Seaborn

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

In [3]:
```
data=sns.load_dataset('tips')
data.head()
```

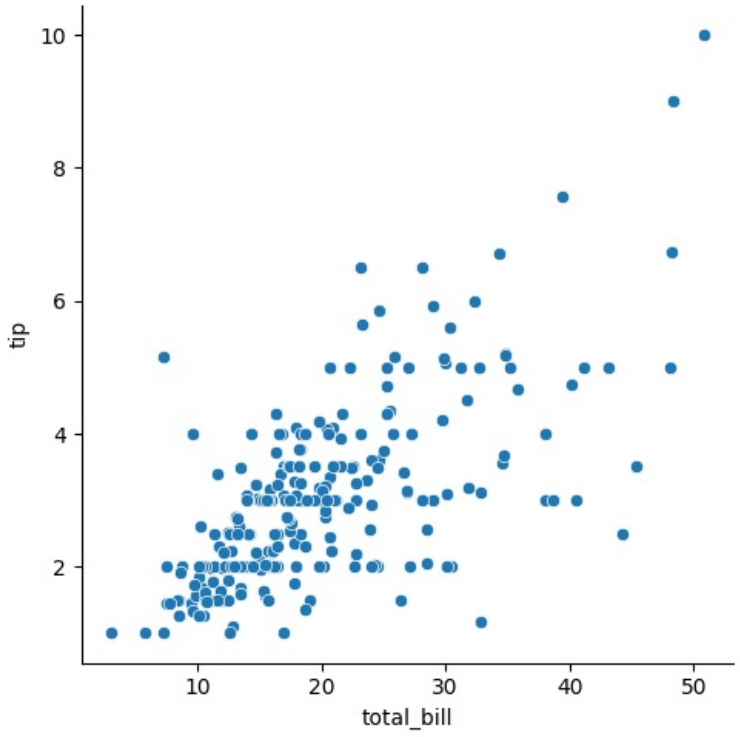
Out[3]:

	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

relplot

In [4]:
```
sns.relplot(x='total_bill',y='tip',data=data)
```

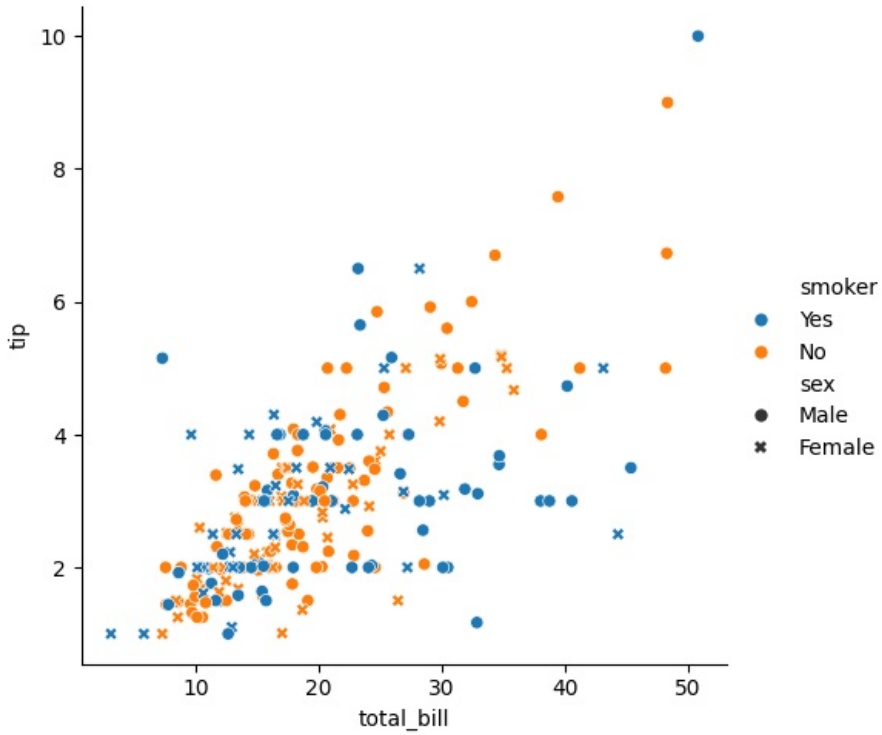
Out[4]:
```
<seaborn.axisgrid.FacetGrid at 0x1f22f811a90>
```



