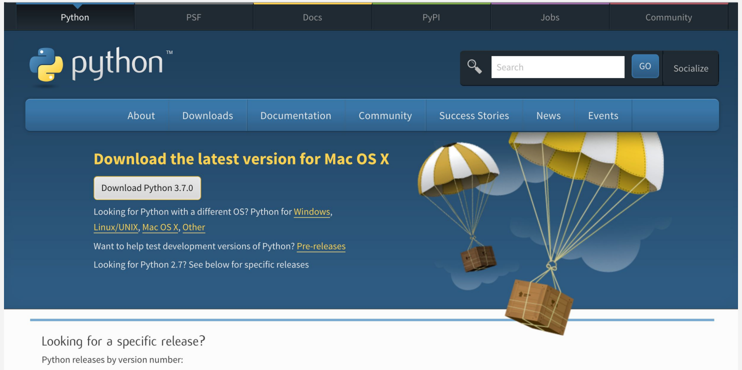
CS 110
Python Basics, Printing, Input

Benjamin Dicken

Did you setup your workspace?

- Did you download python 3?

- Did you download PyCharm?



Download the latest version for Mac OS X

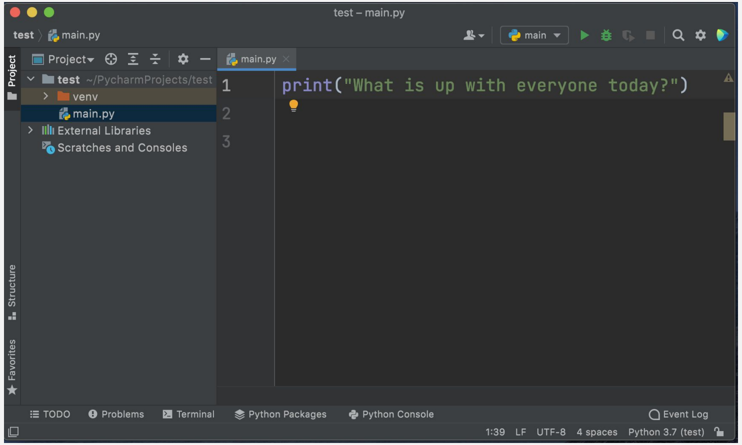
Looking for Python with a different OS? Python for Windows, Linux/UNIX, Mac OS X, Other

Want to help test development versions of Python? Pre-releases

Looking for Python 2.7? See below for specific releases

Looking for a specific release?

Python releases by version number:



```
print("What is up with everyone today?")
```

Announcements

- Prep problems 1 and 2
- Group seating will begin on Friday
- Gradescope for attendance

The `print` function

- This function sends characters (strings) to **standard output**
- By default, the **standard output** of a python program run with the Mu editor goes to the console

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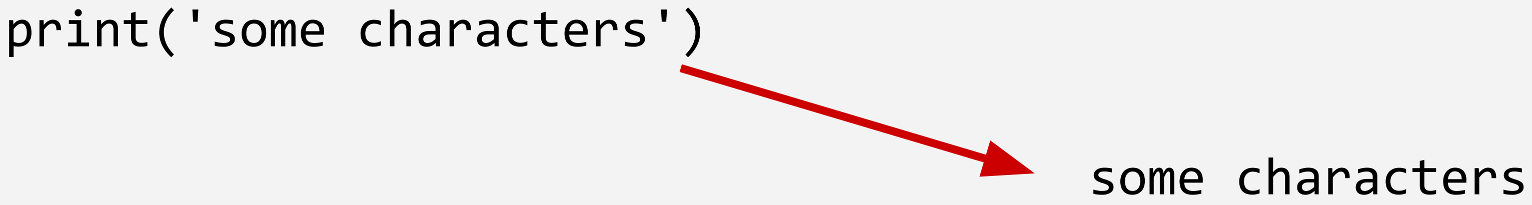

```
print('some characters')
```

```
some characters
```

