

## python programs for classification.

1. `import pandas as pd`
2. `from sklearn.datasets import load_iris`
3. `iris = load_iris()`
4. `iris.feature_names`
5. `iris.target_names`
6. `df = pd.DataFrame(iris.data, columns =  
iris.feature_names)  
df.head() - 1`
7. `df['target'] = iris.target  
df.head() - 2`
8. `df[df.target == 1].head() - 3`
9. `df[df.target == 2].head() - 4`
10. `df['flower_name'] = df.target.apply(lambda  
x: iris.target_names[x])  
df.head() - 5`
11. `df[45: 55]`
12. `df0 = df[:50]  
df1 = df[50:100]  
df2 = df[100:]`

13. import matplotlib.pyplot as plt  
%matplotlib inline.

14. plt.xlabel('Sepal length')  
plt.ylabel('Sepal width')  
plt.scatter(df['Sepal length (cm)'],  
df['Sepal width (cm)'], color=  
"green", marker='x')  
plt.scatter(df['Sepal length (cm)'],  
df['Sepal width (cm)'], color=  
"blue", marker='o')

15. || (petals).

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16. from sklearn.model\_selection import train\_test  
-split

17. X = df.drop(['target', 'flower\_name'], axis=  
'columns')  
y = df.target

18. X\_train, X\_test, y\_train, y\_test =  
train\_test\_split(X, y, test\_size=0.2, random  
-state=1)

19. len(X\_train)

20. len(X\_test)



from sklearn.neighbors import  
neighbors classifier

~~while~~ knn = KNeighborsClassifier  
(n\_neighbors=10)

~~for~~

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knn.fit(X\_train, y\_train)

knn.score(X\_test, y\_test).