hue parameter and style parameter

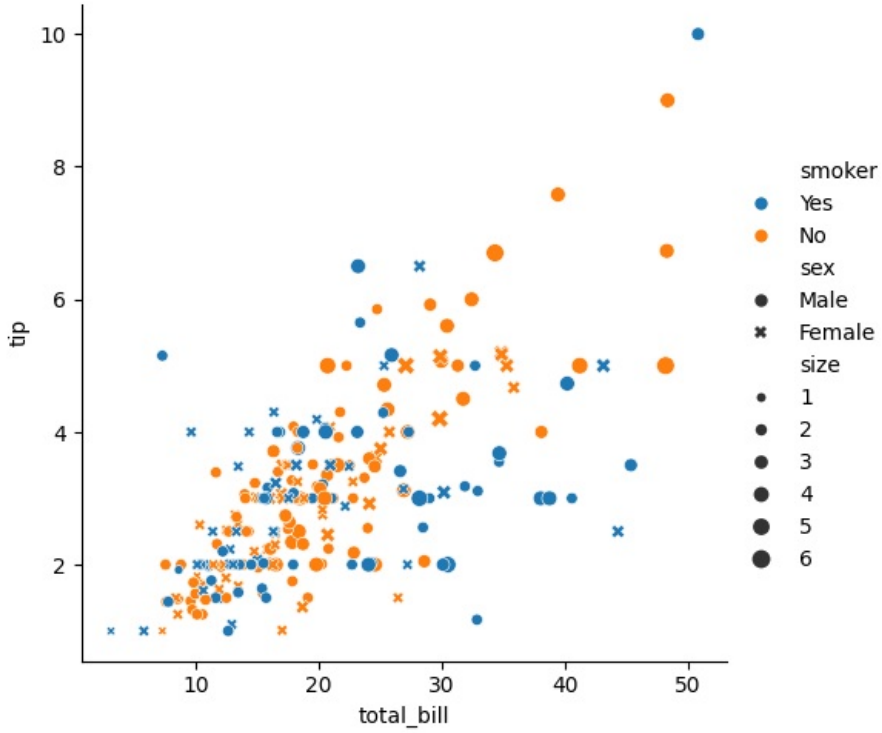
In [5]:
```
sns.relplot(x='total_bill',y='tip',hue='smoker',style='sex',data=data)
```

Out[5]:
```
<seaborn.axisgrid.FacetGrid at 0x1f22f91c190>
```



In [6]:
```
sns.relplot(x='total_bill',y='tip',hue='smoker',style='sex',size='size',data=data)
```

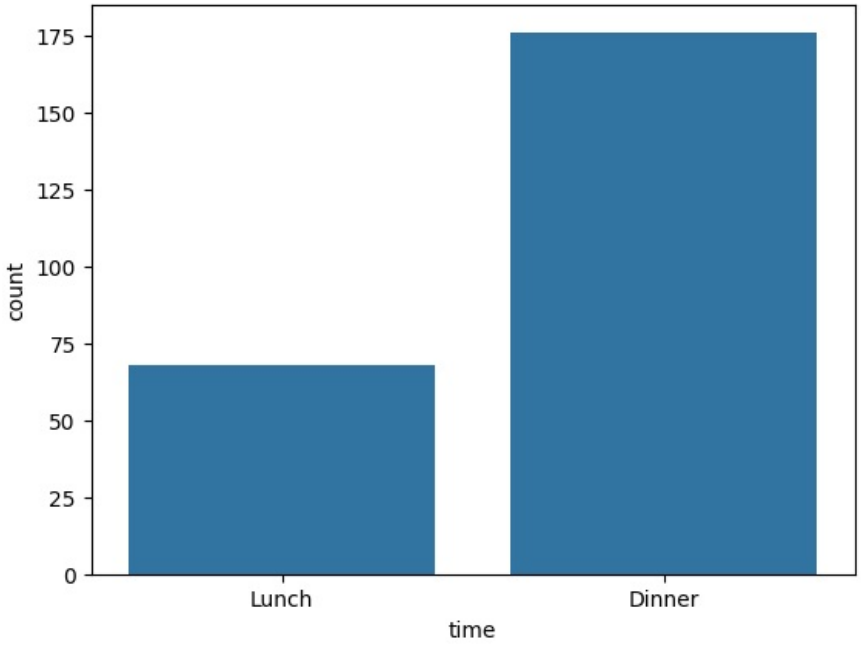
Out[6]:
```
<seaborn.axisgrid.FacetGrid at 0x1f2319a5950>
```



countplot()

