Package 'edm1'

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Title Simplify Complex Data Manipulation

Version 2.0.0.0

Description Provides complex sorting algorythms. Provides date manipulation algorythms. In addition to providing handy functions to discretize variables, an SQL joins alternatives, a set of function to work with geographical coordinates, and other functions to work with text mining.

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Encoding UTF-8

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Imports stringr,
stringi,
dplyr,
data.table,
openxlsx

Depends stringr,
stringi,
dplyr,
data.table,
openxlsx

Contents

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all_stat *all_stat*

Description

Allow to see all the main statistics indicators (mean, median, variance, standard deviation, sum, max, min, quantile) of variables in a dataframe by the modality of a variable in a column of the input datarame. In addition to that, you can get the occurence of other qualitative variables by your chosen qualitative variable, you have just to precise it in the vector "stat_var" where all the statistics indicators are given with "occu-var_you_want/".

Usage

```
all_stat(inpt_v, var_add = c(), stat_var = c(), inpt_datf)
```

Arguments

inpt_v	is the modalities of the variables
var_add	is the variables you want to get the stats from
stat_var	is the stats indicators you want
inpt_datf	is the input dataframe

Examples

```
datf <- data.frame("mod"=c("first", "seco", "seco", "first", "first", "third", "first"),
                "var1"=c(11, 22, 21, 22, 22, 11, 9),
                "var2"=c("d", "d", "z", "z", "z", "d", "z"),
                "var3"=c(45, 44, 43, 46, 45, 45, 42),
                "var4"=c("A", "A", "A", "A", "B", "C", "C"))

print(all_stat(inpt_v=c("first", "seco"), var_add = c("var1", "var2", "var3", "var4"),
 stat_var=c("sum", "mean", "median", "sd", "occu-var2/", "occu-var4/", "variance",
"quantile-0.75/"),
 inpt_datf=datf))

#    modal_v var_vector occu sum mean  med standard_devaition         variance
#1     first
#2               var1      64   16 16.5  6.97614984548545 48.6666666666667
#3            var2-d    1
#4            var2-z    3
#5               var3     178 44.5   45  1.73205080756888                3
#6            var4-A    2
#7            var4-B    1
#8            var4-C    1
#9      seco
#10              var1      43 21.5 21.5 0.707106781186548              0.5
#11           var2-d    1
#12           var2-z    1
#13              var3      87 43.5 43.5 0.707106781186548              0.5
#14           var4-A    2
```

```
#15              var4-B    0
#16              var4-C    0
#   quantile-0.75
#1
#2                22
#3
#4
#5          45.25
#6
#7
#8
#9
#10         21.75
#11
#12
#13         43.75
#14
#15
#16
```

---

any_join_datf *any_join_datf*

Description

Allow to perform SQL joints with more features

Usage

```
any_join_datf(
  inpt_datf_l,
  join_type = "inner",
  join_spe = NA,
  id_v = c(),
  excl_col = c(),
  rtn_col = c(),
  d_val = NA
)
```

Arguments

inpt_datf_l	is a list containing all the dataframe
join_type	is the joint type. Defaults to inner but can be changed to a vector containing all the dataframes you want to take their ids to don external joints.
join_spe	can be equal to a vector to do an external joints on all the dataframes. In this case, join_type should not be equal to "inner"
id_v	is a vector containing all the ids name of the dataframes. The ids names can be changed to number of their columns taking in count their position in inpt_datf_l. It means that if my id is in the third column of the second dataframe and the first dataframe have 5 columns, the column number of the ids is 5 + 3 = 8

excl_col   is a vector containing the column names to exclude, if this vector is filled so
            "rtn_col" should not be filled. You can also put the column number in the manner
            indicated for "id_v". Defaults to c()

rtn_col   is a vector containing the column names to retain, if this vector is filled so
            "excl_col" should not be filled. You can also put the column number in the
            manner indicated for "id_v". Defaults to c()

