
sPy Documentation

Release 0.1

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sPy is Python based script tracking changes at any online or offline location. After detecting changes it sends emails notifying about differences.

STRUCTURE

```
class spy.AbstractDecorator (subject)
    Decorator pattern

    compare ()
    download_new_content ()
    download_old_content ()
    get_diff ()
    get_filename ()
    get_location ()
    get_name ()
    get_new_content ()
    get_old_content ()
    has_changed ()
    notify ()
    parse_new_content (content)
    prepare_notification ()
    save_new_content ()
    set_diff (value)
    set_new_content (value)
    set_old_content (value)

class spy.AbstractProxy (*args, **kwargs)
    Proxy pattern

    compare ()
    download_new_content ()
    download_old_content ()
    get_diff ()
    get_filename ()
    get_location ()
```

```
get_name ()
get_new_content ()
get_old_content ()
has_changed ()
notify ()
parse_new_content (content)
prepare_notification ()
save_new_content ()
set_diff (value)
set_new_content (value)
set_old_content (value)
```

```
class spy.BinarySite (*args, **kwargs)
    cokolwiek tylko do sprawdzenia czy sie zmienilo z poprzednim; sprawdzane na podstawie hasha md5 lub sha1
```

```
compare ()
download_new_content ()
download_old_content ()
get_diff ()
get_filename ()
get_location ()
get_name ()
get_new_content ()
get_old_content ()
has_changed ()
notify ()
parse_new_content (content)
prepare_notification ()
save_new_content ()
set_diff (value)
set_new_content (value)
set_old_content (value)
```

```
class spy.HTMLSite (*args, **kwargs)
    cokolwiek trescia html

compare ()
download_new_content ()
download_old_content ()
get_diff ()
get_filename ()
```



```
get_location()
get_name()
get_new_content()
get_old_content()
has_changed()
notify()
parse_new_content(content)
prepare_notification()
save_new_content()
set_diff(value)
set_new_content(value)
set_old_content(value)
exception spy.ImproperlyConfigured

    args
    with_traceback()
        Exception.with_traceback(tb) – set self.__traceback__ to tb and return self.
class spy.Mailer
    Singleton pattern.

    Collects, creates and sends notification emails.
    exception NotSingle

        args
        with_traceback()
            Exception.with_traceback(tb) – set self.__traceback__ to tb and return self.
Mailer.__Mailer__instance = None
Mailer.configure(sender, default_recipients, host, port, username, password, use_tls)
    Configures mailer.

    classmethod Mailer.get_instance()
        Returns instance of Mailer. If no instance ever existed it creates one.
Mailer.make_email(sender, recipient, data)
    Creates and returns email message for single recipient.
Mailer.make_messages()
    Creates messages for all recipients.
Mailer.prepare_notification(name, diff, location, recipients=None)
    Adds single notification about single site.
Mailer.send_messages()
    Sends all messages.
class spy.NewSiteDecorator(*args, **kwargs)
```

```
compare()
download_new_content()
download_old_content()
get_diff()
get_filename()
get_location()
get_name()
get_new_content()
get_old_content()
has_changed()
notify()
parse_new_content(content)
prepare_notification()
save_new_content()
set_diff(value)
set_new_content(value)
set_old_content(value)
class sPy.OfflineSiteDecorator(subject)
```

```
compare()
download_new_content()
download_old_content()
get_diff()
get_filename()
get_location()
get_name()
get_new_content()
get_old_content()
has_changed()
notify()
parse_new_content(content)
prepare_notification()
save_new_content()
set_diff(value)
set_new_content(value)
set_old_content(value)
```

```
class spy.OnlineSiteDecorator(subject)

    compare()
    download_new_content()
    download_old_content()
    get_diff()
    get_filename()
    get_location()
    get_name()
    get_new_content()
    get_old_content()
    has_changed()
    notify()
    parse_new_content(content)
    prepare_notification()
    save_new_content()
    set_diff(value)
    set_new_content(value)
    set_old_content(value)

class spy.SPy
    Facade pattern

    configure(site_slugs=None)
    get_sites()
    initialize_mailer()
    notify()
    spy()

class spy.Site(name, location, slug, recipients=None)
    Represents single resource

    compare()

    download_new_content()
        Dummy. Left for customization in decorators or proxies.

    download_old_content()
        Opens old file (downloaded during last check) and returns it's content.

    get_diff()
    get_filename()
    get_location()
    get_name()
```

```
get_new_content ()
    Returns new (downloaded) content.

get_old_content ()
    Return old content.

has_changed ()

parse_new_content (content)
    Parses new content after downloading.

prepare_notification ()

save_new_content ()

set_diff (value)

set_new_content (value)
    Sets new content from value.

set_old_content (value)
    Sets old content from value.

class spy.SiteFactory
    Factory pattern

    get_site (section)

class spy.TextSite (*args, **kwargs)
    cokolwiek trescia tekstowa

    compare ()

    download_new_content ()

    download_old_content ()

    get_diff ()

    get_filename ()

    get_location ()

    get_name ()

    get_new_content ()

    get_old_content ()

    has_changed ()

    notify ()

    parse_new_content (content)

    prepare_notification ()

    save_new_content ()

    set_diff (value)

    set_new_content (value)

    set_old_content (value)

spy.main ()

spy.slugify (value)
    Normalizes string, converts to lowercase, removes non-alpha characters, and converts spaces to hyphens.
```

USER'S GUIDE

2.1 Configuration

Config file should be under `~/ .spyrc`. For full example see `.spyrc` in sources.

2.1.1 SPY section

SPY section is about email. Here's an example:

```
[SPY]
email_from = sPy <selerto@gmail.com>
email_to = Rafa Selewoko <rselewonko@gmail.com>, Zenek Mietek <selerto@gmail.com>
smtp_host = smtp.gmail.com
smtp_port = 587
smtp_username = selerto@gmail.com
smtp_password = *****
smtp_tls = True
```

2.1.2 Sites sections

Each section that's name is not SPY represents site to check. Here's an example:

```
[Rozkład zajęć]
# choices are text, html, binary
type = html
# choices are online or offline
site = online
# starts with ``http`` if online, with ``/`` if offline
location = http://www.degra.wi.pb.edu.pl/rozklady/rozklad.php?page=st

# slug is only required if you want to check each site separately
slug = rozkladzajec
```

2.2 Running sPy

To check all sites:

```
./spy.py or python3 /location/of/spy.py
```

To check specified sites:

```
python3 /location/of/spy.py site1_slug site2_slug
```

It's the best to run sPy from **cron** or **Windows Task Sheduler**.

REQUIREMENTS

- python3

LICENSE

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