Music Genre Classification Project

In [25]:
```
import pandas as pd
from sklearn.tree import DecisionTreeClassifier
from sklearn.model_selection import train_test_split
import warnings
from sklearn.metrics import accuracy_score
```

In [2]:
```
data = pd.read_csv("Music_data.csv")
```

In [3]:
```
data.head()
```

Out[3]:

	age	gender	genre
0	20	1	HipHop
1	23	1	HipHop
2	25	1	HipHop
3	26	1	Jazz
4	29	1	Jazz

In [4]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 18 entries, 0 to 17
Data columns (total 3 columns):
 #   Column  Non-Null Count  Dtype 
---  ------  --------------  ----- 
 0   age     18 non-null     int64 
 1   gender  18 non-null     int64 
 2   genre   18 non-null     object
dtypes: int64(2), object(1)
memory usage: 564.0+ bytes
```

In [10]:
```
x = data.drop("genre", axis=1)
x
```

Out[10]:

	age	gender
0	20	1
1	23	1
2	25	1
3	26	1
4	29	1
5	30	1
6	31	1
7	33	1
8	37	1
9	20	0
10	21	0
11	25	0
12	26	0
13	27	0
14	30	0
15	31	0
16	34	0
17	35	0

In [12]:
```
y = data["genre"]
y
```

Out[12]:
```
0         HipHop
1         HipHop
2         HipHop
3           Jazz
4           Jazz
5           Jazz
6      Classical
7      Classical
8      Classical
9          Dance
10         Dance
11         Dance
12      Acoustic
13      Acoustic
14      Acoustic
15     Classical
16     Classical
17     Classical
Name: genre, dtype: object
```

In [21]:
```
warnings.filterwarnings("ignore", category=UserWarning)
```

In [35]:
```
model = DecisionTreeClassifier()
model.fit(x,y)
prediction = model.predict([[21,1],[10,0]])
prediction
```

Out[35]:
```
array(['HipHop', 'Dance'], dtype=object)
```

In [14]:
```
xtrain, xtest, ytrain, ytest = train_test_split(x, y, test_size=0.2)
```

In [33]:
```
model.fit(xtrain, ytrain)
prediction = model.predict(xtest)
score = accuracy_score(ytest, prediction)
score
```

Out[33]:
```
0.5
```