d_val   is the default val when here is no match

Examples

```
datf1 <- data.frame("val"=c(1, 1, 2, 4), "ids"=c("e", "a", "z", "a"),
"last"=c("oui", "oui", "non", "oui"),
"second_ids"=c(13, 11, 12, 8), "third_col"=c(4:1))

datf2 <- data.frame("val"=c(3, 7, 2, 4, 1, 2), "ids"=c("a", "z", "z", "a", "a", "a"),
"bool"=c(TRUE, FALSE, FALSE, FALSE, TRUE, TRUE),
"second_ids"=c(13, 12, 8, 34, 22, 12))

datf3 <- data.frame("val"=c(1, 9, 2, 4), "ids"=c("a", "a", "z", "a"),
"last"=c("oui", "oui", "non", "oui"),
"second_ids"=c(13, 11, 12, 8))

print(any_join_datf(inpt_datf_l=list(datf1, datf2, datf3), join_type="inner",
id_v=c("ids", "second_ids"),
                excl_col=c(), rtn_col=c()))

#  ids val ids last second_ids val ids  bool second_ids val ids last second_ids
#3 z12   2   z  non         12   7   z FALSE         12   2   z  non         12

print(any_join_datf(inpt_datf_l=list(datf1, datf2, datf3), join_type="inner", id_v=c("ids
excl_col=c(), rtn_col=c()))

#  ids val ids last second_ids val ids  bool second_ids val ids last second_ids
#2   a   1   a  oui         11   3   a  TRUE         13   1   a  oui         13
#3   z   2   z  non         12   7   z FALSE         12   2   z  non         12
#4   a   4   a  oui          8   4   a FALSE         34   9   a  oui         11

print(any_join_datf(inpt_datf_l=list(datf1, datf2, datf3), join_type=c(1), id_v=c("ids"),
                excl_col=c(), rtn_col=c()))

#   ids val ids last second_ids  val  ids  bool second_ids  val  ids last
#1    e   1   e  oui         13 <NA> <NA> <NA>        <NA> <NA> <NA> <NA>
#2    a   1   a  oui         11    3    a  TRUE         13    1    a  oui
#3    z   2   z  non         12    7    z FALSE         12    2    z  non
#4    a   4   a  oui          8    4    a FALSE         34    9    a  oui
#   second_ids
#1        <NA>
#2          13
#3          12
#4          11

print(any_join_datf(inpt_datf_l=list(datf2, datf1, datf3), join_type=c(1, 3),
                id_v=c("ids", "second_ids"),
                excl_col=c(), rtn_col=c()))

#   ids  val  ids  bool second_ids  val  ids last second_ids  val  ids last
```

```
#1   a13    3    a   TRUE          13 <NA> <NA> <NA>        <NA>    1    a   oui
#2   z12    7    z  FALSE          12    2    z   non         12    2    z   non
#3    z8    2    z  FALSE           8 <NA> <NA> <NA>        <NA> <NA> <NA> <NA>
#4   a34    4    a  FALSE          34 <NA> <NA> <NA>        <NA> <NA> <NA> <NA>
#5   a22    1    a   TRUE          22 <NA> <NA> <NA>        <NA> <NA> <NA> <NA>
#6   a12    2    a   TRUE          12 <NA> <NA> <NA>        <NA> <NA> <NA> <NA>
#7   a13 <NA> <NA>   <NA>        <NA> <NA> <NA> <NA>        <NA> <NA> <NA> <NA>
#8   a11 <NA> <NA>   <NA>        <NA>    1    a   oui         11    9    a   oui
#9   z12 <NA> <NA>   <NA>        <NA> <NA> <NA> <NA>        <NA> <NA> <NA> <NA>
#10   a8 <NA> <NA>   <NA>        <NA>    4    a   oui          8    4    a   oui
#   second_ids
#1          13
#2          12
#3        <NA>
#4        <NA>
#5        <NA>
#6        <NA>
#7        <NA>
#8          11
#9        <NA>
#10          8

print(any_join_datf(inpt_datf_l=list(datf1, datf2, datf3), join_type=c(1), id_v=c("ids"),
            excl_col=c(), rtn_col=c()))

#ids val ids last second_ids  val  ids  bool second_ids  val  ids last
#1    e   1   e  oui         13 <NA> <NA>  <NA>        <NA> <NA> <NA>  <NA>
#2    a   1   a  oui         11    3    a  TRUE          13    1    a   oui
#3    z   2   z  non         12    7    z FALSE          12    2    z   non
#4    a   4   a  oui          8    4    a FALSE          34    9    a   oui
#  second_ids
#1       <NA>
#2         13
#3         12
#4         11
```

---

appndr   *appndr*

Description

Append to a vector "inpt_v" a special value "val" n times "mmn". The appending begins at "strt" index.

