

# MyProject Documentation

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## Module SuperHelper

### Sub-modules

- [SuperHelper.Core](#)
- [SuperHelper.Modules](#)
- [SuperHelper.Tests](#)

## Module `SuperHelper.Core`

### Sub-modules

- [SuperHelper.Core.Config](#)
- [SuperHelper.Core.Utills](#)
- [SuperHelper.Core.core\\_cli](#)
- [SuperHelper.Core.core\\_commands](#)
- [SuperHelper.Core.core\\_loader](#)

### Functions

#### Function `load_added_modules`

```
def load_added_modules(  
    config: dict  
) -> list
```

Loads all added modules.

Returns ---= A list of a 2-tuple elements, where the first index is the `click.command` object, and the second index is the technical name of the command. For example:

```
[(main, "main"), ...]
```

The first index can be added to a `click.group`, i.e the cli function.

#### Function `load_core_commands`

```
def load_core_commands() -> list
```

Loads the Core CLI commands.

Returns ---= A list of a 2-tuple elements, where the first index is the `click.command` object, and the second index is the technical name of the command. For example:

```
[(add_modules, "core_add"), ...]
```

The first index can be added to a `click.group`, i.e the cli function.

#### Function `main_entry`

```
def main_entry() -> NoReturn
```

#### Function `pass_config`

```
def pass_config(  
    core: bool = None,  
    module_name: str = None,  
    lock: bool = False,  
    param_name: str = 'config'  
) -> Callable
```

Passes the requested config to decorated functions.

The wrapped function will receive the config (as requested). When the function returns (or raises `SystemExit`), this decorator will capture that signal, save the config (if locked) before returning (or re-raising `SystemExit`).

Args ---= `core : bool` : Whether to request core config.

`module_name : str` The name of the module.

`lock : bool` Whether to lock the config, i.e allow writing to the config.

`param_name : str` The name of the parameter that the config will be passed as.

Returns ---= A Callable instance (the decorated function).

Raises ---= SystemExit : Re-raises the SystemExit() raised by the wrapped function.

ValueError Both core and module\_name are specified.

Function `run_startup`

```
def run_startup()
```

Function `save_config`

```
def save_config()
```

Saves application config.

## Module `SuperHelper.Core.Config`

### Sub-modules

- [SuperHelper.Core.Config.app\\_config](#)
- [SuperHelper.Core.Config.config\\_class](#)

### Functions

Function `load_app_config`

```
def load_app_config(  
    config_path: ~PathLike  
) -> NoneType
```

Loads the configuration of the application.

Args ---= `config_path` : PathLike : The path to config file.

Returns ---= None

Raises ---= SystemExit : Config file is unreadable.

Function `make_config_global`

```
def make_config_global(  
    cfg: Config  
) -> NoneType
```

Makes the configuration global.

Args ---= `cfg` : [Config](#) : The [Config](#) instance.

Returns ---= None

Function `pass_config`

```
def pass_config(  
    core: bool = None,  
    module_name: str = None,  
    lock: bool = False,  
    param_name: str = 'config'  
) -> Callable
```

Passes the requested config to decorated functions.

The wrapped function will receive the config (as requested). When the function returns (or raises SystemExit), this decorator will capture that signal, save the config (if locked) before returning (or re-raising SystemExit).

Args ---= core : bool : Whether to request core config.

module\_name : str The name of the module.

lock : bool Whether to lock the config, i.e allow writing to the config.

param\_name : str The name of the parameter that the config will be passed as.

Returns ---= A Callable instance (the decorated function).

Raises ---= SystemExit : Re-raises the SystemExit() raised by the wrapped function.

ValueError Both core and module\_name are specified.

Function save\_app\_config

```
def save_app_config(
    config: SuperHelper.Core.Config.config_class.Config,
    config_path: ~PathLike
) -> NoneType
```

Saves the configuration of the application.

Args ---= config : [Config](#) : The global Config instance

config\_path : PathLike The path to config file

Returns ---= None

Raises ---= SystemExit : Config file is not writable.

## Classes

Class Config

```
class Config(
    core: dict[str, ...] = None,
    modules: dict[str, dict[str, ...]] = None
)
```

The configuration of the application.

Static methods

Method from\_dict

```
def from_dict(
    config: dict[str]
) -> SuperHelper.Core.Config.config_class.Config
```

Methods

Method apply\_core\_patch

```
def apply_core_patch(
    self,
    config: dict[str, ...]
) -> NoneType
```

Applies a new patch to core configuration.

This function should only be used by Core CLI.

Args ---= `config` : `dict[str, ...]` : The patch of the configuration.

Returns ---= `None`

Raises ---= `RuntimeError` : An error has occurred in `self.get_core_config()`

Method `apply_module_patch`

```
def apply_module_patch(
    self,
    module_name: str,
    config: dict[str, ...]
) -> NoneType
```

Applies a new patch to the module configuration.

Args ---= `module_name` : `str` : The name of the module to apply patch to.

`config` : `dict[str, ...]` The patch of the configuration.

Returns ---= `None`

Method `get_core_config`

```
def get_core_config(
    self,
    lock: bool = True
) -> dict
```

Gets the configuration of Core CLI.

This function is intended for internal use only, used for the decorator [pass\\_config\(\)](#).

Args ---= `lock` : `bool` : Whether to lock the config or not.

Returns ---= A dictionary mapping keys to corresponding values of the core config. Each entry is represented by a key-value pair of the dictionary. For example:

```
{"DEBUG": ..., "INSTALLED_MODULES": [...]}
```

The keys are always strings, and the values can be of any JSON-serializable type.

Raises ---= `RuntimeError` : The core config is locked by another call.

