

python-none-objects

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Abstract

A collection of "None" objects compatible with various Python types

Current version: 2024-05-06

Current number of commits: 35

Current git SHA1: a6e1c03e16282891adccf4a0879af0a6a083029c

Code lines: 1710 total lines, 1448 not empty lines, 262 empty lines.

1 Files tree

```
.
├── build_and_checks.sh
├── COPYING
├── COPYING.LESSER
├── dist
│   ├── python_none_objects-1.0.0-py3-none-any.whl
│   ├── python_none_objects-1.0.0.tar.gz
│   ├── python_none_objects-1.0.1-py3-none-any.whl
│   ├── python_none_objects-1.0.1.tar.gz
│   ├── python_none_objects-1.1.0-py3-none-any.whl
│   ├── python_none_objects-1.1.0.tar.gz
│   ├── python_none_objects-1.1.10-py3-none-any.whl
│   ├── python_none_objects-1.1.10.tar.gz
│   ├── python_none_objects-1.1.1-py3-none-any.whl
│   ├── python_none_objects-1.1.1.tar.gz
│   ├── python_none_objects-1.1.2-py3-none-any.whl
│   ├── python_none_objects-1.1.2.tar.gz
│   ├── python_none_objects-1.1.3-py3-none-any.whl
│   ├── python_none_objects-1.1.3.tar.gz
│   ├── python_none_objects-1.1.4-py3-none-any.whl
│   ├── python_none_objects-1.1.4.tar.gz
│   └── python_none_objects-1.1.5-py3-none-any.whl
```

```

├── python_none_objects-1.1.5.tar.gz
├── python_none_objects-1.1.6-py3-none-any.whl
├── python_none_objects-1.1.6.tar.gz
├── python_none_objects-1.1.7-py3-none-any.whl
├── python_none_objects-1.1.7.tar.gz
├── python_none_objects-1.1.8-py3-none-any.whl
├── python_none_objects-1.1.8.tar.gz
├── python_none_objects-1.1.9-py3-none-any.whl
├── python_none_objects-1.1.9.tar.gz
├── .gitignore
├── latex
│   ├── python-none-objects.tex
│   └── python-none-objects.tex.tpl
├── pyproject.toml
├── python-none-objects.pdf
├── README.md
├── README.md.tpl
├── src
│   └── python_none_objects
│       ├── __init__.py
│       └── py.typed
├── typing_test
│   └── __init__.py
└── wget_sha512.sh

```

6 directories, 40 files

```

[4.0K May  6 04:00] ./
├── [1.6K May  6 03:55] build_and_checks.sh*
├── [ 34K May  2 2018] COPYING
├── [7.5K Jul 24 2018] COPYING.LESSER
├── [4.0K May  6 03:40] dist/
│   ├── [ 20K Nov 10 15:35]
│   │   ├── python_none_objects-1.0.0-py3-none-any.whl
│   │   └── [ 16K Nov 10 15:35] python_none_objects-1.0.0.tar.gz
│   ├── [ 20K Nov 11 19:04]
│   │   ├── python_none_objects-1.0.1-py3-none-any.whl
│   │   └── [ 17K Nov 11 19:04] python_none_objects-1.0.1.tar.gz
│   ├── [ 20K Dec 30 21:39]
│   │   ├── python_none_objects-1.1.0-py3-none-any.whl
│   │   └── [ 17K Dec 30 21:39] python_none_objects-1.1.0.tar.gz
│   ├── [ 21K May  4 03:00]
│   │   ├── python_none_objects-1.1.10-py3-none-any.whl
│   │   └── [ 20K May  4 03:00] python_none_objects-1.1.10.tar.gz
│   ├── [ 21K Dec 30 22:09]
│   │   └── python_none_objects-1.1.1-py3-none-any.whl

