

The Design Recipe

For the word problems below, assume `animalA` and `animalB` are defined as the data rows for Felix and Midnight, respectively.

Directions: Define a function called `lookup-fixed`, which looks up whether or not an animal is fixed.

Contract and Purpose Statement

Every contract has three parts...

#	lookup-fixed::	(r :: Row)	->	Boolean
	<i>function name</i>	<i>domain</i>		<i>range</i>

Consumes an animal, and looks up the value in the fixed column.

what does the function do?

Examples

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

examples:

lookup-fixed ("animalA") is animalA["fixed"]

function name *input(s)* *what the function produces*

lookup-fixed ("animalB") is animalB["fixed"]
function name *input(s)* *what the function produces*

end

Definition

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

$$\text{fun } \frac{\text{lookup-fixed}(\text{r})}{\text{function name}} : \frac{}{\text{variable(s)}}$$

```
r["fixed"]
```

what the function does with those variable(s)

end

Directions: Define a function called `lookup-sex`, which consumes a Row of the `animals` table and looks up the sex of that animal.

Contract and Purpose Statement 1

Every contract has three parts...

#	lookup-sex::	(r :: Row)	->	String
	<i>function name</i>	<i>domain</i>		<i>range</i>

```
# Consumes an animal, and looks up the sex
```

what does the function do?

Examples

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

examples:

```
lookup-sex ( "animalA" ) is animalA["sex"]
```

function name *input(s)* *what the function produces*

```
lookup-sex ( "animalB" ) is animalB["sex"]
```

function name *input(s)* *what the function produces*

end

Definition

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

$$\text{fun } \underbrace{\text{lookup-sex}}_{\text{function name}}(\underbrace{\text{r}}_{\text{variable(s)}}):$$

```
r["sex"]
```

what the function does with those variable(s)

end