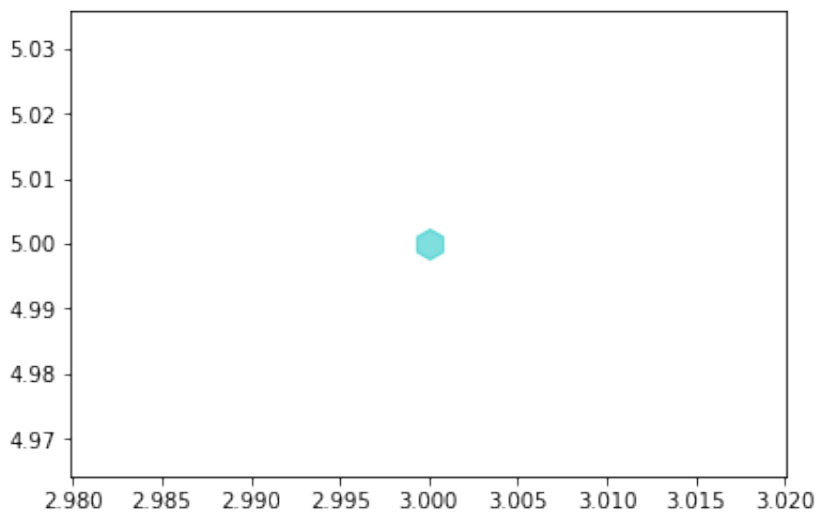


# Matplotlib绘制散点图

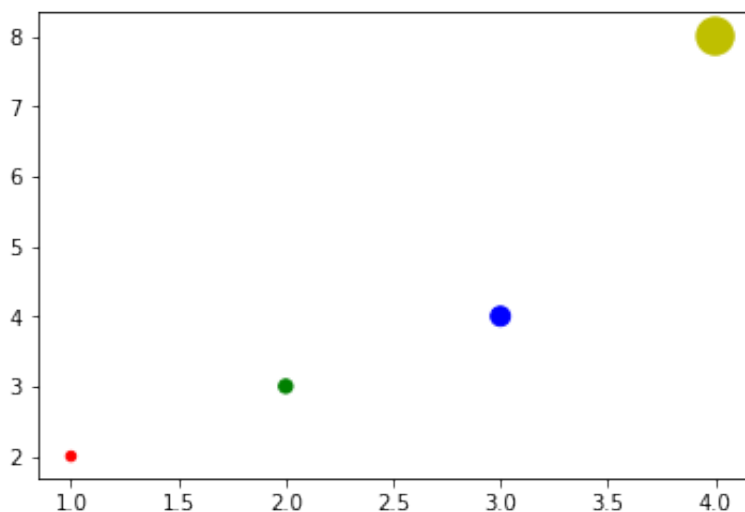
```
In [1]: import matplotlib.pyplot as plt
import numpy as np
```

```
In [2]: # s为标记符的大小
# color      r-red   g-green b-blue   k-black   y-yellow   c-cyan
十六进制    #ff0000
# alpha 透明度    0-1之间, 1位不透明
# marker 标记符号      o  *  x  +  .  d  D  h

# 以上4个均为可选项
plt.scatter(3, 5, s=200, color='c', alpha=0.5, marker='h')
plt.show()
```



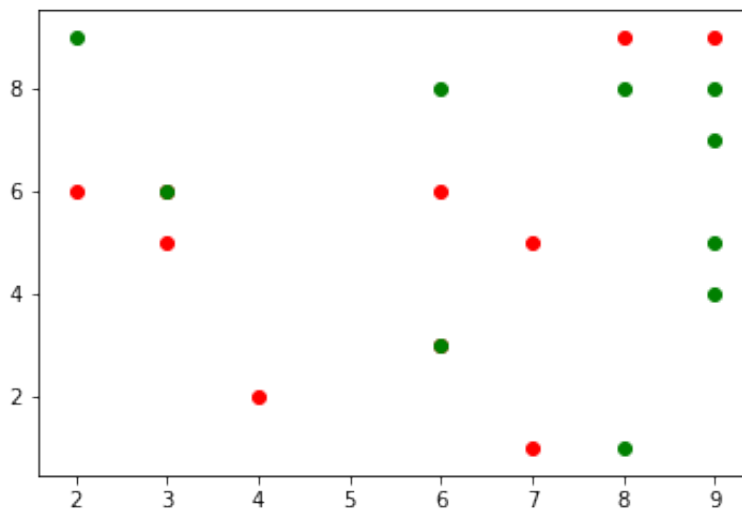
```
In [3]: x = [1, 2, 3, 4]
y = [2, 3, 4, 8]
plt.scatter(x, y, s=[20, 40, 80, 300], color=['r', 'g', 'b', 'y'])
plt.show()
```



```
In [4]: x1 = np.random.randint(1, 10, size=(10, 2))  
x2 = np.random.randint(1, 10, size=(10, 2))  
x1
```

```
Out[4]: array([[7, 5],  
               [6, 6],  
               [8, 9],  
               [7, 1],  
               [4, 2],  
               [2, 6],  
               [3, 6],  
               [9, 9],  
               [3, 5],  
               [6, 3]])
```

```
In [5]: plt.scatter(x1[:,0], x1[:,1], color='r')  
plt.scatter(x2[:,0], x2[:,1], color='g')  
plt.show()
```



```
In [6]: X = np.loadtxt('X_height.txt')
```

```
In [7]: x
```

```
Out[7]: array([[ 1. , 75. ],
 [ 2. , 87.2],
 [ 3. , 95.6],
 [ 4. , 103.1],
 [ 5. , 110.2],
 [ 6. , 116.6],
 [ 7. , 122.5],
 [ 8. , 128.5],
 [ 9. , 134.1],
 [10. , 140.1],
 [11. , 146.6],
 [12. , 152.4],
 [13. , 156.3],
 [14. , 158.6],
 [15. , 159.8],
 [16. , 160.1],
 [17. , 160.3],
 [18. , 160. ],
 [ 1. , 76.5],
 [ 2. , 88.5],
 [ 3. , 96.8],
 [ 4. , 104.1],
 [ 5. , 111.3],
 [ 6. , 117.7],
 [ 7. , 124. ],
 [ 8. , 130. ],
 [ 9. , 135.4],
 [10. , 140.2],
 [11. , 145.3],
 [12. , 151.9],
 [13. , 159.5],
 [14. , 165.9],
 [15. , 169.8],
 [16. , 171.6],
 [17. , 172.3],
 [18. , 172.7]])
```

```
In [8]: y = np.concatenate([np.zeros(18), np.ones(18)])
y
```

```
Out[8]: array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0.,
 0., 0.,
 0., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1.,
 1., 1.,
 1., 1.])
```

```
In [9]: x[y==1, 1]
```

```
Out[9]: array([ 76.5,  88.5,  96.8, 104.1, 111.3, 117.7, 124. , 130. , 135
.4,
 140.2, 145.3, 151.9, 159.5, 165.9, 169.8, 171.6, 172.3, 172
.7])
```

```
In [10]: plt.scatter(X[y==0, 0], X[y==0, 1], color='r', marker='_')
plt.scatter(X[y==1, 0], X[y==1, 1], color='g', marker='_')
plt.show()
```

