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In [2]: import numpy as np
from sklearn.tree import DecisionTreeClassifier
from sklearn.model_selection import train_test_split
# Sample dataset (features: Weight (grams), Fur Length (0=Short, 1=Long), Ears Shape (0=Pointed, 1=Round))
X = np.array([
    [3000, 1, 0], # Cat
    [4000, 1, 0], # Cat
    [5000, 0, 1], # Dog
    [6000, 0, 1], # Dog
    [3500, 1, 1], # Cat
    [7000, 0, 1], # Dog
    [3200, 1, 0], # Cat
    [7500, 0, 1]  # Dog
])
y = np.array(['Cat', 'Cat', 'Dog', 'Dog', 'Cat', 'Dog', 'Cat', 'Dog'])
# Split the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2)
# Create and train the model
model = DecisionTreeClassifier()
model.fit(X_train, y_train)
# Get user input
weight = float(input("Enter the weight of the animal in grams: "))
fur_length = int(input("Enter the fur length (0=Short, 1=Long): "))
ears_shape = int(input("Enter the ears shape (0=Pointed, 1=Round): "))
# Make a prediction
predicted_animal = model.predict([[weight, fur_length, ears_shape]])
print(f"The predicted type of animal is: {predicted_animal[0]}")

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Enter the weight of the animal in grams: 5000
Enter the fur length (0=Short, 1=Long): 1
Enter the ears shape (0=Pointed, 1=Round): 0
The predicted type of animal is: Cat

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