```

```

├── [ 17K Dec 30 22:09] python_none_objects-1.1.1.tar.gz
├── [ 21K Mar 20 01:19]
│   ├── python_none_objects-1.1.2-py3-none-any.whl
│   ├── [ 18K Mar 20 01:19] python_none_objects-1.1.2.tar.gz
│   ├── [ 21K Mar 20 01:22]
│   │   ├── python_none_objects-1.1.3-py3-none-any.whl
│   │   ├── [ 18K Mar 20 01:22] python_none_objects-1.1.3.tar.gz
│   │   ├── [ 21K Mar 20 02:46]
│   │   │   ├── python_none_objects-1.1.4-py3-none-any.whl
│   │   │   ├── [ 18K Mar 20 02:46] python_none_objects-1.1.4.tar.gz
│   │   │   ├── [ 21K Mar 21 20:36]
│   │   │   │   ├── python_none_objects-1.1.5-py3-none-any.whl
│   │   │   │   ├── [ 18K Mar 21 20:36] python_none_objects-1.1.5.tar.gz
│   │   │   │   ├── [ 21K May 2 00:32]
│   │   │   │   │   ├── python_none_objects-1.1.6-py3-none-any.whl
│   │   │   │   │   ├── [ 20K May 2 00:32] python_none_objects-1.1.6.tar.gz
│   │   │   │   │   ├── [ 21K May 2 00:34]
│   │   │   │   │   │   ├── python_none_objects-1.1.7-py3-none-any.whl
│   │   │   │   │   │   ├── [ 21K May 2 00:34] python_none_objects-1.1.7.tar.gz
│   │   │   │   │   │   ├── [ 21K May 3 03:52]
│   │   │   │   │   │   │   ├── python_none_objects-1.1.8-py3-none-any.whl
│   │   │   │   │   │   │   ├── [ 21K May 3 03:52] python_none_objects-1.1.8.tar.gz
│   │   │   │   │   │   │   ├── [ 21K May 3 04:11]
│   │   │   │   │   │   │   │   ├── python_none_objects-1.1.9-py3-none-any.whl
│   │   │   │   │   │   │   │   ├── [ 21K May 3 04:11] python_none_objects-1.1.9.tar.gz
│   │   │   │   │   │   │   │   ├── [ 31 May 4 02:58] .gitignore
│   │   │   │   │   │   │   │   ├── [4.0K May 6 04:00] latex/
│   │   │   │   │   │   │   │   │   ├── [3.8K May 6 04:00] python-none-objects.tex
│   │   │   │   │   │   │   │   │   ├── [3.8K May 5 13:32] python-none-objects.tex.tpl
│   │   │   │   │   │   │   │   │   ├── [1.3K May 6 03:58] pyproject.toml
│   │   │   │   │   │   │   │   │   ├── [ 76K May 6 03:58] python-none-objects.pdf
│   │   │   │   │   │   │   │   │   ├── [4.6K May 6 04:00] README.md
│   │   │   │   │   │   │   │   │   ├── [4.7K Apr 28 21:25] README.md.tpl
│   │   │   │   │   │   │   │   │   ├── [4.0K Nov 10 15:03] src/
│   │   │   │   │   │   │   │   │   │   ├── [4.0K May 6 04:00] python_none_objects/
│   │   │   │   │   │   │   │   │   │   │   ├── [1.8K May 6 04:00] __init__.py
│   │   │   │   │   │   │   │   │   │   │   ├── [ 0 Jul 15 2020] py.typed
│   │   │   │   │   │   │   │   │   │   │   ├── [4.0K May 6 04:00] typing_test/
│   │   │   │   │   │   │   │   │   │   │   │   ├── [1.7K May 6 04:00] __init__.py
│   │   │   │   │   │   │   │   │   │   │   │   ├── [1.1K May 4 02:54] wget_sha512.sh

```

6 directories, 40 files

2 Listing of files

The following source code is covered by LGPLv3+. The text of the license is available at: <https://www.gnu.org/licenses/>. The git repository of this source code is also available at: <https://github.com/LLyaudet/python-none-objects/>.

