The Design Recipe

For the word problems below, assume you have `animalA` and `animalB` defined in your code.

Directions: Define a function called `is-dog`, which consumes a `Row` of the animals table and *computes* whether the animal is a dog.

Contract and Purpose Statement

Every contract has three parts...

```
#     is-dog::                    (r :: Row)              ->    Boolean
```
function name   *domain*   *range*

```
# Consumes an animal, and computes whether the species == "dog"
```
what does the function do?

Examples

Write some examples, then circle and label what changes...

examples:

```
        is-dog (     "animalA"    ) is animalA["species"] == "dog"
```
function name   *input(s)*   *what the function produces*

```
        is-dog (     "animalB"    ) is animalB["species"] == "dog"
```
function name   *input(s)*   *what the function produces*

end

Definition

Write the definition, giving variable names to all your input values...

```
fun        is-dog(     r     ):
```
function name   *variable(s)*

```
  r["species"] == "dog"
```
what the function does with those variable(s)

end

Directions: Define a function called `is-female`, which consumes a Row of the animals table and returns true if the animal is female.

Contract and Purpose Statement

Every contract has three parts...

```
#     is-female::                 (r :: Row)              ->    Boolean
```
function name   *domain*   *range*

```
# Consumes an animal, and computes whether it's female
```
what does the function do?

Examples

Write some examples, then circle and label what changes...

examples:

```
      is-female (     "animalA"    ) is animalA["sex"] == "female"
```
function name   *input(s)*   *what the function produces*

```
      is-female (     "animalB"    ) is animalB["sex"] == "female"
```
function name   *input(s)*   *what the function produces*

end

Definition

Write the definition, giving variable names to all your input values...

```
fun       is-female(     r     ):
```
function name   *variable(s)*

```
  r["sex"] == "female"
```
what the function does with those variable(s)

end