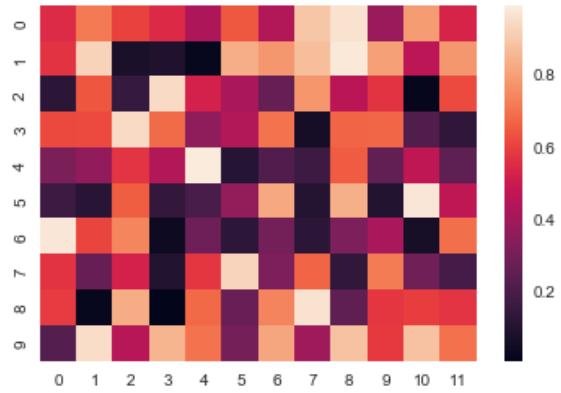
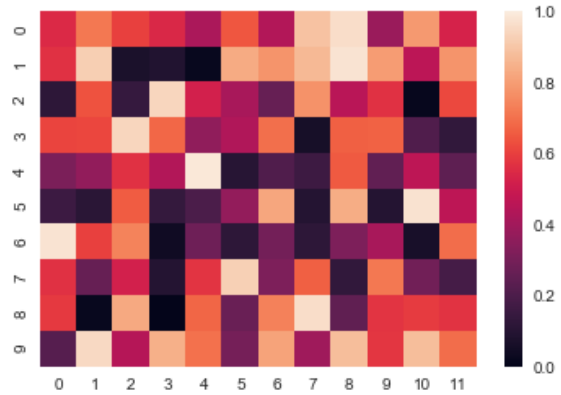
In [3]:
```
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

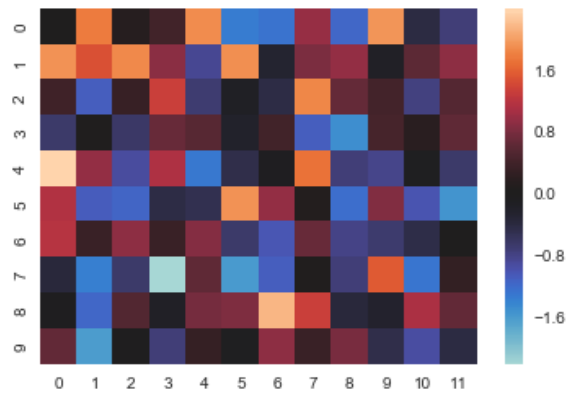
In [4]:
```
sns.set()
np.random.seed(0)
uniform_data = np.random.rand(10, 12)
ax = sns.heatmap(uniform_data)
plt.show()
```



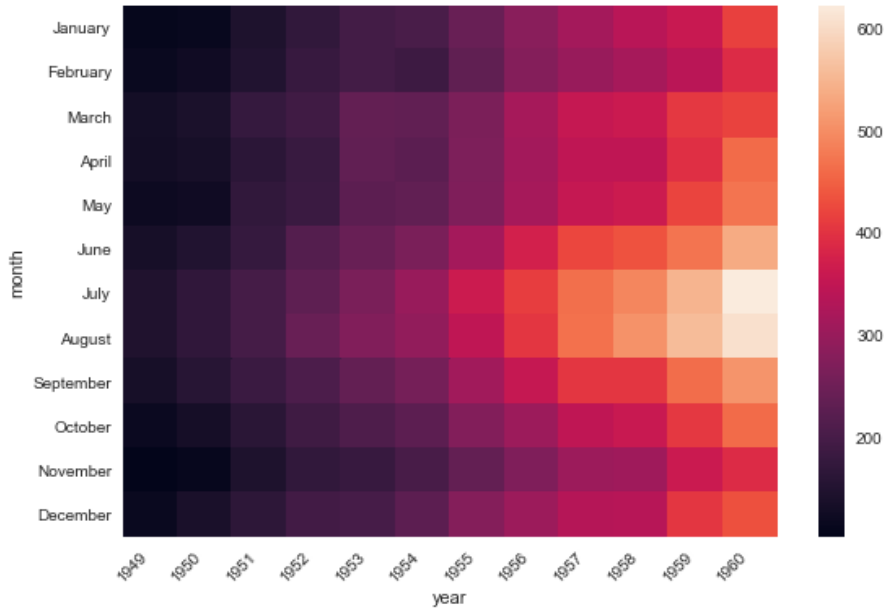
In [5]:
```
# 改变颜色映射的值范围
ax = sns.heatmap(uniform_data, vmin=0, vmax=1)
plt.show()
```



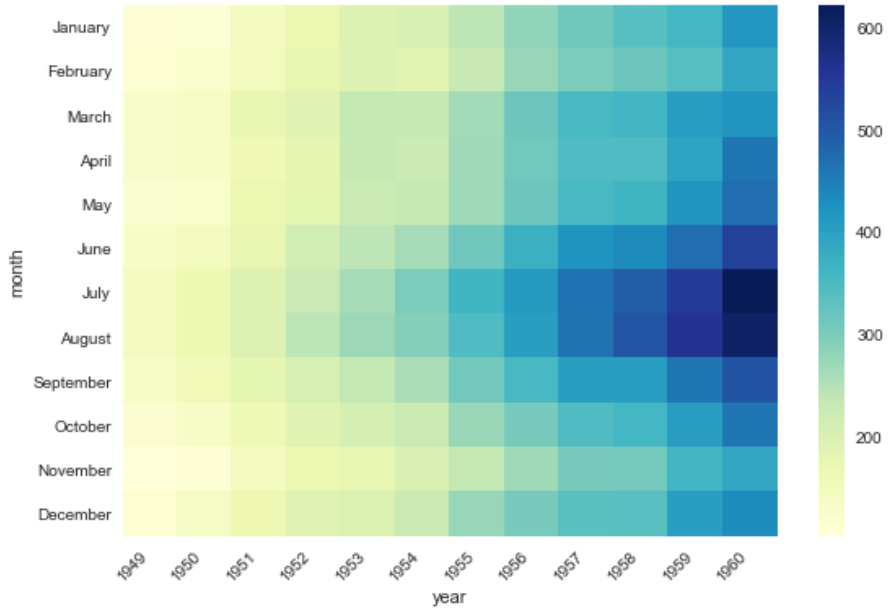
In [6]:
```
uniform_data = np.random.randn(10, 12)
#为以0为中心的数据绘制一张热图
ax = sns.heatmap(uniform_data, center=0)
plt.show()
```



In [7]:
```
sns.set()
#用行和列标签绘制
flights_long = sns.load_dataset("flights")
flights = flights_long.pivot("month", "year", "passengers")
# 绘制x-y-z的热力图，比如 年-月-销量 的热力图
f, ax = plt.subplots(figsize=(9, 6))
sns.heatmap(flights, ax=ax)
#设置坐标字体方向
label_y = ax.get_yticklabels()
plt.setp(label_y, rotation=360, horizontalalignment='right')
