
CS 61A Structure and Interpretation of Computer Programs

Summer 2017

QUIZ 9

INSTRUCTIONS

- You have 10 minutes to complete this quiz.
- The exam is closed book, closed notes, closed computer, closed calculator.
- The final score for this quiz will be assigned based on **effort** rather than correctness.
- 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) Oops! ... I Did It Again

(a) (1 pt) Britney wants to define a Person class.

```
class Person:
    name = None
    def __init__(self, name):
        Person.name = name
    def greet(self):
        return 'Hello, my name is ' + self.name
```

Angela, however, sees a problem. Mark **all** appropriate criticisms of this implementation.

- Every Person's name will be equal to the most recently-created Person's name.
- Instantiating a Person will cause an error.
- Every Person's name will be None.
- Invoking greet on a person instance will cause an error.

(b) (2 pt) Consider the following simple class definition.

```
class Dog:
    def bark(self):
        print('woof!')
```

One day, while using this class, Britney decides she wants her dog, Lacey, to bark differently:

```
>>> lacey = Dog()
>>> lacey.bark = 'bow wow!'
```

Rocky quickly points out that this won't work. "bark is supposed to be a method, not a string!" So Britney attempts to reset the bark method to what it was before:

```
>>> lacey.bark = Dog.bark
```

Rocky isn't convinced this will fix it. Mark **all** appropriate statements about this assignment statement.

- Executing this assignment statement will cause an error.
- After this assignment, invoking fido.bark() will cause an error.
- This assignment statement will have no effect at all.
- None of the above criticisms are valid.

(c) (2 pt) Mark **all** lines that should be removed so that the expression N().r() evaluates to 1.

```
 class M:
     p = 2
     q = True
     def r(self):
         if self.q:
             return self.p
         return self.r() - 1
```

```
 class N(M):
     p = 1
     q = False
     def r(self):
         return self.p + 1
```