
CS 61A Summer 2017

Structure and Interpretation of Computer Programs

REDEMPTION QUIZ 2

INSTRUCTIONS

- You have 10 minutes to complete this quiz.
- The exam is closed book, closed notes, closed computer, closed calculator.
- This redemption quiz is worth 3 midterm points and the final score will be assigned based on **effort**.
- Mark your answers **on the exam itself**. We will *not* grade answers written on scratch paper.
- For multiple choice questions,
 - means mark **all options** that apply
 - means mark a **single choice**

Last name	
First name	
Student ID number	
CalCentral email (_@berkeley.edu)	
Teaching Assistant	<input type="radio"/> Alex Stennet <input type="radio"/> Kelly Chen <input type="radio"/> Angela Kwon <input type="radio"/> Michael Gibbes <input type="radio"/> Ashley Chien <input type="radio"/> Michelle Hwang <input type="radio"/> Joyce Luong <input type="radio"/> Mitas Ray <input type="radio"/> Karthik Bharathala <input type="radio"/> Rocky Duan <input type="radio"/> Kavi Gupta <input type="radio"/> Samantha Wong
Name of the person to your left	
Name of the person to your right	
<i>All the work on this exam is my own.</i> (please sign)	

1. (5 points) **Bisicle** (It's a two-pronged popsicle, so you can eat it twice.)

Implement `unreplicate_link`, which takes a **replicated or empty** linked list of integers `s` and returns a new linked list where each integer `n` only appears once for each of `n` replicated copies.

```
def unreplicate_link(s):
```

```
    """Given a replicated or empty linked list of integers s, return a new linked list where
    each element, n, of the linked list s appears once instead of n times.
```

```
    >>> print_link(unreplicate_link(empty))          # handle the empty linked list
```

```
    <BLANKLINE>
```

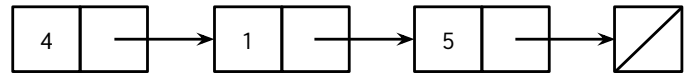
```
    >>> l = replicate_link(link(4, link(1, link(5)))) # show input linked list
```

```
    >>> print_link(l)
```

```
    4 4 4 4 1 5 5 5 5 5
```

```
    >>> print_link(unreplicate_link(l))
```

```
    4 1 5
```



```
    >>> l = link(2, link(2, link(2, link(2, link(2, link(2, link(1)))))))
```

```
    >>> print_link(l)                                # show input linked list
```

```
    2 2 2 2 2 2 1
```

```
    >>> print_link(unreplicate_link(l))             # unreplicated linked list
```

```
    2 2 2 1
```

```
    """
```

```
def unreplicate(_____):
```

```
    if _____:
```

```
        return _____
```

```
    elif _____:
```

```
        return _____
```

```
    return _____
```

```
return _____
```

2. (0 points) **The power to reshape the world... The ability to "SAVE."**

In this extra credit problem, you may choose one of two options.

- Mark the choice to “Go alone” and write a positive integer in the blank below. The one student who writes the *smallest, unique positive integer* will receive *one-point-five* (1.5) extra credit points but only if fewer than **90%** of students choose the next option.
- Mark the choice to “Cooperate”. If at least **90%** of students choose this option, all students who chose this option will receive *one* (1) extra credit point and those who marked the choice to “Go alone” will receive zero (0) extra credit points.

Will you *go alone*? Or will you *cooperate*? It is up to you.

Go alone _____

Cooperate