Method `get_module_config`

```
def get_module_config(
    self,
    module_name: str,
    lock: bool = True
) -> dict
```

Gets the configuration of the specified module.

This function is intended for internal use only, used for the decorator [pass\\_config\(\)](#).

Args ---= `module_name` : `str` : The name of the module that the config belongs to.

`lock` : `bool` Whether to lock the config or not.

Returns ---= A dictionary mapping keys to corresponding values of the module config. Each entry is represented by a key-value pair of the dictionary. For example:

```
{"DEBUG": ..., "INSTALLED_MODULES": [...]}
```

The keys are always strings, and the values can be of any JSON-serializable type.

Raises `RuntimeError` : The module config is locked by another call.

Method `set_core_config`

```
def set_core_config(
    self,
    config: dict[str, ...]
) -> NoneType
```

Sets the configuration of Core CLI.

This function is intended for internal use only, used for the decorator `pass_config()`.

Args `config : dict[str, ...]` : A dictionary with string keys of the core configuration.

Returns `None`

Raises `RuntimeError` : The last retrieval of the core config was not locked, hence it is read-only.

Method `set_module_config`

```
def set_module_config(
    self,
    module_name: str,
    config: dict[str, ...]
) -> NoneType
```

Sets the module configuration.

This function is intended for internal use only, used for the decorator `pass_config()`.

Args `module_name : str` : The name of the module that the config belongs to.

`config : dict[str, ...]` A dictionary with string keys of the core configuration.

Returns `None`

Raises `RuntimeError` : The last retrieval of the module config was not locked, hence it is read-only.

## Module `SuperHelper.Core.Config.app_config`

### Functions

Function `load_app_config`

```
def load_app_config(
    config_path: ~PathLike
) -> NoneType
```

Loads the configuration of the application.

Args `config_path : PathLike` : The path to config file.

Returns `None`

Raises `SystemExit` : Config file is unreadable.



#### Function `save_app_config`

```
def save_app_config(
    config: SuperHelper.Core.Config.config_class.Config,
    config_path: ~PathLike
) -> NoneType
```

Saves the configuration of the application.

Args ---= `config` : `Config` : The global `Config` instance

`config_path` : `PathLike` The path to config file

Returns ---= `None`

Raises ---= `SystemExit` : Config file is not writable.

## Module `SuperHelper.Core.Config.config_class`

### Functions

#### Function `make_config_global`

```
def make_config_global(
    cfg: Config
) -> NoneType
```

Makes the configuration global.

Args ---= `cfg` : `Config` : The `Config` instance.

Returns ---= `None`

#### Function `pass_config`

```
def pass_config(
    core: bool = None,
    module_name: str = None,
    lock: bool = False,
    param_name: str = 'config'
) -> Callable
```

Passes the requested config to decorated functions.

The wrapped function will receive the config (as requested). When the function returns (or raises `SystemExit`), this decorator will capture that signal, save the config (if locked) before returning (or re-raising `SystemExit`).

Args ---= `core` : `bool` : Whether to request core config.

`module_name` : `str` The name of the module.

`lock` : `bool` Whether to lock the config, i.e allow writing to the config.

`param_name` : `str` The name of the parameter that the config will be passed as.

Returns ---= A `Callable` instance (the decorated function).

Raises ---= `SystemExit` : Re-raises the `SystemExit()` raised by the wrapped function.

`ValueError` Both `core` and `module_name` are specified.

### Classes

#### Class `Config`

```
class Config(
```

```

        core: dict[str, ...] = None,
        modules: dict[str, dict[str, ...]] = None
    )

```

The configuration of the application.

## Static methods

### Method from\_dict

```

def from_dict(
    config: dict[str]
) -> SuperHelper.Core.Config.config_class.Config

```

## Methods

### Method apply\_core\_patch

```

def apply_core_patch(
    self,
    config: dict[str, ...]
) -> NoneType

```

Applies a new patch to core configuration.

This function should only be used by Core CLI.

Args ---= config : dict[str, ...] : The patch of the configuration.

Returns ---= None

Raises ---= RuntimeError : An error has occurred in self.get\_core\_config()

### Method apply\_module\_patch

```

def apply_module_patch(
    self,
    module_name: str,
    config: dict[str, ...]
) -> NoneType

```

Applies a new patch to the module configuration.

Args ---= module\_name : str : The name of the module to apply patch to.

config : dict[str, ...] The patch of the configuration.

Returns ---= None

### Method get\_core\_config

```

def get_core_config(
    self,
    lock: bool = True
) -> dict

```

Gets the configuration of Core CLI.

This function is intended for internal use only, used for the decorator [pass\\_config\(\)](#).

Args ---= lock : bool : Whether to lock the config or not.

Returns ---= A dictionary mapping keys to corresponding values of the core config. Each entry is represented by a key-value pair of the dictionary. For example:

```
{"DEBUG": ..., "INSTALLED_MODULES": [...]}
```

The keys are always strings, and the values can be of any JSON-serializable type.

Raises `RuntimeError` : The core config is locked by another call.

Method `get_module_config`

```
def get_module_config(
    self,
    module_name: str,
    lock: bool = True
) -> dict
```

Gets the configuration of the specified module.

This function is intended for internal use only, used for the decorator `pass_config()`.

Args `module_name : str` : The name of the module that the config belongs to.

`lock : bool` Whether to lock the config or not.

Returns `dict` : A dictionary mapping keys to corresponding values of the module config. Each entry is represented by a key-value pair of the dictionary. For example:

```
{"DEBUG": ..., "INSTALLED_MODULES": [...]}
```

The keys are always strings, and the values can be of any JSON-serializable type.

Raises `RuntimeError` : The module config is locked by another call.