Usage

```
appndr(inpt_v, val = NA, hmn, strt = "max")
```

Arguments

inpt_v	is the input vector
val	is the special value
hmn	is the number of special value element added

strt   is the index from which appending begins, defaults to max which means the end
            of "inpt_v"

Examples

```
print(appndr(inpt_v=c(1:3), val="oui", hmn=5))

#[1] "1"   "2"   "3"   "oui" "oui" "oui" "oui" "oui"

print(appndr(inpt_v=c(1:3), val="oui", hmn=5, strt=1))

#[1] "1"   "oui" "oui" "oui" "oui" "oui" "2"   "3"
```

---

arroundr_mean   *arroundr_mean*

Description

Takes an ascendly int ordered vector as input and assigns each elements that are close enough to the same value accrdng to a step value (step_value), see examples.

Usage

```
arroundr_mean(inpt_v = c(), step_val)
```

Arguments

inpt_v   is the input vector

step_val   is the step_value

Examples

```
x <- arroundr_mean(inpt_v = c(-11:25), step_val = 5)
print(x)
print(length(x))

[1] -9.0 -9.0 -9.0 -9.0 -9.0 -4.0 -4.0 -4.0 -4.0 -4.0  1.0  1.0  1.0  1.0  1.0
[16]  6.0  6.0  6.0  6.0  6.0 11.0 11.0 11.0 11.0 11.0 16.0 16.0 16.0 16.0 16.0
[31] 21.0 21.0 21.0 21.0 21.0 23.8 23.8
[1] 37
```

---

arroundr_min   *arroundr_min*

Description

Takes an ascendly int ordered vector as input and assigns each elements that are close enough to the same value accrdng to a step value (step_value), see examples.

Usage

```
arroundr_min(inpt_v = c(), step_val)
```

Arguments

inpt_v   is the input vector

step_val   is the step value

Examples

```
print(arroundr_min(inpt_v = c(-11:25), step_val = 5))

 [1] -11 -11 -11 -11 -11 -11  -6  -6  -6  -6  -6  -1  -1  -1  -1  -1   4   4   4
[20]   4   4   9   9   9   9   9  14  14  14  14  14  19  19  19  19  19  24
```

---

better_match   *better_match*

Description

Allow to get the nth element matched in a vector

Usage

```
better_match(inpt_v = c(), ptrn, untl = 1, nvr_here = NA)
```

Arguments

inpt_v   is the input vector

ptrn   is the pattern to be matched

untl   is the maximum number of matched pattern outputed

nvr_here   is a value you are sure is not present in inpt_v

Examples

```
print(better_match(inpt_v=c(1:12, 3, 4, 33, 3), ptrn=3, untl=1))

#[1] 3

print(better_match(inpt_v=c(1:12, 3, 4, 33, 3), ptrn=3, untl=5))

#[1]   3 13 16

print(better_match(inpt_v=c(1:12, 3, 4, 33, 3), ptrn=c(3, 4), untl=5))

[1]   3 13 16  4 14

print(better_match(inpt_v=c(1:12, 3, 4, 33, 3), ptrn=c(3, 4), untl=c(1, 5)))

[1]   3  4 14
```

---

better_split   *better_split*

Description

Allows to split a string by multiple split, returns a vector and not a list.

Usage

```
better_split(inpt, split_v = c())
```

Arguments

inpt	is the input character
split_v	is the vector containing the splits

Examples

```
print(better_split(inpt = "o-u_i", split_v = c("-")))

[1] "o"   "u_i"

print(better_split(inpt = "o-u_i", split_v = c("-", "_")))

[1] "o" "u" "i"
```

---

better_split_any   *better_split_any*

Description

Allows to split a string by multiple split regardless of their length, returns a vector and not a list. Contrary to better_split, this functions keep the delimiters in the output.

