# Task1 : Fetching Data From Website

```python
In [2]: import requests
        python = requests.get("https://www.python.org/")
        python.text
```

```
Out[2]: '<!doctype html>\n<!--[if lt IE 7]>   <html class="no-js ie6 lt-ie7 lt-ie8 lt-ie
9">   <![endif]-->\n<!--[if IE 7]>      <html class="no-js ie7 lt-ie8 lt-ie9">
<![endif]-->\n<!--[if IE 8]>      <html class="no-js ie8 lt-ie9">
<![endif]-->\n<!--[if gt IE 8]><!--><html class="no-js" lang="en" dir="ltr">  <!--
<![endif]-->\n\n<head>\n    <script defer data-domain="python.org" src="https://an
alytics.python.org/js/script.outbound-links.js"></script>\n\n    <meta charset="ut
f-8">\n    <meta http-equiv="X-UA-Compatible" content="IE=edge">\n\n    <link rel
="prefetch" href="//ajax.googleapis.com/ajax/libs/jquery/1.8.2/jquery.min.js">\n
<link rel="prefetch" href="//ajax.googleapis.com/ajax/libs/jqueryui/1.12.1/jquery-
ui.min.js">\n\n    <meta name="application-name" content="Python.org">\n    <meta
name="msapplication-tooltip" content="The official home of the Python Programming
Language">\n    <meta name="apple-mobile-web-app-title" content="Python.org">\n
<meta name="apple-mobile-web-app-capable" content="yes">\n    <meta name="apple-mo
bile-web-app-status-bar-style" content="black">\n\n    <meta name="viewport" conte
nt="width=device-width, initial-scale=1.0">\n    <meta name="HandheldFriendly" con
tent="True">\n    <meta name="format-detection" content="telephone=no">\n    <meta
http-equiv="cleartype" content="on">\n    <meta http-equiv="imagetoolbar" content
="false">\n\n    <script async\n             src="https://media.ethicalads.io/medi
a/client/v1.4.0/ethicalads.min.js"\n             integrity="sha256-U3hKDidudIaxBDEz
wGJApJgPEf2mWk6cfMWghrAa6i0= sha384-UcmsCqcNRSLW/dV3Lo1oCi2/VaurXbib6p4HyUEOeIa/4O
psrnucrugAefzVZJfI sha512-q4t1L4xEjGV2R4hzqCa41P8jrgFUS8xTb8rdNv4FGvw7FpydVj/kkxBJ
HOiaoxHa8olCcx1Slk9K+3sNbsM4ug=="\n             crossorigin="anonymous"\n    ></scr
ipt>\n    <script src="/static/js/libs/modernizr.js"></script>\n\n    <link href
="/static/stylesheets/style.08a078d0aa02.css" rel="stylesheet" type="text/css" med
ia="all" title="default" />\n    <link href="/static/stylesheets/mq.98d6092b2ada.c
ss" rel="stylesheet" type="text/css" media="not print, braille, embossed, speech,
tty" />\n    <link href="/static/stylesheets/no-mq.bf0c425cdb73.css" rel="styleshe
et" type="text/css" media="screen" />\n    \n\n    <!--[if (lte IE 8)&(!IEMobile)]
>\n    <link href="/static/stylesheets/no-mq.bf0c425cdb73.css" rel="stylesheet" ty
pe="text/css" media="screen" />\n    \n    \n    <![endif]-->\n    <link rel="styl
esheet" href="//ajax.googleapis.com/ajax/libs/jqueryui/1.12.1/themes/smoothness/jq
uery-ui.css">\n\n    \n    <link rel="icon" type="image/x-icon" href="/static/favi
con.ico">\n    <link rel="apple-touch-icon-precomposed" sizes="144x144" href="/sta
tic/apple-touch-icon-144x144-precomposed.png">\n    <link rel="apple-touch-icon-pr
ecomposed" sizes="114x114" href="/static/apple-touch-icon-114x114-precomposed.pn
g">\n    <link rel="apple-touch-icon-precomposed" sizes="72x72" href="/static/appl
e-touch-icon-72x72-precomposed.png">\n    <link rel="apple-touch-icon-precomposed"
href="/static/apple-touch-icon-precomposed.png">\n    <link rel="apple-touch-icon"
href="/static/apple-touch-icon-precomposed.png">\n\n    \n    <meta name="msapplic
ation-TileImage" content="/static/metro-icon-144x144.png"><!-- white shape -->\n
<meta name="msapplication-TileColor" content="#3673a5"><!-- python blue -->\n    <
meta name="msapplication-navbutton-color" content="#3673a5">\n\n    <title>Welcome
to Python.org</title>\n\n    <meta name="description" content="The official home o
f the Python Programming Language">\n    <meta name="keywords" content="Python pro
gramming language object oriented web free open source software license documentat
ion download community">\n\n    \n    <meta property="og:type" content="website">
\n    <meta property="og:site_name" content="Python.org">\n    <meta property="og:
title" content="Welcome to Python.org">\n    <meta property="og:description" conte
nt="The official home of the Python Programming Language">\n    \n    <meta proper
ty="og:image" content="https://www.python.org/static/opengraph-icon-200x200.png">
\n    <meta property="og:image:secure_url" content="https://www.python.org/static/
opengraph-icon-200x200.png">\n    \n    <meta property="og:url" content="https://w
ww.python.org/">\n\n    <link rel="author" href="/humans.txt">\n\n    <link rel="a
lternate" type="application/rss+xml" title="Python Enhancement Proposals"\n
href="https://peps.python.org/peps.rss">\n    <link rel="alternate" type="applicat
ion/rss+xml" title="Python Job Opportunities"\n          href="https://www.python.
```

