
Watson - Dev

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Work with WSGI applications locally.

Build Status

Installation

```
pip install watson-dev
```

Testing

Watson can be tested with `pytest`. Simply activate your `virtualenv` and run `python setup.py test`.

Contributing

If you would like to contribute to Watson, please feel free to issue a pull request via Github with the associated tests for your code. Your name will be added to the AUTHORS file under contributors.

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5.1 Reference Library

5.1.1 watson.dev.middleware

class watson.dev.middleware.**StaticFileMiddleware** (*app, initial_dir=None*)

A WSGI compatible Middleware class that allows content to be retrieved from the directory that the `__main__` is called from.

Example:

```
def app(envIRON, start_response):
    start_response('200 OK', [('Content-Type', 'text/plain')])
    return [b'Hello World!']
```

```
my_app = StaticFileMiddleware(app)
```

```
__init__(app, initial_dir=None)
```

5.1.2 watson.dev.reloader

```
1  # -*- coding: utf-8 -*-
2  # Autoreloading launcher.
3  # Borrowed from Peter Hunt and the CherryPy project (http://www.cherrypy.org).
4  # Some taken from Ian Bicking's Paste (http://pythonpaste.org/).
5  # Sourced from the Django project (http://djangoproject.com)
6  #
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29 # CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
30 # OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
31 # OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
32 import sys
33 import os
34 import time
35 import _thread as thread
36 from watson.common.contextmanagers import suppress
37
38 _mtimes = {}
39
40
41 def code_changed():
42     global _mtimes
43     filenames = [getattr(m, "__file__", None) for m in sys.modules.values()]
44     for filename in filter(None, filenames):
45         if filename.endswith(".pyc") or filename.endswith(".pyo"):
46             filename = filename[:-1]
47         if filename.endswith("$py.class"):
48             filename = filename[:-9] + ".py"
49         if not os.path.exists(filename):
50             continue
51         stat = os.stat(filename)
52         mtime = stat.st_mtime
53         if filename not in _mtimes:
54             _mtimes[filename] = mtime
55             continue
56         if mtime != _mtimes[filename]:
57             _mtimes = {}
58             return True
59     return False
60
61
62 def reloader_thread():
63     while True:
64         if code_changed():
65             sys.exit(3)
66         time.sleep(1)
67
68
69 def restart_with_reloader(script_dir=None):
70     import __main__
71     while True:
72         if not script_dir:
73             script = os.path.abspath(__main__.__file__)
74         else:
75             script = os.path.abspath(
76                 os.path.join(script_dir, __main__.__file__))
77         args = [sys.executable, script]
78         sys_argv = sys.argv[:]
```



```

79         if len(sys_argv) > 1:
80             sys_argv.pop(0)
81             args = args + sys_argv
82         new_environ = os.environ.copy()
83         new_environ['RUN_MAIN'] = 'true'
84         exit_code = os.spawnve(os.P_WAIT, sys.executable, args, new_environ)
85         if exit_code != 3:
86             return exit_code
87
88
89 def reloader(main_func, args, kwargs, script_dir=None):
90     if os.environ.get('RUN_MAIN') == 'true':
91         thread.start_new_thread(main_func, args, kwargs)
92         with suppress(KeyboardInterrupt):
93             reloader_thread()
94     else:
95         try:
96             exit_code = restart_with_reloader(script_dir)
97             if exit_code < 0:
98                 os.kill(os.getpid(), -exit_code)
99             else:
100                 sys.exit(exit_code)
101         except KeyboardInterrupt:
102             print('\nTerminated.')
103
104
105 def main(main_func, args=None, kwargs=None, script_dir=None):
106     reloader(main_func, args or (), kwargs or {}, script_dir)

```

5.1.3 watson.dev.server

`watson.dev.server.make_dev_server` (*app*, *host*='0.0.0.0', *port*=8000, *do_reload*=True, *script_dir*=None, *public_dir*=None)

A simple local development server utilizing the existing `simple_server` module, but allows for serving of static files.

Never use this in production. EVER.

Example:

```

def my_app(environ, start_response):
    start_response('200 OK', [('Content-Type', 'text/html')])
    return [b'<h1>Hello World!</h1>']

if __name__ == '__main__':
    make_dev_server(my_app)

```

Parameters

- **app** – A WSGI callable
- **host** – The host to bind to
- **port** – The port
- **do_reload** – Whether or not to automatically reload the application when source code changes.

W

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