Usage

```
better_split_any(inpt, split_v = c())
```

Arguments

inpt   is the input character

split_v   is the vector containing the splits

Examples

```
print(better_split_any(inpt = "o-u_i", split_v = c("-")))

[1] "o"   "-" "u_i"

print(better_split_any(inpt = "o-u_i", split_v = c("-", "_")))

[1] "o" "-" "u"   "_" "i"

print(better_split_any(inpt = "--o--_/m/m/__-opo-/m/-u_i-_--", split_v = c("--", "_", "/"

 [1] "--"     "o"      "--"     "_"      "/"      "m"      "/"      "m"      "/"
[10] "_"      "_"      "-opo-" "/"      "m"      "/"      "-u"     "_"      "i-"
[19] "_"      "--"


print(better_split_any(inpt = "(ok(ee:56))(ok2(oui)(ee:4))", split_v = c("(", ")", ":")))

 [1] "("    "ok"  "("    "ee"  ":"   "56"  ")"   ")"   "("    "ok2" "("    "oui"
[13] ")"   "("    "ee"  ":"   "4"   ")"   ")"
```

---

better_sub   *better_sub*

Description

Allow to perform a sub operation to a given number of matched patterns, see examples

Usage

```
better_sub(inpt_v = c(), pattern, replacement, untl_v = c())
```

Arguments

`inpt_v`	is a vector containing all the elements that contains expressions to be substituted
`pattern`	is the expression that will be substituted
`replacement`	is the expression that will substituate pattern
`untl_v`	is a vector containing, for each element of inpt_v, the number of pattern that will be substituted

Examples

```
print(better_sub(inpt_v = c("yes NAME, i will call NAME and NAME",
                            "yes NAME, i will call NAME and NAME"),
              pattern = "NAME",
              replacement = "Kevin",
              untl = c(2)))

[1] "yes Kevin, i will call Kevin and NAME"
[2] "yes Kevin, i will call Kevin and NAME"

print(better_sub(inpt_v = c("yes NAME, i will call NAME and NAME",
                            "yes NAME, i will call NAME and NAME"),
              pattern = "NAME",
              replacement = "Kevin",
              untl = c(2, 3)))

[1] "yes Kevin, i will call Kevin and NAME"
[2] "yes Kevin, i will call Kevin and Kevin"

print(better_sub(inpt_v = c("yes NAME, i will call NAME and NAME",
                            "yes NAME, i will call NAME and NAME"),
              pattern = "NAME",
              replacement = "Kevin",
              untl = c("max", 3)))

[1] "yes Kevin, i will call Kevin and Kevin"
[2] "yes Kevin, i will call Kevin and Kevin"
```

`better_sub_mult`	*better_sub_mult*

Description

Allow to perform a sub_mult operation to a given number of matched patterns, see examples

Usage

```
better_sub_mult(
  inpt_v = c(),
  pattern_v = c(),
  replacement_v = c(),
  untl_v = c()
)
```

Arguments

`inpt_v`	is a vector containing all the elements that contains expressions to be substituted
`pattern_v`	is a vector containing all the patterns to be substituted in any elements of inpt_v
`replacement_v`	
	is a vector containing the expression that are going to substituate those provided by pattern_v
`untl_v`	is a vector containing, for each element of inpt_v, the number of pattern that will be substituted

Examples

```
print(better_sub_mult(inpt_v = c("yes NAME, i will call NAME and NAME2",
                         "yes NAME, i will call NAME and NAME2, especially NAME2"),
            pattern_v = c("NAME", "NAME2"),
            replacement_v = c("Kevin", "Paul"),
            untl = c(1, 3)))

[1] "yes Kevin, i will call NAME and Paul"
[2] "yes Kevin, i will call NAME and Paul, especially Paul"

print(better_sub_mult(inpt_v = c("yes NAME, i will call NAME and NAME2",
                         "yes NAME, i will call NAME and NAME2, especially NAME2"),
            pattern_v = c("NAME", "NAME2"),
            replacement_v = c("Kevin", "Paul"),
            untl = c("max", 3)))

[1] "yes Kevin, i will call Kevin and Kevin2"
[2] "yes Kevin, i will call Kevin and Kevin2, especially Kevin2"
```

`better_unique`	*better_unique*

Description

Returns the element that are not unique from the input vector

Usage

```
better_unique(inpt_v, occu = ">-1-")
```

Arguments

`inpt_v`	is the input vector containing the elements
`occu`	is a parameter that specifies the occurence of the elements that must be returned, defaults to ">-1-" it means that the function will return all the elements that are present more than one time in inpt_v. The synthax is the following "comparaison_type-actual_value-". The comparaison type may be "==" or ">" or "<". Occu can also be a vector containing all the occurence that must have the elements to be returned.

