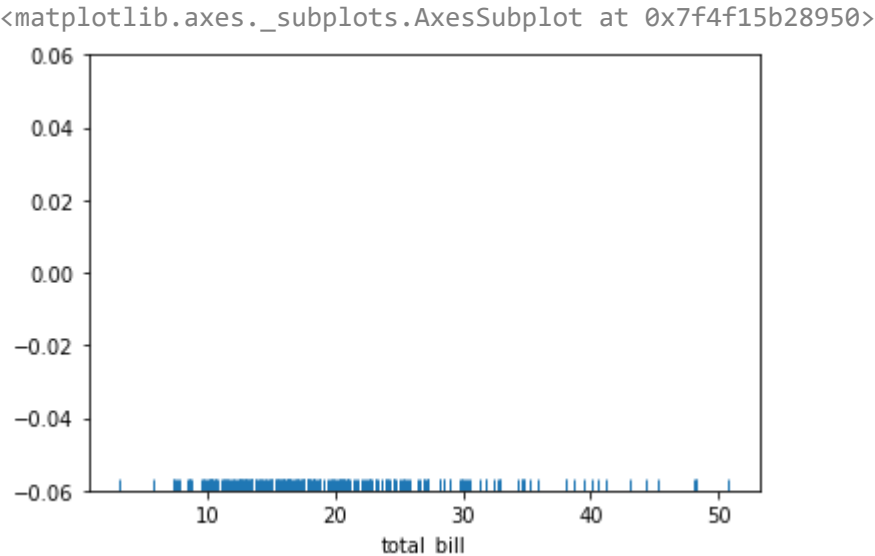
```
#pairplot  
sns.pairplot(tips,kind="hist",hue='sex')
```


<seaborn.axisgrid.PairGrid at 0x7f4f1cacac00>



```
iris = sns.load_dataset("iris")
g = sns.pairplot(iris)
plt.show()
```

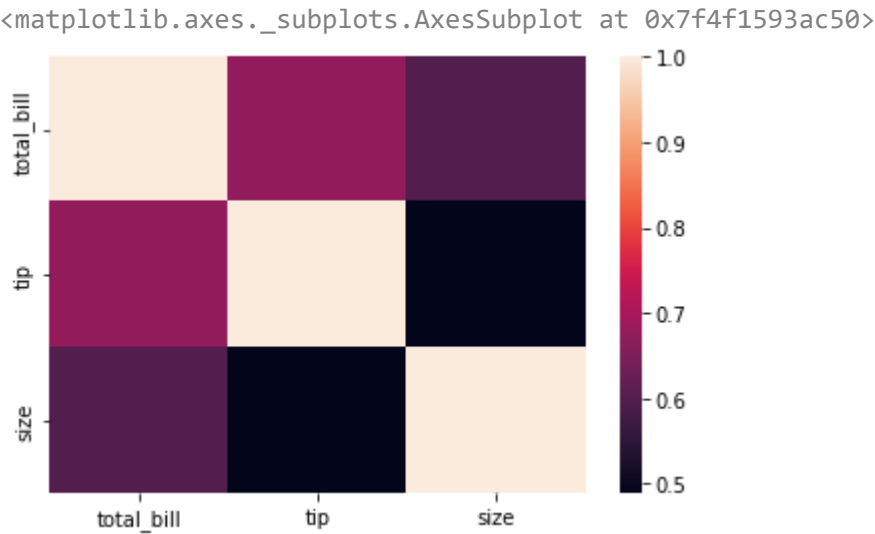
```
#rugplot
sns.rugplot(tips['total_bill'])
```