label_x = ax.get_xticklabels()
plt.setp(label_x, rotation=45, horizontalalignment='right')
plt.show()
```



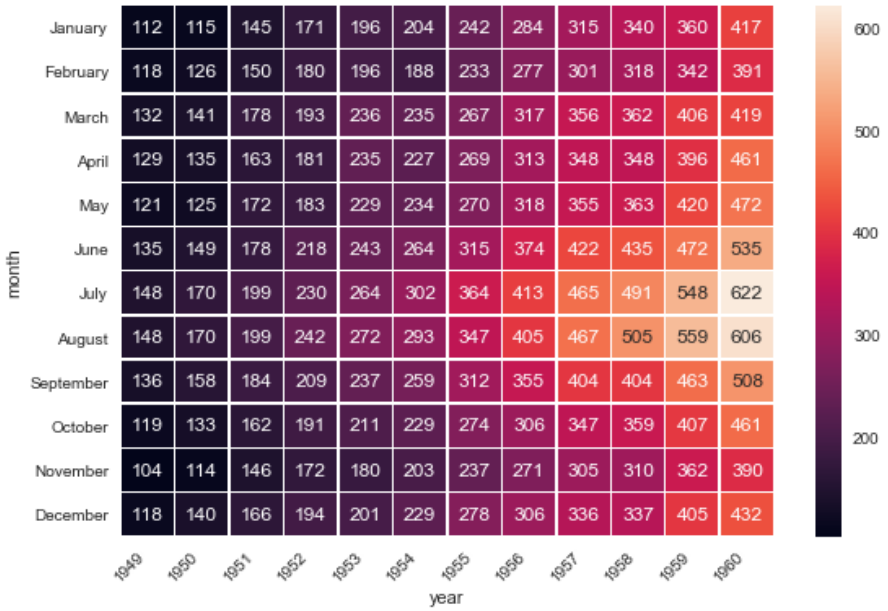
In [8]:
```
import matplotlib.pyplot as plt
import seaborn as sns
sns.set()
flights_long = sns.load_dataset("flights")
flights = flights_long.pivot("month", "year", "passengers")
# 绘制x-y-z的热力图，比如 年-月-销量 的热力图
f, ax = plt.subplots(figsize=(9, 6))
#使用不同的颜色
sns.heatmap(flights, fmt="d",cmap='YlGnBu', ax=ax)
#设置坐标字体方向
label_y = ax.get_yticklabels()
plt.setp(label_y, rotation=360, horizontalalignment='right')
label_x = ax.get_xticklabels()
plt.setp(label_x, rotation=45, horizontalalignment='right')
plt.show()
```



注释热图

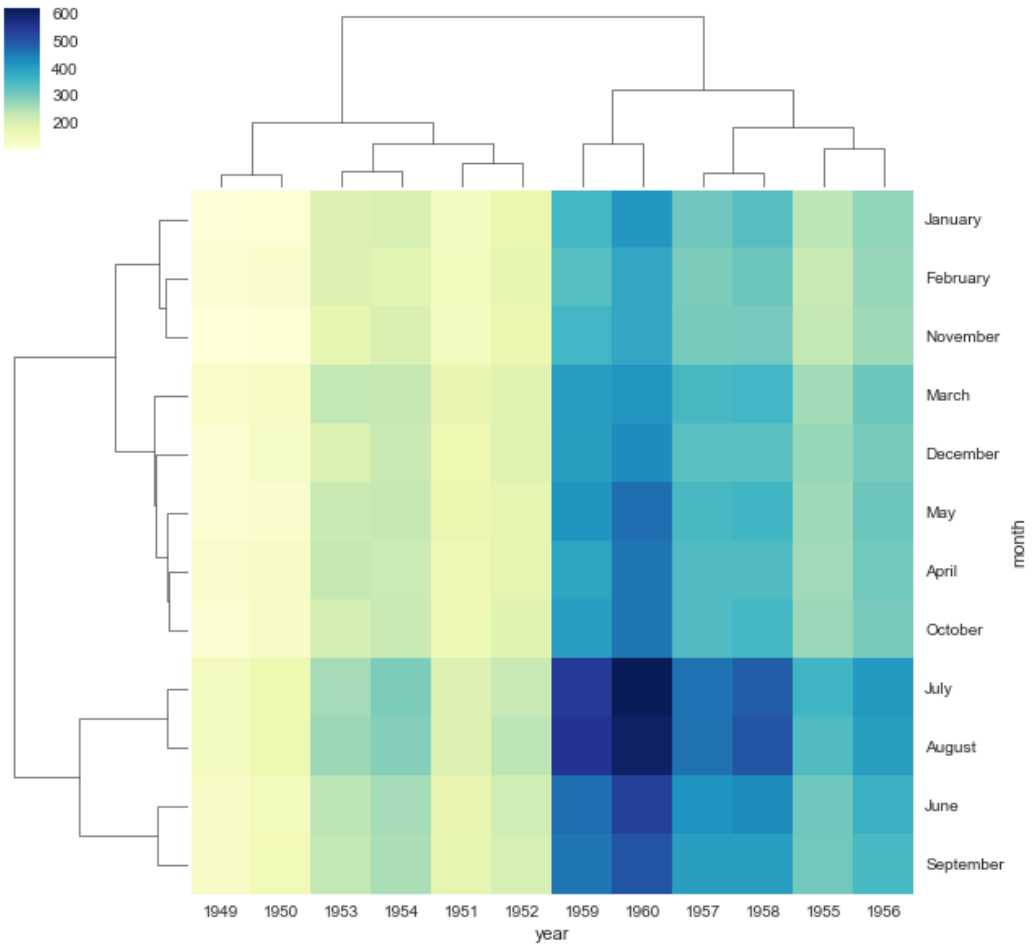
In [9]:
```
import matplotlib.pyplot as plt
import seaborn as sns
sns.set()
flights_long = sns.load_dataset("flights")
flights = flights_long.pivot("month", "year", "passengers")
# 绘制x-y-z的热力图，比如 年-月-销量 的热力图
f, ax = plt.subplots(figsize=(9, 6))