Examples

```
print(better_unique(inpt_v=c("oui", "oui", "non", "non", "peut", "peut1", "non")))

#[1] "oui" "non"

print(better_unique(inpt_v=c("oui", "oui", "non", "non", "peut", "peut1", "non"), occu="=

#[1] "oui"

print(better_unique(inpt_v=c("oui", "oui", "non", "non", "peut", "peut1", "non"), occu=">

#[1] "non"

print(better_unique(inpt_v=c("oui", "oui", "non", "non", "peut", "peut1", "non"), occu=c(

#[1] "non"   "peut"  "peut1"

print(better_unique(inpt_v = c("a", "b", "c", "c"), occu = "==-1-"))

[1] "a" "b"

print(better_unique(inpt_v = c("a", "b", "c", "c"), occu = "<-2-"))

[1] "a" "b"
```

---

bind_cols   *bind_cols*

Description

Allow to find the cols of a dataframe in an other dataframe, see examples

Usage

```
bind_cols(from_datf, in_datf)
```

Arguments

from_datf   is the dataframe that contains the cols to find among other cols

in_datf   is the dataframe that only contans the cols to find in from_datf

Examples

```
iris[, 5] <- as.character(iris[, 5])
iris <- cbind(iris, iris[, 4])
from_datf <- iris
in_datf <- iris[, c(1, 2, 2, 2, 4)]
bind_cols(from_datf = from_datf,
          in_datf = in_datf)

[[1]]
[1] 1
```

```
[[2]]
[1] 2

[[3]]
[1] 2

[[4]]
[1] 2

[[5]]
[1] 4 6
```

---

bind_rows	*bind_rows*

Description

Allow to find the rows of a dataframe in an other dataframe, see examples

Usage

```
bind_rows(from_datf, in_datf)
```

Arguments

from_datf   is the dataframe that contains the rows to find among other rows

in_datf   is the dataframe that only contans the rows to find in from_datf

Examples

```
iris[, 5] <- as.character(iris[, 5])
from_datf <- iris
in_datf <- iris[c(4, 2, 23, 21, 11), ]

bind_rows(from_datf = from_datf,
          in_datf = in_datf)

[[1]]
[1] 4

[[2]]
[1] 2

[[3]]
[1] 23

[[4]]
[1] 21

[[5]]
[1] 11
```

---

can_be_num   *can_be_num*

Description

Return TRUE if a variable can be converted to a number and FALSE if not (supports float)

Usage

```
can_be_num(x)
```

Arguments

x   is the input value

Examples

```
print(can_be_num("34.677"))

#[1] TRUE

print(can_be_num("34"))

#[1] TRUE

print(can_be_num("3rt4"))

#[1] FALSE

print(can_be_num(34))

#[1] TRUE
```

---

closer_ptrn   *closer_ptrn*

Description

Take a vector of patterns as input and output each chosen word with their closest patterns from chosen patterns.

Usage

```
closer_ptrn(
  inpt_v,
  base_v = c("?", letters),
  excl_v = c(),
  rtn_v = c(),
  sub_excl_v = c(),
  sub_rtn_v = c()
)
```

Arguments

`inpt_v`	is the input vector containing all the patterns
`base_v`	must contain all the characters that the patterns are succeptible to contain, defaults to c("?", letters). "?" is necessary because it is internaly the default value added to each element that does not have a suffiient length compared to the longest pattern in inpt_v. If set to NA, the function will find by itself the elements to be filled with but it may takes an extra time
`excl_v`	is the vector containing all the patterns from inpt_v to exclude for comparing them to others patterns. If this parameter is filled, so "rtn_v" must be empty.
`rtn_v`	is the vector containing all the patterns from inpt_v to keep for comparing them to others patterns. If this parameter is filled, so "rtn_v" must be empty.
`sub_excl_v`	is the vector containing all the patterns from inpt_v to exclude for using them to compare to another pattern. If this parameter is filled, so "sub_rtn_v" must be empty.
`sub_rtn_v`	is the vector containing all the patterns from inpt_v to retain for using them to compare to another pattern. If this parameter is filled, so "sub_excl_v" must be empty.