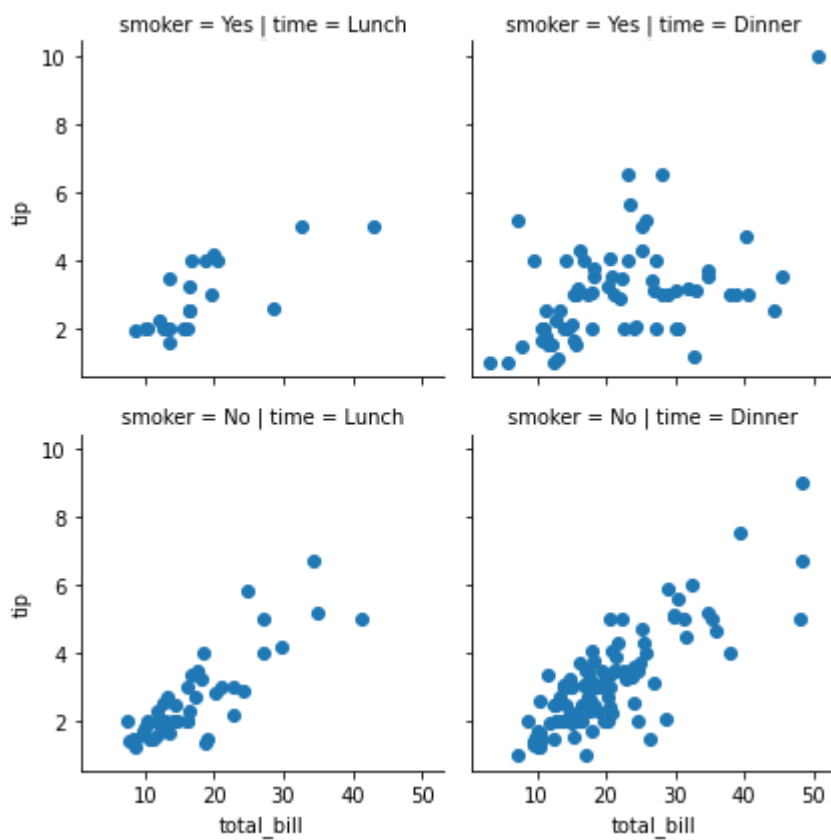
```
tips.corr()
```

	total_bill	tip	size
total_bill	1.000000	0.675734	0.598315
tip	0.675734	1.000000	0.489299
size	0.598315	0.489299	1.000000

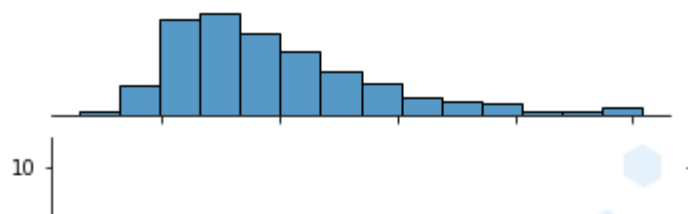
```
#matrix plot
sns.heatmap(tips.corr())
```



```
#Grid plot
#facetgrid
g = sns.FacetGrid(tips, col="time", row="smoker")
g = g.map(plt.scatter, "total_bill", "tip")
```



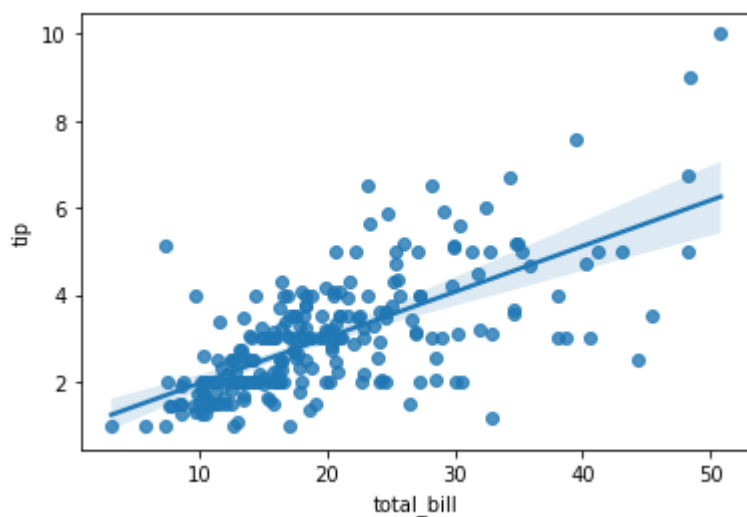
```
#jointplot
sns.jointplot(x="total_bill",y="tip",data=tips,kind='hex')
plt.show()
```



```
#regression plots
```

```
sns.regplot(x="total_bill", y="tip", data=tips)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f4f14f7f690>
```