2.1 build_and_checks.sh

```
1  #!/usr/bin/env bash
2  # This file is part of python-none-objects library.
3  #
4  # python-none-objects is free software:
5  # you can redistribute it and/or modify it under the terms
6  # of the GNU Lesser General Public License
7  # as published by the Free Software Foundation,
8  # either version 3 of the License,
9  # or (at your option) any later version.
10 #
11 # python-none-objects is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU Lesser General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU Lesser General Public License
20 # along with python-none-objects.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023-2024 Laurent Lyaudet
24
25 source ./wget_sha512.sh
26
27 mkdir -p build_and_checks_dependencies
28 subdir="build_and_checks_dependencies"
29
30 personal_github="https://raw.githubusercontent.com/LLyaudet/"
31 dependencies="DevOrSysAdminScripts/main/build_and_checks_dependencies"
32 URL_beginning="$personal_github$dependencies"
33
34 script="$URL_beginning/common_build_and_checks.sh"
35 correct_sha512='a46cd00d7b2d90fala3c7923244879fad28e789ff7dda791a0bd0'
36 correct_sha512+='c723848c12cb73ccf2c4c5875cdb674237da9696ef9e4deac07d'
37 correct_sha512+='c2b04aed6d90ffb98b9b0c4'
38 wget_sha512 "$subdir/common_build_and_checks.sh" "$script"
```

```

39     "$correct_sha512"
40     chmod +x "$subdir/common_build_and_checks.sh"
41
42     cwd="."
43     if [[ -n "$1" ]];
44     then
45         cwd="$1"
46     fi
47
48     ./build_and_checks_dependencies/common_build_and_checks.sh "$cwd"
49
50     echo "Running pylint"
51     pylint src/python_none_objects/
52     pylint typing_test/

```

2.2 .gitignore

```

1 build_and_checks_dependencies/

```

2.3 latex/python-none-objects.tex.tpl

```

1 %!/usr/bin/env bash
2 % This file is part of python-none-objects library.
3 %
4 % python-none-objects is free software:
5 % you can redistribute it and/or modify it under the terms
6 % of the GNU Lesser General Public License
7 % as published by the Free Software Foundation,
8 % either version 3 of the License,
9 % or (at your option) any later version.
10 %
11 % python-none-objects is distributed in the hope
12 % that it will be useful,
13 % but WITHOUT ANY WARRANTY;
14 % without even the implied warranty of
15 % MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 % See the GNU Lesser General Public License for more details.
17 %
18 % You should have received a copy of
19 % the GNU Lesser General Public License
20 % along with python-none-objects.
21 % If not, see <https://www.gnu.org/licenses/>.
22 %
23 % Copyright 2023-2024 Laurent Lyaudet
24
25 \documentclass{article}

```

```

26
27 \usepackage[utf8]{inputenc}
28 \usepackage{subfigure}
29 \usepackage{amsmath}
30 \usepackage{amssymb}
31 \usepackage{amsthm}
32 \usepackage[pdftex]{hyperref}
33 \usepackage{tikz}
34 \usepackage{caption}
35 \usepackage[round]{natbib}
36 \usepackage{fancyhdr}
37 \usepackage{amsfonts}
38 \usepackage{times}
39 \usepackage{ifpdf}
40 \usepackage{latexsym}
41 \usepackage{graphicx}
42 \usepackage{enumerate}
43 \usepackage{pmbboxdraw}
44 \usepackage{fancyvrb}
45
46 % *** les environnements ***
47 %\theoremstyle{break}
48 \newtheorem{definition}[definition]{Definition}[section]
49 \newtheorem{proposition}[definition]{Proposition}
50 \newtheorem{theorem}[definition]{Theorem}
51 \newtheorem{lemma}[definition]{Lemma}
52 \newtheorem{corollary}[definition]{Corollary}
53 \newtheorem{remark}[definition]{Remark}
54 \newtheorem{openproblem}[definition]{Open problem}
55
56 \begin{document}
57
58 \author{
59   Laurent Lyaudet\\
60   \url{https://lyaudet.eu/laurent/}\\
61   laurent.lyaudet@gmail.com
62 }
63 \title{python-none-objects}
64
65 \maketitle
66 \begin{abstract}
67 A collection of "None" objects
68 compatible with various Python types
69 \end{abstract}
70
71 Current version: @current_date@

