

with statement

with statement

`with_stmt ::= "with" with_item
("," with_item)* ":" suite`

`with_item ::= expression ["as" target]`

context manager

- `object.__enter__()`
- `object.__exit__(exc_type, exc_value, traceback)`

УСТРОЙСТВО **with**

```
with EXPR as VAR:  
    BLOCK
```

```
BLOCK
```

```
mgr = (EXPR)  
exit = mgr.__exit__  
value = mgr.__enter__()  
no_exc = True  
try:  
    try:  
        VAR = value  
        BLOCK  
    except:  
        no_exc = False  
        if not exit(*sys.exc_info()):  
            raise  
finally:  
    if no_exc:  
        exit(None, None, None)
```

```
exit('None', 'None', 'None')
```

Устройство **with**

```
with A() as a, B() as b:  
    suite
```

2017

```
with A() as a:  
    with B() as b:  
        suite
```

2017

Объекты, поддерживающие **with**

- `file (open(...))`
- `socket (socket.socket(...))`
- `http.client.HTTPResponse (urllib.request.urlopen(...))`
- ...

contextlib

- `@contextlib.contextmanager`
- `contextlib.closing(thing)`
- `contextlib.suppress(*exceptions)`
- `class contextlib.ExitStack`

contextlib

```
import contextlib

@contextlib.contextmanager
def closing(thing):
    try:
        yield thing
    finally:
        thing.close()
        fμγnā·c]o2ε()
```


contextlib

```
import contextlib

with contextlib.suppress(FileNotFoundError):
    os.remove('somefile.tmp')

os.remove('somefile.tmp')

with contextlib.suppress(FileNotFoundError):
```

Модули

Пакеты