```
import pandas as pd
from sklearn.preprocessing import LabelEncoder
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier
from sklearn.metrics import classification_report, accuracy_score
import matplotlib.pyplot as plt
from sklearn import tree

df=pd.read_csv("//content/drive/MyDrive/datast/
StudentMarksDataset.csv")

def Grade_class(marks):
  if marks>=90:
    return "A"
  elif marks>=80:
    return "B"
  elif marks>=70:
    return "c"
  else:
    return "D"
df["Grade"]=df["Std_Marks"].apply(Grade_class)
```

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---------------------------------------------------------------------------
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TypeError                                 Traceback (most recent call
last)
/tmp/ipython-input-1998595972.py in <cell line: 0>()
      8   else:
      9     return "D"
---> 10 df["Grade"]=df["Std_Marks"].apply(Grade_class)

TypeError: 'DecisionTreeClassifier' object is not subscriptable
```

```
lb=LabelEncoder()

label=LabelEncoder()
df["Std_Branch"] = lb.fit_transform(df["Std_Branch"])
df["Std_Course"] = lb.fit_transform(df["Std_Course"])
df["Std_Name"] = lb.fit_transform(df["Std_Name"])
df["Std_RollNo"] = lb.fit_transform(df["Std_RollNo"])
df["Grade"] = lb.fit_transform(df["Grade"])

X = df[["Std_Branch", "Std_Course", "Std_Marks"]]
y = df["Grade"]

X_train, X_test, y_train, y_test = train_test_split(X, y,
test_size=0.25, random_state=42)


dt = DecisionTreeClassifier(criterion="entropy", max_depth=4)
dt.fit(X_train, y_train)
```

```
DecisionTreeClassifier(criterion='entropy', max_depth=4)

y_pred = dt.predict(X_test)
print("Accuracy:", accuracy_score(y_test, y_pred))
print("\nClassification Report:\n")
print(classification_report(y_test, y_pred))

Accuracy: 1.0

Classification Report:

              precision    recall  f1-score   support

           0       1.00      1.00      1.00        19
           1       1.00      1.00      1.00        31

    accuracy                           1.00        50
   macro avg       1.00      1.00      1.00        50
weighted avg       1.00      1.00      1.00        50


plt.figure(figsize=(5, 5))
tree.plot_tree(dt, feature_names=X.columns, class_names=["A", "B",
"C"], filled=True)
plt.show()

---------------------------------------------------------------------------
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NameError                                 Traceback (most recent call
last)
/tmp/ipython-input-3902178599.py in <cell line: 0>()
----> 1 plt.figure(figsize=(5, 5))
      2 tree.plot_tree(dt, feature_names=X.columns, class_names=["A",
"B", "C"], filled=True)
      3 plt.show()

NameError: name 'plt' is not defined
```