Program to implement decision trees using any standard dataset available in public domain and find the accuracy of the algorithm

```
from sklearn.datasets import load_iris
```

```
iris = load_iris()
```

```
x = iris.data
```

```
x
```

```
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[6.1, 3. , 4.6, 1.4],
[5.8, 2.6, 4. , 1.2],
```

```
y = iris.target
```

```
y
```

```
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       2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2])
```

```
from sklearn.model_selection import train_test_split
```

```
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.3,random_state=4)
```

```
from sklearn.tree import DecisionTreeClassifier
```

```
dtClassifier = DecisionTreeClassifier()
```

```
dtClassifier.fit(x_train,y_train)
```

```
DecisionTreeClassifier()
```

```
y_pred = dtClassifier.predict(x_test)
```

```
import matplotlib.pyplot as plt
```

```
from sklearn import tree
```

```
plt.figure(figsize=(15,15))
```

```
tree.plot_tree(dtClassifier,filled=True,rounded=True,class_names=iris.target_names, featur
```

```
[Text(0.5, 0.9, 'petal length (cm) <= 2.45\ngini = 0.661\nsamples = 105\nvalue = [29,
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```

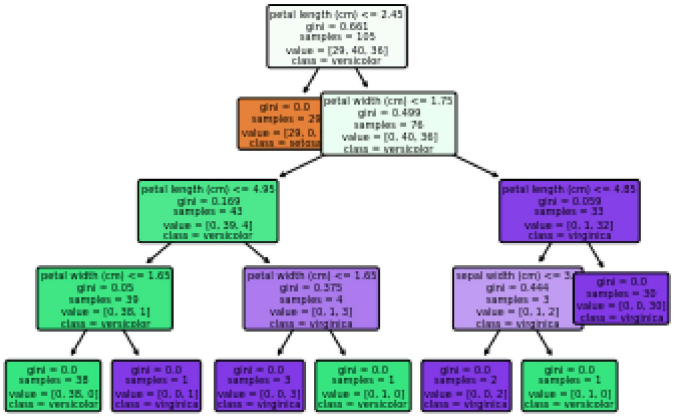


```
from sklearn.metrics import accuracy_score
```

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```
print("Accuracy Score : ",accuracy_score(y_test,y_pred))
```

```
Accuracy Score :  0.9777777777777777
```

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