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org/jobs/feed/rss/">\n    <link rel="alternate" type="application/rss+xml" title
="Python Software Foundation News"\n         href="https://feeds.feedburner.com/P
ythonSoftwareFoundationNews">\n    <link rel="alternate" type="application/rss+xm
l" title="Python Insider"\n         href="https://feeds.feedburner.com/PythonInsi
der">\n    <link rel="alternate" type="application/rss+xml" title="Python Release
s"\n         href="https://www.python.org/downloads/feed.rss">\n\n    \n\n    \n
<script type="application/ld+json">\n     {\n         "@context": "https://schema.or
g",\n        "@type": "WebSite",\n        "url": "https://www.python.org/",\n
"potentialAction": {\n          "@type": "SearchAction",\n          "target": "http
s://www.python.org/search/?q={search_term_string}",\n          "query-input": "requ
ired name=search_term_string"\n        }\n    }\n    </script>\n\n    \n    <scrip
t type="text/javascript">\n     var _gaq = _gaq || [];\n     _gaq.push([\'_setAccoun
t\', \'UA-39055973-1\']);\n     _gaq.push([\'_trackPageview\']);\n\n     (function()
{\n       var ga = document.createElement(\'script\'); ga.type = \'text/javascrip
t\'; ga.async = true;\n       ga.src = (\'https:\' == document.location.protocol
? \'https://ssl\' : \'http://www\') + \'.google-analytics.com/ga.js\';\n          va
r s = document.getElementsByTagName(\'script\')[0]; s.parentNode.insertBefore(ga,
s);\n     })();\n    </script>\n    \n</head>\n\n\n<body class="python home" id="home
page">\n\n    <div id="touchnav-wrapper">\n\n      <div id="nojs" class="do-not-
print">\n          <p><strong>Notice:</strong> While JavaScript is not essential
for this website, your interaction with the content will be limited. Please turn J
avaScript on for the full experience. </p>\n        </div>\n\n        <!--[if lte
IE 8]>\n        <div id="oldie-warning" class="do-not-print">\n          <p>\n
<strong>Notice:</strong> Your browser is <em>ancient</em>. Please\n
<a href="http://browsehappy.com/">upgrade to a different browser</a> to experience
a better web.\n          </p>\n        </div>\n        <![endif]-->\n\n
<!-- Sister Site Links -->\n        <div id="top" class="top-bar do-not-print">\n
\n          <nav class="meta-navigation container" role="navigation">\n\n
\n            <div class="skip-link screen-reader-text">\n
<a href="#content" title="Skip to content">Skip to content</a>\n              </
div>\n\n            \n            <a id="close-python-network" class="jump
-link" href="#python-network" aria-hidden="true">\n              <span aria-
hidden="true" class="icon-arrow-down"><span>&#9660;</span></span> Close\n
</a>\n\n            \n\n<ul class="menu" role="tree">\n    \n    <li class="py
thon-meta current_item selectedcurrent_branch selected">\n        <a href="/" titl
e="The Python Programming Language" class="current_item selectedcurrent_branch sel
ected">Python</a>\n    </li>\n    \n    <li class="psf-meta ">\n        <a href="h
ttps://www.python.org/psf/" title="The Python Software Foundation" >PSF</a>\n
</li>\n    \n    <li class="docs-meta ">\n        <a href="https://docs.python.or
g" title="Python Documentation" >Docs</a>\n    </li>\n    \n    <li class="pypi-me
ta ">\n        <a href="https://pypi.org/" title="Python Package Index" >PyPI</a>
\n    </li>\n    \n    <li class="jobs-meta ">\n        <a href="/jobs/" title="Py
thon Job Board" >Jobs</a>\n    </li>\n    \n    <li class="shop-meta ">\n        <
a href="/community/"  >Community</a>\n    </li>\n    \n</ul>\n\n\n
<a id="python-network" class="jump-link" href="#top" aria-hidden="true">\n
<span aria-hidden="true" class="icon-arrow-up"><span>&#9650;</span></span> The Pyt
hon Network\n            </a>\n\n          </nav>\n\n        </div>\n\n
<!-- Header elements -->\n        <header class="main-header" role="banner">\n
<div class="container">\n\n            <h1 class="site-headline">\n
<a href="/"><img class="python-logo" src="/static/img/python-logo.png" alt="python
&trade;"></a>\n            </h1>\n\n            <div class="options-bar-co
ntainer do-not-print">\n                <a href="https://psfmember.org/civicr
m/contribute/transact?reset=1&id=2" class="donate-button">Donate</a>\n
<div class="options-bar">\n                    \n                      <a id
="site-map-link" class="jump-to-menu" href="#site-map"><span class="menu-icon">&eq
uiv;</span> Menu</a><form class="search-the-site" action="/search/" method="get">
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\n                              <fieldset title="Search Python.org">\n\n
<span aria-hidden="true" class="icon-search"></span>\n\n
<label class="screen-reader-text" for="id-search-field">Search This Site</label>\n
<input id="id-search-field" name="q" type="search" role="textbox" class="search-fi
eld" placeholder="Search" value="" tabindex="1">\n\n
<button type="submit" name="submit" id="submit" class="search-button" title="Submi
t this Search" tabindex="3">\n                                            GO\n
</button>\n\n                                            \n                              <!-
-[if IE]><input type="text" style="display: none;" disabled="disabled" size="1" ta
bindex="4"><![endif]-->\n\n                        </fieldset>\n
</form><span class="breaker"></span><div class="adjust-font-size" aria-hidden="tru
e">\n                        <ul class="navigation menu" aria-label="Adjust Te
xt Size on Page">\n                                <li class="tier-1 last" aria-ha
spopup="true">\n                                    <a href="#" class="action-trig
ger"><strong><small>A</small> A</strong></a>\n
<ul class="subnav menu">\n                                        <li class="tier-
2 element-1" role="treeitem"><a class="text-shrink" title="Make Text Smaller" href
="javascript:;">Smaller</a></li>\n                                        <li clas
s="tier-2 element-2" role="treeitem"><a class="text-grow" title="Make Text Larger"
href="javascript:;">Larger</a></li>\n                                        <li c
lass="tier-2 element-3" role="treeitem"><a class="text-reset" title="Reset any fon
t size changes I have made" href="javascript:;">Reset</a></li>\n
</ul>\n                                </li>\n                            </ul>\n
</div><div class="winkwink-nudgenudge">\n                        <ul class="na
vigation menu" aria-label="Social Media Navigation">\n
<li class="tier-1 last" aria-haspopup="true">\n
<a href="#" class="action-trigger">Socialize</a>\n
<ul class="subnav menu">\n                                        <li class="tier-
2 element-1" role="treeitem"><a href="https://www.linkedin.com/company/python-soft
ware-foundation/"><i aria-hidden="true" class="fa fa-linkedin-square"></i>LinkedIn
</a></li>\n                                        <li class="tier-2 element-2" ro
le="treeitem"><a href="https://fosstodon.org/@ThePSF"><span aria-hidden="true" cla
ss="icon-mastodon"></span>Mastodon</a></li>\n
<li class="tier-2 element-3" role="treeitem"><a href="/community/irc/"><span aria-
hidden="true" class="icon-freenode"></span>Chat on IRC</a></li>\n
<li class="tier-2 element-4" role="treeitem"><a href="https://twitter.com/ThePSF">
<span aria-hidden="true" class="icon-twitter"></span>Twitter</a></li>\n
</ul>\n                                </li>\n                            </ul>\n
</div>\n                    <span data-html-include="/authenticated"></span>\n
</div><!-- end options-bar -->\n                    </div>\n\n                <nav id
="mainnav" class="python-navigation main-navigation do-not-print" role="navigatio
n">\n                    \n                        \n<ul class="navigation menu" r
ole="menubar" aria-label="Main Navigation">\n  \n    \n    \n    <li id="about" cl
ass="tier-1 element-1  " aria-haspopup="true">\n        <a href="/about/" title=""
class="">About</a>\n        \n            \n\n<ul class="subnav menu" role="menu"
aria-hidden="true">\n    \n        <li class="tier-2 element-1" role="treeitem"><a
href="/about/apps/" title="">Applications</a></li>\n    \n        <li class="tier-
2 element-2" role="treeitem"><a href="/about/quotes/" title="">Quotes</a></li>\n
\n        <li class="tier-2 element-3" role="treeitem"><a href="/about/gettingstar
ted/" title="">Getting Started</a></li>\n    \n        <li class="tier-2 element-
4" role="treeitem"><a href="/about/help/" title="">Help</a></li>\n    \n        <l
i class="tier-2 element-5" role="treeitem"><a href="http://brochure.getpython.inf
o/" title="">Python Brochure</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n
\n    \n    <li id="downloads" class="tier-1 element-2  " aria-haspopup="true">\n
<a href="/downloads/" title="" class="">Downloads</a>\n        \n            \n\n<
ul class="subnav menu" role="menu" aria-hidden="true">\n    \n        <li class="t
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ier-2 element-1" role="treeitem"><a href="/downloads/" title="">All releases</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/downloads/source/" title="">Source code</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="/downloads/windows/" title="">Windows</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/downloads/macos/" title="">macOS</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="/downloads/android/" title="">Android</a></li>\n    \n        <li class="tier-2 element-6" role="treeitem"><a href="/download/other/" title="">Other Platforms</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href="https://docs.python.org/3/license.html" title="">License</a></li>\n    \n        <li class="tier-2 element-8" role="treeitem"><a href="/download/alternatives" title="">Alternative Implementations</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    \n    \n    <li id="documentation" class="tier-1 element-3  " aria-haspopup="true">\n        <a href="/doc/" title="" class="">Documentation</a>\n        \n\n\n<ul class="subnav menu" role="menu" aria-hidden="true">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/doc/" title="">Docs</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/doc/av" title="">Audio/Visual Talks</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="https://wiki.python.org/moin/BeginnersGuide" title="">Beginner&#x27;s Guide</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="https://devguide.python.org/" title="">Developer&#x27;s Guide</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="https://docs.python.org/faq/" title="">FAQ</a></li>\n    \n        <li class="tier-2 element-6" role="treeitem"><a href="http://wiki.python.org/moin/Languages" title="">Non-English Docs</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href="https://peps.python.org" title="">PEP Index</a></li>\n    \n        <li class="tier-2 element-8" role="treeitem"><a href="https://wiki.python.org/moin/PythonBooks" title="">Python Books</a></li>\n    \n        <li class="tier-2 element-9" role="treeitem"><a href="/doc/essays/" title="">Python Essays</a></li>\n    \n</ul>\n    \n        \n    </li>\n    \n    \n    \n    <li id="community" class="tier-1 element-4  " aria-haspopup="true">\n        <a href="/community/" title="" class="">Community</a>\n        \n        \n\n\n<ul class="subnav menu" role="menu" aria-hidden="true">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/community/diversity/" title="">Diversity</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/community/lists/" title="">Mailing Lists</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="/community/irc/" title="">IRC</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/community/forums/" title="">Forums</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="/psf/annual-report/2024/" title="">PSF Annual Impact Report</a></li>\n    \n        <li class="tier-2 element-6" role="treeitem"><a href="/community/workshops/" title="">Python Conferences</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href="/community/sigs/" title="">Special Interest Groups</a></li>\n    \n        <li class="tier-2 element-8" role="treeitem"><a href="/community/logos/" title="">Python Logo</a></li>\n    \n        <li class="tier-2 element-9" role="treeitem"><a href="https://wiki.python.org/moin/" title="">Python Wiki</a></li>\n    \n        <li class="tier-2 element-10" role="treeitem"><a href="/psf/conduct/" title="">Code of Conduct</a></li>\n    \n        <li class="tier-2 element-11" role="treeitem"><a href="/community/awards" title="">Community Awards</a></li>\n    \n        <li class="tier-2 element-12" role="treeitem"><a href="/psf/get-involved/" title="">Get Involved</a></li>\n    \n        <li class="tier-2 element-13" role="treeitem"><a href="/psf/community-stories/" title="">Shared Stories</a></li>\n    \n</ul>\n\n\n        \n    </li>\n    \n    \n    \n    <li id="success-stories" class="tier-1 element-5  " aria-haspopup="true">\n        <a href="/success-stories/" title="success-stories" class="">Success Stories</a>\n        \n                \n\n\n<ul class="subnav menu" role="menu" aria-hidden="true">\n    \n        <li class="tier-2 element-1" ro

