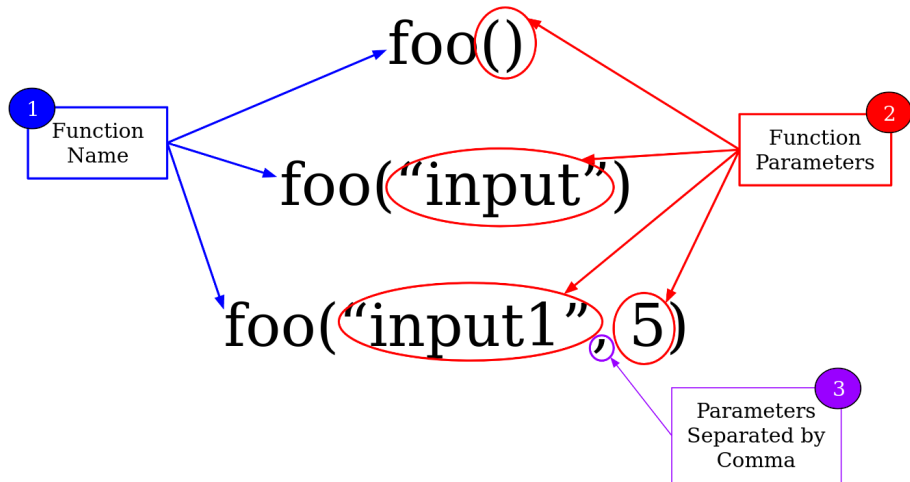# Topic 1: Intro to Python

David H Smith IV

University of Illinois Urbana-Champaign

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Updates

1. **Homework 1:** Posted and due this Friday.
2. **Topic 2 (Part 1) and Post-reading**: Posted and due this Friday.
3. Feel free to drop by office hours if you have any questions.
4. As a reminder, I encourage you all to work together to complete the homeworks.

Anatomy of a Function Call

Input and Print

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- **The Print Function**: A builtin function that takes a string as a parameter (in between the parentheses) and outputs that string
    - **print('Hello, World!')** →Will output the 'Hello, World!".

Data Types in Python

- Two types we'll need to know now:
    - **Strings:** A long list of characters accompanied by surrounding quotes (e.g., 'Hello, CS 105!').
    - **Integers:** Whole numbers, both positive and negative.
- You can check the type of a variable or expression with the `type()` function.
- You can convert between them with the `str()` and `int()` functions.
- It's important to keep the type of your variables in mind when programming.
- Keeping types in mind when attempting to deduce what a program is doing is very important.

Poll Question: Input and Print

Assuming there is a variable value with the value 7, which of the following statements prints: count = 7.

Ⓐ `print("count = " value)`

Ⓑ `print("count = ", end="value")`

Ⓒ `print("count = ", value)`

Ⓓ `print("count = $value")`

Poll Question: Addition Operation

In Python x + y is:

- Ⓐ an assignment

- Ⓑ a statement

- Ⓒ a variable

- Ⓓ an expression

Poll Question: Errors

What happens if I type the following code into a **brand new** Python
interpreter:

```
1    x + y
```

- Ⓐ Nothing
- Ⓑ SyntaxError
- Ⓒ NameError
- Ⓓ ValueError

Poll Question: Error

What happens if I type the following code into a Python interpreter?

```
1  print(input("Enter a number: "))
```

- **A** No error
- **B** SyntaxError
- **C** NameError
- **D** TypeError

Poll Question: Errors

What happens if I type the following code into a Python interpreter?

```python
value = input("Input your favorite number!\n")
print("Your new favorite number is", value + 1)
```

- **A** No error
- **B** SyntaxError
- **C** ValueError
- **D** TypeError

Poll Question: The Print Function

What type of error will Python produce when this segment of code is run?

```python
1   x = "Hello, world"
2   y = 5
3   foo = x + y + z
```

- **A** SyntaxError
- **B** NameError
- **C** ValueError
- **D** TypeError

Poll Question: Data Types

What is the value of x after the following segment of code runs if the user inputs a 5 and then a 4?

```python
1    a = input()
2    b = input()
3    x = a + b
```

Ⓐ String

Ⓑ Integer

Poll Question: Error

What happens if I type the following into a Python interpreter?

```python
1    a = input()
2    b = input()
3    a + b = x
```

1. No error
2. SyntaxError
3. NameError
4. ValueError
5. TypeError

Your Questions!

15 minutes of homework

- Spend 15 minutes working in groups to complete some of homework 1.