

(Monty) Python Nested for loops

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Comparison

	Java	C++	Python
source code name	.java	.cpp	.py
Object Oriented?	required	optional	optional
output	<code>new Text(" ", , ,)</code> <code>System.out.print()</code>	<code>cout <<</code>	<code>print(" blah, blah")</code>
functions/ methods	methods (<code>bob.hide()</code>)	functions (<code>gotoxy(4,3)</code>)	functions (<code>str(5)</code>)
input	skipped this (complicated)	<code>cin>></code>	<code>input()</code>
casting <code>int()</code>	<code>int(double)</code>	<code>int(double)</code>	<code>int(string)</code>
if - else	<code>if(boolean)</code> { } <code>else</code> { }	<code>if(boolean)</code> { } <code>else</code> { }	brackets replaced by indenting!

Comparison

Java

C++

Python

for loops

```
for( int i=0 ;i<10 ; i++)
```

exact same as Java

different

for loops in Python

- Same idea as C++ and Java – provides a mechanism for repeated actions
- Syntax different from C++ and Java
- Requires a list
- For now our list is going to be provided by a string (recall a string is a list of characters)

for loops in Python

```
>>> word = "sand"  
>>> for x in word:
```

for each letter (x) in the string (word) do the following:

This will cause something to occur 4 times since there are 4 letters in the string "sand"

for loops in Python

What does this program do?

```
word = "dolphins"  
for x in word:  
    print("*", end = " ")
```

for loops in Python

What if we wanted to make a box? (did this in C++)

```
word = "dolphins"
```

```
for xx in word:
```

```
    for x in word:
```

```
        print("*", end = " ")
```

```
    print()
```

Lab 9

Write an app that asks the user for two words (strings). Then the app draws a box that is the width of the number of letters in the first word and is the height of the number of letters in the second word. The box should be made out of the letters of the second word. The first row should be made up of the first letter of the second word. The second row should be made up of the second letter of the second word....

Lab 9

Example output:

Please enter first word: beach

Please enter second word: boys

bbbbbb

oooooo

yyyyyy

sssss