

# CS 1315 Exam 1, Version A

## Fall 2015

Name: \_\_\_\_\_

Section: \_\_\_\_\_

TA Name: \_\_\_\_\_

Question	Points	Score	Grading TA
Section and TA	2		
1	8		
2	5		
3	5		
4	7		
5	4		
6	10		
7	4		
8	10		
<b>Total:</b>	55		

1. (8pts)

Pretend you are the Jython interpreter. Evaluate each of the expressions below. The **result** column is the value of the expression that would be provided by JES. The **type** column is where the data type of the result should be listed. If the expression is not valid Jython syntax, or will throw an exception, simply write "Error" in both columns. The first line has been provided as an example.

Expression	Result	Type
5 + 5	10	int
10 % 3	3	int
file = pickAFile()		String
range(2, 9, 2)	[2, 4, 6, 8]	list
15 / 13	1	int
"I have" + 5 + "cats"	ERROR	ERROR
"GT" * 3	'GTGTGT'	String
3*(1+2.0)-5	4.0	Float
"gt">"ga"	True	Boolean

2. (5 pts)

This year the College of Computing is turning twenty-five years old! To show your appreciation to the College of Computing you decide to write a function that takes in two parameters, a string and an integer where the name of the college is the string parameter and the 25 years in the integer parameter. The function will print out the following statement, 'Happy 25th Anniversary College of Computing!' using the two parameters.

**Test Case:**

```
>>> anniversary("College of Computing", 25)
Happy 25th Anniversary College of Computing!
```

```
def anniversary(college, years):
    print "Happy " + str(years) + "th Anniversary" + college + "!"
```

### 3.(5 pts)

You lost your glasses, so while completing your reading assignment for a class, you are seeing double. Write a function that takes in a string and prints the same word, but doubling each letter forming a new string with no spaces between the letters.

#### Test Case:

```
>>> seeingDouble("Hello")
HHeellllloo
```

```
def seeingDouble(word):
    new = ""
    for letter in word:
        new = new + letter * 2
    print new
```

### 4. (7 pts)

What's the good word? You and your friends all went to different schools for college and you want to create a program that takes in the mascot of a school as a parameter and outputs a cheer for that team. But one of your friends went to UGA and you never want to cheer for that school, so everytime someone inputs "dawgs" as the mascot, you want to switch it to say Jackets and print "To Hell With Georgia!" Fill in the blanks for the following program that takes in a single parameter, a string that represents a college mascot.

#### Test Cases:

```
>>> gamedayCheer("dawgs")
To Hell with Georgia!
Let's go Jackets!
```

```
>>> gamedayCheer("Tigers")
Let's go Tigers!
```

```
def gamedayCheer(mascot):
    if mascot == "dawgs":
        mascot = "Jackets"
        print "To Hell with Georgia!"
        print "Let's go " + mascot + "!"
    else:
        print "Let's go " + mascot + "!"
```

### 5. (4 pts)

What will be **printed** when the following function is called?

```
def movieQuotes(num):  
    if num < 5:  
        print "Do you know who I am?"  
    if num >= 4 and num <= 15:  
        print "Bond. James Bond."  
    elif num >= 8 and num < 24:  
        print "I am Groot."  
    else:  
        print "May the Force be with you."
```

```
>>> movieQuotes(4)  
Do you know who I am?  
Bond. James Bond
```

```
>>> movieQuotes(24)  
May the Force be with you.
```

### 6. (10 pts)

You're trying to land a job at the trendiest magazine ever as a photoshop guru. You want to show them your talents by playing around with some photos in JES in your free time. Fill in the blanks for the following function that takes in a picture as a parameter and makes the top left quadrant green and the bottom right quadrant blue. That's bound to get you a job!

```
def popArt(pic):  
    width = getWidth(pic)                #get width of the picture  
    height = getHeight(pic)             #get height of the picture  
    for pixel in getPixels(pic):        #pixels of entire picture  
        #change upper left corner to green  
        if ((getX(pixel) < width/2) and (getY(pixel) < height/2)):  
            setColor(pixel, green)  
        #change lower right corner to blue  
        elif ((getX(pixel) > width/2) and (getY(pixel) > height/2)):  
            setColor(pixel, blue)  
    show(pic)
```

7. (4 pts)

What will be **printed** when the following function is called?

```
def pyramid(word):  
    for num in range(len(word)):  
        print (num + 1) * word[num]
```

```
>>>pyramid("Football")
```

```
f  
oo  
ooo  
tttt  
bbbbb  
aaaaaa  
lllllll  
lllllllll
```

8. (10 pts)

You really like editing pictures and were blown away when you learned you make a picture negative in JES. Write a function called `negative` that takes in a picture as the parameter. The function will create the negative version of that picture. Be sure to have the function show the picture at the end!

```
def negative(pic):  
    pixels = getPixels(pic)  
    for pix in pixels:  
        r = getRed(pix)  
        b = getBlue(pix)  
        g = getGreen(pix)  
        setRed(pix, 255-r)  
        setGreen(pix, 255-g)  
        setBlue(pix, 255-b)  
    show(pic)
```