**Lab 12: Development of ensemble model for an application**

**Aim:** Bagged decision trees

**Source Code for the block world problem implementation using python: -**

import pandas

from sklearn import model\_selection

from sklearn.ensemble import BaggingClassifier

from sklearn.tree import DecisionTreeClassifier

url = "https://raw.githubusercontent.com/jbrownlee/Datasets/master/pima-indians-diabetes.data.csv"

names = ['preg', 'plas', 'pres', 'skin', 'test', 'mass', 'pedi', 'age', 'class']

dataframe = pandas.read\_csv(url, names=names)

array = dataframe.values

X = array[:,0:8]

Y = array[:,8]

seed = 7

kfold = model\_selection.KFold(n\_splits=10, random\_state=seed)

cart = DecisionTreeClassifier()

num\_trees = 100

model = BaggingClassifier(base\_estimator=cart, n\_estimators=num\_trees, random\_state=seed)

results = model\_selection.cross\_val\_score(model, X, Y, cv=kfold)

print(results)

print(results.mean())

**SCREENSHOT**

**Output:**

