\Box

```
1
     from numpy import where
 2
 3
     from collections import Counter
 4
 5
     from sklearn.datasets import make_blobs
 6
 7
     from matplotlib import pyplot
 8
 9
     X,y=make_blobs(n_samples=1000,centers=3,random_state=1)
10
11
     print(X.shape,y.shape)
12
     counter=Counter(y)
13
14
15
     print(counter)
16
17
     for i in range(10):
18
19
       print(X[i],y[i])
20
21
     for label,_ in counter.items():
22
23
       row_ix=where(y==label)[0]
24
       pyplot.scatter(X[row_ix,0],X[row_ix,1],label=str(label))
25
26
27
     pyplot.legend()
28
29
     pyplot.show()
30
```

```
(1000, 2) (1000,)
Counter({0: 334, 1: 333, 2: 333})
[-3.05837272 4.48825769] 0
[-8.60973869 -3.72714879] 1
[1.37129721 5.23107449] 0
[-9.33917563 -2.9544469 ] 1
                                 + Code
                                              + Text
[-8.63895561 -8.05263469] 2
[-8.48974309 -9.05667083] 2
[-7.51235546 -7.96464519] 2
[-7.51320529 -7.46053919] 2
[-0.61947075 3.48804983] 0
[-10.91115591
              -4.5772537 ] 1
           1
   5.0
   2.5
   0.0
 -2.5
  -5.0
 -7.5
 -10.0
         -12
               -10
                                       -2
                                             0
```

✓ 1s completed at 12:20 AM

X