**LAB - 6**

**RANDOM FOREST ALGORITHM**

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**CODE -**

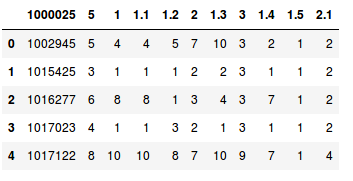
import numpy as np

import pandas as pd

from sklearn.ensemble import RandomForestClassifier

data = pd.read\_csv('/home/priyanshu/Desktop/PRIYANSHU/MAIN/LAB/breast.csv')

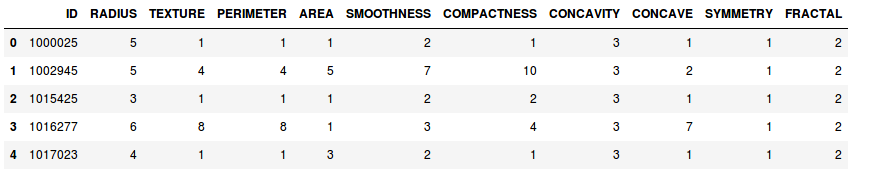
data.head()



colnames=['ID', 'RADIUS', 'TEXTURE', 'PERIMETER', 'AREA', 'SMOOTHNESS', 'COMPACTNESS', 'CONCAVITY', 'CONCAVE', 'SYMMETRY', 'FRACTAL']

data = pd.read\_csv('/home/priyanshu/Desktop/PRIYANSHU/MAIN/LAB/breast.csv', names=colnames, header=None)

data.head()



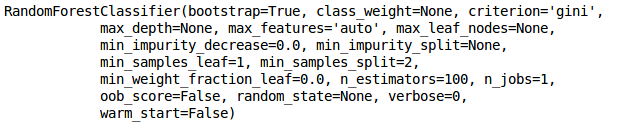
from sklearn.cross\_validation import train\_test\_split

X = data.iloc[0:, [1,2,3,4,5,6,7,8,9]].values

X\_train,X\_test,Y\_train,Y\_test = train\_test\_split(X,data['FRACTAL'], test\_size=0.3, random\_state=0)

rf = RandomForestClassifier(n\_estimators = 100)

rf.fit(X\_train, Y\_train)



accuracy = rf.score(X\_test, Y\_test)

print("Accuracy = {}% ".format(accuracy\*100))



X = [[6,2,4,1,4,6,4,5,2]]

rf.predict(X)