```

```

72
73 Current number of commits: @number_of_commits@
74
75 Current git SHA1: @current_git_SHA1@
76
77 Code lines: @number_of_lines@
78
79 \section{Files tree}
80 \label{section:tree}
81
82 \begin{verbatim}
83 @current_tree_light@
84 \end{verbatim}
85
86 \begin{verbatim}
87 @current_tree@
88 \end{verbatim}
89
90 \section{Listing of files}
91 \label{section:listing}
92
93 The following source code is covered by LGPLv3+.
94 The text of the license is available at:
95 \url{https://www.gnu.org/licenses/}.
96 The git repository of this source code is also available at:
97 \url{https://github.com/LLyaudet/python-none-objects/}.
98
99
100 \subsection{
101     build\_and\_checks.sh
102 }
103 \label{
104     build_and_checkssh
105 }
106
107 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
108     build_and_checks.sh
109 }
110
111
112 \subsection{
113     .gitignore
114 }
115 \label{
116     gitignore
117 }

```

```

118
119 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
120     .gitignore
121 }
122
123
124 \subsection{
125     latex/python-none-objects.tex.tpl
126 }
127 \label{
128     latex:python-none-objectstextpl
129 }
130
131 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
132     latex/python-none-objects.tex.tpl
133 }
134
135
136 \subsection{
137     pyproject.toml
138 }
139 \label{
140     pyprojecttoml
141 }
142
143 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
144     pyproject.toml
145 }
146
147
148 \subsection{
149     README.md.tpl
150 }
151 \label{
152     READMEmdtpl
153 }
154
155 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
156     README.md.tpl
157 }
158
159
160 \subsection{
161     src/python\_none\_objects/\_\_init\_\_.py
162 }
163 \label{

```



```

164     src:python_none_objects:__init__.py
165 }
166
167 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
168     src/python_none_objects/__init__.py
169 }
170
171
172 \subsection{
173     src/python\_none\_objects/py.typed
174 }
175 \label{
176     src:python_none_objects:pytyped
177 }
178
179 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
180     src/python_none_objects/py.typed
181 }
182
183
184 \subsection{
185     typing\_test/\_\_init\_\_.py
186 }
187 \label{
188     typing_test:__init__.py
189 }
190
191 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
192     typing_test/__init__.py
193 }
194
195
196 \subsection{
197     wget\_sha512.sh
198 }
199 \label{
200     wget_sha512sh
201 }
202
203 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
204     wget_sha512.sh
205 }
206
207
208 Merci Dieu ! Merci P\`ere ! Merci Seigneur ! Merci Saint Esprit !
209

```

210 \end{document}

2.4 pyproject.toml

```
1  # pyproject.toml
2
3  [build-system]
4  requires = ["hatchling"]
5  build-backend = "hatchling.build"
6
7  [project]
8  name = "python-none-objects"
9  version = "1.1.11"
10 description = """\
11 Add more constant \None\ objects to Python \
12 to avoid boilerplate code\
13 """
14 readme = "README.md"
15 authors = [
16     { name = "Laurent Lyaudet", email = "laurent.lyaudet@gmail.com" },
17 ]
18 maintainers = [
19     { name = "Laurent Lyaudet", email = "laurent.lyaudet@gmail.com" },
20 ]
21 license = { file = "COPYING.LESSER" }
22 classifiers = [
23     "Development Status :: 5 - Production/Stable",
24     "Intended Audience :: Developers",
25     """\
26 License :: OSI Approved :: \
27 GNU Lesser General Public License v3 or later (LGPLv3+)\
28 """,
29     "Operating System :: OS Independent",
30     "Programming Language :: Python",
31     "Programming Language :: Python :: 3",
32     "Topic :: Software Development :: Libraries :: Python Modules",
33     "Typing :: Typed",
34 ]
35 keywords = ["Python", "None", "Immutable", "Default values"]
36 dependencies = [
37 ]
38 requires-python = ">=3.11"
39
40 [project.optional-dependencies]
41 dev = [
42     "black",
```

```

43     "isort",
44     "mypy",
45     "pylint",
46 ]
47
48 [project.urls]
49 "Homepage" = "https://github.com/LLyaudet/python-none-objects"
50 "Bug Tracker" = ""\
51 https://github.com/LLyaudet/python-none-objects/issues\
52 ""
53
54 [tool.black]
55 line-length = 70
56
57 [tool.isort]
58 profile = "black"
59 line_length = 70