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le="treeitem"><a href="/success-stories/category/arts/" title="">Arts</a></li>\n
\n            <li class="tier-2 element-2" role="treeitem"><a href="/success-stories/c
ategory/business/" title="">Business</a></li>\n    \n        <li class="tier-2 ele
ment-3" role="treeitem"><a href="/success-stories/category/education/" title="">Ed
ucation</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a hr
ef="/success-stories/category/engineering/" title="">Engineering</a></li>\n    \n
<li class="tier-2 element-5" role="treeitem"><a href="/success-stories/category/go
vernment/" title="">Government</a></li>\n    \n        <li class="tier-2 element-
6" role="treeitem"><a href="/success-stories/category/scientific/" title="">Scient
ific</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href
="/success-stories/category/software-development/" title="">Software Development</
a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    \n    \n    <li id="news" c
lass="tier-1 element-6  " aria-haspopup="true">\n        <a href="/blogs/" title
="News from around the Python world" class="">News</a>\n        \n            \n\n
<ul class="subnav menu" role="menu" aria-hidden="true">\n    \n        <li class
="tier-2 element-1" role="treeitem"><a href="/blogs/" title="Python Insider Blog P
osts">Python News</a></li>\n    \n        <li class="tier-2 element-2" role="treei
tem"><a href="/psf/newsletter/" title="Python Software Foundation Newsletter">PSF
Newsletter</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a
href="http://pyfound.blogspot.com/" title="PSF Blog">PSF News</a></li>\n    \n
<li class="tier-2 element-4" role="treeitem"><a href="http://pycon.blogspot.com/"
title="PyCon Blog">PyCon US News</a></li>\n    \n        <li class="tier-2 element
-5" role="treeitem"><a href="http://planetpython.org/" title="Planet Python">News
from the Community</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    \n
\n    <li id="events" class="tier-1 element-7  " aria-haspopup="true">\n        <a
href="/events/" title="" class="">Events</a>\n        \n            \n\n<ul class
="subnav menu" role="menu" aria-hidden="true">\n    \n        <li class="tier-2 el
ement-1" role="treeitem"><a href="/events/python-events/" title="">Python Events</
a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/even
ts/python-user-group/" title="">User Group Events</a></li>\n    \n        <li clas
s="tier-2 element-3" role="treeitem"><a href="/events/python-events/past/" title
="">Python Events Archive</a></li>\n    \n        <li class="tier-2 element-4" rol
e="treeitem"><a href="/events/python-user-group/past/" title="">User Group Events
Archive</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a hr
ef="https://wiki.python.org/moin/PythonEventsCalendar#Submitting_an_Event" title
="">Submit an Event</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    \n
\n    \n \n</ul>\n\n                                \n                </nav>\n\n
<div class="header-banner "> <!-- for optional "do-not-print" class -->\n
\n        <div id="dive-into-python" class="flex-slideshow slideshow">\n\n
<ul class="launch-shell menu" id="launch-shell">\n                    <li>\n
<a class="button prompt" id="start-shell" data-shell-container="#dive-into-python"
href="/shell/">&gt;_\n                        <span class="message">Launch Interac
tive Shell</span>\n                    </a>\n                </li>\n            </
ul>\n\n        <ul class="slides menu">\n                \n                <li
>\n                    <div class="slide-code"><pre><code><span class="comment">#
Python 3: Fibonacci series up to n</span>\r\n>>> def fib(n):\r\n>>>     a, b = 0,
1\r\n>>>     while a &lt; n:\r\n>>>         print(a, end=\' \')\r\n>>>         a,
b = b, a+b\r\n>>>     print()\r\n>>> fib(1000)\r\n<span class="output">0 1 1 2 3 5
8 13 21 34 55 89 144 233 377 610 987</span></code></pre></div>\n
<div class="slide-copy"><h1>Functions Defined</h1>\r\n<p>The core of extensible pr
ogramming is defining functions. Python allows mandatory and optional arguments, k
eyword arguments, and even arbitrary argument lists. <a href="//docs.python.org/3/
tutorial/controlflow.html#defining-functions">More about defining functions in Pyt
hon 3</a></p></div>\n                    </li>\n                    \n
<li>\n                    <div class="slide-code"><pre><code><span class="commen
t"># Python 3: List comprehensions</span>\r\n>>> fruits = [\'Banana\', \'Apple\',
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\'Lime\']\r\n>>> loud_fruits = [fruit.upper() for fruit in fruits]\r\n>>> print(lo
ud_fruits)\r\n<span class="output">[\'BANANA\', \'APPLE\', \'LIME\']</span>\r\n\r
\n<span class="comment"># List and the enumerate function</span>\r\n>>> list(enume
rate(fruits))\r\n<span class="output">[(0, \'Banana\'), (1, \'Apple\'), (2, \'Lime
\')]</span></code></pre></div>\n                    <div class="slide-copy"><h1>Co
mpound Data Types</h1>\r\n<p>Lists (known as arrays in other languages) are one of
the compound data types that Python understands. Lists can be indexed, sliced and
manipulated with other built-in functions. <a href="//docs.python.org/3/tutorial/i
ntroduction.html#lists">More about lists in Python 3</a></p></div>\n
</li>\n                  \n                  <li>\n                      <div class="sli
de-code"><pre><code><span class="comment"># Python 3: Simple arithmetic</span>\r\n
>>> 1 / 2\r\n<span class="output">0.5</span>\r\n>>> 2 ** 3\r\n<span class="outpu
t">8</span>\r\n>>> 17 / 3  <span class="comment"># classic division returns a floa
t</span>\r\n<span class="output">5.666666666666667</span>\r\n>>> 17 // 3  <span cl
ass="comment"># floor division</span>\r\n<span class="output">5</span></code></pre
></div>\n                    <div class="slide-copy"><h1>Intuitive Interpretation
</h1>\r\n<p>Calculations are simple with Python, and expression syntax is straight
forward: the operators <code>+</code>, <code>-</code>, <code>*</code> and <code>/
</code> work as expected; parentheses <code>()</code> can be used for grouping. <a
href="http://docs.python.org/3/tutorial/introduction.html#using-python-as-a-calcul
ator">More about simple math functions in Python 3</a>.</p></div>\n
</li>\n                  \n                  <li>\n                      <div class="sli
de-code"><pre><code><span class="comment"># For loop on a list</span>\r\n>>> numbe
rs = [2, 4, 6, 8]\r\n>>> product = 1\r\n>>> for number in numbers:\r\n...     produ
ct = product * number\r\n... \r\n>>> print(\'The product is:\', product)\r\n<span
class="output">The product is: 384</span></code></pre></div>\n
<div class="slide-copy"><h1>All the Flow You&rsquo;d Expect</h1>\r\n<p>Python know
s the usual control flow statements that other languages speak &mdash; <code>if</c
ode>, <code>for</code>, <code>while</code> and <code>range</code> &mdash; with som
e of its own twists, of course. <a href="//docs.python.org/3/tutorial/controlflow.
html">More control flow tools in Python 3</a></p></div>\n                     </li
>\n                  \n                  <li>\n                      <div class="slide-c
ode"><pre><code><span class="comment"># Simple output (with Unicode)</span>\r\n>>>
print("Hello, I\'m Python!")\r\n<span class="output">Hello, I\'m Python!</span>\r
\n<span class="comment"># Input, assignment</span>\r\n>>> name = input(\'What is y
our name?\\n\')\r\n<span class="output">What is your name?\r\nPython</span>\r\n>>>
print(f\'Hi, {name}.\')\r\n<span class="output">Hi, Python.</span></code>\r\n</pre
></div>\n                    <div class="slide-copy"><h1>Quick &amp; Easy to Learn
</h1>\r\n<p>Experienced programmers in any other language can pick up Python very
quickly, and beginners find the clean syntax and indentation structure easy to lea
rn. <a href="//docs.python.org/3/tutorial/">Whet your appetite</a> with our Python
 3 overview.</p></div>\n                  </li>\n                  \n
</ul>\n        </div>\n\n\n                </div>\n\n          \n          <di
v class="introduction">\n            <p>Python is a programming language that lets
you work quickly <span class="breaker"></span>and integrate systems more effective
ly. <a class="readmore" href="/doc/">Learn More</a></p>\n          </div>\n\n\n
</div><!-- end .container -->\n        </header>\n\n        <div id="content" clas
s="content-wrapper">\n            <!-- Main Content Column -->\n            <div c
lass="container">\n\n                <section class="main-content " role="main">\n
\n                            \n                            \n\n                            \n\n
\n\n                  \n\n                    <div class="row">\n\n                          <
div class="small-widget get-started-widget">\n                            <h2 class="w
idget-title"><span aria-hidden="true" class="icon-get-started"></span>Get Started
</h2>\r\n<p>Whether you\'re new to programming or an experienced developer, it\'s
easy to learn and use Python.</p>\r\n<p><a href="/about/gettingstarted/">Start wit
h our Beginner&rsquo;s Guide</a></p>\n                        </div>\n\n
```

