**Test KNN on Iris dataset and visualize the results**

from sklearn import datasets

from sklearn.model\_selection import train\_test\_split

from sklearn.metrics import classification\_report,confusion\_matrix

import numpy as np

import matplotlib.pyplot as plt

#User defined module import

from KNN import k\_nearest\_neighbors

#Loading dataset

iris\_data = datasets.load\_iris()

data = iris\_data.data

target = iris\_data.target

# Train/Test splits

X\_train, X\_test, y\_train, y\_test = train\_test\_split(data, target, test\_size=0.2)

print("traning instances: ",len(X\_train))

print("Test instances: ",len(X\_test))

#Train KNN model

my\_model = k\_nearest\_neighbors(k = 3)

model=my\_model.knn\_fit(X\_train, y\_train)

predictions = my\_model.knn\_predict(X\_test)

#Evaluation report

print("confusion Matrix:")

print(confusion\_matrix(y\_test,predictions))

print("Classificatiin report:", classification\_report(y\_test, predictions))

#Visulize the predictions

for class\_value in range(3):

row\_ix = np.where(predictions== class\_value)

row\_px = np.where(y\_test== class\_value)

# create scatter of these samples

if(class\_value==0):

m='\*'

c='red'

elif(class\_value==1):

m="o"

c='green'

elif(class\_value==2):

m='x'

c='blue'

plt.scatter(X\_test[row\_ix, 1], X\_test[row\_ix, 0],marker=m,color=c)