DATE:22-12-2021

AIM:Program to implement decision tree

**CODE**

import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

import seaborn as sns

from sklearn.preprocessing import labelEncoder

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

from sklearn.tree import DecisionTreeClassifier

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

from sklearn.tree import plot\_tree

df = sns.load\_dataset('iris')

print(df.head())

print(df.info())

df.isnull().any()

print(df.shape)

sns.pairplot(data=df,hue='species')

plt.savefig("pne.png")

sns.heatmap(df.corr())

plt.savefig("one.png")

target=df['species']

df1=df.copy()

df1 = df1.drop('species',axis=1)

print(df1.shape)

print(df1.head())

x = df1

print(target)

le =labelEncoder()

target = le.fit\_transform(target)

print(target)

y = target

x\_tarin,x\_test,y\_train,y\_test=train\_test\_split(x,y,test\_size=0.2,random\_state=4)

**OUTPUT**















