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Feedback — Quiz - HtDD   Help

You submitted this quiz on **Thu 19 Sep 2013 6:05 AM EDT (UTC -0400)**. You got a score of **6.00** out of **8.00**. You can attempt again, if you'd like.

Question 1

Choose the best form of data definition to use for the problem statement fragments in questions 1 through 4.

"air conditioner temperature 16-32°C"

Your Answer		Score	Explanation
○ Itemization			
○ Simple atomic data			
○ Enumeration			
◉ Interval	✔	1.00	
Total		1.00 / 1.00	

Question Explanation

Interval is used when the form of the information to be represented is numbers within a certain range. In this case the range is [16, 32].

Question 2

"TV volume level 1-30, or mute"

Your Answer		Score	Explanation
◉ Itemization	✔	1.00	

○ Simple atomic data

○ Enumeration

○ Interval

Total   1.00 / 1.00

Question Explanation

Itemization is used when the form of the information to be represented is comprised of 2 or more subclasses, at least one of which is not a distinct data item. In this case, the distinct item is mute, and the non-distinct item is the interval 1-30.

Question 3

"names of the days of the week"

Your Answer		Score	Explanation
○ Itemization			
○ Simple atomic data			
◉ Enumeration	✔	1.00	
○ Interval			
Total		1.00 / 1.00	

Question Explanation

Enumeration is used when the form of the information to be represented consists of a fixed number of distinct values. In this case, the distinct values are the names of the days of the week.

Question 4

"height of a rocket"

Your Answer	Score	Explanation

⊙ Itemization

◉ Simple atomic data   ✔   1.00

⊙ Enumeration

⊙ Interval

Total   1.00 / 1.00

Question Explanation

Simple atomic data is used when the form of the information to be represented is atomic. So the type comment should be something like `;; RocketHeight is Number.`

Question 5

Based on the following type comment, choose the correct template.

```
;; Foo is one of:
;; - Natural[7, 27]
;; - "blue"
;; - true
```

Your Answer	Score	Explanation

⊙

```
(define (fn-for-foo f)
  (cond [(<= 7 b 27) f) (... f)]
        [(string? b) (...)]
        [else (...)]))
```

⊙

```
(define (fn-for-foo f)
  (cond [(number? f) (... f)]
        [(string? f) (...)]
        [else (...)]))
```

⊙

```
(define (fn-for-foo f)
  (cond [(number? f) (... f)]
        [(string=? "blue" f) (...)]
        [else (...)]))
```

⊚   ✖ 0.00

```
(define (fn-for-foo f)
  (cond [(<= 7 b 27) f) (... f)]
        [(string=? "blue" f) (...)]
        [else (...)]))
```

Total   0.00 / 1.00

Question Explanation

Because this is a mixed data itemization, we need to guard the first case against being called with "blue" or `true` using `number?`, and guard the second case against being called with `true` using `string?`.

Question 6

Consider the following type comment:

```
;; Direction is one of:
;;  - "N"
;;  - "S"
;;  - "E"
;;  - "W"
```

Suppose you are asked to design a function called `left` that consumes a `Direction` and produces a `Direction`. Which of the following is a correct stub for that function? [choose all that apply]

Your Answer		Score	Explanation
☑	✔	0.25	

```
(define (left d) "N")
```

| ☑ | ✔ | 0.25 |

```
(define (left d) "S")
```

| ☐ | ✔ | 0.25 |

```
(define (left d) "SE")
```

| ☐ | ✔ | 0.25 |

```
(define (left d) "")
```

Total   1.00 / 1.00

Question Explanation

Remember, the stub should produce a dummy result of the correct type. In this case the correct type is `Direction`.

Question 7

Consider the following type comment:

```
;; Direction is one of:
;;  - "N"
;;  - "S"
;;  - "E"
;;  - "W"
```
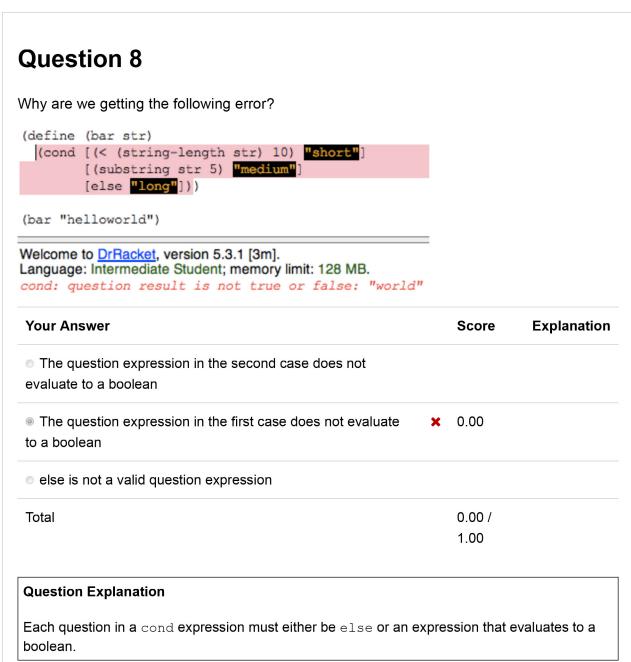
Suppose you are asked to design a function named `left` that consumes a compass direction and produces the direction that results from making a 90 degree left turn. What is the minimum number of tests needed to design that function?

Your Answer	Score	Explanation
⊙ 0		
⊙ 1		
⊙ 2		

⊙ 3

◉ 4   ✔   1.00

Total   1.00 / 1.00

Question Explanation

We need at least as many tests as there are cases in the enumeration (in this case 4).

Question 8

Why are we getting the following error?

```
(define (bar str)
  (cond [(< (string-length str) 10) "short"]
        [(substring str 5) "medium"]
        [else "long"]))

(bar "helloworld")
```

Welcome to DrRacket, version 5.3.1 [3m].
Language: Intermediate Student; memory limit: 128 MB.
cond: question result is not true or false: "world"

Your Answer		Score	Explanation
⊙ The question expression in the second case does not evaluate to a boolean			
◉ The question expression in the first case does not evaluate to a boolean	✖	0.00	
⊙ else is not a valid question expression			
Total		0.00 / 1.00	

Question Explanation

Each question in a `cond` expression must either be `else` or an expression that evaluates to a boolean.

Question 9

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 20, 11:00 pm PDT (UTC -7).

Your Answer		Score	Explanation
◉ Yes	✔	0.00	
◯ No			
Total		0.00 / 0.00	