CCNY
Foundations of Data Science
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Activity 4

Functions

For my foundations of data science class, my colleagues and I got a chance to learn about python scripts. The python scripts we got to learn about were conditionals, comparisons, string methods, loops, functions, version control, data cleaning, data collection, data analysis, and text analysis. One python script that I would like to talk about is functions. Now, what exactly is a command? A python command is a behavioral design pattern that converts requests or simple operation into objects. Functions are what runs a command due to it being the way of building up a code to perform specific tasks. Functions are also useful because it organizes your code very well and stops you from repeating a code over and over again. Examples of built-in-python functions are “print(), len(), and type()”; what this does is help determine or define what is being commanded. Below, I will be making a tutorial of a function; therefore, it can give you an example of how to use functions.

Tutorial:

- If you were to make a function of asking you friend out, you would first type the word “def” and then “asking_your_friend_out”
- Example : def asking_your_friend_out

Note: What does the word def mean?
The word Def is short for define which means you are defining the function.

- After tying this you would need to use the word print and then type what exactly you are going to ask and tell your friend

Note: “Print()” helps display the text on your screen or display what exactly you are going to type or say on your screen.

- Example:
- Def asking_your_crush_out
  Print(“Hey, I been knowing you for such a long time.”)
  Print(“Things about us has been on my mind lately.”)
  Print(“I wanted to know if I could take you on a date?”)
  Print(“ I’ll let you know what I’ve been thinking about only if your willing to go.”)
  Print(“ Please?”)

  Note: Make sure that you indent or else an error will appear and the function would not be defined.

- After typing this, the next thing you would need to do is type in return under the function: therefore, you can make a return statement

What is a return statement?

- The return statement executes the function that needs to be defined by putting what needs to be said out there by writing it in full sentences without built-in python functions being included.

```
Def asking_your_friend_out
   Print( “Hey, I’ve been knowing you for such a long time.”)
   Print( “Things about us has been on my mind lately.”)
   Print( “I wanted to know if I could take you on a date?”)
   Print(“ I’ll let you know what I’ve been thinking about only if your willing to go.”)
   Print(“ Please?”)
   return
```

- Now, that you have done this python now has and idea of what needs to be said once you type “asking_your_crush_out()” then it will type out what you would want say to your crush

- asking_your_friend_out()
  Answer:

Hey, I’ve been knowing you for such a long time. Things about us have been on my mind lately. I wanted to know if I could take you on a date? I’ll let you know what I’ve been only if you're willing to go. Please?

- Also, if you would like to include your mysterious crush name and his or her name is Berline you would then need to retype the function but include “to_name=Berlin” with braces.

Example:

```
Def asking_your_friend_out (to name = ‘Berlin”)
   Print( “Hey {to_name}, I’ve been knowing you for such a long time.”)
   Print( “Things about us has been on my mind lately.”)
   Print( “I wanted to know if I could take you on a date?”)
   Print(“ I’ll let you know what I’ve been thinking about only if your willing to go.”)
   Print(“ Please?”)
   return
```

Answer:

Hey Berlin, I’ve been knowing you for such a long time. Things about us have been on my mind lately. I wanted to know if I could take you on a date? I’ll let you know what I’ve been only if you're willing to go. Please?

- More Keys:
  When dealing with a function you must have a parameter and an argument. Everything that I did previously is an example of a parameter and an argument. A parameter is

when a variable is listed inside the parentheses in the function definition. It acts as a placeholder for the values that will be passed onto the function when it is called. The value being passed onto the function when it is called is called a parameter. Once it is called it would provide the function information it needs in order to complete the task.