Activity

Your ‘first’ program

Write a program that simply prints out

```
Hi Students!
```

Activity

Multiple prints

What precisely would this program print out? Are the words on separate lines, or all on one?

```
print('Are')
print('You')
print('In')
print('College?')
```

The next line

- By default, the print function sends the output cursor to the next line after printing

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Code

Standard Output

The next line

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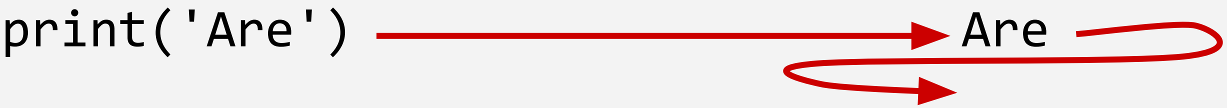
Code **Standard Output**



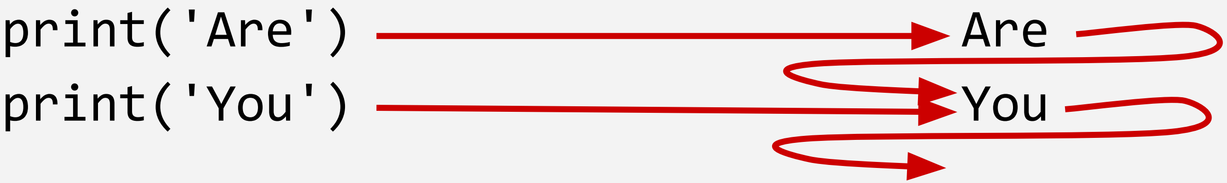
```
print('Are')
```

```
Are
```

The next line

- By default, the print function sends the output cursor to the next line after printing

Code **Standard Output**

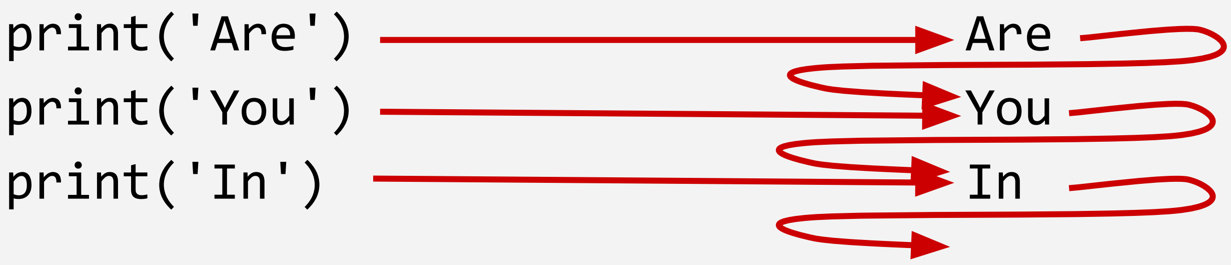


```
print('Are')
print('You')
```

```
Are
You
```

The next line

- By default, the print function sends the output cursor to the next line after printing



