

CS 150: Nested Loops and Picture Module

Cynthia Taylor

Oberlin College

February 12th, 2014

Code

```
for i in range(1,4):  
    for j in range(1,4):  
        print(i,j,end=' ')
```

At the end of this code,
what will appear on the
terminal?

A

1 1 2 2 3 3

B

1 2 3 1 2 3 1 2 3

C

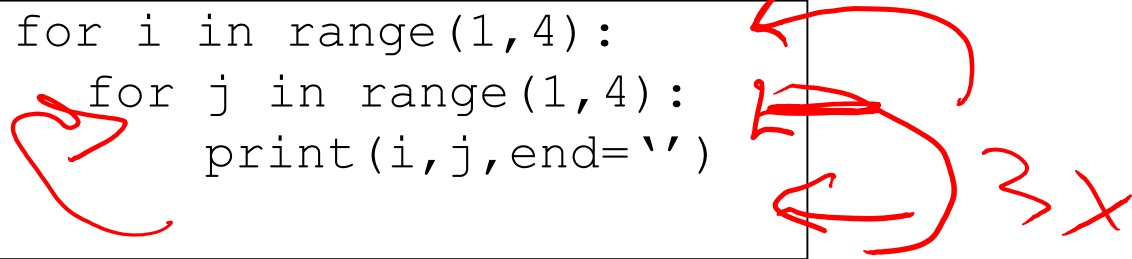
1 1 1 2 1 3 2 1 2 2 2 3 3 1 3 2 3 3

D

1 1 2 1 3 1 2 1 2 2 2 3 3 1 3 2 3 3

E. I don't know

```
for i in range(1,4):  
    for j in range(1,4):  
        print(i,j,end='')
```



outer loop	inner loop	i	j
1	1	1	1
	2	1	2
	3	1	3
2	1	2	1
	2	2	2
	3	2	3
3	1	3	1
	2	3	2
	3	3	3

Generate the times table for any n

1 2 3 4
2 4 6 8
3 6 9 12
4 8 12 16

n=4

1 2 3
2 3 4
3 4 5
4 5 6

A

```
for i in range(0,n):  
    for j in range(0,n):  
        print(i*j,end=' ')  
    print()
```

0000
0
0
0

B

```
for i in range(1,n+1):  
    for j in range(1,n+1):  
        print(i*j,end=' ')
```

1 2 3 4 5 6 0

C

```
for i in range(1,n+1):  
    for j in range(1,n+1):  
        print(i*j,end=' ')  
    print()
```

return
print(" ")

E. I don't know

D

```
for i in range(1,n+1):  
    for j in range(1,n+1):  
        print(i*j,end=' ')  
    print()
```

outside loop

Picture Demo

all the code

```
import * from picture
```

```
pic = Picture(800, 600)
```

```
pic.setFillColor(255, 0, 0)
```

```
pic.drawCircleFill(300, 200,  
100)
```

*use code picture.py in picture.py
height width*

Color Channels

- (red,green,blue)
- 0-255
- (0,0,0) – black
- (255,255,255) – white
- (255,0,0) – red
- (255,255,0) - yellow

For Loop

```
pic = Picture(800, 600)
pic.setFillColor(255, 0, 0)

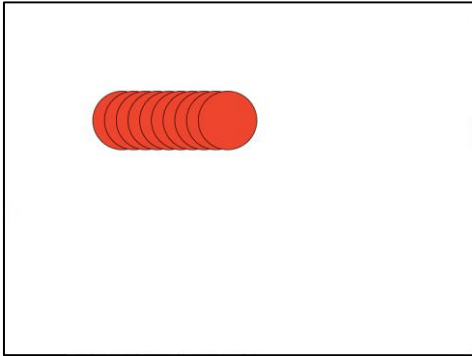
for i in range(0, 10):
    pic.drawCircleFill(100+50*i, 300,
        100)

input()
```

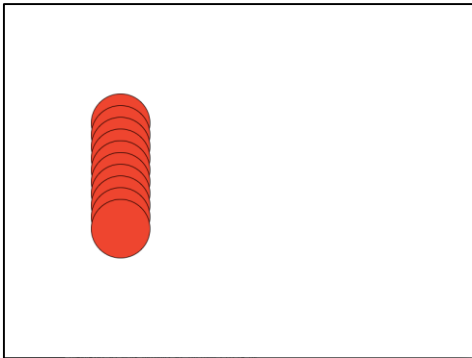
Code

```
for i in range(5):  
    pic.drawCircleFill(200+50*i, 200+20*i, 50)
```

