EXPERIMENT-6

CODE:-

```
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.naive_bayes import GaussianNB
from sklearn.metrics import confusion_matrix, accuracy_score

# ---------- Load Dataset ----------
iris = load_iris()
X = iris.data
y = iris.target

# ---------- Train-Test Split ----------
X_train, X_test, y_train, y_test = train_test_split(
    X, y, test_size=0.3, random_state=42
)

# ---------- Naïve Bayes Model ----------
model = GaussianNB()
model.fit(X_train, y_train)

# ---------- Prediction ----------
y_pred = model.predict(X_test)

# ---------- Evaluation ----------
cm = confusion_matrix(y_test, y_pred)
accuracy = accuracy_score(y_test, y_pred)
```

```
# ---------------- Output ----------------
print("Confusion Matrix:")
print(cm)

print("\nAccuracy:")
print(accuracy * 100, "%")
```

OUTPUT:-

```
Confusion Matrix:
[[19  0  0]
 [ 0 12  1]
 [ 0  0 13]]

Accuracy:
97.77777777777777 %
```