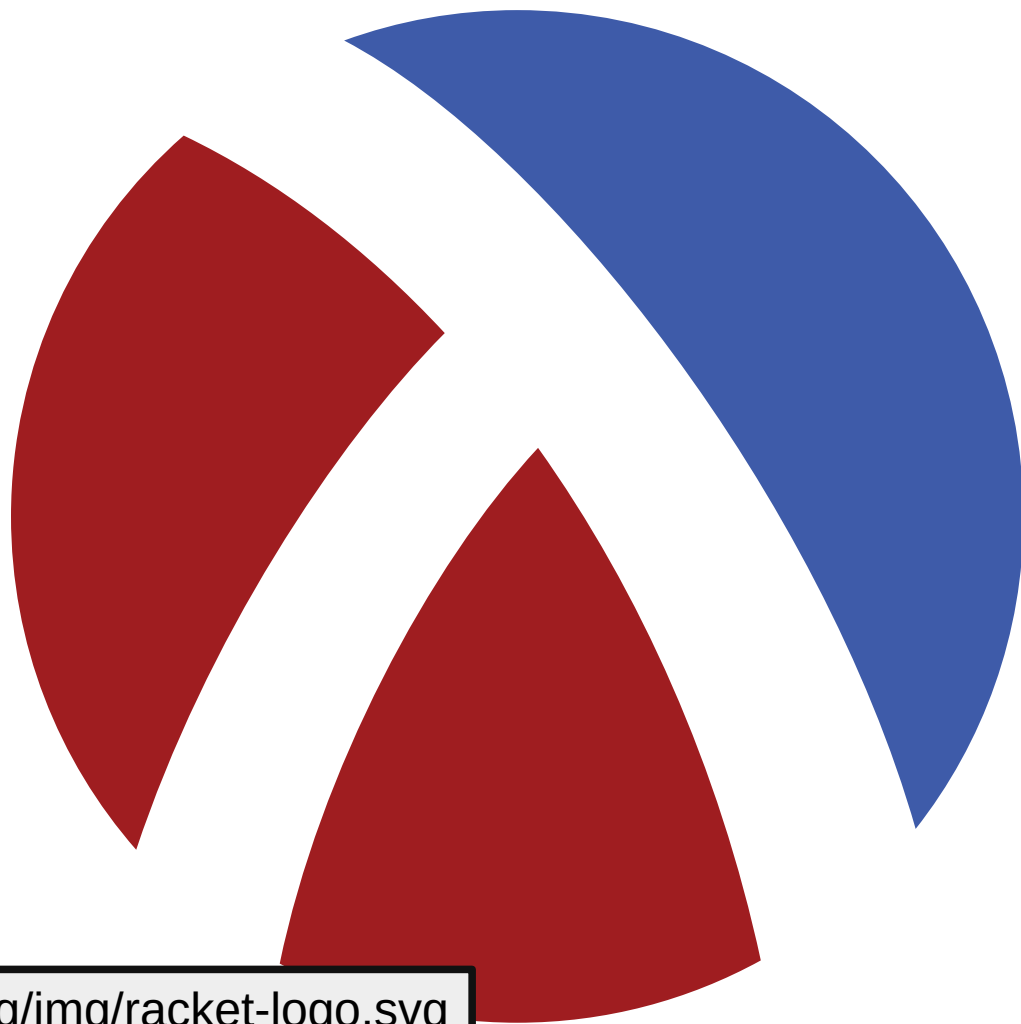


# Open edX: A FLOSS Case Study

Paul “Worthless” Nijjar  
2021-10-04  
KWLUG



<https://racket-lang.org/img/racket-logo.svg>



<https://flickr.com/photos/ryantylersmith/14033211423/>  
CC-BY Ryan Smithright

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that consumes two strings and a list of strings, and produces a new list where all occurrences of the first string have been replaced by the second string.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:

```
(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:

```
(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

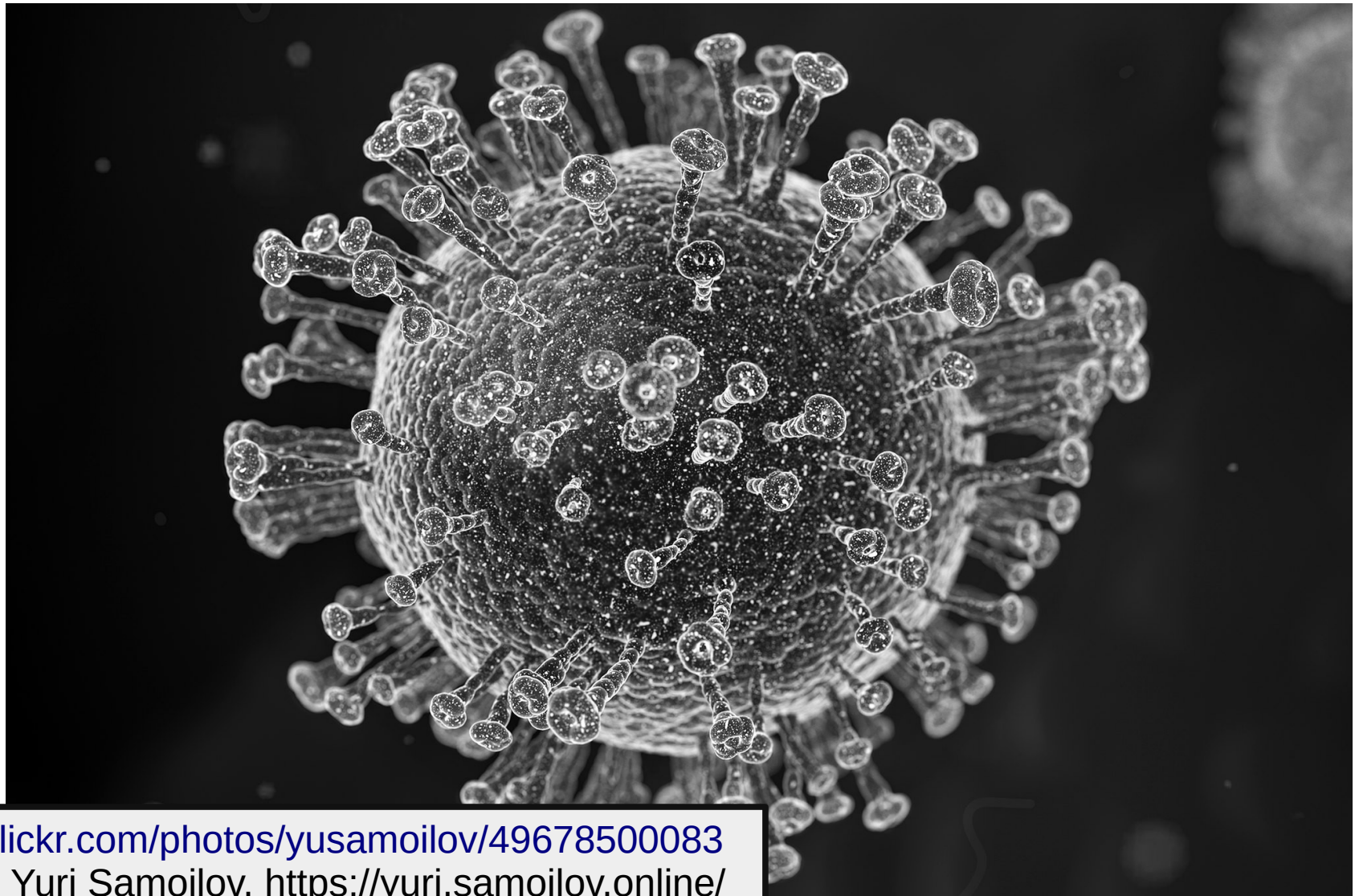
Delete

Search files

<input type="checkbox"/>	FILENAME ▲	LAST REVISED ▼	REVISED BY ▼
<input type="checkbox"/>	 a02q02a.rkt	2021-09-28, 2:29:06 p.m.	jdehal-student
<input type="checkbox"/>	 a02q02b.rkt	2021-09-28, 2:29:06 p.m.	jdehal-student
<input type="checkbox"/>	FILENAME ▲	LAST REVISED ▼	REVISED BY ▼

