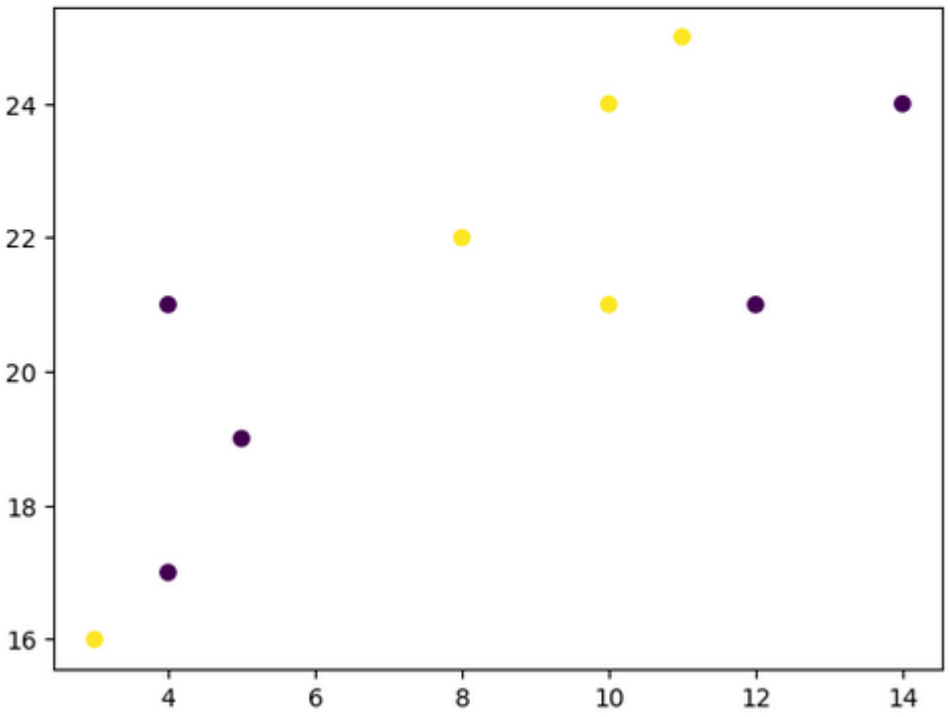
[5]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

[17]:
```
x=[4,5,10,4,3,11,14,8,10,12]
y=[21,19,24,17,16,25,24,22,21,21]
cv=[0,0,1,0,1,1,0,1,1,0]
plt.scatter(x,y,c=cv)
```

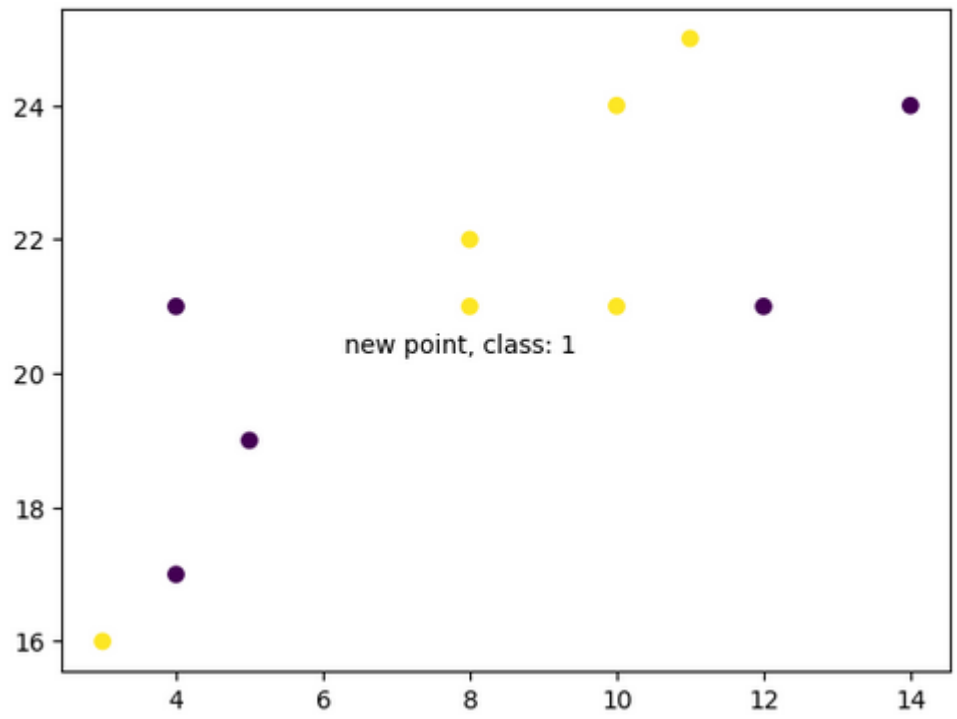
[17]:
```
<matplotlib.collections.PathCollection at 0x1ea9786fc20>
```



[19]:
```
from sklearn.neighbors import KNeighborsClassifier
data=list(zip(x,y))
knn=KNeighborsClassifier(n_neighbors=1)
knn.fit(data,cv)
```

[19]:
```
KNeighborsClassifier
KNeighborsClassifier(n_neighbors=1)
```

[21]:
```
new_x=8
new_y=21
new_point=[(new_x,new_y)]
prediction=knn.predict(new_point)
plt.scatter(x+[new_x],y+[new_y],c=cv+[prediction[0]])
plt.text(x=new_x-1.7,y=new_y-0.7,s=f"new point, class: {prediction[0]}")
plt.show()
```


24
22
20
18
16
4
6
8
10
12
14
new point, class: 1