```html
<div class="small-widget download-widget">\n                              <h2 class="widget-title"><span aria-hidden="true" class="icon-download"></span>Download</h2>\n<p>Python source code and installers are available for download for all versions!</p>\n<p>Latest: <a href="/downloads/release/python-3137/">Python 3.13.7</a></p>\n</div>\n\n                 <div class="small-widget documentation-widget">\n<h2 class="widget-title"><span aria-hidden="true" class="icon-documentation"></span>Docs</h2>\r\n<p>Documentation for Python\'s standard library, along with tutorials and guides, are available online.</p>\r\n<p><a href="https://docs.python.org">docs.python.org</a></p>\n                 </div>\n\n                 <div class="small-widget jobs-widget last">\n                  <h2 class="widget-title"><span aria-hidden="true" class="icon-jobs"></span>Jobs</h2>\r\n<p>Looking for work or have a Python related position that you\'re trying to hire for? Our <strong>relaunched community-run job board</strong> is the place to go.</p>\r\n<p><a href="//jobs.python.org">jobs.python.org</a></p>\n                 </div>\n\n</div>\n\n          <div class="list-widgets row">\n\n              <div class="medium-widget blog-widget">\n                             \n<div class="shrubbery">\n                   \n                       <h2 class="widget-title"><span aria-hidden="true" class="icon-news"></span>Latest News</h2>\n                   <p class="give-me-more"><a href="https://blog.python.org" title="More News">More</a></p>\n                       \n<ul class="menu">\n                   \n\n                       <li>\n<time datetime="2025-08-18T13:06:00+00:00"><span class="say-no-more">2025-</span>08-18</time>\n <a href="https://pyfound.blogspot.com/2025/08/the-2024-python-developer-survey.html">The 2024 Python Developer Survey Results are here!</a></li>\n                             \n<li>\n<time datetime="2025-08-14T19:15:00.000003+00:00"><span class="say-no-more">2025-</span>08-14</time>\n <a href="https://pythoninsider.blogspot.com/2025/08/python-3140rc2-and-3137-are-go.html">Python 3.14.0rc2 and 3.13.7 are go!</a></li>\n\n                       <li>\n<time datetime="2025-08-14T16:19:00.000003+00:00"><span class="say-no-more">2025-</span>08-14</time>\n <a href="https://pyfound.blogspot.com/2025/08/announcing-psf-board-candidates-for-2025.html">Announcing the PSF Board Candidates for 2025!</a></li>\n                             \n<li>\n<time datetime="2025-08-08T12:47:00.000004+00:00"><span class="say-no-more">2025-</span>08-08</time>\n <a href="https://pyfound.blogspot.com/2025/08/announcing-python-software-foundation.html">Announcing Python Software Foundation Fellow Members for Q2 2025! 🎉</a></li>\n                             \n<li>\n<time datetime="2025-08-07T12:45:00.000003+00:00"><span class="say-no-more">2025-</span>08-07</time>\n <a href="https://pyfound.blogspot.com/2025/08/unmasking-phantom-dependencies-with.html">Unmasking Phantom Dependencies with Software Bill-of-Materials as Ecosystem Neutral Metadata</a></li>\n
\n                       </ul>\n                   </div><!-- end .shrubbery -->\n\n                   </div>\n\n                 <div class="medium-widget event-widget last">\n                             \n                       <div class="shrubbery">\n                   \n                       <h2 class="widget-title"><span aria-hidden="true" class="icon-calendar"></span>Upcoming Events</h2>\n                   <p class="give-me-more"><a href="/events/calendars/" title="More Events">More</a></p>\n                       \n<ul class="menu">\n                   \n\n                   \n                       <li>\n<time datetime="2025-08-23T00:00:00+00:00"><span class="say-no-more">2025-</span>08-23</time>\n <a href="/events/python-events/2071/">StatusCode 2 Hackathon</a></li>\n
\n                   \n                       <li>\n<time datetime="2025-08-23T00:00:00+00:00"><span class="say-no-more">2025-</span>08-23</time>\n <a href="/events/python-events/2009/">PyCon Togo 2025</a></li>\n
\n                   \n                       <li>\n<time datetime="2025-08-26T16:00:00+00:0
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0"><span class="say-no-more">2025-</span>08-26</time>\n <a href="/events/python-us
er-group/2091/">PyLadies Amsterdam: Data science that ships: production-ready pipe
lines with Kedro</a></li>\n                                              \n
\n                                    \n                                    <li>\n<time da
tetime="2025-08-28T00:00:00+00:00"><span class="say-no-more">2025-</span>08-28</ti
me>\n <a href="/events/python-events/2027/">PyCon Kenya 2025</a></li>\n
\n                                    \n                                    \n
<li>\n<time datetime="2025-08-28T00:00:00+00:00"><span class="say-no-more">2025-</
span>08-28</time>\n <a href="/events/python-events/2020/">PyCon Poland 2025</a></l
i>\n                                    \n                                    \n
</ul>\n                          </div>\n\n                          </div>\n\n
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ium-widget success-stories-widget">\n                            \n\n\n\n
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<h2 class="widget-title"><span aria-hidden="true" class="icon-success-stories"></s
pan>Success Stories</h2>\n                                <p class="give-me-more"><a h
ref="/success-stories/" title="More Success Stories">More</a></p>\n\n\n
\n                                <div class="success-story-item" id="success-story-11
80">\n\n                                    <blockquote>\n
<a href="/success-stories/using-python-with-gretelai-to-generate-synthetic-locatio
n-data/">Generating realistic location data for users for testing or modeling simu
lations is a hard problem. Current approaches just create random locations inside
a box, placing users in waterways or on top of buildings. This inability to make a
ccurate, synthetic location data stifles a lot of innovative projects that require
diverse and complex datasets to fuel their work.</a>\n
</blockquote>\n\n                                    <table cellpadding="0" cellspacing
="0" border="0" width="100%" class="quote-from">\n
<tbody>\n                                        <tr>\n
\n                                            <td><p><a href="/success-stories/using-p
ython-with-gretelai-to-generate-synthetic-location-data/">Using Python with Grete
l.ai to Generate Synthetic Location Data</a> <em>by Alex Watson, co-founder and CP
O, Gretel.ai</em></p></td>\n                                        </tr>\n
</tbody>\n                                    </table>\n                                </div>
\n                                \n\n                                </div><!-- end .shrubber
y -->\n\n                            </div>\n\n                        <div class="medium-widg
et applications-widget last">\n                            <div class="shrubbery">\n
<h2 class="widget-title"><span aria-hidden="true" class="icon-python"></span>Use P
ython for&hellip;</h2>\r\n<p class="give-me-more"><a href="/about/apps" title="Mor
e Applications">More</a></p>\r\n\r\n<ul class="menu">\r\n    <li><b>Web Developmen
t</b>:\r\n        <span class="tag-wrapper"><a class="tag" href="http://www.django
project.com/">Django</a>, <a class="tag" href="http://www.pylonsproject.org/">Pyra
mid</a>, <a class="tag" href="http://bottlepy.org">Bottle</a>, <a class="tag" href
="http://tornadoweb.org">Tornado</a>, <a href="http://flask.pocoo.org/" class="ta
g">Flask</a>, <a class="tag" href="http://www.web2py.com/">web2py</a></span></li>
\r\n    <li><b>GUI Development</b>:\r\n        <span class="tag-wrapper"><a class
="tag" href="http://wiki.python.org/moin/TkInter">tkInter</a>, <a class="tag" href
="https://wiki.gnome.org/Projects/PyGObject">PyGObject</a>, <a class="tag" href="h
ttp://www.riverbankcomputing.co.uk/software/pyqt/intro">PyQt</a>, <a class="tag" h
ref="https://wiki.qt.io/PySide">PySide</a>, <a class="tag" href="https://kivy.or
g/">Kivy</a>, <a class="tag" href="http://www.wxpython.org/">wxPython</a>, <a clas
s="tag" href="https://dearpygui.readthedocs.io/en/latest/">DearPyGui</a></span></l
i>\r\n    <li><b>Scientific and Numeric</b>:\r\n        <span class="tag-wrapper">
\r\n<a class="tag" href="http://www.scipy.org">SciPy</a>, <a class="tag" href="htt
p://pandas.pydata.org/">Pandas</a>, <a href="http://ipython.org" class="tag">IPyth
on</a></span></li>\r\n    <li><b>Software Development</b>:\r\n        <span class
="tag-wrapper"><a class="tag" href="http://buildbot.net/">Buildbot</a>, <a class
```

="tag" href="http://trac.edgewall.org/">Trac</a>, <a class="tag" href="http://roundup.sourceforge.net/">Roundup</a></span></li>\r\n    <li><b>System Administration</b>:\r\n      <span class="tag-wrapper"><a class="tag" href="http://www.ansible.com">Ansible</a>, <a class="tag" href="https://saltproject.io">Salt</a>, <a class="tag" href="https://www.openstack.org">OpenStack</a>, <a class="tag" href="https://xon.sh">xonsh</a></span></li>\r\n</ul>\n                    </div><!-- end .shrubbery -->\n                    </div>\n\n                    </div>\n\n
<div class="psf-widget">\n\n                        <div class="python-logo"></div>\n
\n                        <h2 class="widget-title">\r\n    <span class="prompt">&gt;&gt;&gt;</span> <a href="/psf/">Python Software Foundation</a>\r\n</h2>\r\n\n<p>The mission of the Python Software Foundation is to promote, protect, and advance the Python programming language, and to support and facilitate the growth of a diverse and international community of Python programmers. <a class="readmore" href="/psf/">Learn more</a> </p>\r\n<p class="click-these">\r\n    <a class="button" href="/psf/membership/">Become a Member</a>\r\n    <a class="button" href="/psf/donations/">Donate to the PSF</a>\r\n</p>\n                    </div>\n\n\n\n\n
</section>\n\n                \n                \n\n                          \n
\n\n\n               </div><!-- end .container -->\n        </div><!-- end #content .content-wrapper -->\n\n        <!-- Footer and social media list -->\n           \n
<footer id="site-map" class="main-footer" role="contentinfo">\n            <div class="main-footer-links">\n                    <div class="container">\n\n
\n                    <a id="back-to-top-1" class="jump-link" href="#python-network"><span aria-hidden="true" class="icon-arrow-up"><span>&#9650;</span></span> Back to Top</a>\n\n                        \n\n<ul class="sitemap navigation menu do-not-print" role="tree" id="container">\n    \n    <li class="tier-1 element-1">\n
<a href="/about/" >About</a>\n        \n                \n\n<ul class="subnav menu">\n
\n        <li class="tier-2 element-1" role="treeitem"><a href="/about/apps/" title="">Applications</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/about/quotes/" title="">Quotes</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="/about/gettingstarted/" title="">Getting Started</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/about/help/" title="">Help</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="http://brochure.getpython.info/" title="">Python Brochure</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    <li class="tier-1 element-2">\n        <a href="/downloads/" >Downloads</a>\n        \n                \n\n<ul class="subnav menu">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/downloads/" title="">All releases</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/downloads/source/" title="">Source code</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="/downloads/windows/" title="">Windows</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/downloads/macos/" title="">macOS</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="/downloads/android/" title="">Android</a></li>\n    \n        <li class="tier-2 element-6" role="treeitem"><a href="/download/other/" title="">Other Platforms</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href="https://docs.python.org/3/license.html" title="">License</a></li>\n    \n        <li class="tier-2 element-8" role="treeitem"><a href="/download/alternatives" title="">Alternative Implementations</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    <li class="tier-1 element-3">\n        <a href="/doc/" >Documentation</a>\n        \n                \n\n<ul class="subnav menu">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/doc/" title="">Docs</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/doc/av" title="">Audio/Visual Talks</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="https://wiki.python.org/moin/BeginnersGuide" title="">Beginner&#x27;s Guide</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="https://devguide.python.org/" title="">Developer&#x27;s Guide</a></li>\n    \n        <li class="tier-2 element-5" ro

le="treeitem"><a href="https://docs.python.org/faq/" title="">FAQ</a></li>\n    \n        <li class="tier-2 element-6" role="treeitem"><a href="http://wiki.python.org/moin/Languages" title="">Non-English Docs</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href="https://peps.python.org" title="">PEP Index</a></li>\n    \n        <li class="tier-2 element-8" role="treeitem"><a href="https://wiki.python.org/moin/PythonBooks" title="">Python Books</a></li>\n    \n        <li class="tier-2 element-9" role="treeitem"><a href="/doc/essays/" title="">Python Essays</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    <li class="tier-1 element-4">\n        <a href="/community/" >Community</a>\n        \n        \n\n    <ul class="subnav menu">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/community/diversity/" title="">Diversity</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/community/lists/" title="">Mailing Lists</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="/community/irc/" title="">IRC</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/community/forums/" title="">Forums</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="/psf/annual-report/2024/" title="">PSF Annual Impact Report</a></li>\n    \n        <li class="tier-2 element-6" role="treeitem"><a href="/community/workshops/" title="">Python Conferences</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href="/community/sigs/" title="">Special Interest Groups</a></li>\n    \n        <li class="tier-2 element-8" role="treeitem"><a href="/community/logos/" title="">Python Logo</a></li>\n    \n        <li class="tier-2 element-9" role="treeitem"><a href="https://wiki.python.org/moin/" title="">Python Wiki</a></li>\n    \n        <li class="tier-2 element-10" role="treeitem"><a href="/psf/conduct/" title="">Code of Conduct</a></li>\n    \n        <li class="tier-2 element-11" role="treeitem"><a href="/community/awards" title="">Community Awards</a></li>\n    \n        <li class="tier-2 element-12" role="treeitem"><a href="/psf/get-involved/" title="">Get Involved</a></li>\n    \n        <li class="tier-2 element-13" role="treeitem"><a href="/psf/community-stories/" title="">Shared Stories</a></li>\n    \n</ul>\n\n\n    \n    </li>\n    \n    <li class="tier-1 element-5">\n        <a href="/success-stories/" title="success-stories">Success Stories</a>\n        \n        \n\n<ul class="subnav menu">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/success-stories/category/arts/" title="">Arts</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/success-stories/category/business/" title="">Business</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="/success-stories/category/education/" title="">Education</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/success-stories/category/engineering/" title="">Engineering</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="/success-stories/category/government/" title="">Government</a></li>\n    \n        <li class="tier-2 element-6" role="treeitem"><a href="/success-stories/category/scientific/" title="">Scientific</a></li>\n    \n        <li class="tier-2 element-7" role="treeitem"><a href="/success-stories/category/software-development/" title="">Software Development</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    <li class="tier-1 element-6">\n        <a href="/blogs/" title="News from around the Python world">News</a>\n        \n\n\n<ul class="subnav menu">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/blogs/" title="Python Insider Blog Posts">Python News</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/psf/newsletter/" title="Python Software Foundation Newsletter">PSF Newsletter</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="http://pyfound.blogspot.com/" title="PSF Blog">PSF News</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="http://pycon.blogspot.com/" title="PyCon Blog">PyCon US News</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="http://planetpython.org/" title="Planet Python">News from the Community</a></li>\n    \n</ul>\n\n        \n    </li>\n    \n    <li class="tier-1 element-7">\n        <a href="/events/" >Events</a>\n        \n        \n\n<ul class="subnav menu">

\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="/events/python-events/" title="">Python Events</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="/events/python-user-group/" title="">User Group Events</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="/events/python-events/past/" title="">Python Events Archive</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/events/python-user-group/past/" title="">User Group Events Archive</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="https://wiki.python.org/moin/PythonEventsCalendar#Submitting_an_Event" title="">Submit an Event</a></li>\n    \n</ul>\n\n\n    \n    </li>\n    \n    <li class="tier-1 element-8">\n        <a href="/dev/" >Contributing</a>\n        \n        \n\n<ul class="subnav menu">\n    \n        <li class="tier-2 element-1" role="treeitem"><a href="https://devguide.python.org/" title="">Developer&#x27;s Guide</a></li>\n    \n        <li class="tier-2 element-2" role="treeitem"><a href="https://github.com/python/cpython/issues" title="">Issue Tracker</a></li>\n    \n        <li class="tier-2 element-3" role="treeitem"><a href="https://mail.python.org/mailman/listinfo/python-dev" title="">python-dev list</a></li>\n    \n        <li class="tier-2 element-4" role="treeitem"><a href="/dev/core-mentorship/" title="">Core Mentorship</a></li>\n    \n        <li class="tier-2 element-5" role="treeitem"><a href="/dev/security/" title="">Report a Security Issue</a></li>\n    \n</ul>\n\n    \n    </li>\n    \n</ul>\n\n\n\n                    <a id="back-to-top-2" class="jump-link" href="#python-network"><span aria-hidden="true" class="icon-arrow-up"><span>&#9650;</span></span> Back to Top</a>\n\n\n                </div><!-- end .container -->\n            </div> <!-- end .main-footer-links -->\n\n            <div class="site-base">\n                <div class="container">\n                    \n                    <ul class="footer-links navigation menu do-not-print" role="tree">\n                        <li class="tier-1 element-1"><a href="/about/help/">Help &amp; <span class="say-no-more">General</span> Contact</a></li>\n                        <li class="tier-1 element-2"><a href="/community/diversity/">Diversity <span class="say-no-more">Initiatives</span></a></li>\n                        <li class="tier-1 element-3"><a href="https://github.com/python/pythondotorg/issues">Submit Website Bug</a></li>\n                        <li class="tier-1 element-4">\n                            <a href="https://status.python.org/">Status <span class="python-status-indicator-default" id="python-status-indicator"></span></a>\n                        </li>\n                    </ul>\n\n                    <div class="copyright">\n                        <p><small>\n                            <span class="pre">Copyright &copy;2001-2025.</span>\n                             <span class="pre"><a href="/psf-landing/">Python Software Foundation</a></span>\n                             <span class="pre"><a href="/about/legal/">Legal Statements</a></span>\n                             <span class="pre"><a href="https://policies.python.org/python.org/Privacy-Notice/">Privacy Notice</a></span>\n                            <!-- <span class="pre"><a href="/psf/community-infrastructure">Powered by PSF Community Infrastructure</a></span>-->\n                        </small></p>\n                    </div>\n\n                </div><!-- end .container -->\n            </div><!-- end .site-base -->\n\n        </footer>\n\n    </div><!-- end #touchnav-wrapper -->\n\n    \n    <script src="//ajax.googleapis.com/ajax/libs/jquery/1.8.2/jquery.min.js"></script>\n    <script>window.jQuery || document.write(\'<script src="/static/js/libs/jquery-1.8.2.min.js"><\\/script>\')</script>\n    <script src="//ajax.googleapis.com/ajax/libs/jqueryui/1.12.1/jquery-ui.min.js"></script>\n    <script>window.jQuery || document.write(\'<script src="/static/js/libs/jquery-ui-1.12.1.min.js"><\\/script>\')</script>\n\n    <script src="/static/js/libs/masonry.pkgd.min.js"></script>\n    <script src="/static/js/libs/html-includes.js"></script>\n\n    <script type="text/javascript" src="/static/js/main-min.ef82c06437cf.js" charset="utf-8"></script>\n    \n\n    <!--[if lte IE 7]>\n    <script type="text/javascript" src="/static/js/plugins/IE8-min.8af6e26c7a3b.js" charset="utf-8"></script>\n    \n    \n    <![endif]-->\n\n    <!--[if lte IE 8]>\n    <script type="tex