In [7]:
```
sns.countplot(x="time",data=data)
```

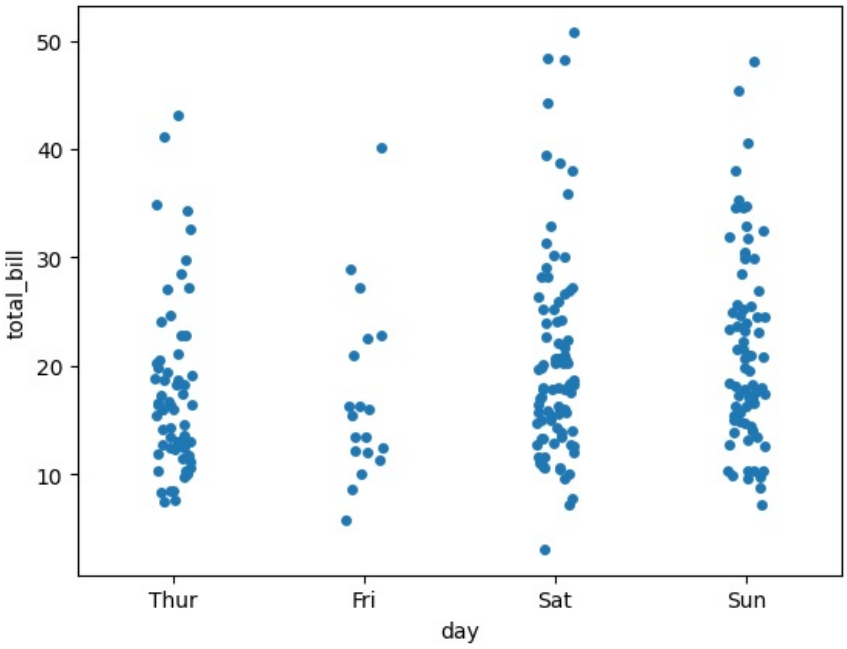
Out[7]:
```
<Axes: xlabel='time', ylabel='count'>
```



stripplot()

In [8]:
```
sns.stripplot(x="day",y="total_bill",data=data)
```

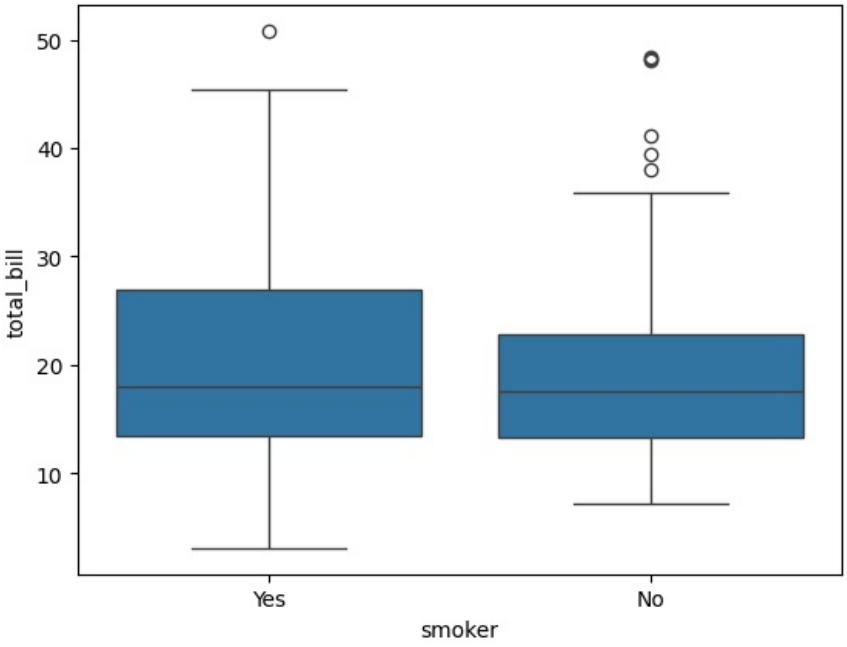
Out[8]:
```
<Axes: xlabel='day', ylabel='total_bill'>
```



boxplot()

In [9]:
```
sns.boxplot(x='smoker',y='total_bill',data=data)
```

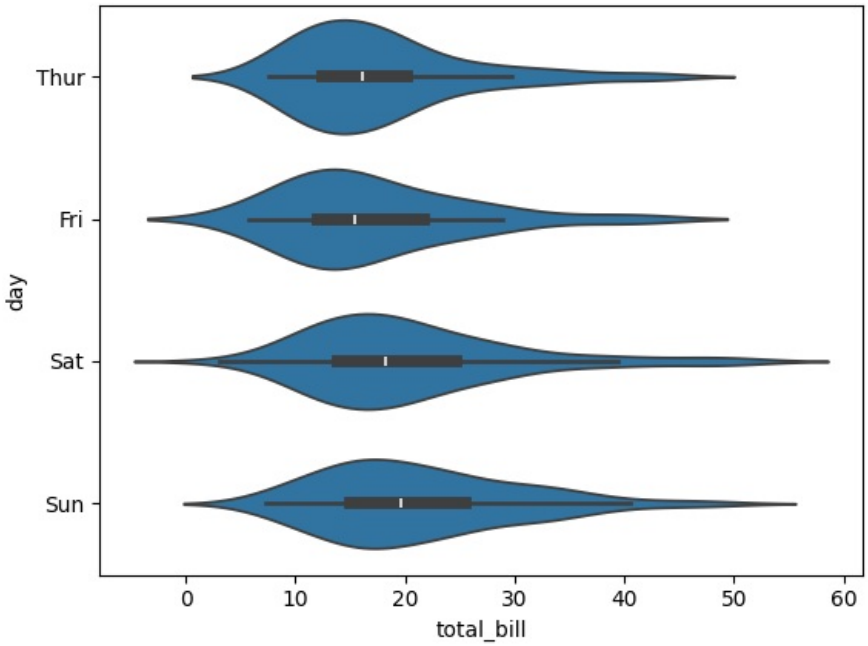
Out[9]:
```
<Axes: xlabel='smoker', ylabel='total_bill'>
```



violinplot()

