**Practical 5**

**Aim:**

**Write a python program to perform multiclass classification on iris dataset.**

**Code:**

from sklearn import datasets  
iris=datasets.load\_iris()  
x=iris.data  
y=iris.target  
from sklearn.model\_selection import train\_test\_split  
x\_train,x\_test,y\_train,y\_test=train\_test\_split(x,y,test\_size=.5)  
from sklearn import tree  
classifier=tree.DecisionTreeClassifier()  
classifier.fit(x\_train,y\_train)  
predictions=classifier.predict(x\_test)  
from sklearn.metrics import accuracy\_score  
print(accuracy\_score(y\_test,predictions))  
  
  
classifier = classifier.fit(iris.data, iris.target)  
tree.export\_graphviz(classifier)   
  
  
dot\_data = tree.export\_graphviz(classifier, out\_file=None,   
                                feature\_names=iris.feature\_names,   
                                class\_names=iris.target\_names)  
  
# Draw graph  
graph = pydotplus.graph\_from\_dot\_data(dot\_data)   
  
# Show graph  
Image(graph.create\_png())

**Output:**