```
t/javascript" src="/static/js/plugins/getComputedStyle-min.d41d8cd98f00.js" charse
t="utf-8"></script>\n        \n        \n        <![endif]-->\n\n        \n\n        \n        \n\n</body>
\n</html>\n'
```

In [6]: 
```
#title
library.select("title")[0].getText()
```

Out[6]: 
```
'Welcome to Python.org'
```

In [4]: 
```
import bs4
library=bs4.BeautifulSoup(python.text ,"lxml")
print(library)
```

```html
<!DOCTYPE html>
<!--[if lt IE 7]>   <html class="no-js ie6 lt-ie7 lt-ie8 lt-ie9">   <![endif]--><!--
[if IE 7]>     <html class="no-js ie7 lt-ie8 lt-ie9">           <![endif]--><!--[if
IE 8]>     <html class="no-js ie8 lt-ie9">                    <![endif]--><!--[if gt I
E 8]><!--><html class="no-js" dir="ltr" lang="en"> <!--<![endif]-->
<head>
<script data-domain="python.org" defer="" src="https://analytics.python.org/js/scrip
t.outbound-links.js"></script>
<meta charset="utf-8"/>
<meta content="IE=edge" http-equiv="X-UA-Compatible"/>
<link href="//ajax.googleapis.com/ajax/libs/jquery/1.8.2/jquery.min.js" rel="prefetc
h"/>
<link href="//ajax.googleapis.com/ajax/libs/jqueryui/1.12.1/jquery-ui.min.js" rel="p
refetch"/>
<meta content="Python.org" name="application-name"/>
<meta content="The official home of the Python Programming Language" name="msapplica
tion-tooltip"/>
<meta content="Python.org" name="apple-mobile-web-app-title"/>
<meta content="yes" name="apple-mobile-web-app-capable"/>
<meta content="black" name="apple-mobile-web-app-status-bar-style"/>
<meta content="width=device-width, initial-scale=1.0" name="viewport"/>
<meta content="True" name="HandheldFriendly"/>
<meta content="telephone=no" name="format-detection"/>
<meta content="on" http-equiv="cleartype"/>
<meta content="false" http-equiv="imagetoolbar"/>
<script async="" crossorigin="anonymous" integrity="sha256-U3hKDidudIaxBDEzwGJApJgPE
f2mWk6cfMWghrAa6i0= sha384-UcmsCqcNRSLW/dV3Lo1oCi2/VaurXbib6p4HyUEOeIa/4OpsrnucrugAe
fzVZJfI sha512-q4t1L4xEjGV2R4hzqCa41P8jrgFUS8xTb8rdNv4FGvw7FpydVj/kkxBJHOiaoxHa8olCc
x1Slk9K+3sNbsM4ug==" src="https://media.ethicalads.io/media/client/v1.4.0/ethicalad
s.min.js"></script>
<script src="/static/js/libs/modernizr.js"></script>
<link href="/static/stylesheets/style.08a078d0aa02.css" media="all" rel="stylesheet"
title="default" type="text/css"/>
<link href="/static/stylesheets/mq.98d6092b2ada.css" media="not print, braille, embo
ssed, speech, tty" rel="stylesheet" type="text/css"/>
<link href="/static/stylesheets/no-mq.bf0c425cdb73.css" media="screen" rel="styleshe
et" type="text/css"/>
<!--[if (lte IE 8)&(!IEMobile)]>
    <link href="/static/stylesheets/no-mq.bf0c425cdb73.css" rel="stylesheet" type="t
ext/css" media="screen" />


    <![endif]-->
<link href="//ajax.googleapis.com/ajax/libs/jqueryui/1.12.1/themes/smoothness/jquery
-ui.css" rel="stylesheet"/>
<link href="/static/favicon.ico" rel="icon" type="image/x-icon"/>
<link href="/static/apple-touch-icon-144x144-precomposed.png" rel="apple-touch-icon-
precomposed" sizes="144x144"/>
<link href="/static/apple-touch-icon-114x114-precomposed.png" rel="apple-touch-icon-
precomposed" sizes="114x114"/>
<link href="/static/apple-touch-icon-72x72-precomposed.png" rel="apple-touch-icon-pr
ecomposed" sizes="72x72"/>
<link href="/static/apple-touch-icon-precomposed.png" rel="apple-touch-icon-precompo
sed"/>
<link href="/static/apple-touch-icon-precomposed.png" rel="apple-touch-icon"/>
<meta content="/static/metro-icon-144x144.png" name="msapplication-TileImage"/><!--
```

```
    white shape -->
<meta content="#3673a5" name="msapplication-TileColor"/><!-- python blue -->
<meta content="#3673a5" name="msapplication-navbutton-color"/>
<title>Welcome to Python.org</title>
<meta content="The official home of the Python Programming Language" name="descripti
on"/>
<meta content="Python programming language object oriented web free open source soft
ware license documentation download community" name="keywords"/>
<meta content="website" property="og:type"/>
<meta content="Python.org" property="og:site_name"/>
<meta content="Welcome to Python.org" property="og:title"/>
<meta content="The official home of the Python Programming Language" property="og:de
scription"/>
<meta content="https://www.python.org/static/opengraph-icon-200x200.png" property="o
g:image"/>
<meta content="https://www.python.org/static/opengraph-icon-200x200.png" property="o
g:image:secure_url"/>
<meta content="https://www.python.org/" property="og:url"/>
<link href="/humans.txt" rel="author"/>
<link href="https://peps.python.org/peps.rss" rel="alternate" title="Python Enhancem
ent Proposals" type="application/rss+xml"/>
<link href="https://www.python.org/jobs/feed/rss/" rel="alternate" title="Python Job
Opportunities" type="application/rss+xml"/>
<link href="https://feeds.feedburner.com/PythonSoftwareFoundationNews" rel="alternat
e" title="Python Software Foundation News" type="application/rss+xml"/>
<link href="https://feeds.feedburner.com/PythonInsider" rel="alternate" title="Pytho
n Insider" type="application/rss+xml"/>
<link href="https://www.python.org/downloads/feed.rss" rel="alternate" title="Python
Releases" type="application/rss+xml"/>
<script type="application/ld+json">
    {
      "@context": "https://schema.org",
      "@type": "WebSite",
      "url": "https://www.python.org/",
      "potentialAction": {
        "@type": "SearchAction",
        "target": "https://www.python.org/search/?q={search_term_string}",
        "query-input": "required name=search_term_string"
      }
    }
    </script>
<script type="text/javascript">
    var _gaq = _gaq || [];
    _gaq.push(['_setAccount', 'UA-39055973-1']);
    _gaq.push(['_trackPageview']);

    (function() {
        var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.a
sync = true;
        ga.src = ('https:' == document.location.protocol ? 'https://ssl' : 'http://w
ww') + '.google-analytics.com/ga.js';
        var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefor
e(ga, s);
    })();
    </script>
</head>
```

```html
<body class="python home" id="homepage">
<div id="touchnav-wrapper">
<div class="do-not-print" id="nojs">
<p><strong>Notice:</strong> While JavaScript is not essential for this website, your
interaction with the content will be limited. Please turn JavaScript on for the full
experience. </p>
</div>
<!--[if lte IE 8]>
        <div id="oldie-warning" class="do-not-print">
            <p>
                <strong>Notice:</strong> Your browser is <em>ancient</em>. Please
                <a href="http://browsehappy.com/">upgrade to a different browser</a>
to experience a better web.
            </p>
        </div>
        <![endif]-->
<!-- Sister Site Links -->
<div class="top-bar do-not-print" id="top">
<nav class="meta-navigation container" role="navigation">
<div class="skip-link screen-reader-text">
<a href="#content" title="Skip to content">Skip to content</a>
</div>
<a aria-hidden="true" class="jump-link" href="#python-network" id="close-python-netw
ork">
<span aria-hidden="true" class="icon-arrow-down"><span>▼</span></span> Close
                </a>
<ul class="menu" role="tree">
<li class="python-meta current_item selectedcurrent_branch selected">
<a class="current_item selectedcurrent_branch selected" href="/" title="The Python P
rogramming Language">Python</a>
</li>
<li class="psf-meta">
<a href="https://www.python.org/psf/" title="The Python Software Foundation">PSF</a>
</li>
<li class="docs-meta">
<a href="https://docs.python.org" title="Python Documentation">Docs</a>
</li>
<li class="pypi-meta">
<a href="https://pypi.org/" title="Python Package Index">PyPI</a>
</li>
<li class="jobs-meta">
<a href="/jobs/" title="Python Job Board">Jobs</a>
</li>
<li class="shop-meta">
<a href="/community/">Community</a>
</li>
</ul>
<a aria-hidden="true" class="jump-link" href="#top" id="python-network">
<span aria-hidden="true" class="icon-arrow-up"><span>▲</span></span> The Python Netw
ork
                </a>
</nav>
</div>
<!-- Header elements -->
<header class="main-header" role="banner">
<div class="container">
```

