

# Homework 8

*Due: Oct. 5, 2010, 2:25 pm*

For this assignment you will first figure out your answers in the Python shell. When you feel like you've arrived at the right answers write them out by hand or type them up and hand it in to the TAs.

## Reminders

For the following problems you may discuss the concepts that will help solve these problems with classmates and course staff. You may *not* simply copy down the answers of your classmates as that is a violation of the collaboration policy. The one exception to this rule are those problems marked as Independent. You may discuss independent problems *with course staff only*.

### Task 1:

Enter the following assignment statement:

```
mylist = [4, 18, 13, 7]
```

- Evaluate the expressions `mylist[1]` and `mylist[2]`. Are they what you expected them to be? Remember that indices of a list start at 0, not 1.
- Write an expression that evaluates to 20 using only mathematical operators (`+`, `-`, `*`, `/`, `()`) and references to `mylist`.
- Write an expression that evaluates to 10 using only mathematical operators and references to `mylist`.
- Write a series of statements and expressions to find the average value of the integers in `mylist` using only mathematical operators and references to `mylist`.
- Now assign the following: `ourlist = [5, 6, 7, 8]`. Change `mylist`'s value to `[4, 5, 6, 7, 8]`, using only references to `mylist` and `ourlist`.

### Task 2:

Look at the following code:

```
numOfBertsToys = 10
stuffedAnimals = ['muffins', 'bonkers', 'grumpy', 'ed']
numberOfStuffies = len(stuffedAnimals)
answer = numberOfStuffies / numOfBertsToys
```

- What does the variable `answer` represent in terms of Bert's stuffed animals and his total number of toys?
- Try running the code, and then ask Python to evaluate the value of `answer`. Why is it 0? What would you change to get the correct value?

**Task 3:**

Consider the following assignment statements:

```
string1 = "Cookie Monster "
string2 = "is hungry for a cookie. "
string3 = "We'd better go to Meeting Street Cafe."
stringlist = [string1, string2, string3]
```

- What would Python output if you told it to evaluate the expression `stringlist[1]`?
- What about the expression `stringlist[1][:7]` (this one is a bit trickier)?
- Using only references to `stringlist` and the `+` operator, write an expression that gives you two full sentences using the words in `string1`, `string2`, and `string3`.
- Using only references to `string1` and `string2`, indexing, and the `+` operator, write an expression that evaluates to `'Cookie Monster is hungry for cookies.'`. **Hint:** how do you use indexing to pull out only one word, or only one letter, from a string?

**Handin**

Either email your typed up homework to `cs0931tas@cs.brown.edu` or hand it in to the TAs. If you decide to email it, title the file `'YOURNAME'hw1.txt` — for example, `GiliKligerhw1.txt`.