```

2.5 README.md.tpl

```

1  # python-none-objects
2
3  [![PyPI-version-badge]] [PyPI-package-page]
4  [![Downloads-badge]] [PyPIStats-package-page]
5  [![Code-style:black:badge]] [Black-GitHub.com]
6  [![Imports:isort:badge]] [Isort-GitHub.io]
7  [![Typecheck:mypy:badge]] [Typecheck-mypy-lang.org]
8  [![Linting:pylint:badge]] [Pylint-GitHub.com]
9  [![CodeFactor-badge]] [CodeFactor-package-page]
10 [![CodeClimateMaintainability-badge]] [CodeClimateM13y-package-page]
11 [![Codacy-badge]] [Codacy-package-page]
12 ![GitHub-top-language-badge]
13 ![GitHub-license-badge]
14 ![PyPI-python-version-badge]
15 ![GitHub-code-size-in-bytes-badge]
16
17 |      **A collection of "None" objects**      |
18 |:-----:|
19 | **compatible with various Python types** |
20
21
22 The following code yields warning
23 for "Default argument value is mutable".
24
25 ```python3
26 from typing import List, Dict

```

```

27
28 def foo(some: int, other: List = [], thing: Dict = {}):
29     for o in other:
30         bar(some, o, thing)
31     '''
32
33 It is usually recommended to use None instead
34 (<https://stackoverflow.com/questions/41686829>
35 /why-does-pycharm-warn-about-mutable-default-arguments-
36 how-can-i-work-around-the):
37
38 ```python3
39 from typing import List, Dict, Optional
40
41 def foo(
42     some: int,
43     other: Optional[List] = None,
44     thing: Optional[Dict] = None,
45 ):
46     if other is None:
47         other = []
48     if thing is None:
49         thing = {}
50     for o in other:
51         bar(some, o, thing)
52     '''
53
54 But I prefer less boilerplate code like this:
55
56 ```python3
57 from typing import Iterable, Mapping
58 from types import MappingProxyType
59
60 def foo(
61     some: int,
62     other: Iterable = (),
63     thing: Mapping = MappingProxyType({}),
64 ):
65     for o in other:
66         bar(some, o, thing)
67     '''
68
69 This package introduces constants to make the code more readable:
70
71 ```python3
72 from typing import Iterable, Mapping

```

```

73 from python_none_objects import NoneIterable, NoneMapping
74
75 def foo(
76     some: int,
77     other: Iterable = NoneIterable,
78     thing: Mapping = NoneMapping,
79 ):
80     for o in other:
81         bar(some, o, thing)
82     '''
83
84 Be sure to look at the discussions on GitHub:
85 <https://github.com/LLyaudet/python-none-objects/discussions>.
86
87 There is a poll on the naming convention you would prefer:
88 <https://github.com/LLyaudet/python-none-objects/discussions/2>.
89
90 And there is a discussion on various ideas
91 to optimize the code with these constants:
92 <https://github.com/LLyaudet/python-none-objects/discussions/3>.
93
94 I think it would be better to have this kind of constants
95 in the standard library.
96 If you think after reading everything, that it is indeed a good idea,
97 add a star to this repository to let the rest
98 of the Python community
99 know that you would like to see such constant objects
100 in the language :).
101 <https://github.com/LLyaudet/python-none-objects/>
102 If the project gains popularity, I'll try to propose it officially.
103
104 [PyPI-version-badge]: https://img.shields.io/pypi/v/\
105 python-none-objects.svg
106
107 [PyPI-package-page]: https://pypi.org/project/\
108 python-none-objects/
109
110 [Downloads-badge]: https://img.shields.io/pypi/dm/\
111 python-none-objects
112
113 [PyPIStats-package-page]: https://pypistats.org/packages/\
114 python-none-objects
115
116 [Code-style:black:badge]: https://img.shields.io/badge/\
117 code%20style-black-000000.svg
118