In [10]:
```
sns.violinplot(x="total_bill",y="day",data=data)
```

Out[10]:
```
<Axes: xlabel='total_bill', ylabel='day'>
```



heatmaps():->

In [11]:
```
flights=sns.load_dataset('flights')
```

In [12]:
```
flights.head()
```

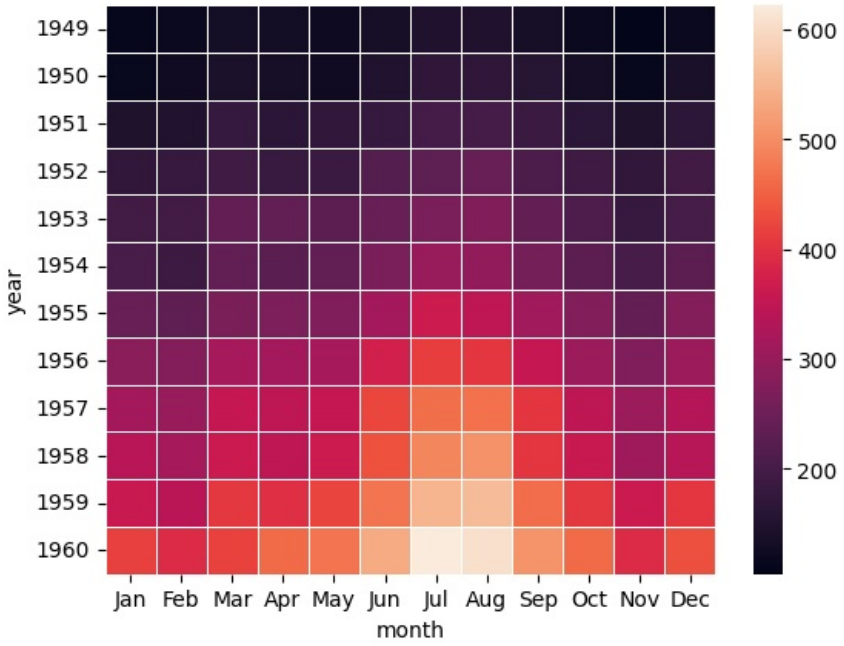
Out[12]:

	year	month	passengers
0	1949	Jan	112
1	1949	Feb	118
2	1949	Mar	132
3	1949	Apr	129
4	1949	May	121

In [20]:
```
x=flights.pivot_table(index='year',columns='month',values='passengers',aggfunc='sum')
sns.heatmap(x,linewidths=0.6)
```

```
C:\Users\mukhe\AppData\Local\Temp\ipykernel_26092\1096495803.py:1: FutureWarning: The default value of observed=
False is deprecated and will change to observed=True in a future version of pandas. Specify observed=False to si
lence this warning and retain the current behavior
  x=flights.pivot_table(index='year',columns='month',values='passengers',aggfunc='sum')
```

Out[20]: <Axes: xlabel='month', ylabel='year'>



clustermap()

