

CS 106

Introduction to Computer Science I

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Today's topics

- More programmer-defined functions

Programmer-defined functions

How do we get data INTO the function?

How does a function get data OUT to the caller?

Programmer-defined functions

How do we get data INTO the function?

Through the parameter list

How does a function get data OUT to the caller?

return _____

Programmer-defined functions

Let's look at the functions we wrote last time and I want to point out that the parameters and any other variables created within the function are LOCAL to that function. This means they are only usable within the function.

Programmer-defined functions

Let's write a function that randomly recommends a Monty Python's Flying Circus episode to watch. According to wikipedia, there are 4 series (aka seasons) of the show, the first 3 of which have 13 episodes and the last has 6 episodes.

Let's change the one we wrote last time to allow every episode an equal chance of being recommended.

Programmer-defined functions

Let's write a function that takes in a list (assumed to be numbers) and creates and returns a new list that is 1 shorter in length and each element is the sum of the corresponding one in the original list and the next one in the original list.

e.g. if this list: `[5, 8, 10, -3]` is passed in, it should return `[13, 18, 7]`

Because $13 = 5 + 8$, $18 = 8 + 10$, $7 = 10 - 3$

Programmer-defined functions

Let's write a function determines if all the numbers in a list are divisible by 3.

e.g.

```
mylist = [9,12,6,3,21]
```

```
all_divisible_by_3(mylist) # should result in True
```

```
all_divisible_by_3([9,6,11,3]) # should result in False
```