```python
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd


dataset = pd.read_csv('London Train Sample.csv')
X = dataset.iloc[:, :4].values
y = dataset.iloc[:, 4:].values
print (X)
print (y)


from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
y_converted = le.fit_transform(y)

print(y)
print(y_converted)

x_Day= X[:,:1]
x_Day=x_Day.reshape(16)
print(x_Day.shape)
print(x_Day)
x_Day=le.fit_transform(x_Day)
print(x_Day)

x_Season= X[:,1:2]
x_Season=x_Season.reshape(16)
print(x_Season.shape)
print(x_Season)
x_Season=le.fit_transform(x_Season)
print(x_Season)

x_Wind= X[:,2:3]
x_Wind=x_Wind.reshape(16)
print(x_Wind.shape)
print(x_Wind)
x_Wind=le.fit_transform(x_Wind)
print(x_Wind)

x_Rain= X[:,3:]
x_Rain=x_Rain.reshape(16)
print(x_Rain.shape)
print(x_Rain)
x_Rain=le.fit_transform(x_Rain)
print(x_Rain)


X_converted=np.array([x_Day,x_Season,x_Wind,x_Rain])
X_converted=X_converted.reshape(16,4)
print(X_converted.shape)
print(X_converted)
```

```python
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X_converted, y_converted, test_size =
print(X_train)
print(X_test)


import numpy as np
from sklearn.naive_bayes import CategoricalNB

clf = CategoricalNB()
clf.fit(X_train, y_train)

y_pred=clf.predict(X_test)
print(y_pred)


from sklearn.metrics import accuracy_score
ac = accuracy_score(y_test,y_pred)
print(ac)


new_row=np.array(['Saturday','Spring','None','Slight'])
new_row_converted=le.fit_transform(new_row)
new_row_converted=new_row_converted.reshape(1,4)
print(new_row_converted.shape)
y_pred=clf.predict(new_row_converted)
print(y_pred)
```

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