#绘制热力图，还要将数值写到热力图上
sns.heatmap(flights, annot=True, fmt="d", ax=ax)
#设置坐标字体方向
label_y = ax.get_yticklabels()
plt.setp(label_y, rotation=360, horizontalalignment='right')
label_x = ax.get_xticklabels()
plt.setp(label_x, rotation=45, horizontalalignment='right')
plt.show()

###################################
# sns.heatmap(flights, ax=ax)
```

In [10]:
```
import matplotlib.pyplot as plt
import seaborn as sns
sns.set()
flights_long = sns.load_dataset("flights")
flights = flights_long.pivot("month", "year", "passengers")
# 绘制x-y-z的热力图，比如 年-月-销量 的热力图
f, ax = plt.subplots(figsize=(9, 6))
#绘制热力图，还要将数值写到热力图上
#每个网格上用线隔开  sns.heatmap(flights, annot=True, fmt="d", ax=ax)
sns.heatmap(flights, annot=True, fmt="d", linewidths=.5, ax=ax)
#设置坐标字体方向
label_y = ax.get_yticklabels()
plt.setp(label_y, rotation=360, horizontalalignment='right')
label_x = ax.get_xticklabels()
plt.setp(label_x, rotation=45, horizontalalignment='right')
plt.show()
```

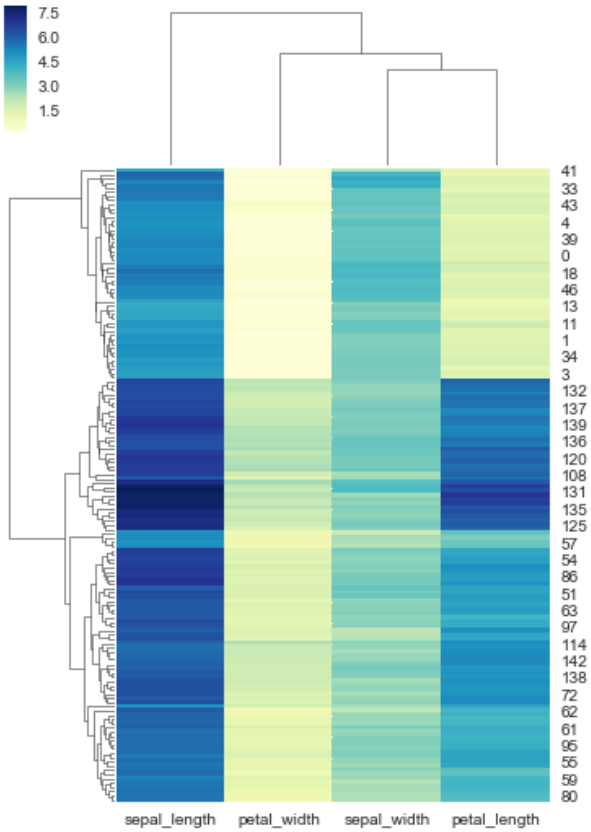


聚类热图

In [11]:
```
import matplotlib.pyplot as plt
import seaborn as sns
sns.set()
flights_long = sns.load_dataset("flights")
flights = flights_long.pivot("month", "year", "passengers")
# 绘制x-y-z的热力图，比如 年-月-销量 的聚类热图
g= sns.clustermap(flights, fmt="d",cmap='YlGnBu')
ax = g.ax_heatmap
label_y = ax.get_yticklabels()
plt.setp(label_y, rotation=360, horizontalalignment='left')
plt.show()
```



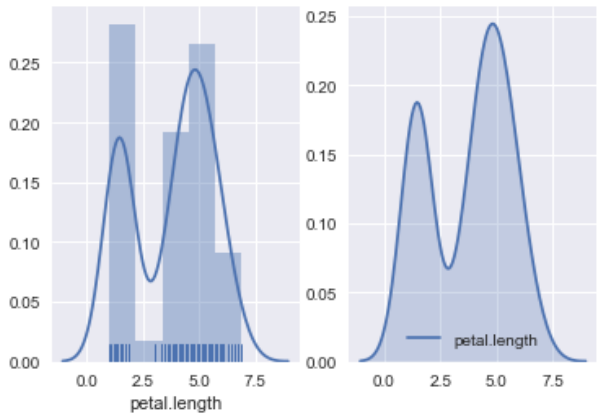
In [12]:
```
import matplotlib.pyplot as plt
import seaborn as sns
sns.set(color_codes=True)
iris = sns.load_dataset("iris")
species = iris.pop("species")
#设置图片大小
g= sns.clustermap(iris, fmt="d",cmap='YlGnBu',figsize=(6,9))
ax = g.ax_heatmap
label_y = ax.get_yticklabels()
plt.setp(label_y, rotation=360, horizontalalignment='left')
#设置图片名称，分辨率，并保存
plt.savefig('cluster.tif',dpi = 300)
plt.show()
```



