Function Design Recipe

The Six Steps

1. **Examples**
   - What should your function do?
   - Type a couple of example calls.
   - Pick a name (often a verb or verb phrase): What is a short answer to "What does your function do"?
2. **Type Contract**
   - What are the parameter types?
   - What type of value is returned?
3. **Header**
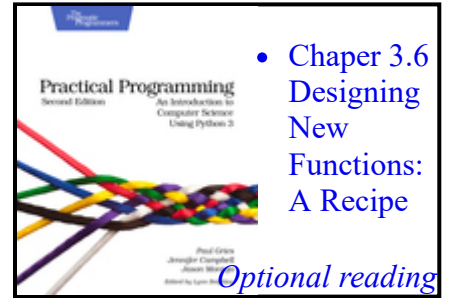   - Pick meaningful parameter names.
4. **Description**
   - Mention every parameter in your description.
   - Describe the return value.
5. **Body**
   - Write the body of your function.
6. **Test**
   - Run the examples.

Applying the Design Recipe

The problem:

The United States measures temperature in Fahrenheit and Canada measures it in Celsius. When travelling between the two countries it helps to have a conversion function. Write a function that converts from Fahrenheit to Celsius.

1. **Examples**

```
>>> convert_to_celsius(32)
0
>>> convert_to_celsius(212)
100
```

2. **Type Contract**

```
(number) -> number
```

3. **Header**

```
def convert_to_celsius(fahrenheit):
```

4. **Description**

```
Return the number of Celsius degrees equivalent to fahrenheit degrees.
```

5. **Body**

```
return (fahrenheit - 32) * 5 / 9
```

6. **Test**

        Run the examples.

Putting it all together:

```
def convert_to_celsius(fahrenheit):
    ''' (number) -> number

    Return the number of Celsius degrees equivalent to fahrenheit degrees.

    >>> convert_to_ccelsius(32)
    0
    >>> convert_to_celsius(212)
    100
    '''

    return (fahrenheit - 32) * 5 / 9
```

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