```html
<h1 class="site-headline">
<a href="/"><img alt="python™" class="python-logo" src="/static/img/python-logo.pn
g"/></a>
</h1>
<div class="options-bar-container do-not-print">
<a class="donate-button" href="https://psfmember.org/civicrm/contribute/transact?res
et=1&amp;id=2">Donate</a>
<div class="options-bar">
<a class="jump-to-menu" href="#site-map" id="site-map-link"><span class="menu-icon">
≡</span> Menu</a><form action="/search/" class="search-the-site" method="get">
<fieldset title="Search Python.org">
<span aria-hidden="true" class="icon-search"></span>
<label class="screen-reader-text" for="id-search-field">Search This Site</label>
<input class="search-field" id="id-search-field" name="q" placeholder="Search" role
="textbox" tabindex="1" type="search" value=""/>
<button class="search-button" id="submit" name="submit" tabindex="3" title="Submit t
his Search" type="submit">
                                    GO
                            </button>
<!--[if IE]><input type="text" style="display: none;" disabled="disabled" size="1" t
abindex="4"><![endif]-->
</fieldset>
</form><span class="breaker"></span><div aria-hidden="true" class="adjust-font-siz
e">
<ul aria-label="Adjust Text Size on Page" class="navigation menu">
<li aria-haspopup="true" class="tier-1 last">
<a class="action-trigger" href="#"><strong><small>A</small> A</strong></a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a class="text-shrink" href="javascrip
t:;" title="Make Text Smaller">Smaller</a></li>
<li class="tier-2 element-2" role="treeitem"><a class="text-grow" href="javascrip
t:;" title="Make Text Larger">Larger</a></li>
<li class="tier-2 element-3" role="treeitem"><a class="text-reset" href="javascrip
t:;" title="Reset any font size changes I have made">Reset</a></li>
</ul>
</li>
</ul>
</div><div class="winkwink-nudgenudge">
<ul aria-label="Social Media Navigation" class="navigation menu">
<li aria-haspopup="true" class="tier-1 last">
<a class="action-trigger" href="#">Socialize</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="https://www.linkedin.com/compa
ny/python-software-foundation/"><i aria-hidden="true" class="fa fa-linkedin-square">
</i>LinkedIn</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="https://fosstodon.org/@ThePS
F"><span aria-hidden="true" class="icon-mastodon"></span>Mastodon</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/community/irc/"><span aria-hi
dden="true" class="icon-freenode"></span>Chat on IRC</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="https://twitter.com/ThePSF"><s
pan aria-hidden="true" class="icon-twitter"></span>Twitter</a></li>
</ul>
</li>
</ul>
</div>
<span data-html-include="/authenticated"></span>
```

```html
</div><!-- end options-bar -->
</div>
<nav class="python-navigation main-navigation do-not-print" id="mainnav" role="navig
ation">
<ul aria-label="Main Navigation" class="navigation menu" role="menubar">
<li aria-haspopup="true" class="tier-1 element-1" id="about">
<a class="" href="/about/" title="">About</a>
<ul aria-hidden="true" class="subnav menu" role="menu">
<li class="tier-2 element-1" role="treeitem"><a href="/about/apps/" title="">Applica
tions</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/about/quotes/" title="">Quote
s</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/about/gettingstarted/" title
="">Getting Started</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/about/help/" title="">Help</a
></li>
<li class="tier-2 element-5" role="treeitem"><a href="http://brochure.getpython.inf
o/" title="">Python Brochure</a></li>
</ul>
</li>
<li aria-haspopup="true" class="tier-1 element-2" id="downloads">
<a class="" href="/downloads/" title="">Downloads</a>
<ul aria-hidden="true" class="subnav menu" role="menu">
<li class="tier-2 element-1" role="treeitem"><a href="/downloads/" title="">All rele
ases</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/downloads/source/" title="">S
ource code</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/downloads/windows/" title="">
Windows</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/downloads/macos/" title="">ma
cOS</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="/downloads/android/" title="">
Android</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="/download/other/" title="">Oth
er Platforms</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="https://docs.python.org/3/lice
nse.html" title="">License</a></li>
<li class="tier-2 element-8" role="treeitem"><a href="/download/alternatives" title
="">Alternative Implementations</a></li>
</ul>
</li>
<li aria-haspopup="true" class="tier-1 element-3" id="documentation">
<a class="" href="/doc/" title="">Documentation</a>
<ul aria-hidden="true" class="subnav menu" role="menu">
<li class="tier-2 element-1" role="treeitem"><a href="/doc/" title="">Docs</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/doc/av" title="">Audio/Visual
Talks</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="https://wiki.python.org/moin/B
eginnersGuide" title="">Beginner's Guide</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="https://devguide.python.org/"
title="">Developer's Guide</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="https://docs.python.org/faq/"
title="">FAQ</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="http://wiki.python.org/moin/La
nguages" title="">Non-English Docs</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="https://peps.python.org" title
```

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="">PEP Index</a></li>
<li class="tier-2 element-8" role="treeitem"><a href="https://wiki.python.org/moin/P
ythonBooks" title="">Python Books</a></li>
<li class="tier-2 element-9" role="treeitem"><a href="/doc/essays/" title="">Python
Essays</a></li>
</ul>
</li>
<li aria-haspopup="true" class="tier-1 element-4" id="community">
<a class="" href="/community/" title="">Community</a>
<ul aria-hidden="true" class="subnav menu" role="menu">
<li class="tier-2 element-1" role="treeitem"><a href="/community/diversity/" title
="">Diversity</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/community/lists/" title="">Ma
iling Lists</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/community/irc/" title="">IRC
</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/community/forums/" title="">F
orums</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="/psf/annual-report/2024/" titl
e="">PSF Annual Impact Report</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="/community/workshops/" title
="">Python Conferences</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="/community/sigs/" title="">Spe
cial Interest Groups</a></li>
<li class="tier-2 element-8" role="treeitem"><a href="/community/logos/" title="">Py
thon Logo</a></li>
<li class="tier-2 element-9" role="treeitem"><a href="https://wiki.python.org/moin/"
title="">Python Wiki</a></li>
<li class="tier-2 element-10" role="treeitem"><a href="/psf/conduct/" title="">Code
of Conduct</a></li>
<li class="tier-2 element-11" role="treeitem"><a href="/community/awards" title="">C
ommunity Awards</a></li>
<li class="tier-2 element-12" role="treeitem"><a href="/psf/get-involved/" title="">
Get Involved</a></li>
<li class="tier-2 element-13" role="treeitem"><a href="/psf/community-stories/" titl
e="">Shared Stories</a></li>
</ul>
</li>
<li aria-haspopup="true" class="tier-1 element-5" id="success-stories">
<a class="" href="/success-stories/" title="success-stories">Success Stories</a>
<ul aria-hidden="true" class="subnav menu" role="menu">
<li class="tier-2 element-1" role="treeitem"><a href="/success-stories/category/art
s/" title="">Arts</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/success-stories/category/busi
ness/" title="">Business</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/success-stories/category/educ
ation/" title="">Education</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/success-stories/category/engi
neering/" title="">Engineering</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="/success-stories/category/gove
rnment/" title="">Government</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="/success-stories/category/scie
ntific/" title="">Scientific</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="/success-stories/category/soft
ware-development/" title="">Software Development</a></li>
</ul>
```