https://blog.csdn.net/qq_34264472/article/details/53814653 (https://blog.csdn.net/qq_34264472/article/details/53814653)

In [18]:
```
import matplotlib.pyplot as plt
import seaborn as sns
import pandas as pd
df_iris = pd.read_csv('iris.csv')
fig, axes = plt.subplots(1,2)
sns.distplot(df_iris['petal.length'], ax = axes[0], kde = True, rug = True)      # kde 密度曲线  rug 边际毛毯
sns.kdeplot(df_iris['petal.length'], ax = axes[1], shade=True)                   # shade  阴影
plt.show()
```

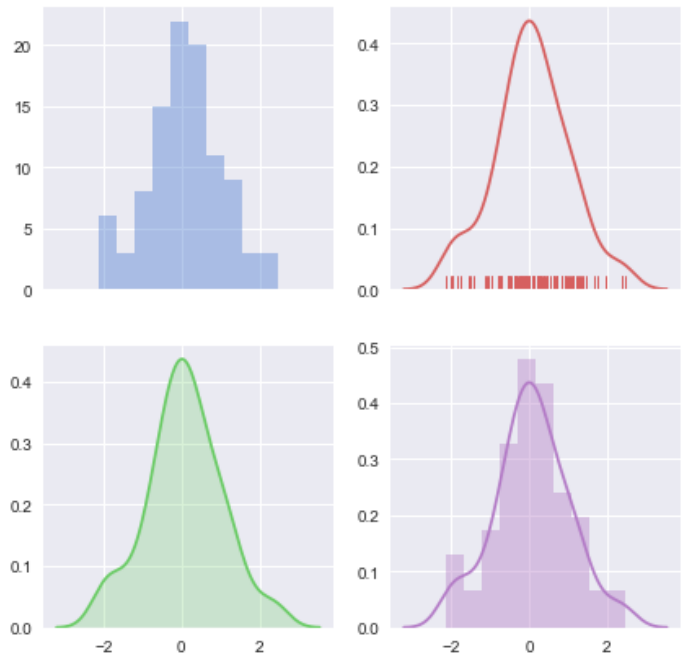
```
/home/eacaen/anaconda3/lib/python3.6/site-packages/matplotlib/axes/_axes.py:6462: UserWarning: The
'normed' kwarg is deprecated, and has been replaced by the 'density' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
```



In [ ]:
```
import matplotlib.pyplot as plt
import seaborn as sns
df_iris = pd.read_csv('../input/iris.csv')
sns.boxplot(x = df_iris['class'],y = df_iris['sepal width'])
plt.show()
```

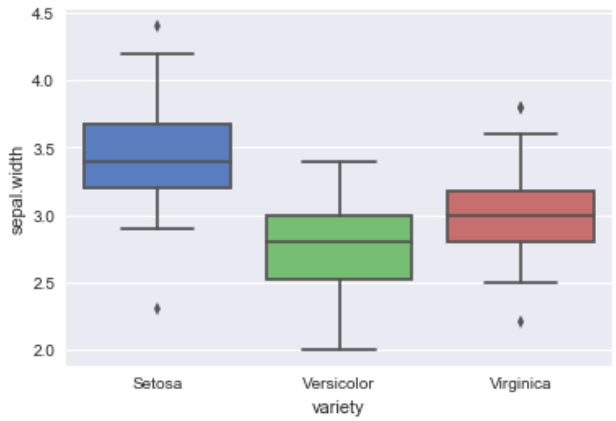
In [20]:
```
