ASSIGNMENT

## New Fact Inferred

**Fido is an animal.**

## Step-by-Step Reasoning Chain

1. From **Fact 1** we know:  
   Fido is a dog.
2. Apply **Rule 1** (*If X is a dog, then X is a mammal*) with X = Fido:  
   Therefore, Fido is a mammal.
3. Apply **Rule 2** (*All mammals are animals*) to the result of step 2:  
   Since Fido is a mammal, Fido is an animal.

Hence, the new fact **“Fido is an animal”** has been logically deduced from the given knowledge base.