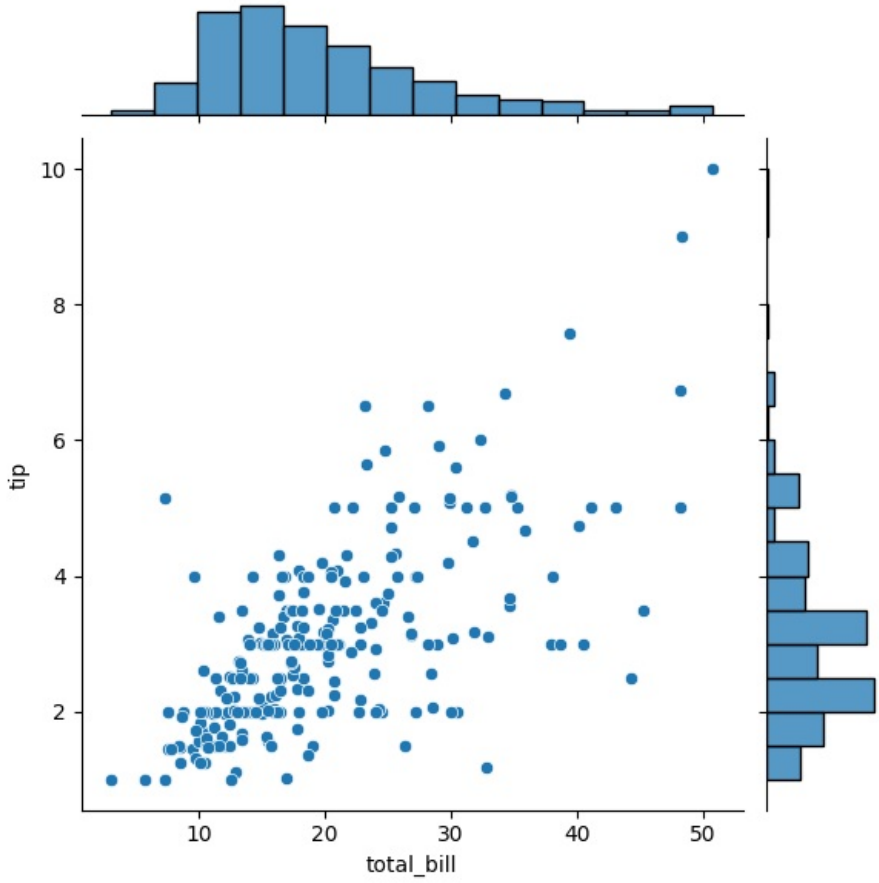
In [21]:
```
sns.clustermap(x)
```

```
---------------------------------------------------------------------------
RuntimeError                              Traceback (most recent call last)
Cell In[21], line 1
----> 1 sns.clustermap(x)

File ~\AppData\Local\Programs\Python\Python313\Lib\site-packages\seaborn\matrix.py:1250, in clustermap(data, piv
ot_kws, method, metric, z_score, standard_scale, figsize, cbar_kws, row_cluster, col_cluster, row_linkage, col_l
inkage, row_colors, col_colors, mask, dendrogram_ratio, colors_ratio, cbar_pos, tree_kws, **kwargs)
   1157 """
   1158 Plot a matrix dataset as a hierarchically-clustered heatmap.
   1159
   (...)
   1247
   1248 """
   1249 if _no_scipy:
-> 1250     raise RuntimeError("clustermap requires scipy to be available")
   1252 plotter = ClusterGrid(data, pivot_kws=pivot_kws, figsize=figsize,
   1253                       row_colors=row_colors, col_colors=col_colors,
   1254                       z_score=z_score, standard_scale=standard_scale,
   1255                       mask=mask, dendrogram_ratio=dendrogram_ratio,
   1256                       colors_ratio=colors_ratio, cbar_pos=cbar_pos)
   1258 return plotter.plot(metric=metric, method=method,
   1259                     colorbar_kws=cbar_kws,
   1260                     row_cluster=row_cluster, col_cluster=col_cluster,
   1261                     row_linkage=row_linkage, col_linkage=col_linkage,
   1262                     tree_kws=tree_kws, **kwargs)

RuntimeError: clustermap requires scipy to be available
```

jointplots()

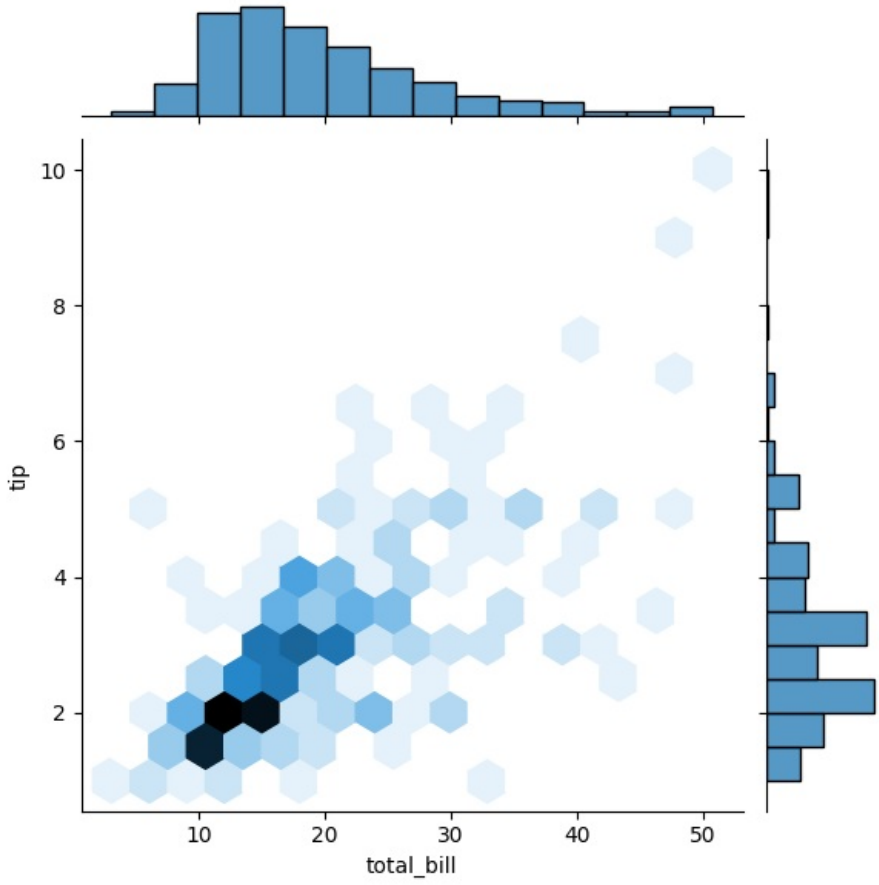
In [22]:
```
sns.jointplot(x="total_bill",y="tip",data=data)
```

