

DHcode.org

resources | debugging help

Python + Pandas

[Glossary of Terms for Python](#)

Python glossary of terms

Adapted from [InteractivePython.org](#) for DHcode.org

Basic terms about computing

algorithm

A general step by step process for solving a problem.

bug

An error in a program.

close

When you are done with a file, you should close it.

constant

Fixed values, either numbers, letters or strings, that do not change.

debugging

The process of finding and removing any of the three kinds of programming errors.

documentation

Where to find help

For questions about why to do something:

https://www.digitalocean.com/community/tutorial_series/how-to-code-in-python-3

For questions about how to do something:

<https://stackoverflow.com/questions/tagged/python-3>

<https://www.reddit.com/r/learnpython/wiki/index>

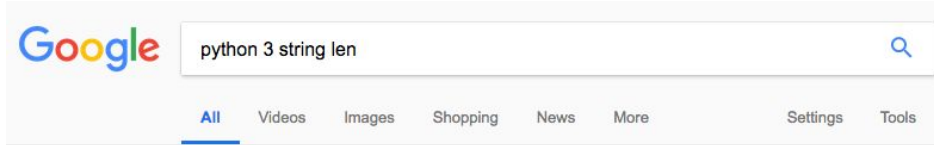
For practice (why + how):

<https://learnpythonthehardway.org/book/> <<< this is free!

http://introtopython.org/hello_world.html <<< this is free!

Google search tips

- use **Python3** , “**Python 3**” or **Python-3** as a keyword
this helps filter out most (but not all) python 2 advice
- use computational language when you can
- use plain language if you must



Google search for "python 3 string len". The search bar contains the text "python 3 string len" and a magnifying glass icon. Below the search bar are navigation tabs: All, Videos, Images, Shopping, News, More, Settings, Tools. The "All" tab is selected.

About 9,330,000 results (0.40 seconds)

Python 3 String len() Method - Tutorialspoint

https://www.tutorialspoint.com/python3/string_len.htm

Python 3 String len() Method - Learning Python 3 in simple and easy steps : A beginner's tutorial containing complete knowledge of Python Syntax Object ...

Python String len() Method - Tutorialspoint

https://www.tutorialspoint.com/python/string_len.htm

Python String len() Method - Learn Python in simple and easy steps starting from basic to advanced concepts with examples including Python Syntax Object ...

How to get the size of a string in Python? - Stack Overflow

<https://stackoverflow.com/questions/.../how-to-get-the-size-of-a-string-in-python>

Feb 11, 2011 - A. The len() function in Python 2 returns count of bytes allocated to store ... print(len('Йцуй'.decode('utf8'))) #String contains Cyrillic symbols 3.

string length - Python 3.x - don't count carriage returns ... 2 answers Sep 18, 2017

python - Using function len() in python3 3 answers Aug 10, 2016

Python 3 variable in string len function 1 answer Sep 1, 2014

Is there a reason Python strings don't have a string ... 8 answers Oct 25, 2008

More results from stackoverflow.com

2. Built-in Functions — Python 3.6.5 documentation

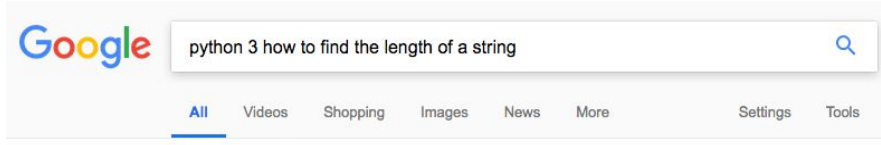
<https://docs.python.org/3/library/functions.html>

As repr() , return a string containing a printable representation of an object, but escape the non-ASCII Return the length (the number of items) of an object.

Python string length | len() - GeeksforGeeks

<https://www.geeksforgeeks.org/python-string-length-len/>

Python string length | len(). len() function is an inbuilt function in Python programming language that returns the length of the string. Syntax: len(string).



Google search for "python 3 how to find the length of a string". The search bar contains the text "python 3 how to find the length of a string" and a magnifying glass icon. Below the search bar are navigation tabs: All, Videos, Shopping, Images, News, More, Settings, Tools. The "All" tab is selected.

About 9,150,000 results (0.44 seconds)

Python String len() Method - Tutorialspoint

https://www.tutorialspoint.com/python/string_len.htm

Python String len() Method - Learn Python in simple and easy steps starting from basic to advanced concepts with examples including Python Syntax Object ...

Python 3 String len() Method - Tutorialspoint

https://www.tutorialspoint.com/python3/string_len.htm

Python 3 String len() Method - Learning Python 3 in simple and easy steps : A beginner's tutorial containing complete knowledge of Python Syntax Object ...

How to get the size of a string in Python? - Stack Overflow

<https://stackoverflow.com/questions/.../how-to-get-the-size-of-a-string-in-python>

Feb 11, 2011 - A. The len() function in Python 2 returns count of bytes allocated to store ... print(len('Йцуй'.decode('utf8'))) #String contains Cyrillic symbols 3.

python - how can I check the length of a list? 3 answers Apr 7, 2017

Python : Get size of string in bytes 4 answers Jun 6, 2015

python - How to get the length of words in a sentence? 4 answers Mar 30, 2014

python - String length without len function 13 answers Oct 21, 2010

More results from stackoverflow.com

Python string length | len() - GeeksforGeeks

<https://www.geeksforgeeks.org/python-string-length-len/>

Python string length | len(). len() function is an inbuilt function in Python programming language that returns the length of the string. Syntax: len(string).