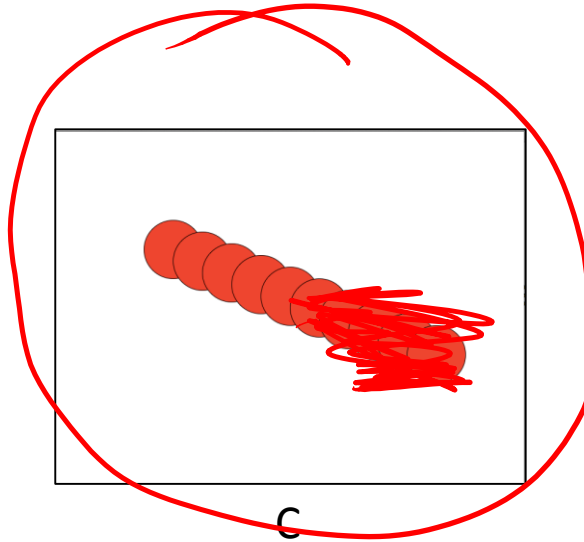
At the end of this code,
what will appear?



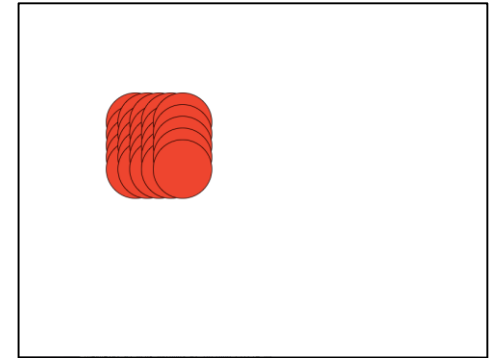
A



B



C



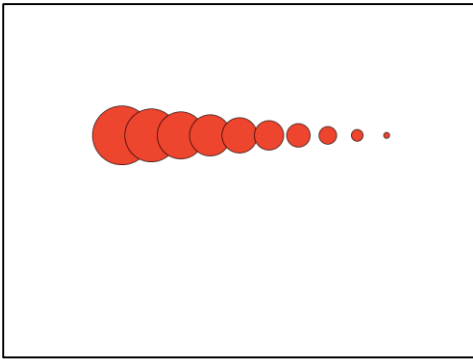
D

E. I don't know

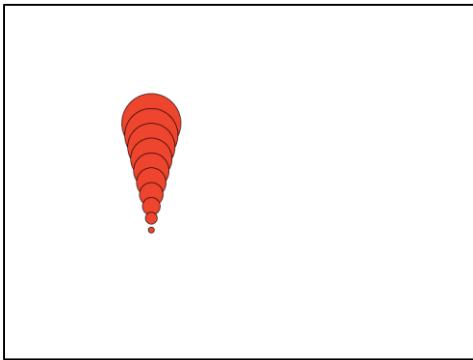
Code

```
for i in range(5):  
    pic.drawCircleFill(200+50*i, 200+20*i, 50-5*i)
```

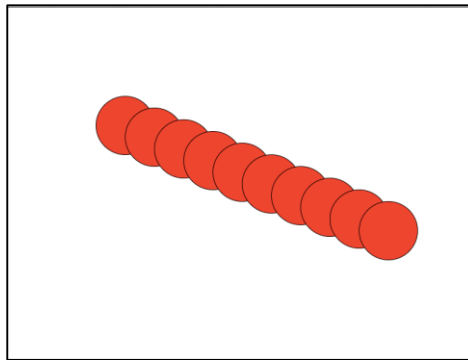
At the end of this code,
what will appear?



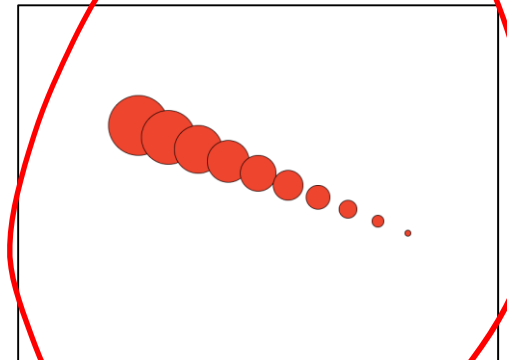
A



B



C



D

E. I don't know

Next Class

- Boolean Expressions and Conditionals
- Reading
 - 7.1 – 7.3
- LAB CODE CHANGE: 7981
- Register your clicker by FRIDAY
- Lab 2 – Due Tuesday Feb 18th at 10pm