Out[22]:
```
<seaborn.axisgrid.JointGrid at 0x1f232f84c20>
```



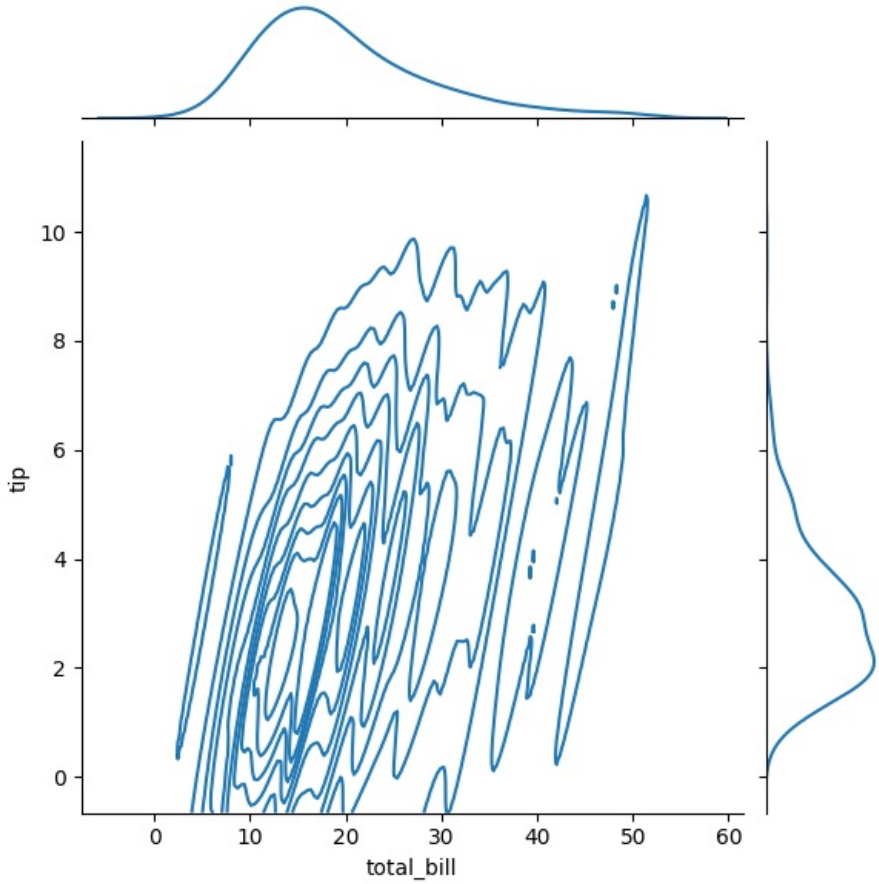
In [24]:
```
sns.jointplot(x="total_bill",y="tip",kind="hex",data=data)
```

Out[24]:
```
<seaborn.axisgrid.JointGrid at 0x1f2352ce990>
```



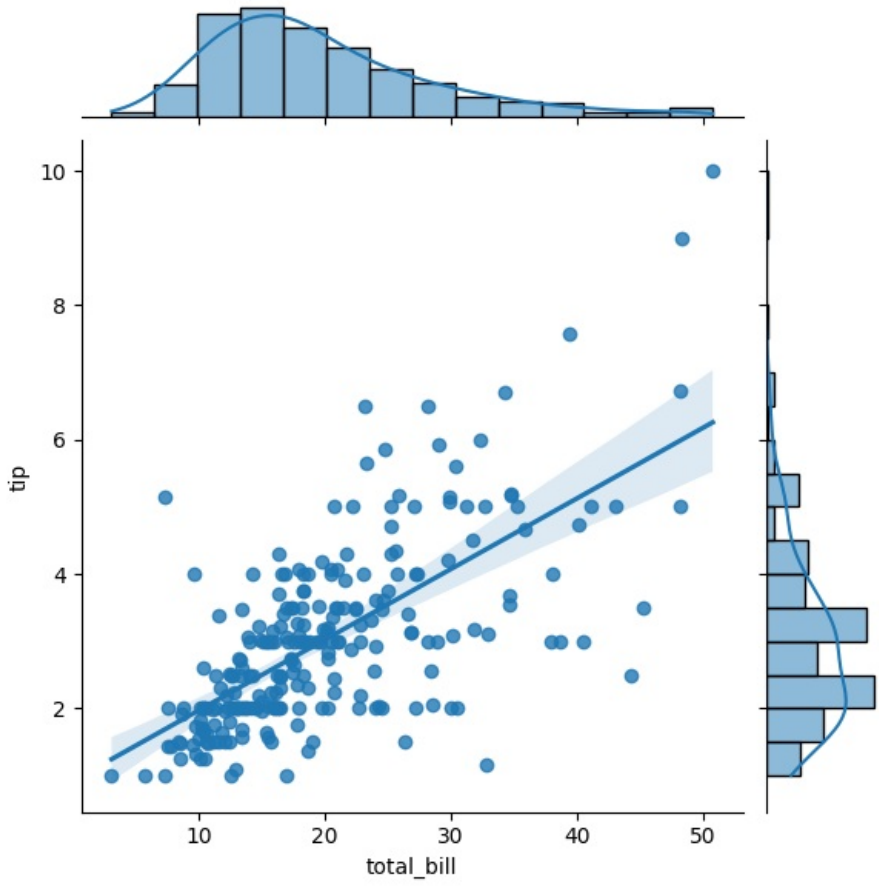
In [25]:
```
sns.jointplot(x="total_bill",y="tip",kind="kde",data=data)
```