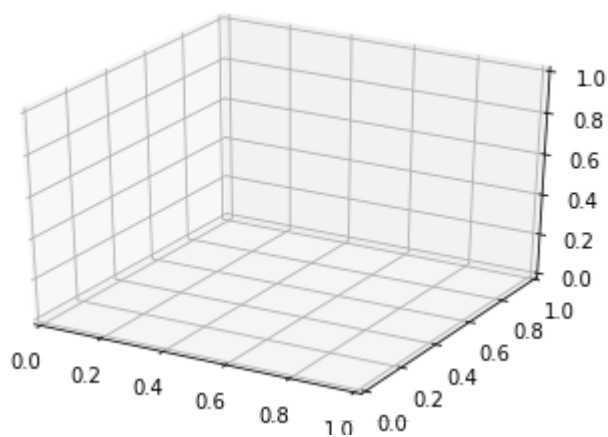


```
import numpy as np
```

```
import matplotlib.pyplot as plt
```

```
fig = plt.figure()
```

```
ax = plt.axes(projection='3d') # obtain a 3D figure
```



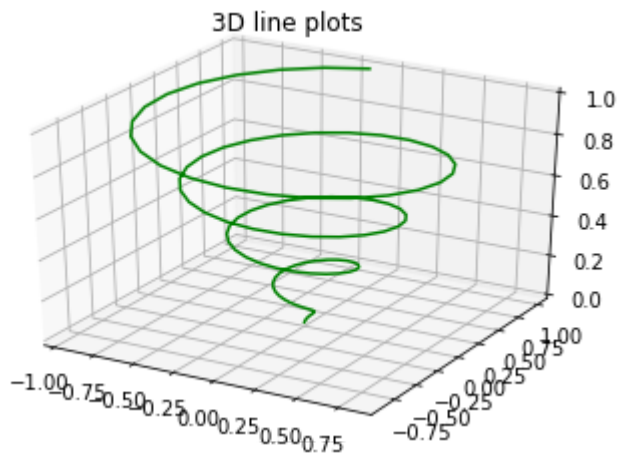
```
import numpy as np
```

```
import matplotlib.pyplot as plt
```

```
fig = plt.figure()
ax = plt.axes(projection = '3d')

# defining axes
z = np.linspace(0, 1, 100)
x = z * np.sin(25 * z)
y = z * np.cos(25 * z)

ax.plot3D(x, y, z, 'green') #lineplot
ax.set_title('3D line plots ')
plt.show()
```



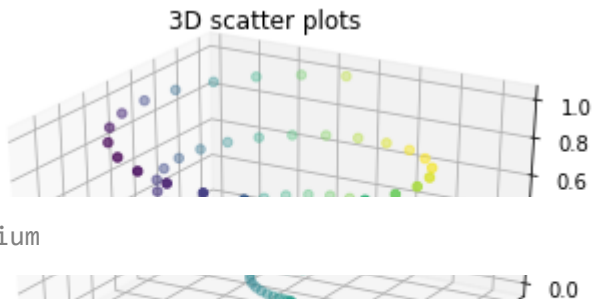
```
import numpy as np
import matplotlib.pyplot as plt

fig = plt.figure()
ax = plt.axes(projection = '3d')

# defining axes
z = np.linspace(0, 1, 100)
x = z * np.sin(25 * z)
y = z * np.cos(25 * z)

c=x+y
ax.scatter(x,y,z,c=c)

ax.set_title('3D scatter plots ')
plt.show()
```



```
import folium
```

```
#geospatial
```

```
import folium
```

```
my_map1 = folium.Map(location = [17.686617, 73.985189], zoom_start = 12 ) # mapleaflet
```

```
folium.CircleMarker(location = [17.686617, 73.985189], radius = 50).add_to(my_map1) #circlema
```

```
folium.Marker([17.686617, 73.985189], popup = 'Satara').add_to(my_map1) #
```

```
print(my_map1)
```

```
#my_map1.save("map1.html")
```

```
<folium.folium.Map object at 0x7f4f1583edd0>
```

```
import folium
```

```
my_map4 = folium.Map(location = [17.686617, 73.985189], zoom_start = 12)
```

```
folium.Marker([17.686617, 73.985189], popup = 'Delhi').add_to(my_map4)
```

```
folium.Marker([28.5011226, 77.4099794], popup = 'myloc').add_to(my_map4)
```

```
folium.PolyLine(locations = [(17.686617, 73.985189), (28.5011226, 77.4099794)], line_opacity =
```

```
my_map4
```

Make this Notebook Trusted to load map: File -> Trust Notebook