```

```

119 [Black-GitHub.com]: https://github.com/psf/black
120
121 [Imports:isort:badge]: https://img.shields.io/badge/\
122 %20imports-isort-%231674b1?style=flat&labelColor=ef8336
123
124 [Isort-GitHub.io]: https://pycqa.github.io/isort/
125
126 [Typecheck:mypy:badge]: https://www.mypy-lang.org/static/\
127 mypy_badge.svg
128
129 [Typecheck-mypy-lang.org]: https://mypy-lang.org/
130
131 [Linting:pylint:badge]: https://img.shields.io/badge/\
132 linting-pylint-yellowgreen
133
134 [Pylint-GitHub.com]: https://github.com/pylint-dev/pylint
135
136 [CodeFactor-badge]: https://www.codefactor.io/repository/github/\
137 llyaudet/python-none-objects/badge
138
139 [CodeFactor-package-page]: https://www.codefactor.io/repository/\
140 github/llyaudet/python-none-objects
141
142 [CodeClimateMaintainability-badge]: https://api.codeclimate.com/v1/\
143 badges/266efb337cabd7d7941e/maintainability
144
145 [CodeClimateM13y-package-page]: https://codeclimate.com/github/\
146 Llyaudet/python-none-objects/maintainability
147
148 [Codacy-badge]: https://app.codacy.com/project/badge/Grade/\
149 4be488463e31459bb2ba02794091610d
150
151 [Codacy-package-page]: https://app.codacy.com/gh/Llyaudet/\
152 python-none-objects/dashboard?utm_source=gh\
153 &utm_medium=referral&utm_content=&utm_campaign=Badge_grade
154
155 [GitHub-top-language-badge]: https://img.shields.io/github/\
156 languages/top/llyaudet/python-none-objects
157
158 [GitHub-license-badge]: https://img.shields.io/github/license/\
159 llyaudet/python-none-objects
160
161 [PyPI-python-version-badge]: https://img.shields.io/pypi/pyversions/\
162 python-none-objects
163
164 [GitHub-code-size-in-bytes-badge]: https://img.shields.io/github/\

```

165 languages/code-size/llyaudet/python-none-objects

2.6 src/python_none_objects/_init_.py

```
1  """
2  This file is part of python-none-objects library.
3
4  python-none-objects is free software:
5  you can redistribute it and/or modify it under the terms
6  of the GNU Lesser General Public License
7  as published by the Free Software Foundation,
8  either version 3 of the License,
9  or (at your option) any later version.
10
11  python-none-objects is distributed in the hope
12  that it will be useful,
13  but WITHOUT ANY WARRANTY;
14  without even the implied warranty of
15  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16  See the GNU Lesser General Public License for more details.
17
18  You should have received a copy of
19  the GNU Lesser General Public License
20  along with python-none-objects.
21  If not, see <https://www.gnu.org/licenses/>.
22
23  ©Copyright 2023-2024 Laurent Lyaudet
24  -----
25  The empty tuple is really useful.
26  But it is implementation dependent for it to be a constant:
27  https://docs.python.org/3.12/reference/expressions.html
28  #parenthesized-forms
29  https://stackoverflow.com/questions/41983180
30  /is-the-empty-tuple-in-python-a-constant
31  https://stackoverflow.com/questions/8185776
32  /compare-object-to-empty-tuple-with-the-is-operator-in-python-2-x
33  https://stackoverflow.com/questions/38328857
34  /why-does-is-return-true-when-is-and-is-return-false
35  https://stackoverflow.com/questions/14135542
36  /how-is-tuple-implemented-in-cpython
37  I'm wondering if there would be additional efficiency gains
38  to treat the empty tuple and the constants here differently
39  at execution of Python scripts.
40  """
41
42  from types import MappingProxyType
```

```

43 from typing import (
44     Any,
45     Collection,
46     Container,
47     Iterable,
48     Mapping,
49     Never,
50 )
51
52 NoneCollection: Collection[Never] = ()
53 NoneIterable: Iterable[Never] = NoneCollection
54 NoneContainer: Container[Never] = NoneCollection
55 NoneMapping: Mapping[Any, Never] = MappingProxyType({})

