**U18ISI6204 – Machine Learning Techniques**

**LAB- EXPERIMENT 8**

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Write a program to implement k-means clustering algorithm for iris dataset.

**With libraries:**

import pandas as pd

import numpy as np

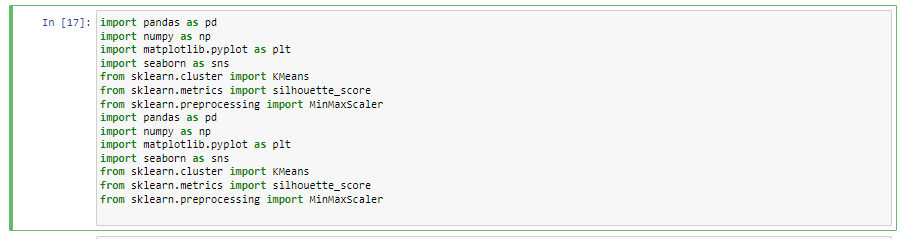
import matplotlib.pyplot as plt

import seaborn as sns

from sklearn.cluster import KMeans

from sklearn.metrics import silhouette\_score

from sklearn.preprocessing import MinMaxScaler

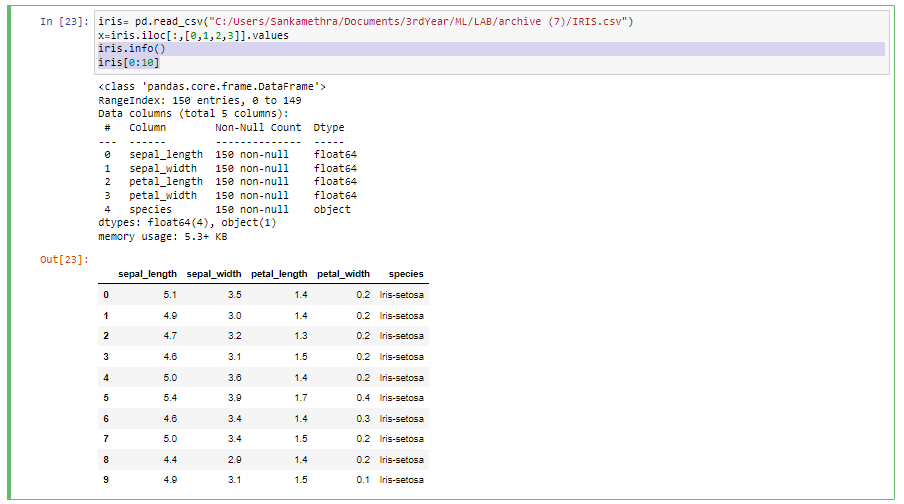


iris= pd.read\_csv("C:/Users/Documents/3rdYear/ML/LAB/archive (7)/IRIS.csv")

x=iris.iloc[:,[0,1,2,3]].values

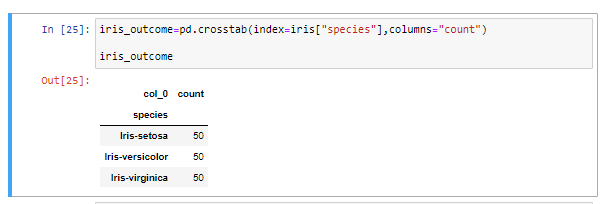
iris.info()

iris[0:10]



iris\_outcome=pd.crosstab(index=iris["species"],columns="count")

iris\_outcome



iris\_setosa= iris.loc[iris["species"]=="Iris-setosa"]

iris\_virginica=iris.loc[iris["species"]=="Iris-virginica"]

iris\_versicolor=iris.loc[iris["species"]=="Iris-versicolor"]

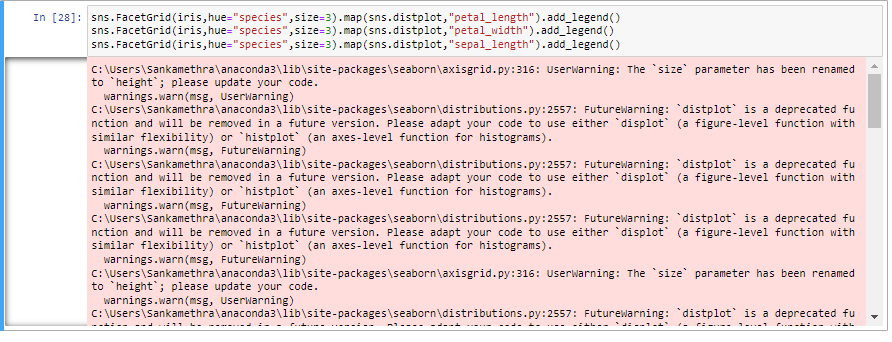
A screenshot of a computer code

Description automatically generated with low confidence

sns.FacetGrid(iris,hue="species",size=3).map(sns.distplot,"petal\_length").add\_legend()

sns.FacetGrid(iris,hue="species",size=3).map(sns.distplot,"petal\_width").add\_legend()

sns.FacetGrid(iris,hue="species",size=3).map(sns.distplot,"sepal\_length").add\_legend()



A screenshot of a computer

Description automatically generated with medium confidence