CS 202 Final Exam

**Lists**

1) What does this code print?  
l = [[1,2],[3,4,5],6]  
print(l[3][1])

2) What does this code print?  
l = [‘a’, ‘b’, ‘c’, ‘d’, ‘e’, ‘f’]  
print(l[3:-1])

3) Write me a small bit of code. It should print YES on time if the word ‘fred’ is in the list ‘names’, and print nothing otherwise. If the word ‘fred’ appears more than once, only print YES once.  
  
  
  
  
  
4) What does this code print?  
a = [1,2,3]  
b = [4,5]  
c = []  
for x in a:  
 c = c.append(x)  
c.append(b)  
print( c )

**Methods**

1) Write me a method that either prints the name I give it, or “Snow” if there is no name. I’ll call it like this:  
 thing(“Steve”)  
 thing(“”)  
 thing(“Amanda”)

**Regular Expressions**

1) Which of these bits of text would match with the regex “[ab]c” (Pick zero or more)  
 abc abba abracadabra cab back

2) Which regex would match words that are all lower case letters and nothing else? (pick zero or more)  
 .\* .+ [a-z] \d+ [a-z]+

**Control Structures (Loops and If Statements)**

1) What does this code print?  
 grade = 92  
 if grade > 90:  
 print(“A”)  
 elif grade == 92:  
 print(“Snow in May!”)  
 else:  
 print(“A”)

2) How many times does this code print?  
 for a in range(10):  
 for b in range(20):  
 print(“Snow in May!”)

**Dictionaries**

1) What does this code print?  
d = {}  
d[‘snow’] = -10  
d[‘snow’] = 20  
d[‘may’] = 12  
d[‘hate’]=100  
print(len(d))

**Files**

1) Assume the file does NOT exist. Where would the program have an error? Which line?  
count = 0  
f = open(“file-name.txt”, “r”)  
for x in f:  
 print(x)  
 count += 1  
print(count)

2) Assume the file does exist. What does the code above count?  
 It counts the number of characters in the file  
 It counts the number of words in the file  
 It counts the number of lines in the file

6) What does this code print?

def thing():

return 5

a = 2+3+4

return a   
print(thing())

2) Make me a **while loop** that prints the numbers 100 .. 120 including both the 100 and the 120.

4) Which values of ‘a’ cause this code to print “Airplane”?

if a > 10:

print(“Boat”)  
 elif a < 20:

print(“Car”)

elif a == 3:

print(“Airplane”)

else:

print(“Airplane”)

1) (int/float/bool/string) In the code below, what TYPE is the variable ‘p’?

f = open(“filename”)

for p in f:

print(p)

**DO THESE ON THE COMPUTER. SHOW ME ON THE COMPUTER. FOUR POINTS EACH.**

1) Write me a program that prints the first letter of the second and fifth lines of a file. You make the file.

2) Write me code that prints the numbers 512,256,128,64,32,16,8,4,2,1. It MUST use a while loop and do math. (Hint: Each number is half the previous one.)

3) Make me a program that asks me to enter a word. If the word starts with ‘y’ or ‘Y’, print “I Hate Snow In May” an quit. Otherwise ask again.