```

2.7 src/python_none_objects/py.typed

2.8 typing_test/__init__.py

```

1  """
2  This file is part of python-none-objects library.
3
4  python-none-objects is free software:
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6  of the GNU Lesser General Public License
7  as published by the Free Software Foundation,
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9  or (at your option) any later version.
10
11  python-none-objects is distributed in the hope
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14  without even the implied warranty of
15  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16  See the GNU Lesser General Public License for more details.
17
18  You should have received a copy of
19  the GNU Lesser General Public License
20  along with python-none-objects.
21  If not, see <https://www.gnu.org/licenses/>.
22
23  ©Copyright 2023-2024 Laurent Lyaudet
24  """
25
26 import sys
27 from typing import Collection, Container, Iterable, Mapping

```



```

28
29 sys.path.insert(0, "../src/")
30 # pylint: disable-next=wrong-import-position
31 from python_none_objects import (
32     NoneCollection,
33     NoneContainer,
34     NoneIterable,
35     NoneMapping,
36 )
37
38
39 def foo_collection(x: Collection[str] = NoneCollection) -> bool:
40     """
41     Check typing for NoneCollection.
42     """
43     for y in x:
44         print(f"foo {y}")
45     return "toto" in x
46
47
48 def foo_iterable(x: Iterable[str] = NoneIterable) -> None:
49     """
50     Check typing for NoneIterable.
51     """
52     for y in x:
53         print(f"foo {y}")
54
55
56 def foo_container(x: Container[str] = NoneContainer) -> bool:
57     """
58     Check typing for NoneContainer.
59     """
60     return "toto" in x
61
62
63 def foo_mapping(x: Mapping[str, str] = NoneMapping) -> None:
64     """
65     Check typing for NoneMapping.
66     """
67     for y, z in x.items():
68         print(f"foo {y} bar {z}")
69
70
71 foo_collection()
72 foo_iterable()
73 foo_container()

```

```
74  foo_mapping()
```

2.9 wget_sha512.sh

```
1  #!/usr/bin/env bash
2  # This file is part of DevOrSysAdminScripts library.
3  #
4  # DevOrSysAdminScripts is free software:
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6  # of the GNU Lesser General Public License
7  # as published by the Free Software Foundation,
8  # either version 3 of the License,
9  # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU Lesser General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU Lesser General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2024 Laurent Lyaudet
24
25 wget_sha512() {
26     # $1 filename
27     # $2 download_URL
28     # $3 correct_sha512
29     if [[ ! -f "$1" ]];
30     then
31         wget -O "$1" "$2"
32     fi
33     present_sha512=$(sha512sum "$1" | cut -f1 -d' ')
34     if [[ "$present_sha512" != "$3" ]];
35     then
36         echo "$1 does not have correct sha512"
37         echo "wanted $3"
38         echo "found $present_sha512"
39         exit
40     fi
41 }
```

Merci Dieu ! Merci Père ! Merci Seigneur ! Merci Saint Esprit !