Method `set_core_config`

```
def set_core_config(
    self,
    config: dict[str, ...]
) -> NoneType
```

Sets the configuration of Core CLI.

This function is intended for internal use only, used for the decorator `pass_config()`.

Args `config : dict[str, ...]` : A dictionary with string keys of the core configuration.

Returns `None`

Raises `RuntimeError` : The last retrieval of the core config was not locked, hence it is read-only.

Method `set_module_config`

```
def set_module_config(
    self,
    module_name: str,
    config: dict[str, ...]
) -> NoneType
```

Sets the module configuration.

This function is intended for internal use only, used for the decorator `pass_config()`.

Args `module_name : str` : The name of the module that the config belongs to.

`config : dict[str, ...]` A dictionary with string keys of the core configuration.

Returns `None`

Raises `RuntimeError` : The last retrieval of the module config was not locked, hence it is read-only.

## Module `SuperHelper.Core.Utls`

### Sub-modules

- [SuperHelper.Core.Utls.bit\\_ops](#)
- [SuperHelper.Core.Utls.crypto\\_ops](#)
- [SuperHelper.Core.Utls.file\\_ops](#)
- [SuperHelper.Core.Utls.logger](#)
- [SuperHelper.Core.Utls.type\\_ensure](#)
- [SuperHelper.Core.Utls.type\\_hinting](#)

### Functions

#### Function `setup_core_logger`

```
def setup_core_logger(  
    logging_path: ~PathLike  
) -> logging.Logger
```

Sets up the core logger.

Args ---= `logging_path` : `PathLike` : The path to the logging file.

Returns ---= A `logging.Logger` instance with name set to [SuperHelper](#).

### Classes

#### Class `BitOps`

```
class BitOps
```

A utility class for bitwise operations.

#### Static methods

##### Method `is_bit_set`

```
def is_bit_set(  
    i: int,  
    pos: int  
) -> bool
```

Checks if the `pos`-th bit of the integer `i` is set.

Args ---= `i` : `int` : The integer to check.

`pos` : `int` The zero-indexed position of the bit (from LSB) to check.

Returns ---= True if the specified bit is set, otherwise False

##### Method `set_bit`

```
def set_bit(  
    i: int,  
    pos: int  
) -> int
```

Sets the the `pos`-th bit of the integer `i`.

Args ---= `i` : `int` : The integer to modify.

`pos` : `int` The zero-indexed position of the bit (from LSB) to set.

Returns ---= The integer with the specified bit set.

#### Method `unset_bit`

```
def unset_bit(  
    i: int,  
    pos: int  
) -> int
```

Unsets the the pos-th bit of the integer i.

Args ---= `i : int` : The integer to modify.

`pos : int` The zero-indexed position of the bit (from LSB) to unset.

Returns ---= The integer with the specified bit unset.

#### Class `Cryptographer`

```
class Cryptographer(  
    salt: bytes,  
    auth_key: bytes,  
    encrypt: bool = True  
)
```

A utility class for cryptographic functions.

Initialises a [Cryptographer](#) instance.

Args ---= `salt : bytes` : The raw salt, in bytes.

`auth_key : bytes` The authentication key, in bytes.

`encrypt : bool` True to make an encrypter, otherwise False.

#### Static methods

##### Method `decode_salt`

```
def decode_salt(  
    salt: str  
) -> bytes
```

Decodes the salt string to raw salt.

Args ---= `salt : str` : The Base64-encoded string of the raw salt.

Returns ---= The raw salt

##### Method `encode_salt`

```
def encode_salt(  
    salt: bytes  
) -> str
```

Encodes the raw salt as string.

Args ---= `salt : bytes` : The raw salt, in bytes.

Returns ---= The Base64-encoded string of the raw salt

##### Method `make_decrypter`

```
def make_decrypter(  
    salt: str,  
    key: str  
) -> SuperHelper.Core.Utils.crypto_ops.Cryptographer
```

Makes a Fernet decrypter for salt and key.

Args ---= salt : str : The Base64-encoded string of the raw salt.

key : str The authentication key.

Returns ---= A [Cryptographer](#) instance, which can be used to decrypt data.

Method make\_encrypter

```
def make_encrypter(  
    salt: str,  
    key: str  
) -> SuperHelper.Core.Utills.crypto_ops.Cryptographer
```

Makes a Fernet encrypter for salt and key.

Args ---= salt : str : The Base64-encoded string of the raw salt.

key : str The authentication key.

Returns ---= A [Cryptographer](#) instance, which can be used to encrypt data.

Method make\_fernet

```
def make_fernet(  
    key: bytes  
) -> cryptography.fernet.Fernet
```

Makes a Fernet encrypter/decrypter from the derived key.

Args ---= key : bytes : The derived key, in bytes.

Returns ---= A Fernet instance, which can be used to either encrypt or decrypt data.

Method make\_kdf

```
def make_kdf(  
    salt: bytes  
) -> cryptography.hazmat.primitives.kdf.pbkdf2.PBKDF2HMAC
```

Makes a key derivation function from raw salt.

Args ---= salt : bytes : The raw salt, in bytes.

Returns ---= A PBKDF2HMAC instance, which can be used to derive key from the authentication key.

Method make\_salt

```
def make_salt() -> bytes
```

Generates a cryptographically secure salt for cryptography.

Returns ---= A 16-byte raw salt

Methods

Method decrypt

```
def decrypt(  
    self,  
    encrypted_data: bytes  
) -> bytes
```

Decrypts the encrypted data.

Args ---= `encrypted_data` : bytes : The encrypted data to be decrypted.

Returns ---= The decrypted data, in bytes, which is decrypted using the Fernet (created by `Cryptography.make_fernet`)

Method `encrypt`

```
def encrypt(  
    self,  
    raw_data: bytes  
) -> bytes
```

Encrypts raw data.

