

```

%%% File: pets_world_1
%%% Line: world of cats and dogs

%% Facts...

% cat(B, height(H),color(C)) :: B is the breed of a cat with height H
and color C
cat(siamese,height(12),color(brown)).
cat(laperm,height(13),color(black)).
cat(ragdoll,height(15),color(white)).

% dog(B,height(H),color(C)) :: B is the breed of a dog with height H and
color C
dog(beagle,height(14),color(brown)).
dog(poodle,height(20),color(white)).
dog(saluki,height(26),color(black)).

%% Rules...
% dogs :: all those items listed are dogs
dogs :- dog(Breed,_,_),write(Breed),nl,fail.
dogs.

% cats :: all those items listed are cats
cats :- cat(Breed,_,_),write(Breed),nl,fail.
cats.

% pets :: all those items listed are pets
pets :- cats,dogs.

% brown(Breed) :: Breed is a brown pet.
brown(Breed) :- dog(Breed,_,color(brown)).
brown(Breed) :- cat(Breed,_,color(brown)).

% black(Breed) :: Breed is a black pet.
black(Breed) :- dog(Breed,_,color(black)).
black(Breed) :- cat(Breed,_,color(black)).

% white(Breed) :: Breed is a white pet.
white(Breed) :- dog(Breed,_,color(white)).
white(Breed) :- cat(Breed,_,color(white)).

% tall(Breed) :: Breed is a tall pet
tall(Breed) :- cm(Breed,Cm),Cm >= 38.1.

% small(Breed) :: Breed is a small pet
small(Breed) :- cm(Breed,Cm),Cm < 38.1.

% cm(Breed,Cm) :: Cm is the height in centimeters of the pet with breed
Breed.
cm(Breed,Cm) :- cat(Breed,height(H),_),Cm is 2.54 * H.
cm(Breed,Cm) :- dog(Breed,height(H),_),Cm is 2.54 * H.

```