

EXPERIMENT – 16

## **OUTPUT:**

The screenshot shows a Microsoft Visual Studio Code (VS Code) interface. The top bar includes standard icons for file operations, search, and windows control. The left sidebar contains icons for file, search, file operations, and other development tools. The main editor area displays a Python script named '16.py' located at 'D:\College\Machine Learning\Experiments\Code Files'. The code imports various classifiers from the 'sklearn' library and splits the 'iris' dataset into training and testing sets. It then iterates through three models: Decision Tree, Naive Bayes, and KNN, fitting them to the training data and printing their accuracy scores.

```
D: > College > Machine Learning > Experiments > Code Files > 16.py > ...
1  from sklearn.tree import DecisionTreeClassifier
2  from sklearn.naive_bayes import GaussianNB
3  from sklearn.neighbors import KNeighborsClassifier
4  from sklearn.datasets import load_iris
5  from sklearn.model_selection import train_test_split
6  iris = load_iris()
7  X_train, X_test, y_train, y_test = train_test_split(iris.data, iris.target)
8  models = {'Decision Tree': DecisionTreeClassifier(), 'Naive Bayes': GaussianNB(),
9  for name, model in models.items():
10     model.fit(X_train, y_train)
11     print(name, "Accuracy:", model.score(X_test, y_test))
```

The bottom right corner shows the Python Debug Console output:

```
Decision Tree Accuracy: 0.9736842105263158
Naive Bayes Accuracy: 0.9473684210526315
KNN Accuracy: 0.9736842105263158
PS D:\College\Machine Learning\Experiments\Code Files>
```

The bottom status bar indicates the workspace has 0 errors, 0 warnings, and 0 informational messages. The Python extension is active, and the version is 3.13.9 (Microsoft Store). There are also 'Go Live' and 'Bell' icons.