

CSSE 120—INTRODUCTION TO SOFTWARE DEVELOPMENT**EXAM 1, SPRING 2009-2010**

This exam contains two parts.

- The first part is to be done on paper without using your computer.
 - This part is closed-everything except you may use a “cheat sheet” that is one 8.5 by 11 sheet of paper (both sides, or two sheets each using only one side).
 - Complete this first part and turn it in before beginning the second part.
- The second part of the exam is to be done on your computer.
 - This part is open-everything except that you may not communicate with anyone except an exam proctor.
 - So, you can use Angel, the course web site, any projects on your computer, the entire World Wide Web, and search engines like Google, among other sources.
 - If you have questions on the on-the-computer part, you may ask an exam proctor. In particular, we don’t expect you to be experts on understanding error messages yet, so if you get an error message, first try to understand it, but then ask for help as needed.
 - Obtain the on-the-computer part of this exam by checking out the **Exam1-201030** project from your SVN repository. It has 5 modules. Do the TODO’s in each. Turn in your work by committing your project.

Time limit: You have a total of 2 hours to complete the entire exam, plus an hour of “bonus” time, so a total of up to 3 hours. Don’t spend more than 30 minutes on the paper-and-pencil part.

Paper-and-pencil score:

Problem	Points	Score
P1	3	
P2	5	
P3	5	
P4	6	
P5	2	
P6	3	
Total	24	

Totals	Points	Score
paper	24	
computer	96	
Total	120	

On-the-computer score:

Problem	Points	Score	Explanation of points deducted
P1	12		
P2	12		
P3	12		
P4	12		
P5a	8		
P5b	8		
P5c	8		
P5d	8		
P5e	8		
P5f	8		
Total	96		

Your total as a percent (of 100): _____

PROBLEMS

1. (3 points) What is the value of each of the following expressions?

11 % 3

Value:

11 / 3

Value:

float(11 / 3)

Value:

2. (5 points: 1, 1 and 3, respectively) What is the output of each of the following code fragments?

```
x = 3
x *= 2
print x + x
```

Output:

```
def fun(x):
    a = 2
    return a + x

a = 8
b = fun(a)
print a, b
```

Output:

```
def g(a, b):
    print a, "of" , b

def f(n):
    for i in range(1, n + 1):
        g(i, n)
    return n ** 2, n ** 3

x, y = f(3)
print x + y
```

Output:

3. (5 points) For each of the following expressions, what does it evaluate to?

```
range(2, 11, 3)
```

```
""" 'hello' """
```

```
"one" + "two"
```

```
x = [10, 20, 30, 40, 50]  
print x[2]
```

```
y = "forget me not"  
print y[2]
```

4. (6 points) For each of the following lists, write a Python `range` expression that produces the list:

```
[1, 2, 3, 4, 5]
```

```
[4, 6, 8, 10, 12]
```

```
[5, 2, -1, -4, -7]
```

Name: _____

5. (2 points) What gets printed by the following expressions:

```
quotesList = ["Immature poets imitate; mature poets steal.",  
              "by T.S. Eliot"]
```

```
print quotesList[1]
```

```
print quotesList[1][1]
```

6. (3 points) What gets printed by the following code:

```
circleA = Circle(Point(25, 25), 10)  
circleB = circleA  
circleA.move(15, 0)  
print circleA.getCenter().getX()  
print circleB.getCenter().getX()
```

Output:

When you have completed this part of the exam, turn it in to the exam proctor so you can use your computer for the next (on-the-computer) part of the exam.

Begin the on-the-computer part by checking out the project called
Exam1-201030

in your SVN repository. Do the five problems therein, each of which has TODO's that specify what to do. Commit your work when you are done.

Recall the instructions on the computer part: Open everything EXCEPT that you may NOT communicate with anyone except the exam proctors.