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
sns.set( palette="muted", color_codes=True)
rs = np.random.RandomState(10)
d = rs.normal(size=100)
f, axes = plt.subplots(2, 2, figsize=(7, 7), sharex=True)
sns.distplot(d, kde=False, color="b", ax=axes[0, 0])
sns.distplot(d, hist=False, rug=True, color="r", ax=axes[0, 1])
sns.distplot(d, hist=False, color="g", kde_kws={"shade": True}, ax=axes[1, 0])
sns.distplot(d, color="m", ax=axes[1, 1])
plt.show()
```

```
/home/eacaen/anaconda3/lib/python3.6/site-packages/matplotlib/axes/_axes.py:6462: UserWarning: The
'normed' kwarg is deprecated, and has been replaced by the 'density' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
```

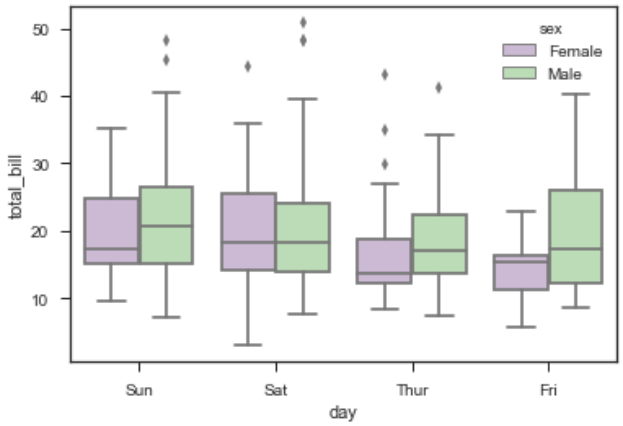


箱型图 boxplot( )

In [22]:
```
import matplotlib.pyplot as plt
import seaborn as sns
df_iris = pd.read_csv('iris.csv')
sns.boxplot(x = df_iris['variety'],y = df_iris['sepal.width'])
plt.show()
```