Code

```
print('Are')
print('You')
print('In')
```

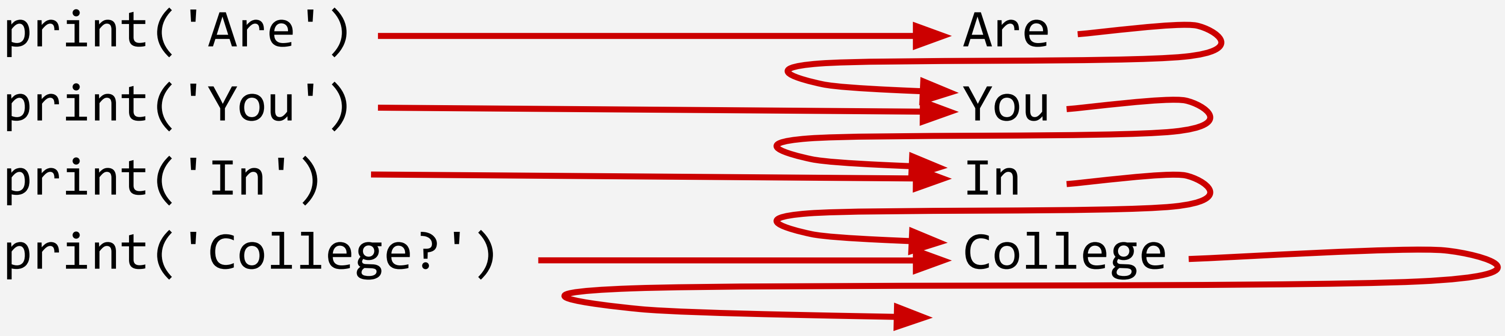
Standard Output

```
Are
You
In
```

The next line

- By default, the print function sends the output cursor to the next line after printing

Code **Standard Output**



```
print('Are')
print('You')
print('In')
print('College?')
```

```
Are
You
In
College
```

Activity

What will this do?

- Will this work in python?
- If so, what will it print? If not, why?

```
print('Are
You
In
College?')
```

Activity

What will this do?

- Will this work in python?
- If so, what will it print? If not, why?

```
print('''Are
You
In
College?''')
```

Multiple line strings

- You can use a triple-quote to create a string that has multiple lines
- These two programs produce the same output

```
print('Are')
print('You')
print('In')
print('College?')
```

```
print('''Are
You
In
College?''')
```

Activity

Write a program

Write a simple program that prints the following output the the python console

```
He said, "What is up?"
Joe's friend didn't reply.
```

Types of quotes

- You can use either single-quotes or double-quotes for printing in python
- You can use single-quotes in double-quoted strings, and vice-versa

```
print('He said, "What is up?"')
print("Joe's friend didn't reply.")
```

Activity

Write a program

What about printing this?

```
He said, "What's up?"
Joe's friend said, "Not much."
```

Activity

Song Lyrics

- Write a program named living.py that prints the following song lyrics:

```
There's a difference in living and living well.
You can't have it all all by yourself.
Something's always missing 'till you share it with someone else.
```

- Submit to the gradescope assignment named **living.py**
- Make sure it passes the one test case!

Variables

- We can assign names to particular values in our program
- When we give a value a name, this is called assigning a **variable**

Activity

What does it print?

```
first_name = 'Kevin'
last_name = 'McCallister'
print(first_name, last_name)
```

Activity

Which program prints something different than the others?

A

```python
first_name = 'Kevin'
last_name = 'McCallister'
print(first_name, last_name)
```

B

```python
first_name = 'Kevin '
print(first_name, ' McCallister')
```

C

```python
print('Kevin', 'McCallister')
```

D

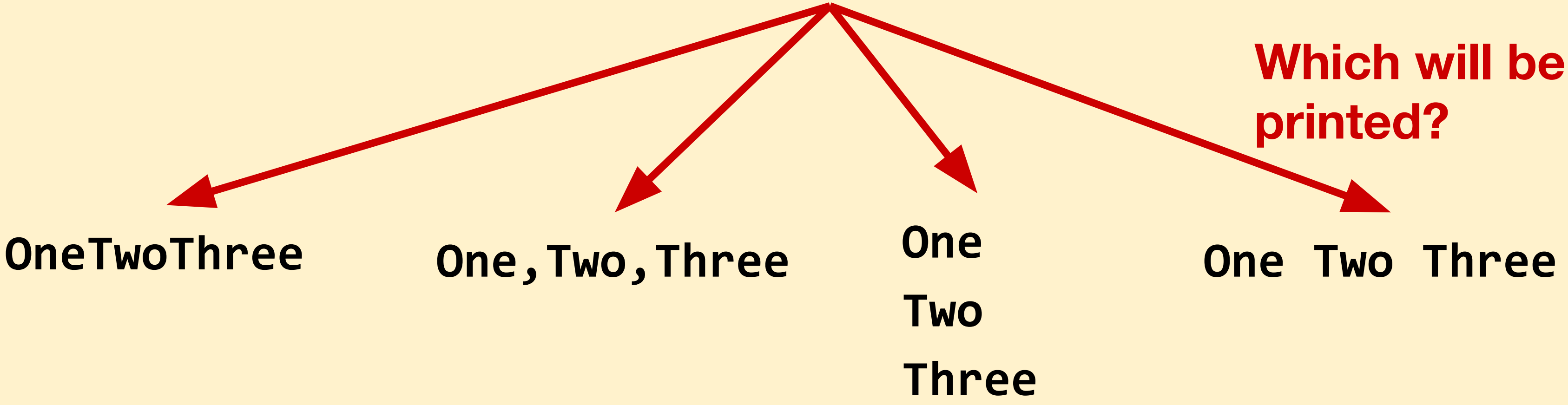
```python
print('Kevin McCallister')
```

