collections.defaultdict equivalent implementation of list

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CHAPTER 1

Usage

List extending automatically to the maximum requested length.

Added indicies are filled with *None* by default.

```
>>> l = defaultlist()
>>> l
[]
>>> l[2] = "C"
>>> l
[None, None, 'C']
>>> l[4]
>>> l
[None, None, 'C', None, None]
```

Slices and negative indicies are supported likewise

```
>>> l[1:4]
[None, 'C', None]
>>> l[-3]
'C'
```

Simple factory functions can be created via *lambda*.

```
>>> l = defaultlist(lambda: 'empty')
>>> l[2] = "C"
>>> l[4]
'empty'
>>> l
['empty', 'empty', 'C', 'empty', 'empty']
```

It is also possible to implement advanced factory functions:

```
>>> def inc():
...     inc.counter += 1
...     return inc.counter
```

```
>>> inc.counter = -1
>>> l = defaultlist(inc)
>>> l[2] = "C"
>>> l
[0, 1, 'C']
>>> l[4]
4
>>> l
[0, 1, 'C', 3, 4]
```

Please be aware that these functions are shared between shallow copies of the list.

```
>>> c = l[1:-1]
>>> c
[1, 'C', 3]
>>> c[5]
7
>>> c
[1, 'C', 3, 5, 6, 7]
>>> l[6]
9
>>> l
[0, 1, 'C', 3, 4, 8, 9]
```

class `defaultlist.`**`defaultlist`**(*factory=None*)

Bases: `list`

List extending automatically to the maximum requested length.

Keyword Arguments **`factory`** – Function called for every missing index.

`copy`()

Return a shallow copy of the list. Equivalent to a[:].

CHAPTER 2

Installation

To install the *defaultlist* module run:

```
pip install defaultlist
```

If you do not have write-permissions to the python installation, try:

```
pip install defaultlist --user
```

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