COSC 101, Practice Exam #1
13 September 1313

Name and section: _____ 9:20 / 10:20 / 11:20

You have 50 minutes to complete this exam.

There are 5 questions and a total of 45 points available for this exam. Don't spend too much time on any one question.

Since indentation is important in Python, please be sure that your use of indentation is obvious for any code you write.

If you want partial credit, show as much of your work and thought process as possible.

Question	Points	Score
1	6	
2	9	
3	10	
4	10	
5	10	
Total:	45	

1. (6 points) For each of the following expressions, evaluate the expression and write the result-
   ing value, or identify the error in the code that would prevent it from running.

   (a) `3**2/2+1`

   (b) `5 = x`

   (c) `7%3 == 2`

   (d) `(3**234235 > 5) or (4 != (3+1))`

   (e) `"average score is " + (90.0 + 80.0)/2`

   (f) `max(3*4, 2*min(5, 9/2))`

2. For each of the following code segments, write what is printed.

   (a) (2 points)
```
income = 90000
above = income > 200000
if above:
    print "1%"
else:
    print "99%"
```

   (b) (4 points) What is the output of the following program?
```
for i in range(2):
    for j in range(3):
        print i,
    print
    for j in range(3):
        print i+1,
    print
```

(c) (3 points) What is the output of the following program?

```
s = 'aahhhhaaa!'
new_string = ''
for i in range(len(s)-1):
    if s[i+1] != s[i]:
        new_string = new_string + s[i+1]
print new_string
```

3. (10 points) Write a short program that asks the user for a 4 letter word (a 4 character string). If the user enters a string that is not 4 characters in length, print "Not a 4 letter word." Otherwise, print a "censored" version of the 4 letter word where instead of the original second and third letters, asterisks ('*') are printed. For example, if a user enters the string 'food', you should print 'f**d'.

4. (10 points) Write a short program that asks a user for two items: a string `s` and a positive integer `width`. The program should print a string that contains exactly `width` characters. The string should consist of as many copies of the string `s`, with no spaces, that fit in `width` characters. If the copies do not fill the entire width, the largest partial copy of `s` should be concatenated to the end. For example, if a user types `dog` and `9`, the program should print:

   dogdogdog

   whereas if the user types `dog` and `5`, it should print:

   dogdo

   and with `dog` and `4`, it should print:

   dogd

   You can assume that `s` has fewer than `width` characters in it.

5. (10 points) Write a program that asks a user for a string `s` and a string `char`. You can assume that the second parameter, `char`, is a single character. Your program should find and print the index of the first occurrence of `char` in the string `s`. If the character is not found, your program should print -1.

   For example, if the user enters `domino` and `o`, the program should print 1, because the first `'o'` is found at index 1 in the string `domino`. As another example, if the user enters `domino` and `p`, the program should print `-1` because the character `'p'` is not found in the string `domino`.