

Earn a Verified Certificate for this course!

[Get Started](#)

Feedback — Quiz - HtDF

[Help](#)

You submitted this quiz on **Thu 12 Sep 2013 6:07 AM EDT (UTC -0400)**. You got a score of **4.00** out of **5.00**. You can [attempt again](#), if you'd like.

Consider these two problems:

- (1) Design a function that consumes a string, and produces 2 times the length of the string.
- (2) Design a function that consumes two images, and produces the taller one.

Your friend, who is also taking this course, attempted to design these functions, and is asking you to take a look at their design:

(1) `string-times2`





```
;; String -> Number
;; double str
(check-expect (string-times2 "cat") 6)

;(define (stub str) str)      ;stub

;(define (string-times2 str)
;  (... str))                  ;template

(define (string-times2 str)
  (* 2 str))
```

(2) `taller-img`

```
;; Image -> Image
;; produce an image
(check-expect (taller-img    )  )

;(define (taller-img img1 img2) 0) ;stub

;(define (taller-img img1 img2)
;  (... img1 img2))              ;template

(define (taller-img img1 img2)
  (if (> (image-width img1)
        (image-width img2))
      (image-width img1)
      (image-width img2)))
```

```
img1  
img2))
```

Questions 1-5 will be about each step in the HtDF recipe for either `string-times2` or `taller-img`, so make sure you have read and understood both.

Question 1

The signature of the function `taller-img` is:

| Your Answer | Score | Explanation |
|---|----------------|-------------|
| <input checked="" type="radio"/> a) incorrect because the function actually consumes two images | ✓ 1.00 | |
| <input type="radio"/> b) incorrect because the function actually produces <code>Number</code> | | |
| <input type="radio"/> c) both (a) and (b) | | |
| <input type="radio"/> d) correct | | |
| Total | 1.00 / 1.00 | |

Question Explanation

The function consumes two images, so the signature should be `;; Image Image -> Image`.

Question 2

The purpose of the function `taller-img` is:

| Your Answer | Score | Explanation |
|---|--------|-------------|
| <input checked="" type="radio"/> a) not good because it's not specific enough | ✓ 1.00 | |
| <input type="radio"/> b) not good because it's too wordy | | |
| <input type="radio"/> c) both (a) and (b) | | |

☐ d) good

Total

1.00 / 1.00

Question Explanation

The purpose above does not clearly describe what the function should do.

Question 3

The test of the function `taller-img`:

| Your Answer | Score | Explanation |
|---|-------------|-------------|
| <input type="radio"/> a) is incorrect because it produces the wrong result | | |
| <input checked="" type="radio"/> b) does not provide complete code coverage | ✓ 1.00 | |
| <input type="radio"/> c) both (a) and (b) | | |
| <input type="radio"/> d) correct | | |
| Total | 1.00 / 1.00 | |

Question Explanation

Although the result of the test is correct, we don't have complete code coverage. We should add a test for the case where the first image is taller to cover the `true` answer of the `if` expression. Also, we should add another test where the two images have the same height to remove any ambiguity.

Question 4

The stub of the function `string-times2` is:

| Your Answer | Score | Explanation |
|--|-------|-------------|
| <input type="radio"/> a) incorrect because it doesn't have the correct function name | | |

☒ b) incorrect because it produces a result of the wrong type ✗ 0.00

Does the stub have the correct function name?

☐ c) both (a) and (b)

☐ d) correct

Total 0.00 / 1.00

Question Explanation

A stub is a function definition that has the correct function name, the correct number of parameters, and produces a dummy result of the correct type.

So the stub should be called `string-times2`, and should produce a `Natural`.

Question 5

`taller-img` function definition is:

Your Answer

Score

Explanation

☐ a) incorrect because the function should have one parameter

☒ b) incorrect because `image-height` should be used

✓ 1.00

☐ c) both (a) and (b)

☐ d) correct

Total 1.00 / 1.00

Question Explanation

We should use `image-height` since we are trying to determine which image is taller.

Question 6

Since your quiz grade and feedback will be given to you as soon as you submit this quiz, it is important that you answer this additional question before you proceed:

I promise that I will not post answers to this quiz before the hard deadline on Friday September 13, 11:00 pm PDT (UTC -7).

| Your Answer | | Score | Explanation |
|--------------------------------------|---|-------------|-------------|
| <input checked="" type="radio"/> Yes | ✓ | 0.00 | |
| <input type="radio"/> No | | | |
| Total | | 0.00 / 0.00 | |