Args ---= `raw_data` : bytes : The raw data to be encrypted.

Returns ---= The encrypted data, in bytes, which is encrypted using the Fernet (created by `Cryptography.make_fernet`)

Raises ---= `ValueError` : A decrypter is used to encrypt.

Method `get_salt_string`

```
def get_salt_string(  
    self  
) -> str
```

String-ify the raw salt.

Returns ---= The Base64-encoded string of the raw salt.

Class `FP`

```
class FP(  
    value,  
    names=None,  
    *,  
    module=None,  
    qualname=None,  
    type=None,  
    start=1  
)
```

Contains file permission flags.

R = Read

W = Write

X = Execute

USR = User (file owner)

GRP = Group owner

OTH = Other users/groups

Ancestors (in MRO)

- [enum.Flag](#)
- [enum.Enum](#)

Class variables

Variable `R_GRP` Group readable.

Variable `R_OTH` Other readable.

Variable `R_USR` User readable.

Variable `W_GRP` Group writable.

Variable `W_OTH` Other writable.

Variable `W_USR` User writable.

Variable `X_GRP` Group executable.

Variable `X_OTH` Other executable.

Variable `X_USR` User executable.

Class `FileOps`

```
class FileOps
```

A utility class for file ownership and permissions.

Static methods

Method `check_fp`

```
def check_fp(
    path: ~PathLike,
    fp: SuperHelper.Core.Uutils.file_ops.FP
) -> bool
```

Checks if the file contains the specified file permissions.

:param path: Path to the file to check :type path: PathLike :param fp: The flags of the file permissions to check. :type fp: FP :return: True if all the flags are valid, otherwise False :rtype: bool

Method `get_stat`

```
def get_stat(
    path: ~PathLike
) -> os.stat_result
```

Gets the stat of file pointed by the path.

This function is decorated by `@cache` to reduce the amount of syscall, since `os.stat` is an expensive function.

Args ---= `path` : PathLike : Path to the file to check

Returns ---= An `os.stat_result` instance containing the stat of the file.



#### Method `is_group_executable`

```
def is_group_executable(  
    path: ~PathLike  
) -> bool
```

Checks if the group owner of the file can execute it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is executable by its group owner, otherwise False :rtype: bool

#### Method `is_group_readable`

```
def is_group_readable(  
    path: ~PathLike  
) -> bool
```

Checks if the group owner of the file can read it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is readable by its group owner, otherwise False :rtype: bool

#### Method `is_group_writable`

```
def is_group_writable(  
    path: ~PathLike  
) -> bool
```

Checks if the group owner of the file can write to it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is writable by its group owner, otherwise False :rtype: bool

#### Method `is_mine`

```
def is_mine(  
    path: ~PathLike  
) -> bool
```

Checks if the file is owned by the current user.

:param path: Path to the file to check :type path: PathLike :return: True if the file is owned by the current user, otherwise False :rtype: bool

#### Method `is_other_executable`

```
def is_other_executable(  
    path: ~PathLike  
) -> bool
```

Checks if the other users or groups can execute the file.

:param path: Path to the file to check :type path: PathLike :return: True if the file is executable by them, otherwise False :rtype: bool

#### Method `is_other_readable`

```
def is_other_readable(  
    path: ~PathLike  
) -> bool
```

Checks if the other users or groups can read the file.

:param path: Path to the file to check :type path: PathLike :return: True if the file is readable by them, otherwise False :rtype: bool

#### Method `is_other_writable`

```
def is_other_writable(  
    path: ~PathLike  
) -> bool
```

Checks if the other users or groups can write the file.

:param path: Path to the file to check :type path: PathLike :return: True if the file is writable by them, otherwise False :rtype: bool

#### Method `is_owner_executable`

```
def is_owner_executable(  
    path: ~PathLike  
) -> bool
```

Checks if the owner of the file can execute it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is executable by its owner, otherwise False :rtype: bool

#### Method `is_owner_readable`

```
def is_owner_readable(  
    path: ~PathLike  
) -> bool
```

Checks if the owner of the file can read it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is readable by its owner, otherwise False :rtype: bool

#### Method `is_owner_writable`

```
def is_owner_writable(  
    path: ~PathLike  
) -> bool
```

Checks if the owner of the file can write to it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is writable by its owner, otherwise False :rtype: bool

#### Method `is_root`

```
def is_root(  
    path: ~PathLike  
) -> bool
```

Check if the file is owned by root.

:param path: Path to the file to check :type path: PathLike :return: True if the file is owned by root, otherwise False :rtype: bool

#### Method `is_user_own`

```
def is_user_own(  
    uid: int,  
    path: ~PathLike  
) -> bool
```

Checks if the file is owned by the user with uid.

:param uid: The UID of the user :type uid: int :param path: Path to the file to check :type path: PathLike :return: True if the file is owned by the uid, otherwise False :rtype: bool

Class TypeCheck

```
class TypeCheck
```

A utility class for type checking functions.

Static methods

Method ensure\_bool

```
def ensure_bool(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type bool.

Args ---= obj : object : The object to check.

name : str The name of the object.

Returns ---= None

Raises ---= TypeError : The type of the object is not the specified type.

Method ensure\_bytearray

```
def ensure_bytearray(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type bytearray.

Args ---= obj : object : The object to check.

name : str The name of the object.

Returns ---= None

Raises ---= TypeError : The type of the object is not the specified type.

Method ensure\_bytes

```
def ensure_bytes(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type bytes.

Args ---= obj : object : The object to check.

name : str The name of the object.

Returns ---= None

Raises ---= TypeError : The type of the object is not the specified type.

#### Method `ensure_complex`

```
def ensure_complex(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `complex`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_custom`

```
def ensure_custom(  
    t: type,  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of the expected type.

Args ---= `t : type` : The expected type of the object.

`obj : object` The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_dict`

```
def ensure_dict(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `dict`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_float`

```
def ensure_float(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `float`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_frozenset`

```
def ensure_frozenset(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `frozenset`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_function`

```
def ensure_function(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is a function.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_generator`

```
def ensure_generator(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is a generator.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_int`

```
def ensure_int(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `int`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_list`

```
def ensure_list(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type list.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_memoryview`

```
def ensure_memoryview(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type memoryview.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_path_like`

```
def ensure_path_like(  
    obj: Ellipsis,  
    name: str = None  
)
```

Ensures the object can be used as a path.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_set`

```
def ensure_set(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type set.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_str`

```
def ensure_str(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type `str`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_tuple`

```
def ensure_tuple(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type `tuple`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

## Module `SuperHelper.Core.Uutils.bit_ops`

### Classes

#### Class `BitOps`

```
class BitOps
```

A utility class for bitwise operations.

### Static methods

#### Method `is_bit_set`

```
def is_bit_set(
    i: int,
    pos: int
) -> bool
```

Checks if the `pos`-th bit of the integer `i` is set.

Args ---= `i : int` : The integer to check.

`pos : int` The zero-indexed position of the bit (from LSB) to check.

Returns ---= `True` if the specified bit is set, otherwise `False`

#### Method `set_bit`

```
def set_bit(  
    i: int,  
    pos: int  
) -> int
```

Sets the the pos-th bit of the integer i.

Args ---= `i : int` : The integer to modify.

`pos : int` The zero-indexed position of the bit (from LSB) to set.

Returns ---= The integer with the specified bit set.

#### Method `unset_bit`

```
def unset_bit(  
    i: int,  
    pos: int  
) -> int
```

Unsets the the pos-th bit of the integer i.

Args ---= `i : int` : The integer to modify.

`pos : int` The zero-indexed position of the bit (from LSB) to unset.

Returns ---= The integer with the specified bit unset.

## Module `SuperHelper.Core.Utills.crypto_ops`

### Classes

#### Class `Cryptographer`

```
class Cryptographer(  
    salt: bytes,  
    auth_key: bytes,  
    encrypt: bool = True  
)
```

A utility class for cryptographic functions.

Initialises a [Cryptographer](#) instance.

Args ---= `salt : bytes` : The raw salt, in bytes.

`auth_key : bytes` The authentication key, in bytes.

`encrypt : bool` True to make an encrypter, otherwise False.

### Static methods

#### Method `decode_salt`

```
def decode_salt(  
    salt: str  
) -> bytes
```

Decodes the salt string to raw salt.

Args ---= `salt : str` : The Base64-encoded string of the raw salt.

Returns ---= The raw salt



**Method `encode_salt`**

```
def encode_salt(  
    salt: bytes  
) -> str
```

Encodes the raw salt as string.

Args ---= `salt : bytes` : The raw salt, in bytes.

Returns ---= The Base64-encoded string of the raw salt

**Method `make_decrypter`**

```
def make_decrypter(  
    salt: str,  
    key: str  
) -> SuperHelper.Core.Utls.crypto_ops.Cryptographer
```

Makes a Fernet decrypter for salt and key.

Args ---= `salt : str` : The Base64-encoded string of the raw salt.

`key : str` The authentication key.

Returns ---= A [Cryptographer](#) instance, which can be used to decrypt data.

**Method `make_encrypter`**

```
def make_encrypter(  
    salt: str,  
    key: str  
) -> SuperHelper.Core.Utls.crypto_ops.Cryptographer
```

Makes a Fernet encrypter for salt and key.

Args ---= `salt : str` : The Base64-encoded string of the raw salt.

`key : str` The authentication key.

Returns ---= A [Cryptographer](#) instance, which can be used to encrypt data.

**Method `make_fernet`**

```
def make_fernet(  
    key: bytes  
) -> cryptography.fernet.Fernet
```

Makes a Fernet encrypter/decrypter from the derived key.

Args ---= `key : bytes` : The derived key, in bytes.

Returns ---= A Fernet instance, which can be used to either encrypt or decrypt data.

**Method `make_kdf`**

```
def make_kdf(  
    salt: bytes  
) -> cryptography.hazmat.primitives.kdf.pbkdf2.PBKDF2HMAC
```

Makes a key derivation function from raw salt.

Args ---= `salt : bytes` : The raw salt, in bytes.

Returns ---= A PBKDF2HMAC instance, which can be used to derive key from the authentication key.

#### Method `make_salt`

```
def make_salt() -> bytes
```

Generates a cryptographically secure salt for cryptography.

Returns ---= A 16-byte raw salt

#### Methods

#### Method `decrypt`

```
def decrypt(  
    self,  
    encrypted_data: bytes  
) -> bytes
```

Decrypts the encrypted data.

Args ---= `encrypted_data` : bytes : The encrypted data to be decrypted.

Returns ---= The decrypted data, in bytes, which is decrypted using the Fernet (created by `Cryptography.make_fernet`)

#### Method `encrypt`

```
def encrypt(  
    self,  
    raw_data: bytes  
) -> bytes
```

Encrypts raw data.

Args ---= `raw_data` : bytes : The raw data to be encrypted.

Returns ---= The encrypted data, in bytes, which is encrypted using the Fernet (created by `Cryptography.make_fernet`)

Raises ---= `ValueError` : A decrypter is used to encrypt.

#### Method `get_salt_string`

```
def get_salt_string(  
    self  
) -> str
```

String-ify the raw salt.

Returns ---= The Base64-encoded string of the raw salt.

## Module `SuperHelper.Core.Utils.file_ops`

### Classes

#### Class `FP`

```
class FP(  
    value,  
    names=None,  
    *,  
    module=None,  
    qualname=None,  
    type=None,
```

```
        start=1
    )
```

Contains file permission flags.

R = Read

W = Write

X = Execute

USR = User (file owner)

GRP = Group owner

OTH = Other users/groups

Ancestors (in MRO)

- [enum.Flag](#)
- [enum.Enum](#)

Class variables

Variable `R_GRP` Group readable.

Variable `R_OTH` Other readable.

Variable `R_USR` User readable.

Variable `W_GRP` Group writable.

Variable `W_OTH` Other writable.

Variable `W_USR` User writable.

Variable `X_GRP` Group executable.

Variable `X_OTH` Other executable.

Variable `X_USR` User executable.

Class `FileOps`

```
class FileOps
```

A utility class for file ownership and permissions.

Static methods

#### Method `check_fp`

```
def check_fp(
    path: ~PathLike,
    fp: SuperHelper.Core.Uutils.file_ops.FP
) -> bool
```

Checks if the file contains the specified file permissions.

:param path: Path to the file to check :type path: PathLike :param fp: The flags of the file permissions to check. :type fp: FP :return: True if all the flags are valid, otherwise False :rtype: bool

#### Method `get_stat`

```
def get_stat(
    path: ~PathLike
) -> os.stat_result
```

Gets the stat of file pointed by the path.

This function is decorated by `@cache` to reduce the amount of syscall, since `os.stat` is an expensive function.

Args ---= path : PathLike : Path to the file to check

Returns ---= An `os.stat_result` instance containing the stat of the file.

#### Method `is_group_executable`

```
def is_group_executable(
    path: ~PathLike
) -> bool
```

Checks if the group owner of the file can execute it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is executable by its group owner, otherwise False :rtype: bool

#### Method `is_group_readable`

```
def is_group_readable(
    path: ~PathLike
) -> bool
```

Checks if the group owner of the file can read it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is readable by its group owner, otherwise False :rtype: bool

#### Method `is_group_writable`

```
def is_group_writable(
    path: ~PathLike
) -> bool
```

Checks if the group owner of the file can write to it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is writable by its group owner, otherwise False :rtype: bool

#### Method `is_mine`

```
def is_mine(  
    path: ~PathLike  
) -> bool
```

Checks if the file is owned by the current user.

:param path: Path to the file to check :type path: PathLike :return: True if the file is owned by the current user, otherwise False :rtype: bool

#### Method `is_other_executable`

```
def is_other_executable(  
    path: ~PathLike  
) -> bool
```

Checks if the other users or groups can execute the file.

:param path: Path to the file to check :type path: PathLike :return: True if the file is executable by them, otherwise False :rtype: bool

#### Method `is_other_readable`

```
def is_other_readable(  
    path: ~PathLike  
) -> bool
```

Checks if the other users or groups can read the file.

:param path: Path to the file to check :type path: PathLike :return: True if the file is readable by them, otherwise False :rtype: bool

#### Method `is_other_writable`

```
def is_other_writable(  
    path: ~PathLike  
) -> bool
```

Checks if the other users or groups can write the file.

:param path: Path to the file to check :type path: PathLike :return: True if the file is writable by them, otherwise False :rtype: bool

#### Method `is_owner_executable`

```
def is_owner_executable(  
    path: ~PathLike  
) -> bool
```

Checks if the owner of the file can execute it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is executable by its owner, otherwise False :rtype: bool

#### Method `is_owner_readable`

```
def is_owner_readable(  
    path: ~PathLike  
) -> bool
```

Checks if the owner of the file can read it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is readable by its owner, otherwise False :rtype: bool

#### Method `is_owner_writable`

```
def is_owner_writable(  
    path: ~PathLike  
) -> bool
```

Checks if the owner of the file can write to it.

:param path: Path to the file to check :type path: PathLike :return: True if the file is writable by its owner, otherwise False :rtype: bool

#### Method `is_roots`

```
def is_roots(  
    path: ~PathLike  
) -> bool
```

Check if the file is owned by root.

:param path: Path to the file to check :type path: PathLike :return: True if the file is owned by root, otherwise False :rtype: bool

#### Method `is_user_own`

```
def is_user_own(  
    uid: int,  
    path: ~PathLike  
) -> bool
```

Checks if the file is owned by the user with uid.

:param uid: The UID of the user :type uid: int :param path: Path to the file to check :type path: PathLike :return: True if the file is owned by the uid, otherwise False :rtype: bool

## Module `SuperHelper.Core.Utils.logger`

### Functions

#### Function `setup_core_logger`

```
def setup_core_logger(  
    logging_path: ~PathLike  
) -> logging.Logger
```

Sets up the core logger.

Args ---= `logging_path` : PathLike : The path to the logging file.

Returns ---= A logging.Logger instance with name set to [SuperHelper](#).

## Module `SuperHelper.Core.Utils.type_ensure`

### Classes

#### Class `TypeCheck`

```
class TypeCheck
```

A utility class for type checking functions.

#### Static methods

#### Method `ensure_bool`

```
def ensure_bool(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type bool.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_bytearray`

```
def ensure_bytearray(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type bytearray.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_bytes`

```
def ensure_bytes(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type bytes.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_complex`

```
def ensure_complex(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type complex.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= None

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_custom`

```
def ensure_custom(  
    t: type,  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of the expected type.

Args ---= `t : type` : The expected type of the object.

`obj : object` The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_dict`

```
def ensure_dict(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `dict`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_float`

```
def ensure_float(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `float`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_frozenset`

```
def ensure_frozenset(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `frozenset`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.



#### Method `ensure_function`

```
def ensure_function(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is a function.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_generator`

```
def ensure_generator(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is a generator.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_int`

```
def ensure_int(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `int`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_list`

```
def ensure_list(  
    obj: Ellipsis,  
    name: str = None  
) -> NoneType
```

Ensures the object is of type `list`.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_memoryview`

```
def ensure_memoryview(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type `memoryview`.

Args ---= `obj` : `object` : The object to check.

`name` : `str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_path_like`

```
def ensure_path_like(
    obj: Ellipsis,
    name: str = None
)
```

Ensures the object can be used as a path.

Args ---= `obj` : `object` : The object to check.

`name` : `str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_set`

```
def ensure_set(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type `set`.

Args ---= `obj` : `object` : The object to check.

`name` : `str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_str`

```
def ensure_str(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type `str`.

Args ---= `obj` : `object` : The object to check.

`name` : `str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

#### Method `ensure_tuple`

```
def ensure_tuple(
    obj: Ellipsis,
    name: str = None
) -> NoneType
```

Ensures the object is of type tuple.

Args ---= `obj : object` : The object to check.

`name : str` The name of the object.

Returns ---= `None`

Raises ---= `TypeError` : The type of the object is not the specified type.

## Module `SuperHelper.Core.Uutils.type_hinting`

### Variables

Variable `PathLike`

Type: `type`

`PathLike` objects can be used as a path. It can be of type `str`, `bytes` or `os.PathLike`.

## Module `SuperHelper.Core.core_cli`

### Functions

Function `load_config`

```
def load_config()
```

Loads application config.

Function `main_entry`

```
def main_entry() -> NoReturn
```

Function `run_startup`

```
def run_startup()
```

Function `save_config`

```
def save_config()
```

Saves application config.

## Module `SuperHelper.Core.core_commands`

### Functions

Function `load_core_commands`

```
def load_core_commands() -> list
```

Loads the Core CLI commands.

Returns `--` A list of a 2-tuple elements, where the first index is the `click.command` object, and the second index is the technical name of the command. For example:

```
[(add_modules, "core_add"), ...]
```

The first index can be added to a `click.group`, i.e the cli function.

## Module `SuperHelper.Core.core_loader`

### Functions

Function `load_added_modules`

```
def load_added_modules(  
    config: dict  
) -> list
```

Loads all added modules.

Returns `--` A list of a 2-tuple elements, where the first index is the `click.command` object, and the second index is the technical name of the command. For example:

```
[(main, "main"), ...]
```

The first index can be added to a `click.group`, i.e the cli function.

## Module `SuperHelper.Modules`

### Sub-modules

- [SuperHelper.Modules.FocusEnabler](#)
- [SuperHelper.Modules.Stenographer](#)

## Module `SuperHelper.Modules.FocusEnabler`

## Module `SuperHelper.Modules.Stenographer`

## Module `SuperHelper.Tests`

### Sub-modules

- [SuperHelper.Tests.test\\_base](#)
- [SuperHelper.Tests.test\\_config](#)
- [SuperHelper.Tests.test\\_core](#)
- [SuperHelper.Tests.test\\_core\\_command](#)
- [SuperHelper.Tests.test\\_module\\_FocusEnabler](#)
- [SuperHelper.Tests.test\\_module\\_Stenographer](#)
- [SuperHelper.Tests.test\\_utils](#)

### Functions

Function `run`

```
def run(  
    args: str = None  
) -> click.testing.Result
```

Function `setup_and_cleanup`

```
def setup_and_cleanup()
```

## Module `SuperHelper.Tests.test_base`

### Functions

Function `run`

```
def run(  
    args: str = None  
) -> click.testing.Result
```

Function `setup_and_cleanup`

```
def setup_and_cleanup()
```

## Module `SuperHelper.Tests.test_config`

### Classes

Class `TestConfig`

```
class TestConfig
```

### Static methods

Method `test_core_and_module`

```
def test_core_and_module()
```

Method `test_core_and_no_module`

```
def test_core_and_no_module()
```

Method `test_from_dict`

```
def test_from_dict()
```

Method `test_no_core_and_module_a`

```
def test_no_core_and_module_a()
```

Method `test_no_core_and_module_b`

```
def test_no_core_and_module_b()
```

## Module `SuperHelper.Tests.test_core`

### Functions

Function `test_main_entry`

```
def test_main_entry()
```

## Module SuperHelper.Tests.test\_core\_command

### Classes

Class TestCore

```
class TestCore
```

### Static methods

Method test\_add\_invalid

```
def test_add_invalid()
```

Method test\_add\_multiple

```
def test_add_multiple()
```

Method test\_add\_same

```
def test_add_same()
```

Method test\_add\_single

```
def test_add_single()
```

Method test\_add\_single\_again

```
def test_add_single_again()
```

Method test\_list\_all

```
def test_list_all()
```

Method test\_list\_multiple\_negative

```
def test_list_multiple_negative()
```

Method test\_list\_multiple\_positive

```
def test_list_multiple_positive()
```

Method test\_list\_negative

```
def test_list_negative()
```

Method test\_list\_single\_negative

```
def test_list_single_negative()
```

Method test\_list\_single\_positive

```
def test_list_single_positive()
```

Method test\_remove\_invalid

```
def test_remove_invalid()
```

Method test\_remove\_multiple  
def test\_remove\_multiple()

Method test\_remove\_same  
def test\_remove\_same()

Method test\_remove\_single  
def test\_remove\_single()

Class TestOtherUtils  
class TestOtherUtils

Static methods

Method test\_load\_installed\_modules\_a  
def test\_load\_installed\_modules\_a()

## Module SuperHelper.Tests.test\_module\_FocusEnabler

### Classes

Class TestFocusEnabler  
class TestFocusEnabler

Static methods

Method setup  
def setup()

Method test\_add\_invalid  
def test\_add\_invalid()

Method test\_add\_multiple  
def test\_add\_multiple()

Method test\_add\_same  
def test\_add\_same()

Method test\_add\_single  
def test\_add\_single()

Method test\_add\_single\_again  
def test\_add\_single\_again()

Method test\_get\_input\_prompt

```
def test_get_input_prompt()
```

Method test\_help

```
def test_help()
```

Method test\_list\_multiple\_negative

```
def test_list_multiple_negative()
```

Method test\_list\_multiple\_positive

```
def test_list_multiple_positive()
```

Method test\_list\_single\_negative

```
def test_list_single_negative()
```

Method test\_list\_single\_positive

```
def test_list_single_positive()
```

Method test\_remove\_invalid

```
def test_remove_invalid()
```

Method test\_remove\_multiple

```
def test_remove_multiple()
```

Method test\_remove\_same

```
def test_remove_same()
```

Method test\_remove\_single

```
def test_remove_single()
```

Method test\_validate\_setup

```
def test_validate_setup(
    setup
)
```

## Module SuperHelper.Tests.test\_module\_Stenographer

### Classes

Class TestStenographer

```
class TestStenographer
```

Static methods



#### Method setup

```
def setup()
```

#### Method test\_help

```
def test_help()
```

#### Method test\_validate\_setup

```
def test_validate_setup(  
    setup  
)
```

## Module SuperHelper.Tests.test\_utils

### Classes

#### Class TestBitOps

```
class TestBitOps
```

#### Static methods

#### Method a

```
def a()
```

#### Method test\_is\_bit\_set

```
def test_is_bit_set(  
    a  
)
```

#### Method test\_set\_bit

```
def test_set_bit(  
    a  
)
```

#### Method test\_unset\_bit

```
def test_unset_bit(  
    a  
)
```

#### Class TestCryptographer

```
class TestCryptographer
```

#### Static methods

#### Method binary\_salt

```
def binary_salt()
```

**Method data**

```
def data()
```

**Method decrypted\_data**

```
def decrypted_data(  
    decrypter,  
    encrypted_data  
)
```

**Method decrypter**

```
def decrypter(  
    string_salt,  
    true_key  
)
```

**Method encrypted\_data**

```
def encrypted_data(  
    encrypter,  
    data  
)
```

**Method encrypter**

```
def encrypter(  
    string_salt,  
    true_key  
)
```

**Method false\_key**

```
def false_key()
```

**Method string\_salt**

```
def string_salt(  
    binary_salt  
)
```

**Method test\_decrypt\_with\_encrypter**

```
def test_decrypt_with_encrypter(  
    encrypter,  
    encrypted_data  
)
```

**Method test\_decrypted\_data**

```
def test_decrypted_data(  
    decrypted_data  
)
```

Method test\_encode\_and\_decode\_salt

```
def test_encode_and_decode_salt(  
    string_salt,  
    binary_salt  
)
```

Method test\_encrypt\_with\_decrypter

```
def test_encrypt_with_decrypter(  
    decrypter,  
    data  
)
```

Method test\_encrypted\_data

```
def test_encrypted_data(  
    encrypted_data  
)
```

Method test\_make\_decrypter

```
def test_make_decrypter(  
    decrypter  
)
```

Method test\_make\_encrypter

```
def test_make_encrypter(  
    encrypter  
)
```

Method test\_make\_kdf

```
def test_make_kdf(  
    binary_salt,  
    true_key,  
    false_key  
)
```

Method test\_salt\_in\_class

```
def test_salt_in_class(  
    encrypter,  
    decrypter,  
    string_salt  
)
```

Method test\_salt\_length

```
def test_salt_length(  
    binary_salt  
)
```

Method true\_key

```
def true_key()
```

## Class TestFileOps

```
class TestFileOps
```

### Static methods

#### Method test\_check\_fp\_grp

```
def test_check_fp_grp()
```

#### Method test\_check\_fp\_oth

```
def test_check_fp_oth()
```

#### Method test\_check\_fp\_usr

```
def test_check_fp_usr()
```

#### Method test\_is\_mine\_negative

```
def test_is_mine_negative()
```

#### Method test\_is\_mine\_positive

```
def test_is_mine_positive()
```

#### Method test\_is\_root\_negative

```
def test_is_root_negative()
```

#### Method test\_is\_root\_positive

```
def test_is_root_positive()
```

## Class TestTypeCheck

```
class TestTypeCheck
```

### Static methods

#### Method test\_ensure\_bool

```
def test_ensure_bool()
```

#### Method test\_ensure\_bytearray

```
def test_ensure_bytearray()
```

#### Method test\_ensure\_bytes

```
def test_ensure_bytes()
```

#### Method test\_ensure\_complex

```
def test_ensure_complex()
```

```
Method test_ensure_custom
    def test_ensure_custom()

Method test_ensure_dict
    def test_ensure_dict()

Method test_ensure_float
    def test_ensure_float()

Method test_ensure_frozenset
    def test_ensure_frozenset()

Method test_ensure_function
    def test_ensure_function()

Method test_ensure_generator
    def test_ensure_generator()

Method test_ensure_int
    def test_ensure_int()

Method test_ensure_list
    def test_ensure_list()

Method test_ensure_memoryview
    def test_ensure_memoryview()

Method test_ensure_path_like
    def test_ensure_path_like()

Method test_ensure_set
    def test_ensure_set()

Method test_ensure_str
    def test_ensure_str()

Method test_ensure_tuple
    def test_ensure_tuple()

Method test_ensure_with_name
    def test_ensure_with_name()
```

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