Examples

```
print(closer_ptrn(inpt_v=c("bonjour", "lpoerc", "nonnour", "bonnour", "nonjour", "aurevoi

#[[1]]
#[1] "bonjour"
#
#[[2]]
#[1] "lpoerc"   "nonnour"  "bonnour"  "nonjour"  "aurevoir"
#
#[[3]]
#[1] 1 1 2 7 8
#
#[[4]]
#[1] "lpoerc"
#
#[[5]]
#[1] "bonjour"  "nonnour"  "bonnour"  "nonjour"  "aurevoir"
#
#[[6]]
#[1] 7 7 7 7 7
#
#[[7]]
#[1] "nonnour"
#
#[[8]]
#[1] "bonjour"  "lpoerc"   "bonnour"  "nonjour"  "aurevoir"
#
#[[9]]
#[1] 1 1 2 7 8
#
#[[10]]
#[1] "bonnour"
#
#[[11]]
#[1] "bonjour"  "lpoerc"   "nonnour"  "nonjour"  "aurevoir"
```

```
#
#[[12]]
#[1] 1 1 2 7 8
#
#[[13]]
#[1] "nonjour"
#
#[[14]]
#[1] "bonjour"  "lpoerc"   "nonnour"  "bonnour"  "aurevoir"
#
#[[15]]
#[1] 1 1 2 7 8
#
#[[16]]
#[1] "aurevoir"
#
#[[17]]
#[1] "bonjour" "lpoerc"  "nonnour" "bonnour" "nonjour"
#
#[[18]]
#[1] 7 8 8 8 8

print(closer_ptrn(inpt_v=c("bonjour", "lpoerc", "nonnour", "bonnour", "nonjour", "aurevoi
excl_v=c("nonnour", "nonjour"),
                  sub_excl_v=c("nonnour")))

#[1] 3 5
#[[1]]
#[1] "bonjour"
#
#[[2]]
#[1] "lpoerc"   "bonnour"  "nonjour"  "aurevoir"
#
#[[3]]
#[1] 1 1 7 8
#
#[[4]]
#[1] "lpoerc"
#
#[[5]]
#[1] "bonjour"  "bonnour"  "nonjour"  "aurevoir"
#
#[[6]]
#[1] 7 7 7 7
#
#[[7]]
#[1] "bonnour"
#
#[[8]]
#[1] "bonjour" "lpoerc"   "bonnour" "nonjour" "aurevoir"
#
#[[9]]
#[1] 0 1 2 7 8
#
#[[10]]
#[1] "aurevoir"
#
```

```
#[[11]]
#[1] "bonjour"  "lpoerc"   "nonjour"  "aurevoir"
#
#[[12]]
#[1] 0 7 8 8
```

---

closer_ptrn_adv   *closer_ptrn_adv*

Description

Allow to find how patterns are far or near between each other relatively to a vector containing characters at each index ("base_v"). The function gets the sum of the indexes of each pattern letter relatively to the characters in base_v. So each pattern can be compared.

Usage

```
closer_ptrn_adv(
  inpt_v,
  res = "raw_stat",
  default_val = "?",
  base_v = c(default_val, letters),
  c_word = NA
)
```

Arguments

inpt_v	is the input vector containing all the patterns to be analyzed
res	is a parameter controling the result. If set to "raw_stat", each word in inpt_v will come with its score (indexes of its letters relatively to base_v). If set to something else, so "c_word" parameter must be filled.
default_val	is the value that will be added to all patterns that do not equal the length of the longest pattern in inpt_v. Those get this value added to make all patterns equal in length so they can be compared, defaults to "?"
base_v	is the vector from which all pattern get its result (letters indexes for each pattern relatively to base_v), defaults to c("default_val", letters). "default_val" is another parameter and letters is all the western alphabetic letters in a vector
c_word	is a pattern from which the nearest to the farest pattern in inpt_v will be compared