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</li>
<li aria-haspopup="true" class="tier-1 element-6" id="news">
<a class="" href="/blogs/" title="News from around the Python world">News</a>
<ul aria-hidden="true" class="subnav menu" role="menu">
<li class="tier-2 element-1" role="treeitem"><a href="/blogs/" title="Python Insider
Blog Posts">Python News</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/psf/newsletter/" title="Pytho
n Software Foundation Newsletter">PSF Newsletter</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="http://pyfound.blogspot.com/"
title="PSF Blog">PSF News</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="http://pycon.blogspot.com/" ti
tle="PyCon Blog">PyCon US News</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="http://planetpython.org/" titl
e="Planet Python">News from the Community</a></li>
</ul>
</li>
<li aria-haspopup="true" class="tier-1 element-7" id="events">
<a class="" href="/events/" title="">Events</a>
<ul aria-hidden="true" class="subnav menu" role="menu">
<li class="tier-2 element-1" role="treeitem"><a href="/events/python-events/" title
="">Python Events</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/events/python-user-group/" ti
tle="">User Group Events</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/events/python-events/past/" t
itle="">Python Events Archive</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/events/python-user-group/pas
t/" title="">User Group Events Archive</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="https://wiki.python.org/moin/P
ythonEventsCalendar#Submitting_an_Event" title="">Submit an Event</a></li>
</ul>
</li>
</ul>
</nav>
<div class="header-banner"> <!-- for optional "do-not-print" class -->
<div class="flex-slideshow slideshow" id="dive-into-python">
<ul class="launch-shell menu" id="launch-shell">
<li>
<a class="button prompt" data-shell-container="#dive-into-python" href="/shell/" id
="start-shell">&gt;_
                        <span class="message">Launch Interactive Shell</span>
</a>
</li>
</ul>
<ul class="slides menu">
<li>
<div class="slide-code"><pre><code><span class="comment"># Python 3: Fibonacci serie
s up to n</span>
&gt;&gt;&gt; def fib(n):
&gt;&gt;&gt;     a, b = 0, 1
&gt;&gt;&gt;     while a &lt; n:
&gt;&gt;&gt;         print(a, end=' ')
&gt;&gt;&gt;         a, b = b, a+b
&gt;&gt;&gt;     print()
&gt;&gt;&gt; fib(1000)
<span class="output">0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987</span></code>
</pre></div>
```

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<div class="slide-copy"><h1>Functions Defined</h1>
<p>The core of extensible programming is defining functions. Python allows mandatory
and optional arguments, keyword arguments, and even arbitrary argument lists. <a hre
f="//docs.python.org/3/tutorial/controlflow.html#defining-functions">More about defi
ning functions in Python 3</a></p></div>
</li>
<li>
<div class="slide-code"><pre><code><span class="comment"># Python 3: List comprehens
ions</span>
&gt;&gt;&gt; fruits = ['Banana', 'Apple', 'Lime']
&gt;&gt;&gt; loud_fruits = [fruit.upper() for fruit in fruits]
&gt;&gt;&gt; print(loud_fruits)
<span class="output">['BANANA', 'APPLE', 'LIME']</span>

<span class="comment"># List and the enumerate function</span>
&gt;&gt;&gt; list(enumerate(fruits))
<span class="output">[(0, 'Banana'), (1, 'Apple'), (2, 'Lime')]</span></code></pre>
</div>
<div class="slide-copy"><h1>Compound Data Types</h1>
<p>Lists (known as arrays in other languages) are one of the compound data types tha
t Python understands. Lists can be indexed, sliced and manipulated with other built-
in functions. <a href="//docs.python.org/3/tutorial/introduction.html#lists">More ab
out lists in Python 3</a></p></div>
</li>
<li>
<div class="slide-code"><pre><code><span class="comment"># Python 3: Simple arithmet
ic</span>
&gt;&gt;&gt; 1 / 2
<span class="output">0.5</span>
&gt;&gt;&gt; 2 ** 3
<span class="output">8</span>
&gt;&gt;&gt; 17 / 3  <span class="comment"># classic division returns a float</span>
<span class="output">5.666666666666667</span>
&gt;&gt;&gt; 17 // 3  <span class="comment"># floor division</span>
<span class="output">5</span></code></pre></div>
<div class="slide-copy"><h1>Intuitive Interpretation</h1>
<p>Calculations are simple with Python, and expression syntax is straightforward: th
e operators <code>+</code>, <code>-</code>, <code>*</code> and <code>/</code> work a
s expected; parentheses <code>()</code> can be used for grouping. <a href="http://do
cs.python.org/3/tutorial/introduction.html#using-python-as-a-calculator">More about
simple math functions in Python 3</a>.</p></div>
</li>
<li>
<div class="slide-code"><pre><code><span class="comment"># For loop on a list</span>
&gt;&gt;&gt; numbers = [2, 4, 6, 8]
&gt;&gt;&gt; product = 1
&gt;&gt;&gt; for number in numbers:
...     product = product * number
...
&gt;&gt;&gt; print('The product is:', product)
<span class="output">The product is: 384</span></code></pre></div>
<div class="slide-copy"><h1>All the Flow You'd Expect</h1>
<p>Python knows the usual control flow statements that other languages speak — <code
>if</code>, <code>for</code>, <code>while</code> and <code>range</code> — with some
of its own twists, of course. <a href="//docs.python.org/3/tutorial/controlflow.htm
l">More control flow tools in Python 3</a></p></div>
```

```
</li>
<li>
<div class="slide-code"><pre><code><span class="comment"># Simple output (with Unico
de)</span>
&gt;&gt;&gt; print("Hello, I'm Python!")
<span class="output">Hello, I'm Python!</span>
<span class="comment"># Input, assignment</span>
&gt;&gt;&gt; name = input('What is your name?\n')
<span class="output">What is your name?
Python</span>
&gt;&gt;&gt; print(f'Hi, {name}.')
<span class="output">Hi, Python.</span></code>
</pre></div>
<div class="slide-copy"><h1>Quick &amp; Easy to Learn</h1>
<p>Experienced programmers in any other language can pick up Python very quickly, an
d beginners find the clean syntax and indentation structure easy to learn. <a href
="//docs.python.org/3/tutorial/">Whet your appetite</a> with our Python 3 overview.
</p></div>
</li>
</ul>
</div>
</div>
<div class="introduction">
<p>Python is a programming language that lets you work quickly <span class="breake
r"></span>and integrate systems more effectively. <a class="readmore" href="/doc/">L
earn More</a></p>
</div>
</div><!-- end .container -->
</header>
<div class="content-wrapper" id="content">
<!-- Main Content Column -->
<div class="container">
<section class="main-content" role="main">
<div class="row">
<div class="small-widget get-started-widget">
<h2 class="widget-title"><span aria-hidden="true" class="icon-get-started"></span>Ge
t Started</h2>
<p>Whether you're new to programming or an experienced developer, it's easy to learn
and use Python.</p>
<p><a href="/about/gettingstarted/">Start with our Beginner's Guide</a></p>
</div>
<div class="small-widget download-widget">
<h2 class="widget-title"><span aria-hidden="true" class="icon-download"></span>Downl
oad</h2>
<p>Python source code and installers are available for download for all versions!</p
>
<p>Latest: <a href="/downloads/release/python-3137/">Python 3.13.7</a></p>
</div>
<div class="small-widget documentation-widget">
<h2 class="widget-title"><span aria-hidden="true" class="icon-documentation"></span>
Docs</h2>
<p>Documentation for Python's standard library, along with tutorials and guides, are
available online.</p>
<p><a href="https://docs.python.org">docs.python.org</a></p>
</div>
<div class="small-widget jobs-widget last">
```

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<h2 class="widget-title"><span aria-hidden="true" class="icon-jobs"></span>Jobs</h2>
<p>Looking for work or have a Python related position that you're trying to hire fo
r? Our <strong>relaunched community-run job board</strong> is the place to go.</p>
<p><a href="//jobs.python.org">jobs.python.org</a></p>
</div>
</div>
<div class="list-widgets row">
<div class="medium-widget blog-widget">
<div class="shrubbery">
<h2 class="widget-title"><span aria-hidden="true" class="icon-news"></span>Latest Ne
ws</h2>
<p class="give-me-more"><a href="https://blog.python.org" title="More News">More</a>
</p>
<ul class="menu">
<li>
<time datetime="2025-08-18T13:06:00+00:00"><span class="say-no-more">2025-</span>08-
18</time>
<a href="https://pyfound.blogspot.com/2025/08/the-2024-python-developer-survey.htm
l">The 2024 Python Developer Survey Results are here!</a></li>
<li>
<time datetime="2025-08-14T19:15:00.000003+00:00"><span class="say-no-more">2025-</s
pan>08-14</time>
<a href="https://pythoninsider.blogspot.com/2025/08/python-3140rc2-and-3137-are-go.h
tml">Python 3.14.0rc2 and 3.13.7 are go!</a></li>
<li>
<time datetime="2025-08-14T16:19:00.000003+00:00"><span class="say-no-more">2025-</s
pan>08-14</time>
<a href="https://pyfound.blogspot.com/2025/08/announcing-psf-board-candidates-for-20
25.html">Announcing the PSF Board Candidates for 2025!</a></li>
<li>
<time datetime="2025-08-08T12:47:00.000004+00:00"><span class="say-no-more">2025-</s
pan>08-08</time>
<a href="https://pyfound.blogspot.com/2025/08/announcing-python-software-foundation.
html">Announcing Python Software Foundation Fellow Members for Q2 2025! 🎉</a></li>
<li>
<time datetime="2025-08-07T12:45:00.000003+00:00"><span class="say-no-more">2025-</s
pan>08-07</time>
<a href="https://pyfound.blogspot.com/2025/08/unmasking-phantom-dependencies-with.ht
ml">Unmasking Phantom Dependencies with Software Bill-of-Materials as Ecosystem Neut
ral Metadata</a></li>
</ul>
</div><!-- end .shrubbery -->
</div>
<div class="medium-widget event-widget last">
<div class="shrubbery">
<h2 class="widget-title"><span aria-hidden="true" class="icon-calendar"></span>Upcom
ing Events</h2>
<p class="give-me-more"><a href="/events/calendars/" title="More Events">More</a></p
>
<ul class="menu">
<li>
<time datetime="2025-08-23T00:00:00+00:00"><span class="say-no-more">2025-</span>08-
23</time>
<a href="/events/python-events/2071/">StatusCode 2 Hackathon</a></li>
<li>
<time datetime="2025-08-23T00:00:00+00:00"><span class="say-no-more">2025-</span>08-
```

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23</time>
<a href="/events/python-events/2009/">PyCon Togo 2025</a></li>
<li>
<time datetime="2025-08-26T16:00:00+00:00"><span class="say-no-more">2025-</span>08-
26</time>
<a href="/events/python-user-group/2091/">PyLadies Amsterdam: Data science that ship
s: production-ready pipelines with Kedro</a></li>
<li>
<time datetime="2025-08-28T00:00:00+00:00"><span class="say-no-more">2025-</span>08-
28</time>
<a href="/events/python-events/2027/">PyCon Kenya 2025</a></li>
<li>
<time datetime="2025-08-28T00:00:00+00:00"><span class="say-no-more">2025-</span>08-
28</time>
<a href="/events/python-events/2020/">PyCon Poland 2025</a></li>
</ul>
</div>
</div>
</div>
<div class="row">
<div class="medium-widget success-stories-widget">
<div class="shrubbery">
<h2 class="widget-title"><span aria-hidden="true" class="icon-success-stories"></spa
n>Success Stories</h2>
<p class="give-me-more"><a href="/success-stories/" title="More Success Stories">Mor
e</a></p>
<div class="success-story-item" id="success-story-1180">
<blockquote>
<a href="/success-stories/using-python-with-gretelai-to-generate-synthetic-location-
data/">Generating realistic location data for users for testing or modeling simulati
ons is a hard problem. Current approaches just create random locations inside a box,
placing users in waterways or on top of buildings. This inability to make accurate,
synthetic location data stifles a lot of innovative projects that require diverse an
d complex datasets to fuel their work.</a>
</blockquote>
<table border="0" cellpadding="0" cellspacing="0" class="quote-from" width="100%">
<tbody>
<tr>
<td><p><a href="/success-stories/using-python-with-gretelai-to-generate-synthetic-lo
cation-data/">Using Python with Gretel.ai to Generate Synthetic Location Data</a> <e
m>by Alex Watson, co-founder and CPO, Gretel.ai</em></p></td>
</tr>
</tbody>
</table>
</div>
</div><!-- end .shrubbery -->
</div>
<div class="medium-widget applications-widget last">
<div class="shrubbery">
<h2 class="widget-title"><span aria-hidden="true" class="icon-python"></span>Use Pyt
hon for…</h2>
<p class="give-me-more"><a href="/about/apps" title="More Applications">More</a></p>
<ul class="menu">
<li><b>Web Development</b>:
        <span class="tag-wrapper"><a class="tag" href="http://www.djangoproject.co
m/">Django</a>, <a class="tag" href="http://www.pylonsproject.org/">Pyramid</a>, <a
```