Out[25]:
```
<seaborn.axisgrid.JointGrid at 0x1f2319e63f0>
```



In [26]:
```
sns.jointplot(x="total_bill",y="tip",kind="reg",data=data)
```

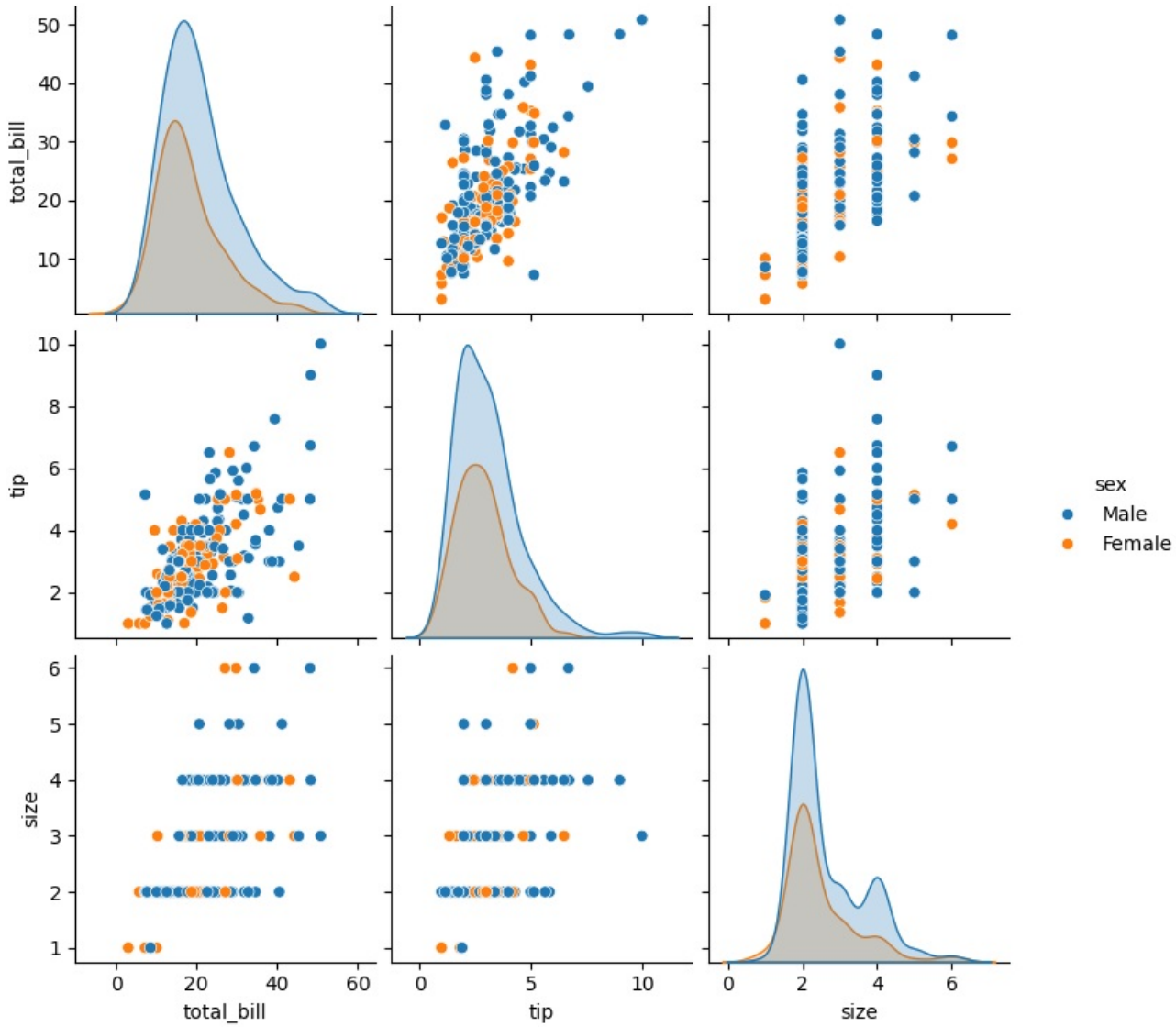
Out[26]:
```
<seaborn.axisgrid.JointGrid at 0x1f2319e6650>
```



pairplot()