Finding the length of a Python String - YouTube

<https://www.youtube.com/watch?v=5VkAlishHc0>

Oct 1, 2014 - Uploaded by John Philip Jones

Shows how to find the length of a Python String. ... Python 3 Programming Tutorial [18] Len() Function and ...

Error messages

Adapted from interactivepython.org

Parse error

Parse errors happen when you make an error in the syntax of your program.

Type error

Type Errors occur when you you try to combine two objects that are not compatible.

Name error

Name errors almost always mean that you have used a variable before it has a value.

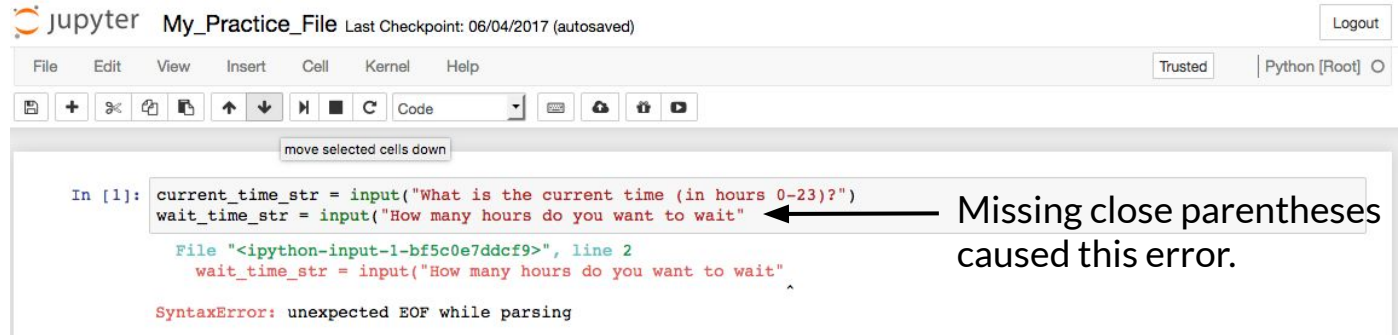
Value error

Value errors occur when the variable expects the value to be a certain data type but it gets something different.

Parse error

Parse errors happen when you make an error in the syntax of your program.

Syntax errors are like making grammatical errors in writing. If you don't use periods and commas in your writing then you are making it hard for other readers to figure out what you are trying to say. Code also has grammatical rules that must be followed or else the program can't figure out what you are trying to say. Usually Parse Errors can be traced back to missing punctuation characters, such as parentheses, quotation marks, or commas.



```
Jupyter My_Practice_File Last Checkpoint: 06/04/2017 (autosaved) Logout  
File Edit View Insert Cell Kernel Help Trusted | Python [Root] O  
[Icons]  
move selected cells down  
In [1]: current_time_str = input("What is the current time (in hours 0-23)?")  
        wait_time_str = input("How many hours do you want to wait"  
                               File "<ipython-input-1-bf5c0e7ddcf9>", line 2  
                               wait_time_str = input("How many hours do you want to wait"  
                               ^  
SyntaxError: unexpected EOF while parsing
```

Missing close parentheses caused this error.

Type error

Type Errors occur when you you try to combine two objects that are not compatible.

For example you try to add together an integer and a string. Usually type errors can be isolated to lines that are using mathematical operators, and usually the line number given by the error message is an accurate indication of the line.

```
In [19]: number = str(input("What's your favorite number? "))
```

```
What's your favorite number? 7
```

```
In [20]: print(number)
```

```
7
```

```
In [21]: print(number + 1)
```

```
-----  
TypeError                                 Traceback (most recent call last)  
<ipython-input-21-3ad155d8df06> in <module>()  
----> 1 print(number + 1)  
  
TypeError: Can't convert 'int' object to str implicitly
```


Name error

Name errors almost always mean that you have used a variable before it has a value.

Often Name Errors are simply caused by typos in your code. They can be hard to spot if you don't have a good eye for catching spelling mistakes. Other times you may simply mis-remember the name of a variable or even a function you want to call. Or you didn't give the value a variable name yet.

```
In [12]: my_lucky_number = 7
         your_lucky_number = four ←
         our_lucky_numbers = my_lucky_number + your_lucky_number

-----
NameError                                Traceback (most recent call last)
<ipython-input-12-293e70a8be42> in <module>()
      1 my_lucky_number = 7
----> 2 your_lucky_number = four
      3 our_lucky_numbers = my_lucky_number + your_lucky_number

NameError: name 'four' is not defined
```

The value here is missing the quote marks so it is not written correctly as a string.

But watch out! The next line will also throw an error. The code is setup to add the two numbers. Strings and ints are different data types and can't be added.

Value error

Value errors occur when the variable expects the value to be a certain data type but it gets something different. This tends to happen when you're asking for user input but did not include specific enough directions about how to enter the data.

Be sure to comment your code, printing very explicit instructions and/or being mindful of how you name the variables which will remind you about what types of values to expect.

```
In [25]: current_time_str = input("What is the current time (in hours 0-23)? ")
What is the current time (in hours 0-23)? 12:34

In [26]: current_time_int = int(current_time_str)

-----
ValueError                                Traceback (most recent call last)
<ipython-input-26-380a22bb36b3> in <module>()
----> 1 current_time_int = int(current_time_str)

ValueError: invalid literal for int() with base 10: '12:34'

In [27]: current_time_str = input("What is the current time (in hours 0-23)? ")
What is the current time (in hours 0-23)? 10

In [28]: current_time_int = int(current_time_str)
```

This input is correct for how we think about time but does not follow the prompt.

This input does follow the prompt, so it works.