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class="tag" href="http://bottlepy.org">Bottle</a>, <a class="tag" href="http://torna
doweb.org">Tornado</a>, <a class="tag" href="http://flask.pocoo.org/">Flask</a>, <a
class="tag" href="http://www.web2py.com/">web2py</a></span></li>
<li><b>GUI Development</b>:
        <span class="tag-wrapper"><a class="tag" href="http://wiki.python.org/moin/T
kInter">tkInter</a>, <a class="tag" href="https://wiki.gnome.org/Projects/PyGObjec
t">PyGObject</a>, <a class="tag" href="http://www.riverbankcomputing.co.uk/software/
pyqt/intro">PyQt</a>, <a class="tag" href="https://wiki.qt.io/PySide">PySide</a>, <a
class="tag" href="https://kivy.org/">Kivy</a>, <a class="tag" href="http://www.wxpyt
hon.org/">wxPython</a>, <a class="tag" href="https://dearpygui.readthedocs.io/en/lat
est/">DearPyGui</a></span></li>
<li><b>Scientific and Numeric</b>:
        <span class="tag-wrapper">
<a class="tag" href="http://www.scipy.org">SciPy</a>, <a class="tag" href="http://pa
ndas.pydata.org/">Pandas</a>, <a class="tag" href="http://ipython.org">IPython</a></
span></li>
<li><b>Software Development</b>:
        <span class="tag-wrapper"><a class="tag" href="http://buildbot.net/">Buildbo
t</a>, <a class="tag" href="http://trac.edgewall.org/">Trac</a>, <a class="tag" href
="http://roundup.sourceforge.net/">Roundup</a></span></li>
<li><b>System Administration</b>:
        <span class="tag-wrapper"><a class="tag" href="http://www.ansible.com">Ansib
le</a>, <a class="tag" href="https://saltproject.io">Salt</a>, <a class="tag" href
="https://www.openstack.org">OpenStack</a>, <a class="tag" href="https://xon.sh">xon
sh</a></span></li>
</ul>
</div><!-- end .shrubbery -->
</div>
</div>
<div class="psf-widget">
<div class="python-logo"></div>
<h2 class="widget-title">
<span class="prompt">&gt;&gt;&gt;</span> <a href="/psf/">Python Software Foundation
</a>
</h2>
<p>The mission of the Python Software Foundation is to promote, protect, and advance
the Python programming language, and to support and facilitate the growth of a diver
se and international community of Python programmers. <a class="readmore" href="/ps
f/">Learn more</a> </p>
<p class="click-these">
<a class="button" href="/psf/membership/">Become a Member</a>
<a class="button" href="/psf/donations/">Donate to the PSF</a>
</p>
</div>
</section>
</div><!-- end .container -->
</div><!-- end #content .content-wrapper -->
<!-- Footer and social media list -->
<footer class="main-footer" id="site-map" role="contentinfo">
<div class="main-footer-links">
<div class="container">
<a class="jump-link" href="#python-network" id="back-to-top-1"><span aria-hidden="tr
ue" class="icon-arrow-up"><span>▲</span></span> Back to Top</a>
<ul class="sitemap navigation menu do-not-print" id="container" role="tree">
<li class="tier-1 element-1">
<a href="/about/">About</a>
```

```html
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="/about/apps/" title="">Applica
tions</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/about/quotes/" title="">Quote
s</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/about/gettingstarted/" title
="">Getting Started</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/about/help/" title="">Help</a
></li>
<li class="tier-2 element-5" role="treeitem"><a href="http://brochure.getpython.inf
o/" title="">Python Brochure</a></li>
</ul>
</li>
<li class="tier-1 element-2">
<a href="/downloads/">Downloads</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="/downloads/" title="">All rele
ases</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/downloads/source/" title="">S
ource code</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/downloads/windows/" title="">
Windows</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/downloads/macos/" title="">ma
cOS</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="/downloads/android/" title="">
Android</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="/download/other/" title="">Oth
er Platforms</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="https://docs.python.org/3/lice
nse.html" title="">License</a></li>
<li class="tier-2 element-8" role="treeitem"><a href="/download/alternatives" title
="">Alternative Implementations</a></li>
</ul>
</li>
<li class="tier-1 element-3">
<a href="/doc/">Documentation</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="/doc/" title="">Docs</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/doc/av" title="">Audio/Visual
Talks</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="https://wiki.python.org/moin/B
eginnersGuide" title="">Beginner's Guide</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="https://devguide.python.org/"
title="">Developer's Guide</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="https://docs.python.org/faq/"
title="">FAQ</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="http://wiki.python.org/moin/La
nguages" title="">Non-English Docs</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="https://peps.python.org" title
="">PEP Index</a></li>
<li class="tier-2 element-8" role="treeitem"><a href="https://wiki.python.org/moin/P
ythonBooks" title="">Python Books</a></li>
<li class="tier-2 element-9" role="treeitem"><a href="/doc/essays/" title="">Python
Essays</a></li>
</ul>
</li>
```

```
<li class="tier-1 element-4">
<a href="/community/">Community</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="/community/diversity/" title
="">Diversity</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/community/lists/" title="">Ma
iling Lists</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/community/irc/" title="">IRC
</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/community/forums/" title="">F
orums</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="/psf/annual-report/2024/" titl
e="">PSF Annual Impact Report</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="/community/workshops/" title
="">Python Conferences</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="/community/sigs/" title="">Spe
cial Interest Groups</a></li>
<li class="tier-2 element-8" role="treeitem"><a href="/community/logos/" title="">Py
thon Logo</a></li>
<li class="tier-2 element-9" role="treeitem"><a href="https://wiki.python.org/moin/"
title="">Python Wiki</a></li>
<li class="tier-2 element-10" role="treeitem"><a href="/psf/conduct/" title="">Code
of Conduct</a></li>
<li class="tier-2 element-11" role="treeitem"><a href="/community/awards" title="">C
ommunity Awards</a></li>
<li class="tier-2 element-12" role="treeitem"><a href="/psf/get-involved/" title="">
Get Involved</a></li>
<li class="tier-2 element-13" role="treeitem"><a href="/psf/community-stories/" titl
e="">Shared Stories</a></li>
</ul>
</li>
<li class="tier-1 element-5">
<a href="/success-stories/" title="success-stories">Success Stories</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="/success-stories/category/art
s/" title="">Arts</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/success-stories/category/busi
ness/" title="">Business</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/success-stories/category/educ
ation/" title="">Education</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/success-stories/category/engi
neering/" title="">Engineering</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="/success-stories/category/gove
rnment/" title="">Government</a></li>
<li class="tier-2 element-6" role="treeitem"><a href="/success-stories/category/scie
ntific/" title="">Scientific</a></li>
<li class="tier-2 element-7" role="treeitem"><a href="/success-stories/category/soft
ware-development/" title="">Software Development</a></li>
</ul>
</li>
<li class="tier-1 element-6">
<a href="/blogs/" title="News from around the Python world">News</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="/blogs/" title="Python Insider
Blog Posts">Python News</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/psf/newsletter/" title="Pytho
```

```html
n Software Foundation Newsletter">PSF Newsletter</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="http://pyfound.blogspot.com/"
title="PSF Blog">PSF News</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="http://pycon.blogspot.com/" ti
tle="PyCon Blog">PyCon US News</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="http://planetpython.org/" titl
e="Planet Python">News from the Community</a></li>
</ul>
</li>
<li class="tier-1 element-7">
<a href="/events/">Events</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="/events/python-events/" title
="">Python Events</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="/events/python-user-group/" ti
tle="">User Group Events</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="/events/python-events/past/" t
itle="">Python Events Archive</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/events/python-user-group/pas
t/" title="">User Group Events Archive</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="https://wiki.python.org/moin/P
ythonEventsCalendar#Submitting_an_Event" title="">Submit an Event</a></li>
</ul>
</li>
<li class="tier-1 element-8">
<a href="/dev/">Contributing</a>
<ul class="subnav menu">
<li class="tier-2 element-1" role="treeitem"><a href="https://devguide.python.org/"
title="">Developer's Guide</a></li>
<li class="tier-2 element-2" role="treeitem"><a href="https://github.com/python/cpyt
hon/issues" title="">Issue Tracker</a></li>
<li class="tier-2 element-3" role="treeitem"><a href="https://mail.python.org/mailma
n/listinfo/python-dev" title="">python-dev list</a></li>
<li class="tier-2 element-4" role="treeitem"><a href="/dev/core-mentorship/" title
="">Core Mentorship</a></li>
<li class="tier-2 element-5" role="treeitem"><a href="/dev/security/" title="">Repor
t a Security Issue</a></li>
</ul>
</li>
</ul>
<a class="jump-link" href="#python-network" id="back-to-top-2"><span aria-hidden="tr
ue" class="icon-arrow-up"><span>▲</span></span> Back to Top</a>
</div><!-- end .container -->
</div> <!-- end .main-footer-links -->
<div class="site-base">
<div class="container">
<ul class="footer-links navigation menu do-not-print" role="tree">
<li class="tier-1 element-1"><a href="/about/help/">Help &amp; <span class="say-no-m
ore">General</span> Contact</a></li>
<li class="tier-1 element-2"><a href="/community/diversity/">Diversity <span class
="say-no-more">Initiatives</span></a></li>
<li class="tier-1 element-3"><a href="https://github.com/python/pythondotorg/issue
s">Submit Website Bug</a></li>
<li class="tier-1 element-4">
<a href="https://status.python.org/">Status <span class="python-status-indicator-def
ault" id="python-status-indicator"></span></a>
```

```
</li>
</ul>
<div class="copyright">
<p><small>
<span class="pre">Copyright ©2001-2025.</span>
                                <span class="pre"><a href="/psf-landing/">Python Softwa
re Foundation</a></span>
                                <span class="pre"><a href="/about/legal/">Legal Stateme
nts</a></span>
                                <span class="pre"><a href="https://policies.python.org/
python.org/Privacy-Notice/">Privacy Notice</a></span>
<!-- <span class="pre"><a href="/psf/community-infrastructure">Powered by PSF C
ommunity Infrastructure</a></span>-->
</small></p>
</div>
</div><!-- end .container -->
</div><!-- end .site-base -->
</footer>
</div><!-- end #touchnav-wrapper -->
<script src="//ajax.googleapis.com/ajax/libs/jquery/1.8.2/jquery.min.js"></script>
<script>window.jQuery || document.write('<script src="/static/js/libs/jquery-1.8.2.m
in.js"><\/script>')</script>
<script src="//ajax.googleapis.com/ajax/libs/jqueryui/1.12.1/jquery-ui.min.js"></scr
ipt>
<script>window.jQuery || document.write('<script src="/static/js/libs/jquery-ui-1.1
2.1.min.js"><\/script>')</script>
<script src="/static/js/libs/masonry.pkgd.min.js"></script>
<script src="/static/js/libs/html-includes.js"></script>
<script charset="utf-8" src="/static/js/main-min.ef82c06437cf.js" type="text/javascr
ipt"></script>
<!--[if lte IE 7]>
    <script type="text/javascript" src="/static/js/plugins/IE8-min.8af6e26c7a3b.js"
charset="utf-8"></script>


    <![endif]-->
<!--[if lte IE 8]>
    <script type="text/javascript" src="/static/js/plugins/getComputedStyle-min.d41d
8cd98f00.js" charset="utf-8"></script>


    <![endif]-->
</body>
</html>
```

In [5]: 
```python
# fetch whole words from website
content=library.getText()
```

# Task2 : Count Frequency From Text File

In [10]: 
```python
#write in text file
f=open("web_python.txt","w+",encoding="utf-8")
f.write(content)
```

```python
f.close()
#read in text file
f=open("web_python.txt","r")
f.read()
f.close()

# check frequency
freq={}
count=1
data=content.split()
for i in range(len(data)):
    if data[i].isalpha():
        if data[i] in freq:
            count+=1
            freq[data[i]]=(count)
        else:
            freq[data[i]]=count

#final output
f=open("web.python.txt","w")
f.write(str(freq))
f.close()
```