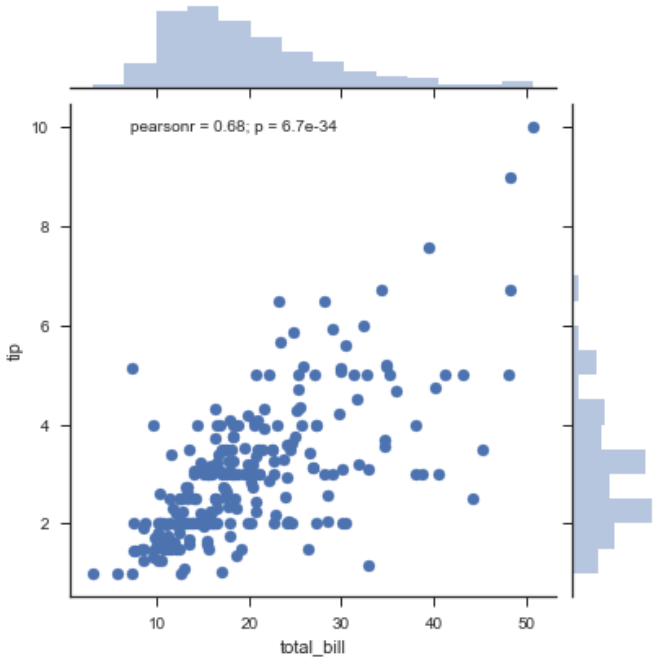
In [23]:
```
import matplotlib.pyplot as plt
import seaborn as sns
tips = pd.read_csv('tips.csv')
sns.set(style="ticks")                          #设置主题
sns.boxplot(x="day", y="total_bill", hue="sex", data=tips, palette="PRGn")  #palette 调色板
plt.show()
```



联合分布jointplot( )

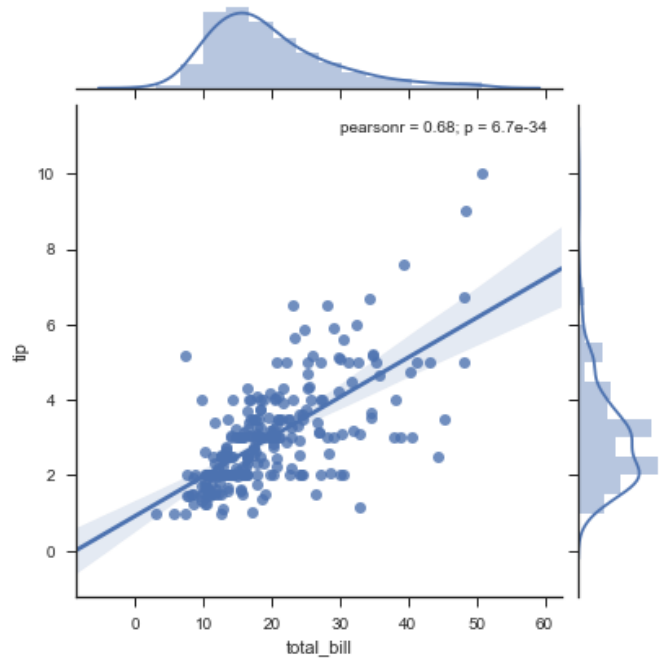
In [24]:
```
import matplotlib.pyplot as plt
import seaborn as sns
tips = pd.read_csv('tips.csv')  #右上角显示相关系数
sns.jointplot("total_bill", "tip", tips)
plt.show()
```

```
/home/eacaen/anaconda3/lib/python3.6/site-packages/matplotlib/axes/_axes.py:6462: UserWarning: The
'normed' kwarg is deprecated, and has been replaced by the 'density' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
```



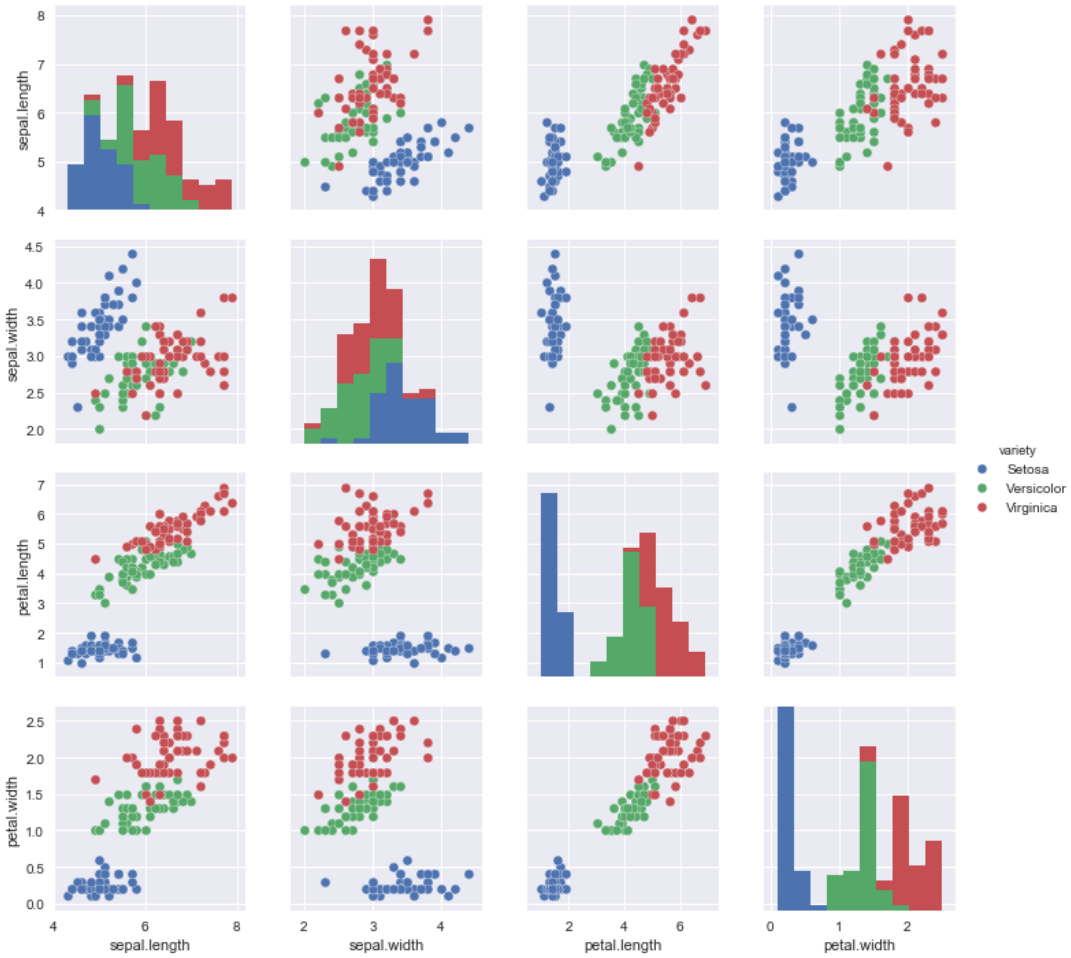
In [26]:
```
import matplotlib.pyplot as plt
import seaborn as sns
tips = pd.read_csv('tips.csv')
sns.jointplot("total_bill", "tip", tips, kind='reg')
plt.show()
```