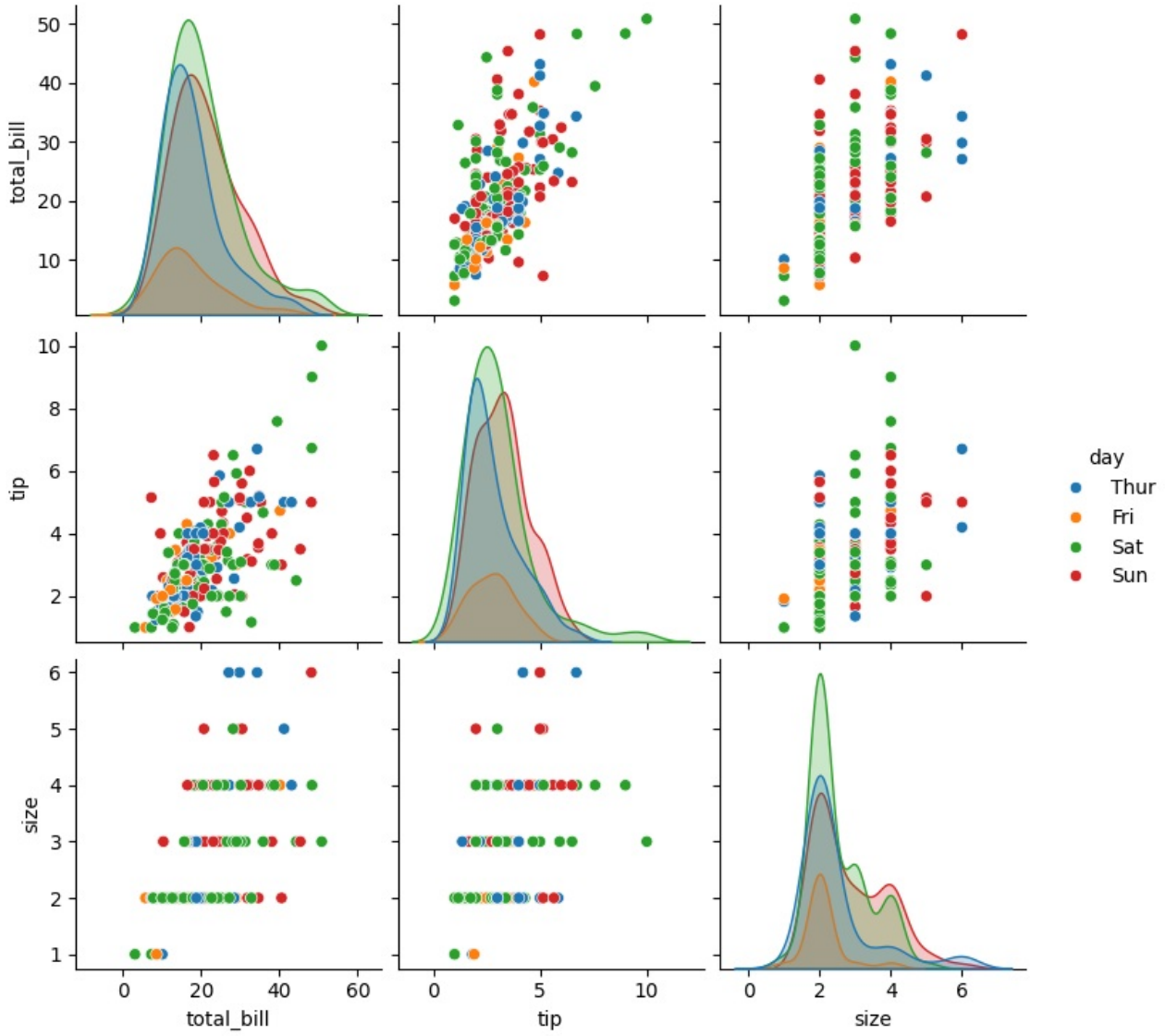
In [27]:
```
sns.pairplot(data,hue='sex')
```

Out[27]:
```
<seaborn.axisgrid.PairGrid at 0x1f232f85e80>
```



In [28]:
```
sns.pairplot(data,hue="day")
```

Out[28]:
```
<seaborn.axisgrid.PairGrid at 0x1f236594b90>
```



In [ ]: