Package 'verifyr2'

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Type Package

Title Compare and Verify File Contents

Description Extendable 'R6' file comparison classes, including a 'shiny' app for combining the comparison functionality into a file comparison application. The package idea originates from pharma companies' drug development processes, where statisticians and statistical programmers need to review and compare different versions of the same outputs and datasets. The package implementation itself is not tied to any specific industry and can be used in any context for easy file comparisons between different file version sets.

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 ${\tt BinaryFileComparator.} \textit{R} \\ \textbf{\textit{BinaryFileComparator.}} \\ \textbf{\textit{R}}$

Description

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BinaryFileComparator.R BinaryFileComparator.R

Details

Fallback comparator for binary files without any specific definied comparator.

Super class

```
verifyr2::FileComparator -> BinaryFileComparator
```

Methods

Public methods:

- BinaryFileComparator\$vrf_contents()
- BinaryFileComparator\$vrf_contents_inner()
- BinaryFileComparator\$vrf_summary_inner()
- BinaryFileComparator\$vrf_details_inner()
- BinaryFileComparator\$clone()

Method vrf_contents(): Method for getting the single file contents for the comparison. This method returns the file contents in two separate vectors inside a list. The first vector is the file contents and the second one is the file contents with the rows matching the omit string excluded. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn not be called directly by the user.

```
Usage:
BinaryFileComparator$vrf_contents(file, config, omit)
Arguments:
file file for which to get the contents
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_contents_inner(): Method for getting the inner part for the file contents query. The method returns the file contents in two separate vectors inside a list. The first vector is the file contents and the second one is the file contents with the rows matching the omit string excluded. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn not be called directly by the user.

```
Usage:
BinaryFileComparator$vrf_contents_inner(contents, config, omit)
Arguments:
contents file contents
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_summary_inner(): Method for comparing the inner part for the details query. The method returns the file contents in two separate vectors inside a list. The first vector is the file contents and the second one is the file contents with the rows matching the omit string excluded. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn not be called directly by the user.

```
Usage:
BinaryFileComparator$vrf_summary_inner(config, omit)
Arguments:
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details_inner(): Method for comparing the inner part for the details query. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
BinaryFileComparator$vrf_details_inner(config, omit)
Arguments:
config configuration values
omit string pattern to omit from the comparison

Method clone(): The objects of this class are cloneable with this method.
```

```
Usage:
BinaryFileComparator$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
```

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Examples

```
# The normal way for creating a comparator would be to call the generic
# factory method verifyr2::create_comparator that will automatically create
# the correct comparator instance based on the file types.

file1 <- 'my_file1.bin'
file2 <- 'my_file2.bin'
comparator <- verifyr2::create_comparator(file1, file2)

# If needed, an explicit comparator can be created as well.

file1 <- 'my_file1.bin'
file2 <- 'my_file2.bin'
comparator <- BinaryFileComparator$new(file1, file2)</pre>
```

Config

Config.R

Description

Config.R

Config.R

Details

Class for manging the library configuration options. Creates the default configuration without any source file, populates partial or missing config elements, stores the config file to local machine, and provides easy access methods for setting and getting config values.

Public fields

```
schema configuration schema
config current configuration data
path configuration json file path
```

Methods

Public methods:

- Config\$new()
- Config\$get()
- Config\$set()
- Config\$save()
- Config\$get_default_config()
- Config\$get_default_schema()
- Config\$clone()

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Method new(): Constructor for initializing the configuration. Checks the local machine for existing configuration file is load_config = TRUE. Ensures that all the project configuration values are included.

```
Usage:
Config$new(load_config = TRUE, config_path = NULL)
Arguments:
load_config load configuration from local machine if available
config_path location of the used/stored configuration json file
```

Method get(): Mehod for getting configuration value based on configuration key. Configuratio item children are separated with a dot in the key notation.

```
Usage:
Config$get(key)
Arguments:
key configuration property key for which to get the value
```

Method set(): Mehod for setting configuration value based on configuration key. Configuration item children are separated with a dot in the key notation.

```
Usage:
Config$set(key, value)
Arguments:
key configuration property key for which to get the value
value value to set for the specified configuration key
```

Method save(): Method for saving the current configuration data into local machine.

```
Usage:
Config$save()
```

Method get_default_config(): Helper method for getting configuration default values. These default values will be used in the configuration in case the configuration properties are not present previously.

```
Usage:
Config$get_default_config()
```

Method get_default_schema(): Method for getting the full configuration schema. Apart from the configuration data, the schema contains property descriptions as well as all possible values for the configuration properties.

```
Usage:
Config$get_default_schema()
```

Method clone(): The objects of this class are cloneable with this method.

```
Usage:
Config$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
```

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Examples

```
# Creates the configuration instance. Checks automatically if there is
# a previously stored configuration json file available for usage. Note
# that you don't need to explicitly define the config file path for the
# Config instance - by default the config file will be searched from and
# written in user-specific configuration directory for the package.

path <- tempfile(fileext = ".json")
config <- Config$new(config_path = path)

# Getting and setting configuration values

value <- config$get("defailts.mode")
config$set("details.mode", "full")

# Saving the current configuration to local machine (to tmp folder with
# the given explicit file path in initialization).

config$save()</pre>
```

create_comparator

FileComparatorFactory.R

Description

Factory method for creating comparator instance based on the given two files.

Usage

```
create_comparator(file1, file2)
```

Arguments

file1	first file to compare
file2	second file to compare

Examples

```
# instantiating the compared files
file1 <- "file1.rtf"
file2 <- "file2.rtf"

# instantiating the configuration
config <- Config$new()

# instantiating a new comparator instance for every comparison:
comparator <- verifyr2::create_comparator(file1, file2)</pre>
```

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```
# calling the summary and details comparison methods
comparator$vrf_summary(config = config)
comparator$vrf_details(config = config)
```

Debugger

Debugger.R

Description

Debugger.R

Debugger.R

Details

Class for managing the library debugging. Tracks the debugged method execution times and prints out the full debugging information only when the main debugging instance is stopped.

Public fields

stack local property for storing debugging labels and start times

Methods

Public methods:

- Debugger\$new()
- Debugger\$open_debug()
- Debugger\$add_debug()
- Debugger\$close_debug()
- Debugger\$print_debug_tree()
- Debugger\$clone()

Method new(): Constructor for initializing the Debugger instance.

Usage:

Debugger\$new()

Method open_debug(): Method for opening new debug instance to the current debugging stack. Stores also the start time for execution time calculation.

Usage:

Debugger\$open_debug(label)

Arguments:

label debugging message

Method add_debug(): Method for adding a new debug string under the currently open debug instance.

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```
Usage:
Debugger$add_debug(label)
Arguments:
label debugging message
```

Method close_debug(): Method for closing a debug instance from the current debugging stack. If the stopped debug instance is the main level one, the whole debug data is printed out to console. If the stopped debug instance is not the main level one, calculates the execution time of current debug instance and updates the stack data.

```
Usage:
Debugger$close_debug()
```

Method print_debug_tree(): Recursive method for printing out the current debug stack items and recursively all the item children. This method is called for the whole stack once the topmost debug instance is stopped.

```
Usage:
Debugger$print_debug_tree(entry, depth = 0)
Arguments:
entry current debug level being processed for printing
depth current processing depth for printing indentation
```

Method clone(): The objects of this class are cloneable with this method.

```
Usage:
Debugger$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
```

Examples

```
# Creates a debugger instance.
debugger <- Debugger$new()

# Opening and closing debugs in multileveled function calls.
function1 <- function() {
   debugger$open_debug("function1")
   function2()
   debuger$close_debug()
}

function2 <- function() {
   debugger$open_debug("function2")
   Sys.sleep(1)
   debugger$close_debug()
}</pre>
```

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```
# This will produce the following printout to the console after the
# function1 finishes
#
# - 'function1' (execution time 7 ms)
# - 'function2' (execution time 5 ms)
```

FileComparator

FileComparator.R

Description

FileComparator.R FileComparator.R

Details

Comparator 'abstract' class containing the generic comparison methods and handling for high level checks (like file existence). This class should never be instantiated - doing that and calling the comparison methods will lead to error.

Public fields

```
file1 file1
file2 file2
file1_contents_list file1 contents
file2_contents_list file2 contents
summary_comparison summary comparison result
details_comparison details comparison result
debugger debugger instance
```

Methods

Public methods:

- FileComparator\$new()
- FileComparator\$vrf_summary()
- FileComparator\$vrf_details()
- FileComparator\$vrf_summary_inner()
- FileComparator\$vrf_details_inner()
- FileComparator\$vrf_details_supported()
- FileComparator\$vrf_option_value()
- FileComparator\$vrf_open_debug()
- FileComparator\$vrf_add_debug()
- FileComparator\$vrf_add_debug_files()

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```
FileComparator$vrf_close_debug()
```

• FileComparator\$clone()

Method new(): Initialize a FileComparator instance

```
Usage:
FileComparator$new(file1 = NULL, file2 = NULL)
Arguments:
file1 First file to compare.
file2 Second file to compare.
```

Method vrf_summary(): Method for comparing the file summary information. This method is intended to be implemented only this class level. For comparator specific rules, the internal method vrf_summary_inner should be customized on lower levels instead.

```
Usage:
FileComparator$vrf_summary(config, omit = NULL)
Arguments:
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details(): Method for comparing the file details information. This method is intended to be implemented only this class level. For comparator specific rules, the internal method vrf summary inner should be customized on lower levels instead.

```
Usage:
FileComparator$vrf_details(config, omit = NULL)
Arguments:
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_summary_inner(): "Abstract" method for comparing the inner part for the summary. This method has to be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
FileComparator$vrf_summary_inner(config, omit)
Arguments:
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details_inner(): "Abstract" method for comparing the inner part for the detailsThis method has to be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
FileComparator$vrf_details_inner(config, omit)
```

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```
Arguments:
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details_supported(): Inherited method for indicating whether detailed comparison is available with the current comparator. Returns an empty string if the comparator is is supported, otherwise a string that will be concatenated with the summary string.

```
Usage:
FileComparator$vrf_details_supported(config)
Arguments:
config configuration values
```

Method vrf_option_value(): Method for getting specific value from the config In the initial version, returns 'NA' if null con is passed.

```
Usage:
FileComparator$vrf_option_value(config, key)
Arguments:
config configuration values
key key to search from the parameters
```

Method vrf_open_debug(): Wrapper method for the opening a new debugging instance with Debugger class if debugging is enabled in config class. Creates the used debugger instance if needed.

```
Usage:
FileComparator$vrf_open_debug(message, config)
Arguments:
message message to debug to console
config configuration values
```

Method vrf_add_debug(): Wrapper method for the adding a new debugging message with Debugger class.

```
Usage:
FileComparator$vrf_add_debug(message)
Arguments:
message message to debug to console
```

Method vrf_add_debug_files(): Special method for adding the compared files into debugger stack.

```
Usage:
FileComparator$vrf_add_debug_files()
```

Method vrf_close_debug(): Wrapper method for the stopping (closing) current debugging instance with Debugger class.

Usage:

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```
FileComparator$vrf_close_debug()
```

Method clone(): The objects of this class are cloneable with this method.

Usage:

FileComparator\$clone(deep = FALSE)

Arguments:

deep Whether to make a deep clone.

 ${\tt ImgFileComparator}$

ImgFileComparator.R

Description

ImgFileComparator.R ImgFileComparator.R

Details

Specialized comparator for image file (jpg, jpef, png) comparison. This comparator contains the custom handling for handling only img content part for the comparison.

Super classes

```
verifyr2::FileComparator -> verifyr2::BinaryFileComparator -> ImgFileComparator
```

Public fields

image1_raw extracted raw data for image1. image2_raw extracted raw data for image2.

Methods

Public methods:

- ImgFileComparator\$new()
- ImgFileComparator\$vrf_details_inner()
- ImgFileComparator\$vrf_details_inner_from_raw()
- ImgFileComparator\$vrf_details_inner_from_files()
- ImgFileComparator\$vrf_details_supported()
- ImgFileComparator\$clone()

Method new(): Initialize a ImgFileComparator instance

```
Usage:
```

```
ImgFileComparator$new(file1 = NULL, file2 = NULL, raw1 = NULL, raw2 = NULL)
Arguments:
```

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```
file1 First file to compare.
file2 Second file to compare.
raw1 First image in raw format to compare.
raw2 Second image in raw format to compare.
```

Method vrf_details_inner(): Method for comparing the inner part for the details query. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
ImgFileComparator$vrf_details_inner(config, omit)
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details_inner_from_raw(): Internal method for comparing the earlier populated raw image contents in details and generating the difference highlight image in case differences are found.

```
Usage:
ImgFileComparator$vrf_details_inner_from_raw(config)
Arguments:
config configuration values
```

Method vrf_details_inner_from_files(): Method for comparing the inner part for the details query with the file names as the base arguments. This is a part of a group of image processing functions that work with different image abstractions (file, image, raw image). These methods are intended to improve the performance so that best suiting method version can be used depending on what data is available from the earlier method calls to the same comparator instance.

```
Usage:
ImgFileComparator$vrf_details_inner_from_files(config)
Arguments:
config configuration values
```

Method vrf_details_supported(): Inherited method for indicating whether detailed comparison is available with the current comparator. Returns an empty string if the comparator is is supported, otherwise a string that will be concatenated with the summary string.

```
Usage:
 ImgFileComparator$vrf_details_supported(config)
 Arguments:
 config configuration values
Method clone(): The objects of this class are cloneable with this method.
```

```
Usage:
ImgFileComparator$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
```

list_files

Examples

```
# The normal way for creating a comparator would be to call the generic
# factory method verifyr2::create_comparator that will automatically create
# the correct comparator instance based on the file types.

file1 <- 'my_file1.jpg'
file2 <- 'my_file2.jpg'
comparator <- verifyr2::create_comparator(file1, file2)

# If needed, an explicit comparator can be created as well.

file1 <- 'my_file1.png'
file2 <- 'my_file2.png'
comparator <- ImgFileComparator$new(file1, file2)

# This comparator has also second explicit creation method that is used
# by the library for processing embedded image contents.

image1_raw <- 'raw hex vector data'
image2_raw <- 'raw hex vector data'
comparator <- ImgFileComparator$new(NULL, NULL, image1_raw, image2_raw)</pre>
```

list_files

One row list for two distinct files

Description

list_files List single file row based on the explicit parameter files. This is a conveniency function for building same structure list for direct two file comparison case.

Usage

```
list_files(file1, file2)
```

Arguments

filel	character, giving the the full file path of the first file
file2	character, giving the the full file path of the second file

Value

Returns a tibble, selected_files with 2 columns file1, file2

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Examples

```
path1 <- "/extdata/base_files/file2_additional_rows.rtf"
file1 <- paste0(fs::path_package(path1, package = "verifyr2"))
path2 <- "/extdata/compare_files/file3_changed_rows.rtf"
file2 <- paste0(fs::path_package(path2, package = "verifyr2"))
verifyr2::list_files(file1, file2)</pre>
```

list_folder_files

List files that exist in two folders

Description

list_folder_files List files that exist in two folders with a specific name pattern

Usage

```
list_folder_files(folder1, folder2, pattern = NULL)
```

Arguments

folder1	character, giving the the full file path and name of the folder where first files are stored (required)
folder2	character, giving the the full file path and name of the folder where second new files are stored (required)
pattern	character, limit the files to be listed to contain a specific pattern (optional)

Value

Returns a tibble, selected_files with 2 columns file1, file2

Examples

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PdfFileComparator

PdfFileComparator.R

Description

PdfFileComparator.R PdfFileComparator.R

Details

Specialized comparator for PDF file comparison. This comparator contains the custom handling for handling only PDF content part for the comparison.

Super classes

```
verifyr2::FileComparator -> verifyr2::BinaryFileComparator -> verifyr2::TxtFileComparator
-> PdfFileComparator
```

Methods

Public methods:

- PdfFileComparator\$vrf_contents()
- PdfFileComparator\$vrf_details_supported()
- PdfFileComparator\$clone()

Method vrf_contents(): Method for getting the single file contents for the comparison. The method returns the file contents in two separate vectors inside a list. The first vector is the file contents and the second one is the file contents with the rows matching the omit string excluded. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
PdfFileComparator$vrf_contents(file, config, omit)
Arguments:
file file for which to get the contents
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details_supported(): Inherited method for indicating whether detailed comparison is available with the current comparator. Returns an empty string if the comparator is is supported, otherwise a string that will be concatenated with the summary string.

```
Usage:
PdfFileComparator$vrf_details_supported(config)
Arguments:
```

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```
config configuration values
```

Method clone(): The objects of this class are cloneable with this method.

```
Usage:
PdfFileComparator$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
```

Examples

```
# The normal way for creating a comparator would be to call the generic
# factory method verifyr2::create_comparator that will automatically create
# the correct comparator instance based on the file types.

file1 <- 'my_file1.pdf'
file2 <- 'my_file2.pdf'
comparator <- verifyr2::create_comparator(file1, file2)

# If needed, an explicit comparator can be created as well.

file1 <- 'my_file1.pdf'
file2 <- 'my_file2.pdf'
comparator <- PdfFileComparator$new(file1, file2)</pre>
```

RtfFileComparator

RtfFileComparator.R

Description

RtfFileComparator.R

RtfFileComparator.R

Details

Specialized comparator for RTF file comparison. This comparator contains the custom handling for handling only RTF content part for the comparison.

Super classes

```
verifyr2::FileComparator -> verifyr2::BinaryFileComparator -> verifyr2::TxtFileComparator
-> verifyr2::TxtWithImagesFileComparator -> RtfFileComparator
```

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Methods

Public methods:

- RtfFileComparator\$vrf_contents()
- RtfFileComparator\$vrf_images()
- RtfFileComparator\$clone()

Method vrf_contents(): Method for getting the single file contents for the comparison. The method returns the file contents in two separate vectors inside a list. The first vector is the file contents and the second one is the file contents with the rows matching the omit string excluded. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

For RtfComparator, only the RTF file content part is returned for comparison.

```
Usage:
RtfFileComparator$vrf_contents(file, config, omit)
Arguments:
file file for which to get the contents
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_images(): "Abstract" method for getting the raw image hex vector array from the given source file.

```
Usage:
RtfFileComparator$vrf_images(file, config)
Arguments:
file file for which to get the embedded image details
config configuration values
```

Method clone(): The objects of this class are cloneable with this method.

```
Usage:
RtfFileComparator$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
```

Examples

```
# The normal way for creating a comparator would be to call the generic
# factory method verifyr2::create_comparator that will automatically create
# the correct comparator instance based on the file types.

file1 <- 'my_file1.rtf'
file2 <- 'my_file2.rtf'
comparator <- verifyr2::create_comparator(file1, file2)
# If needed, an explicit comparator can be created as well.</pre>
```

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```
file1 <- 'my_file1.rtf'
file2 <- 'my_file2.rft'
comparator <- RtfFileComparator$new(file1, file2)</pre>
```

run_example

Call for shiny example where the user can test verifyr2 package functions

Description

verifyr2::run_example returns simple Shiny App where user can see how the verifyr2 functions work

Usage

```
run_example(debug = FALSE)
```

Arguments

debug

option to override debug configuration (TRUE only)

 ${\tt TxtFileComparator}$

TextFileComparator.R

Description

TextFileComparator.R

TextFileComparator.R

Details

Fallback comparator for text files without any specific definied comparator. This comparator contains the methods for doing basic comparisons on raw text contents.

Super classes

```
verifyr2::FileComparator -> verifyr2::BinaryFileComparator -> TxtFileComparator
```

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Methods

Public methods:

- TxtFileComparator\$vrf_summary_inner()
- TxtFileComparator\$vrf_details_inner()
- TxtFileComparator\$vrf_contents_inner()
- TxtFileComparator\$vrf_details_supported()
- TxtFileComparator\$clone()

Method vrf_summary_inner(): Method for comparing the inner part for the details query. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
TxtFileComparator$vrf_summary_inner(config, omit)
Arguments:
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details_inner(): Method for comparing the inner part for the details query. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
TxtFileComparator$vrf_details_inner(config, omit)
Arguments:
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_contents_inner(): Method for getting the inner part for the file contents query. The method returns the file contents in two separate vectors inside a list. The first vector is the file contents and the second one is the file contents with the rows matching the omit string excluded. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
TxtFileComparator$vrf_contents_inner(contents, config, omit)
Arguments:
contents file contents
config configuration values
omit string pattern to omit from the comparison
```

Method vrf_details_supported(): Inherited method for indicating whether detailed comparison is available with the current comparator. Returns an empty string if the comparator is is supported, otherwise a string that will be concatenated with the summary string.

```
Usage:
TxtFileComparator$vrf_details_supported(config)
Arguments:
config configuration values

Method clone(): The objects of this class are cloneable with this method.
Usage:
TxtFileComparator$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
```

Examples

```
# The normal way for creating a comparator would be to call the generic
# factory method verifyr2::create_comparator that will automatically create
# the correct comparator instance based on the file types.

file1 <- 'my_file1.txt'
file2 <- 'my_file2.txt'
comparator <- verifyr2::create_comparator(file1, file2)

# If needed, an explicit comparator can be created as well.

file1 <- 'my_file1.lst'
file2 <- 'my_file2.lst'
comparator <- TxtFileComparator$new(file1, file2)</pre>
```

 ${\tt TxtWithImagesFileComparator}$

TxtWithImageFileComparator.R

Description

 $TxtWithImageFileComparator. R \\ TxtWithImageFileComparator. R \\$

Details

"Abstract" comparator for txt based comparator classes that can additionally contain embedded images. This abstraction level contains generic logic for handling embedded images and storing the related data.

Super classes

```
verifyr2::FileComparator -> verifyr2::BinaryFileComparator -> verifyr2::TxtFileComparator
-> TxtWithImagesFileComparator
```

Public fields

```
file1_images_raw local property for storing image1 raw data
file2_images_raw local property for storing image2 raw data
```

Methods

Public methods:

- TxtWithImagesFileComparator\$new()
- TxtWithImagesFileComparator\$vrf_summary_inner()
- TxtWithImagesFileComparator\$vrf_details_inner()
- TxtWithImagesFileComparator\$vrf_images()
- TxtWithImagesFileComparator\$hex2raw()
- TxtWithImagesFileComparator\$clone()

Method new(): Initialize a TxtWithImagesFileComparator instance

```
Usage:
```

```
TxtWithImagesFileComparator$new(file1 = NULL, file2 = NULL)
```

Arguments:

file1 First file to compare.

file2 Second file to compare.

Method vrf_summary_inner(): Method for comparing the inner part for the details query. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
```

```
TxtWithImagesFileComparator$vrf_summary_inner(config, omit)
```

Arguments:

config configuration values

omit string pattern to omit from the comparison

Method vrf_details_inner(): Method for comparing the inner part for the details query. This method can be overwritten by more specialized comparator classes. This method is intended to be called only by the comparator classes in the processing and shouldn't be called directly by the user.

```
Usage:
```

```
TxtWithImagesFileComparator$vrf_details_inner(config, omit)
```

Arguments:

config configuration values

omit string pattern to omit from the comparison

Method vrf_images(): "Abstract" method for getting the raw image hex vector array from the given source file.

Usage:

TxtWithImagesFileComparator\$vrf_images(file)

Arguments:

file file for which to get the embedded image details

Method hex2raw(): Internal helper method for converting a hex string to raw vector.

Usage:

TxtWithImagesFileComparator\$hex2raw(hex_string)

Arguments:

hex_string hexadecimal string to be converted to raw vector

Method clone(): The objects of this class are cloneable with this method.

Usage:

TxtWithImagesFileComparator\$clone(deep = FALSE)

Arguments:

deep Whether to make a deep clone.

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