Book1 - Experiment - 10 Dataset.xlsx *

	A(X)	B(Y)	C(Y)	D(Y)
Long Name	Age	Income	Credit Rating	Loan Approved
Units				
Comments				
F(x)=				
Sparklines				
1	25	High	Good	Yes
2	30	Low	Bad	No
3	45	Medium	Good	Yes
4	40	Low	Good	No
5	22	Medium	Bad	No
6	35	High	Good	Yes
7	28	Low	Good	Yes
8	50	Medium	Bad	No
9	32	High	Good	Yes
10	55	Low	Bad	No
11				
12				

extract the dataset from this

```python
import pandas as pd
from sklearn.tree import DecisionTreeClassifier, plot_tree
import matplotlib.pyplot as plt
# Load the dataset
data = pd.read_csv("/content/Experiment - 10 Dataset - extract the dataset from this.csv")
# Prepare features and target variable
X = pd.get_dummies(data[['Age', 'Income', 'Credit Rating']])
y = data['Loan Approved'].map({'Yes': 1, 'No': 0})
# Initialize and fit the Decision Tree model
model = DecisionTreeClassifier(criterion="entropy", max_depth=3)
model.fit(X, y)
# Plot the Decision Tree
plt.figure(figsize=(12, 8))
plot_tree(model, feature_names=X.columns, class_names=['No', 'Yes'], filled=True)
plt.savefig("decision_tree_output.png")
plt.show()
```

Image1 - decision_tree_output.png *

1200x800 pixels; 1/1; (124,13), RGBA(255,255,255,255)