```python
#!/usr/bin/env python
# coding: utf-8

# In[3]:


import matplotlib.pyplot as plt
from sklearn.datasets import load_iris
import pandas as pd
import numpy as np

np.random.seed(2)        #the start number of the random number
generator with 2.
iris=load_iris()
x=pd.DataFrame(iris.data)
y=pd.DataFrame(iris.target)
colormap=np.array(['red','blue','green'])

from sklearn.cluster import KMeans
kmeans=KMeans(n_clusters=3).fit(x)
plt.subplot(1,2,2)
plt.title("KMeans")
plt.scatter(x[2],x[3],c=colormap[kmeans.labels_])
KM_Cluster=kmeans.predict(x)

import sklearn.metrics as sm
print('K Means Accuracy:',sm.accuracy_score(y,KM_Cluster))
print('Confusion Matrix for
KMeans:\n',sm.confusion_matrix(y,KM_Cluster))

from sklearn.mixture import GaussianMixture     #if it didn't work,
replace GaussianMixture with GMM
gm=GaussianMixture(n_components=3).fit(x)
ycluster=gm.predict(x)

plt.subplot(1,2,1)
plt.title("EM")
plt.scatter(x[2],x[3],c=colormap[ycluster])
print('EM Accuracy:',sm.accuracy_score(y,ycluster))
print('Confusion Matrix for EM:\n',sm.confusion_matrix(y,ycluster))


# In[ ]:
```