Activity

Using the Comma

- You can put multiple strings in a single call to the print function
- One way to do this is by separating them with commas
- For example:

```
print('One', 'Two', 'Three')
```



Which will be printed?

```
OneTwoThree
```

```
One,Two,Three
```

```
One
Two
Three
```

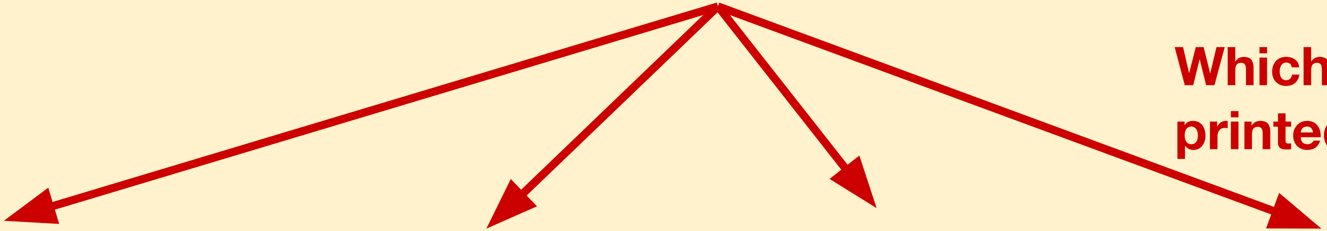
```
One Two Three
```

Activity

Using the plus (concatenation)

- Can also combine strings with the plus symbol
- This is referred to as ***string concatenation***
- For example:

```
print('One' + 'Two' + 'Three')
```



Which will be printed?

```
OneTwoThree
```

```
One,Two,Three
```

```
One
Two
Three
```

```
One Two Three
```

Activity

What will this print out?

```
name  = 'Jim'
age  = '35'
print('Hello ' + name)
print('you are', age, 'years old')
```

The input() function

- The **`input()`** function is the second function introduced
  - The first one being **`print()`**
- The input function allows the programmer to read in a value from the user
- Now, we can make an interactive program!

Activity

Change so that the user can customize the input

```
name  = 'Jim'
age  = '35'
print('Hello ' + name)
print('you are', age, 'years old')
```

Change so that the user can customize the input

```
name  = input('What is your name? ')
age  = input('How old are you? ')
print('Hello ' + name)
print('you are', age, 'years old')
```

Newlines

- We’ve seen several **escape sequences** so far
- An escape sequence is a sequence of characters that produces a particular character within a string
    - `\'`   `\"`   What do these produce?

Newlines

- We’ve seen several **escape sequences** so far
- An escape sequence is a sequence of characters that produces a particular character within a string
  - **`\'`** **`\"`** What do these produce?
  - And now: **`\n`**

Activity

What is the difference?

```
name  = input('What is your name? ')
age  = input('How old are you? ')
print('Hello ' + name)
print('you are', age, 'years old')
```

```
name  = input('What is your name?\n')
age  = input('How old are you?\n')
print('Hello ' + name)
print('you are', age, 'years old')
```