
What's New in Python

Release 3.12.0a0

A. M. Kuchling

May 09, 2022

Python Software Foundation
Email: docs@python.org

Contents

1	Summary – Release highlights	2
2	New Features	2
3	Other Language Changes	2
4	New Modules	2
5	Improved Modules	2
6	Optimizations	2
7	Deprecated	2
8	Removed	2
9	Porting to Python 3.12	2
9.1	Changes in the Python API	2
10	Build Changes	2
11	C API Changes	2
11.1	New Features	2
11.2	Porting to Python 3.12	2
11.3	Deprecated	2
11.4	Removed	2

Release 3.12.0a0

Date May 09, 2022

This article explains the new features in Python 3.12, compared to 3.11.

For full details, see the changelog.

Note: Prerelease users should be aware that this document is currently in draft form. It will be updated substantially as Python 3.12 moves towards release, so it's worth checking back even after reading earlier versions.

1 Summary – Release highlights

2 New Features

3 Other Language Changes

4 New Modules

- None yet.

5 Improved Modules

6 Optimizations

7 Deprecated

8 Removed

9 Porting to Python 3.12

This section lists previously described changes and other bugfixes that may require changes to your code.

9.1 Changes in the Python API

- More strict rules are now applied for numerical group references and group names in regular expressions. Only sequence of ASCII digits is now accepted as a numerical reference. The group name in bytes patterns and replacement strings can now only contain ASCII letters and digits and underscore. (Contributed by Serhiy Storchaka in [gh-91760](#).)

10 Build Changes

11 C API Changes

11.1 New Features

11.2 Porting to Python 3.12

11.3 Deprecated

11.4 Removed

- `PyFrame_BlockSetup()` and `PyFrame_BlockPop()` have been removed.