

# The Python Standard Library

While [ref:reference-index](#) describes the exact syntax and semantics of the Python language, this library reference manual describes the standard library that is distributed with Python. It also describes some of the optional components that are commonly included in Python distributions.

**System Message: ERROR/3** (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]index.rst, line 7); [backlink](#)

Unknown interpreted text role "ref".

Python's standard library is very extensive, offering a wide range of facilities as indicated by the long table of contents listed below. The library contains built-in modules (written in C) that provide access to system functionality such as file I/O that would otherwise be inaccessible to Python programmers, as well as modules written in Python that provide standardized solutions for many problems that occur in everyday programming. Some of these modules are explicitly designed to encourage and enhance the portability of Python programs by abstracting away platform-specifics into platform-neutral APIs.

The Python installers for the Windows platform usually include the entire standard library and often also include many additional components. For Unix-like operating systems Python is normally provided as a collection of packages, so it may be necessary to use the packaging tools provided with the operating system to obtain some or all of the optional components.

In addition to the standard library, there is a growing collection of several thousand components (from individual programs and modules to packages and entire application development frameworks), available from the [Python Package Index](#).

**System Message: ERROR/3** (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]index.rst, line 38)

Unknown directive type "toctree".

```
.. toctree::
   :maxdepth: 2

   intro.rst
   functions.rst
   constants.rst
   stdtypes.rst
   exceptions.rst

   text.rst
   binary.rst
   datatypes.rst
   numeric.rst
   functional.rst
   filesystems.rst
   persistence.rst
   archiving.rst
   fileformats.rst
   crypto.rst
   allos.rst
   concurrency.rst
   ipc.rst
   netdata.rst
   markup.rst
   internet.rst
   mm.rst
   il8n.rst
   frameworks.rst
   tk.rst
   development.rst
   debug.rst
   distribution.rst
   python.rst
   custominterp.rst
   modules.rst
   language.rst
   windows.rst
   unix.rst
   superseded.rst
   undoc.rst
   security_warnings.rst
```