

```

import pandas as pd
data=pd.read_csv(r"C:\Users\Divyasri\OneDrive\Desktop\AIML\fires.csv")
data.head()

data.columns

data.drop([124,122,123,168],axis=0,inplace=True)
data.shape

x=data.iloc[ : , :-1].values
y=data.iloc[: , -1].values

from sklearn.model_selection import train_test_split
xtrain,xtest,ytrain,ytest=train_test_split(x,y,test_size=0.2,random_state=0)

from sklearn.tree import DecisionTreeClassifier
model=DecisionTreeClassifier(criterion='entropy')
model.fit(xtrain,ytrain)

ypred=model.predict(xtest)

from sklearn.metrics import accuracy_score
print(accuracy_score(ytest,ypred))

print(model.predict([[2,    6,  2012,   29, 61, 13, 1.3,   64.4,   4.1,   7.6
]]))

sample=pd.read_csv(r"C:\Users\Divyasri\OneDrive\Desktop\AIML\pred.csv")
sample.shape

p=model.predict(sample)

sample=pd.read_csv(r"C:\Users\Divyasri\OneDrive\Desktop\AIML\pred.csv")
sample.shape

p=model.predict(sample)

sample['status']=p

sample.to_csv(r"C:\Users\Divyasri\OneDrive\Desktop\AIML\prediction.csv")

```

Output:-

	day	month	year	Temperat	RH	Ws	Rain	FFMC	DMC	DC	ISI	BUI	FWI	status
0	1	6	2012	29	57	18	0	65.7	3.4	7.6	1.3	3.4	0.5	not fire
1	2	6	2012	29	61	13	1.3	64.4	4.1	7.6	1	3.9	0.4	not fire
2	3	6	2012	26	82	22	13.1	47.1	2.5	7.1	0.3	2.7	0.1	not fire
3	4	6	2012	25	89	13	2.5	28.6	1.3	6.9	0	1.7	0	not fire
4	5	6	2012	27	77	16	0	64.8	3	14.2	1.2	3.9	0.5	not fire