

INSTRUCTIONS

- You have 10 minutes to complete this quiz.
- The exam is closed book, closed notes, closed computer, closed calculator.
- Mark your answers **on the exam itself**. We will *not* grade answers written on scratch paper.
- For multiple choice questions, fill in each option or choice completely.
 - means mark **all options** that apply
 - means mark a **single choice**

| | |
|---|-------|
| Last name | |
| First name | |
| Student ID number | |
| CalCentral email (_@berkeley.edu) | |
| Discussion Section | _____ |
| <i>All the work on this exam is my own.</i> (please sign) | |

0. **Your thoughts?** What makes you strong?

1. Oops! ... I Did It Again

- (a) Suppose 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
```

John, 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) 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!'
```

Paul 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
```

Paul 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 lacey.bark() will cause an error.
- This assignment statement will have no effect at all.
- None of the above criticisms are valid.

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

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

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