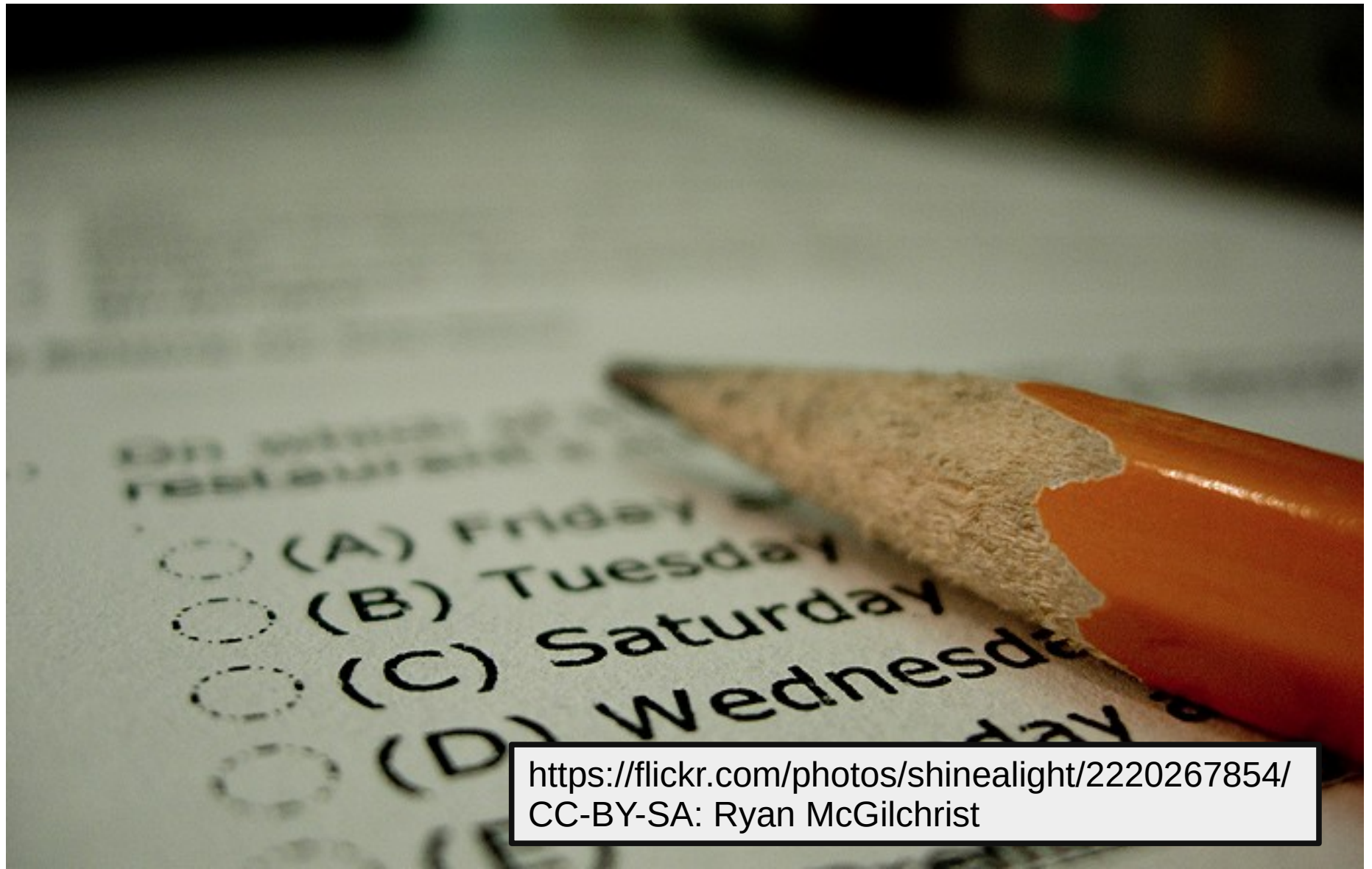
Run Basic Tests





<https://flickr.com/photos/yusamoilov/49678500083>

CC-BY: Yuri Samoilov, <https://yuri.samoilov.online/>



<https://flickr.com/photos/shinealight/2220267854/>  
CC-BY-SA: Ryan McGilchrist

**BIG BROTHER**

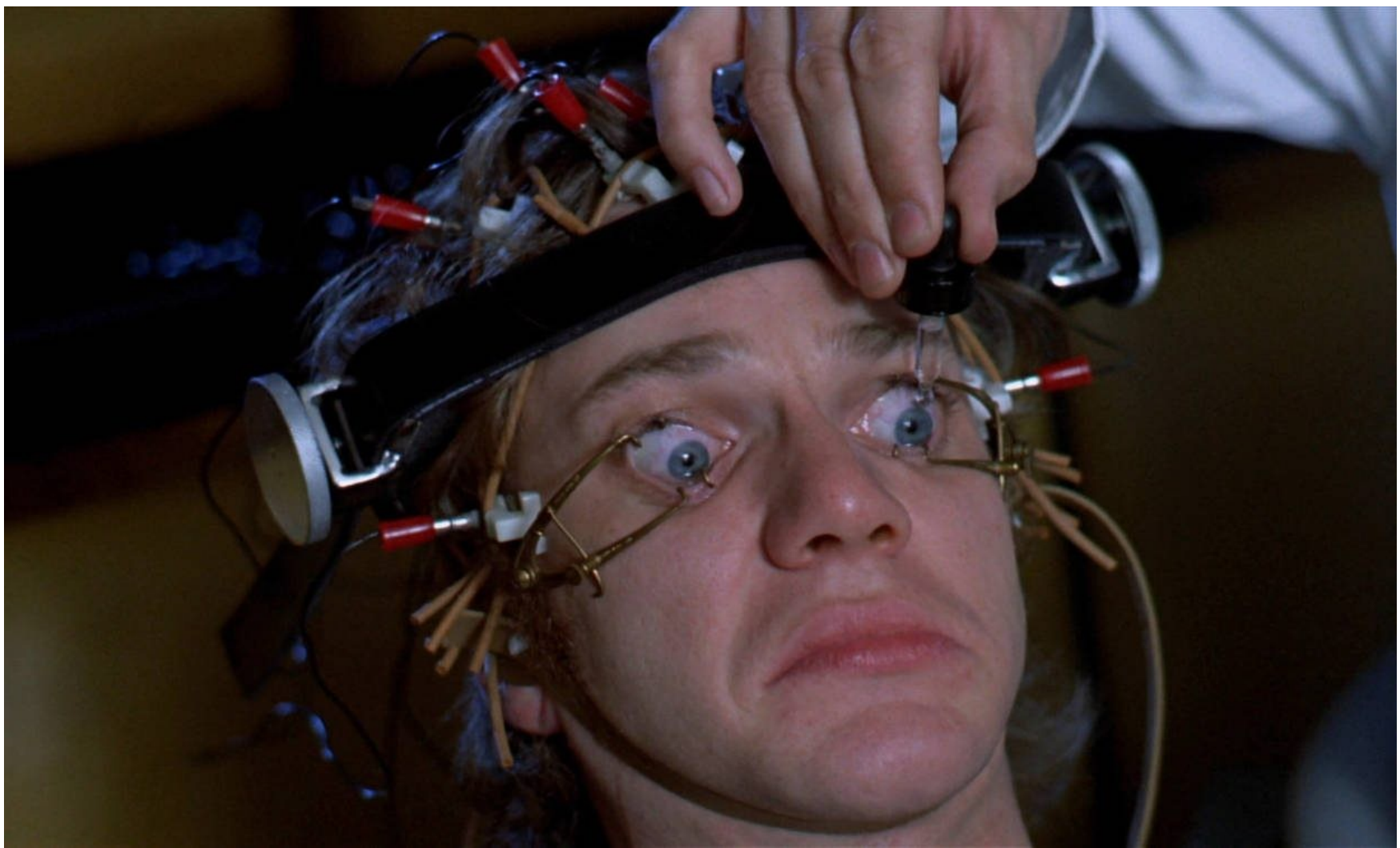


**IS WATCHING  
YOU**

Stolen from:

[https://www.zazzle.com/big\\_brother\\_is\\_watching\\_you\\_postcard-239023337544112470](https://www.zazzle.com/big_brother_is_watching_you_postcard-239023337544112470)





Stolen from:

<https://thenewbev.com/blog/2016/12/anthony-burgess-a-clockwork-orange/>



<https://flickr.com/photos/randomskk/560932738/>  
CC-BY-SA: Adam Greig

FLOSS

**XB1ocks**



Todd



<https://flickr.com/photos/nlireland/50247386382/>  
Public Domain: National Library of Ireland



<https://flickr.com/photos/tuchodi/5610246834/>  
CC-BY: Tuchodi



Stolen from:

<https://www.etsy.com/listing/538282106/philosoraptor-meme-poster-raptor>