

Python functions, user inputs, loops and conditional

We have a very needy customer today



Some examples of where python is used

Shopping website counts the sum of all the items you clicked to purchase using python

Good website to read about this:

<https://www.netguru.com/blog/8-top-companies-that-use-python-for-their-apps-examples-of-top-notch-python-applications>

Our customer



Build me a python app that adds numbers 1 and 2 everytime before you print a statment

Expected output:

```
$ python3 adding_numbers_basic.py
→ Sum of 1 and 2 is 3.
→ Hello! This is Statement 1
→ Sum of 1 and 2 is 3.
→ How are you! This is Statement 2
→ Sum of 1 and 2 is 3.
→ Bye! This is Statement 3
```

What did we learn

- Recap of addition operator, `print()` and `format()`

Very pleased but



Oh but now I would like the app to add 3 and 4 instead please

Expected output:

```
Expected output
$ python3 adding_numbers_basic.py
Sum of 3 and 4 is 7.
Hello! This is Statement 1
Sum of 3 and 4 is 7.
How are you! This is Statement 2
Sum of 3 and 4 is 7.
Bye! This is Statement 3
```

What did we learn

- Recap of addition operator, `print()` and `format()`
- What a function is
- How to write a function
- Calling function
- Importance of indentation in python
- Builtin functions

Mr. Bean again



Oh but now I want to be able to add 2 different numbers everytime

Expected output:

```
Expected output
$ python3 adding_numbers_basic.py
Sum of 1 and 2 is 3.
Hello! This is Statement 1
Sum of 3 and 4 is 7.
How are you! This is Statement 2
Sum of 7 and 9 is 16.
Bye! This is Statement 3
```

What did we learn

- Recap of addition operator, print() and format()
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- Function arguments

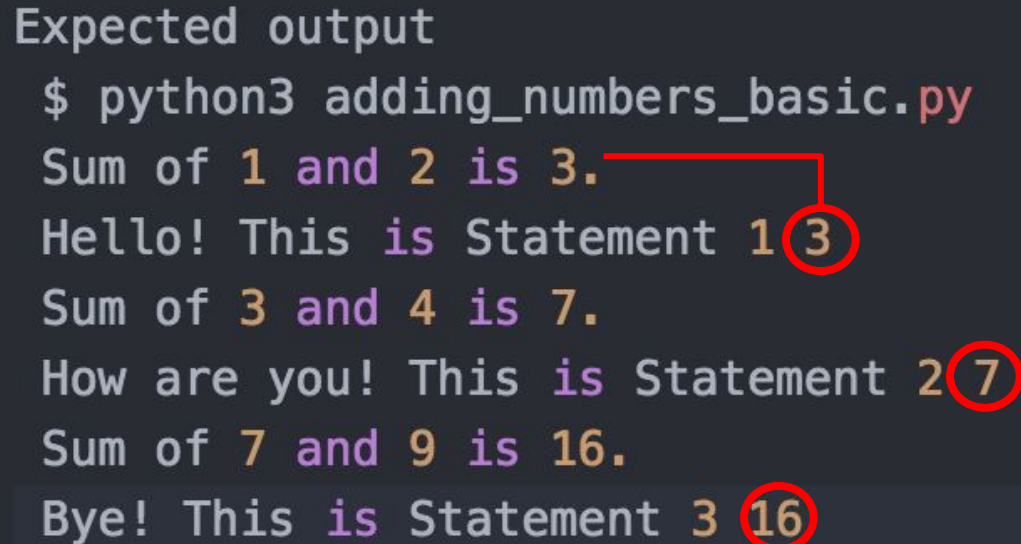
I have another very small request



Can we add the sum of the 2 numbers at the end of each statement Please

Expected output:

```
Expected output
$ python3 adding_numbers_basic.py
Sum of 1 and 2 is 3.
Hello! This is Statement 1 3
Sum of 3 and 4 is 7.
How are you! This is Statement 2 7
Sum of 7 and 9 is 16.
Bye! This is Statement 3 16
```



What did we learn

- Recap of addition operator, print() and format()
- What a function is
- How to write a function
- Calling function
- Importance of indentation in python
- Builtin functions
- Function arguments
- Returning value from a function

This is my last request I promise



"This is Statement {sum}" was a bad idea. Can we instead take a name from the person and type that

Expected output:

```
Expected output
$ python3 adding_numbers_basic.py
Please enter your name:
→ Nayana Shetty
Sum of 1 and 2 is 3.
Hello! Nayana Shetty
Sum of 3 and 4 is 7.
How are you! Nayana Shetty
Sum of 7 and 9 is 16.
Bye! Nayana Shetty
```


What did we learn

- Recap of addition operator, print() and format()
- What a function is
- How to write a function
- Calling function
- Importance of indentation in python
- Builtin functions
- Function arguments
- Returning value from a function
- Taking an input from users

Some Good practices

- **Naming** variables and functions
- Keep the functions **small**
- **Sketch** what you are trying to do on paper helps
 - [Scratch](#) is a good way to start learn coding
- Write **clean code**
 - Indentation and spacing
 - Comments

Arrays

- `>>> a = 1`
- `>>> type(a)`
- `>>> a = "string"`
- `>>> type(a)`
- `>>> a = [1,2,3]`
- `>>> type(a)`
- `>>> print(a)`
- `>>> print(a[0])`
- `>>> print(a[2])`
- `>>> print(a[-1])`
- `>>> print(a[3])`
- `>>> print(len(a))`
- `>>> a.append(4)`
- `>>> print(a)`

For loop

- `for()`
- Let us print the list of things in a shopping cart

Conditional

- `if() else()`
- Stop taking input when the user types “pay”

More Loops

- `while()`

Play around with python

Learning coding: [AgileKata](#)

Python functions: [Codewar.com](#)