Open edX: A FLOSS Case Study

Paul “Worthless” Nijjar
2021-10-04
KWLUG

Released under CC-BY-SA, except for the stolen parts.
1. **[5% Correctness]**

For this question you will be solving several different problems.

(a) Write the function `replace-word` that consumes two strings and a list of strings, and produces a new list where all occurrences of the first string have been replaced by the second string.

Example:

```scheme
(check-expect
 (replace-word "exam" "assessment"
 (cons "content"
 (cons "exam"
 (cons "assignment" empty)))
 (cons "content" (cons "assessment" (cons "assignment" empty))))
```

(b) Write the Racket function `add` that consumes two natural numbers and produces their sum (just like the + function). You may not use the + function (or the - function). Instead use `add1`, `sub1`, and recursion on natural numbers.

Example:

```scheme
(check-expect (add 2 3) 5)
```

(c) Write the Racket function `mult` that consumes two natural numbers and produces their product (just like the * function). You may not use the * function (or the +, -, or / function). Instead use `add1`, `sub1`, and recursion on natural numbers. (You can also use `add` from the previous part of this question as a helper function, since it follows the
a02: File Manager

Server Time: Tuesday, September 28, 2021, 2:43 PM

You still need to submit 1 required file(s) for this assignment:

- a02q03.rkt

Add or Replace Files  Delete

Search files

<table>
<thead>
<tr>
<th>FILENAME</th>
<th>LAST REVISED</th>
<th>REVISED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a02q02a.rkt</td>
<td>2021-09-28, 2:29:06 p.m.</td>
<td>jdehal-student</td>
</tr>
<tr>
<td>a02q02b.rkt</td>
<td>2021-09-28, 2:29:06 p.m.</td>
<td>jdehal-student</td>
</tr>
<tr>
<td>a02q03.rkt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Stolen from:
https://thenewbev.com/blog/2016/12/anthony-burgess-a-clockwork-orange/
FLOSS
XBlocks
Todd
Stolen from:
https://www.etsy.com/listing/538282106/philosoraptor-meme-poster-raptor