```
/home/eacaen/anaconda3/lib/python3.6/site-packages/matplotlib/axes/_axes.py:6462: UserWarning: The 'normed' kwarg is deprecated, and has been replaced by the 'density' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
```

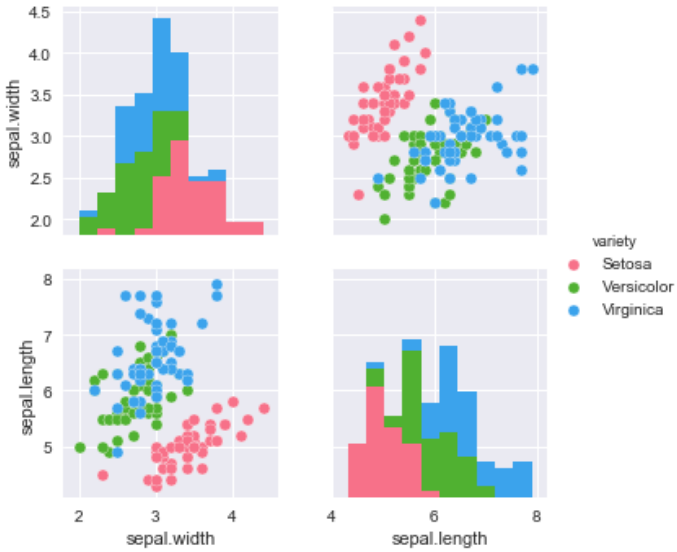


pairplot( )

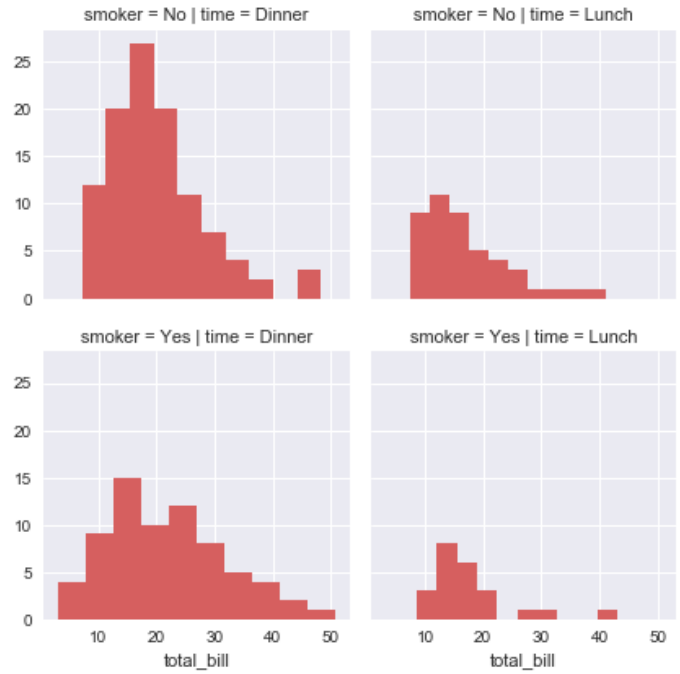
In [28]:
```
import matplotlib.pyplot as plt
import seaborn as sns
data = pd.read_csv("iris.csv")
sns.set()                    #使用默认配色
sns.pairplot(data,hue="variety")   #hue 选择分类列
plt.show()
```



In [29]:
```
import seaborn as sns
import matplotlib.pyplot as plt
iris = pd.read_csv('iris.csv')
sns.pairplot(iris, vars=["sepal.width", "sepal.length"],hue='variety',palette="husl")
plt.show()
```



In [30]:
```
import seaborn as sns
import matplotlib.pyplot as plt
tips = pd.read_csv('tips.csv')
g = sns.FacetGrid(tips, col="time",  row="smoker")
g = g.map(plt.hist, "total_bill",  color="r")
plt.show()
```



In [ ]: