

Fall '11 CIS 122 Final Review

You may bring one page of notes, front and back.

You may bring a calculator but shouldn't need one.

Questions will be in short-answer format with partial credit for partial answers.

Questions will require you to read Python code.

You will not be asked to write Python code, but may be asked to write Python pseudocode (i.e., code that is close to Python but is not required to compile).

Topics:

- All midterm topics
- Lists: construction using [], access by index, list(), append(), remove(), pop(), sort(), copying
- Tuples: construction using (), access by index,
- Dictionaries: construction using {}, access by key, items(), keys(), values(), clear(), copy()
- Sets: set(), intersection(), union(), difference()
- Common data-structure functions: len(), zip(), sorted(), in, for/in
- Function scope: local variables, mutability versus immutability

Sample questions:

1. [10] Consider the following code:

```
def f(a, b, c):  
    a    = 1  
    c    = b  
    c[0] = 2  
  
a = 10  
b = [11, 12, 13]  
c = [13, 14, 15]  
f(a, b, c)  
print a, b, c
```

What is printed by the above code? Why?

2. [10] Write Python pseudocode for a function which takes three strings as input and returns True if the first string occurs in both the second and third strings, False otherwise.

3. [10] Write Python pseudocode for a function which takes two strings as input and returns a string containing only the characters in the first string which are not in the second string. Characters in the output should be unique (i.e., each character should only appear once).