

David H Smith IV

University of Illinois Urbana-Champaign

Wed, June 16 2021

Updates

- **1** Homework 1: Posted and due this Friday.
- Topic 2 (Part 1) and Post-reading: Posted and due this Friday.
- Feel free to drop by office hours if you have any questions.
- As a reminder, I encourage you all to work together to complete the homeworks. Don't share exact answers but feel free to discuss things at a high level.

A Brief Review

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Computability

• Complexity \neq Non-computable (undecidable)

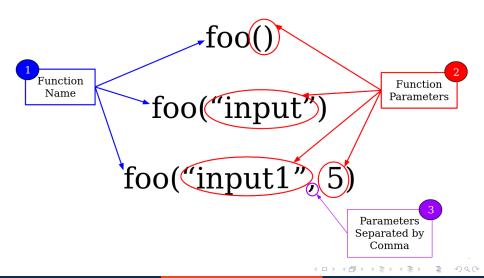
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- Complexity ≠ Non-computable (undecidable)
- The Halting Problem: Given a description of a Turing Machine and it's initial input (the paper strip), determine whether the program, when executed on this input, ever halts.
- There is no general solution to the halting problem.

Function Calls



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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!".

- Two types we'll need to know now:
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 - Integers: Whole numbers, both positive and negative.
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Poll Question: Input and Print

Poll Questions

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

- A print("count = " value)
- B print("count = ", end="value")
- print("count = ", value)
- print("count = \$value")

Poll Question: Addition Operation

In Python x + y is:

- an assignment
- B a statement
- a variable
- an expression

Errors



Errors

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

- 1 x + y
 - Nothing
 - SyntaxError
 - NameError
 - ValueError

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

Errors 0000000

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

- No error
- SyntaxError
- NameError
- TypeError

Poll Question: Errors

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

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

- No error
- SyntaxError
- ValueError
- TypeError

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

Errors 0000000

```
x = "Hello, world'
v = 5
foo = x + y
```

- SyntaxError
- NameError
- ValueError
- TypeError

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

Errors 0000000

```
x = "Hello, world"
foo = x + y + z
```

- SyntaxError
- NameError
- ValueError
- TypeError

Errors

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

```
a = input()
b = input()
a + b = x
```

- No error
- SyntaxError
- NameError
- TypeError

Data Types and Errors

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

```
a = input()
b = input()
x = a + b
```

- String
- Integer



Poll Question: Data Types

What is the result of running the following code if the user types in world and then hello?

```
a = int(input())
b = int(input())
x = a + b
```

- SyntaxError
- NameError
- ValueError
- TypeError

Converting from string to integer

```
x = input() #type(x) is str
x = int(x) #type of x is int
```

is the same as

```
x = int(input())
```

Your Questions!

Two options for remaining time

- Get Python/text editor setup using the instructions on under the lab section on the course website's about page.
- Get started on homework 1



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