



Functions and Methods

Code Girls 2021-22



Built-in Functions and Methods

- What is a function?
 - A block of reusable code to perform a single action
- What is a method?
 - A type of function that “belongs to” or is unique to an object type





Built-in functions

- int and float casting
 - int() and float()
- Regular math functions
 - Like pow() and abs()
- len()

```
Python 3.4.4 Shell
File Edit Shell Debug Options Window Help
Python 3.4.4 (v3.4.4:737efcadf5a6, Dec 20 2015, 19:28:18) [MSC v.1600 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> int(23.34)
23
>>> int(-3.1415)
-3
>>> int(5.0)
5
>>> float(7)
7.0
>>> complex(7,5)
(7+5j)
>>> complex(7)
(7+0j)
>>> |
```



String Methods

STRING METHOD	WHAT IT DOES
<code>s.center(width)</code>	Returns a copy of <code>s</code> centered within the given number of columns.
<code>s.count(sub [, start [, end]])</code>	Returns the number of non-overlapping occurrences of substring <code>sub</code> in <code>s</code> . Optional arguments <code>start</code> and <code>end</code> are interpreted as in slice notation.
<code>s.endswith(sub)</code>	Returns True if <code>s</code> ends with <code>sub</code> or False otherwise.
<code>s.find(sub [, start [, end]])</code>	Returns the lowest index in <code>s</code> where substring <code>sub</code> is found. Optional arguments <code>start</code> and <code>end</code> are interpreted as in slice notation.
<code>s.isalpha()</code>	Returns True if <code>s</code> contains only letters or False otherwise.
<code>s.isdigit()</code>	Returns True if <code>s</code> contains only digits or False otherwise.



String Methods

<code>s.join(sequence)</code>	Returns a string that is the concatenation of the strings in the sequence. The separator between elements is <code>s</code> .
<code>s.lower()</code>	Returns a copy of <code>s</code> converted to lowercase.
<code>s.replace(old, new [, count])</code>	Returns a copy of <code>s</code> with all occurrences of substring <code>old</code> replaced by <code>new</code> . If the optional argument <code>count</code> is given, only the first <code>count</code> occurrences are replaced.
<code>s.split([sep])</code>	Returns a list of the words in <code>s</code> , using <code>sep</code> as the delimiter string. If <code>sep</code> is not specified, any whitespace string is a separator.
<code>s.startswith(sub)</code>	Returns <code>True</code> if <code>s</code> starts with <code>sub</code> or <code>False</code> otherwise.
<code>s.strip([aString])</code>	Returns a copy of <code>s</code> with leading and trailing whitespace (tabs, spaces, newlines) removed. If <code>aString</code> is given, remove characters in <code>aString</code> instead.
<code>s.upper()</code>	Returns a copy of <code>s</code> converted to uppercase.



Practice - Cathy Words

- **Cathy like words that start with “c” and end with “y”. Write a program to see what words Cathy likes.**
 - Have the user input a word
 - If the user inputs a number instead of a word, have the user re-enter a word
 - Check what the first and last letter of the word is
 - Print whether Cathy likes the word

Replit link:

<https://replit.com/@CodeGirls1/21-22-Python-Lecture-4-Cathy-Words?v=1>



Practice - Password Verifier

- **Password Verifier**
 - Have the user enter a password
 - Make sure the password is longer than 10 characters
 - Make sure the password consists of lowercase and uppercase letters, as well as numbers
 - Print whether the password is valid

Replit link:

<https://replit.com/@CodeGirls1/21-22-Python-Lecture-4-Password-Verifier?v=1>



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