Examples

```
print(closer_ptrn_adv(inpt_v=c("aurevoir", "bonnour", "nonnour", "fin", "mois", "bonjour"
     res="word", c_word="bonjour"))

#[[1]]
#[1]  1  5 15 17 38 65
#
#[[2]]
#[1] "bonjour"  "bonnour"  "aurevoir" "nonnour"  "mois"     "fin"
```

```
print(closer_ptrn_adv(inpt_v=c("aurevoir", "bonnour", "nonnour", "fin", "mois")))

#[[1]]
#[1] 117 107 119  37  64
#
#[[2]]
#[1] "aurevoir" "bonnour"  "nonnour"  "fin"      "mois"
```

---

clusterizer_v   *clusterizer_v*

Description

Allow to output clusters of elements. Takes as input a vector "inpt_v" containing a sequence of number. Can also take another vector "w_v" that has the same size of inpt_v because its elements are related to it. The way the clusters are made is related to an accuracy value which is "c_val". It means that if the difference between the values associated to 2 elements is superior to c_val, these two elements are in distinct clusters. The second element of the outputed list is the begin and end value of each cluster.

Usage

```
clusterizer_v(inpt_v, w_v = NA, c_val)
```

Arguments

inpt_v	is the vector containing the sequence of number
w_v	is the vector containing the elements related to inpt_v, defaults to NA
c_val	is the accuracy of the clusterization

Examples

```
 print(clusterizer_v(inpt_v=sample.int(20, 26, replace=TRUE), w_v=NA, c_val=0.9))

# [[1]]
#[[1]][[1]]
#[1] 1
#
#[[1]][[2]]
#[1] 2
#
#[[1]][[3]]
#[1] 3
#
#[[1]][[4]]
#[1] 4
#
#[[1]][[5]]
#[1] 5 5
#
#[[1]][[6]]
```

```
#[1] 6 6 6 6
#
#[[1]][[7]]
#[1] 7 7 7
#
#[[1]][[8]]
#[1] 8 8 8
#
#[[1]][[9]]
#[1] 9
#
#[[1]][[10]]
#[1] 10
#
#[[1]][[11]]
#[1] 12
#
#[[1]][[12]]
#[1] 13 13 13
#
#[[1]][[13]]
#[1] 18 18 18
#
#[[1]][[14]]
#[1] 20
#
#
#[[2]]
# [1] "1"  "1"  "-"  "2"  "2"  "-"  "3"  "3"  "-"  "4"  "4"  "-"  "5"  "5"  "-"
#[16] "6"  "6"  "-"  "7"  "7"  "-"  "8"  "8"  "-"  "9"  "9"  "-"  "10" "10" "-"
#[31] "12" "12" "-"  "13" "13" "-"  "18" "18" "-"  "20" "20"

print(clusterizer_v(inpt_v=sample.int(40, 26, replace=TRUE), w_v=letters, c_val=0.29))

#[[1]]
#[[1]][[1]]
#[1] "a"
#
#[[1]][[2]]
#[1] "b"
#
#[[1]][[3]]
#[1] "c" "d"
#
#[[1]][[4]]
#[1] "e" "f"
#
#[[1]][[5]]
#[1] "g" "h" "i" "j"
#
#[[1]][[6]]
#[1] "k"
#
#[[1]][[7]]
#[1] "l"
#
#[[1]][[8]]
```

```
#[1] "m" "n"
#
#[[1]][[9]]
#[1] "o"
#
#[[1]][[10]]
#[1] "p"
#
#[[1]][[11]]
#[1] "q" "r"
#
#[[1]][[12]]
#[1] "s" "t" "u"
#
#[[1]][[13]]
#[1] "v"
#
#[[1]][[14]]
#[1] "w"
#
#[[1]][[15]]
#[1] "x"
#
#[[1]][[16]]
#[1] "y"
#
#[[1]][[17]]
#[1] "z"
#
#
#[[2]]
# [1] "13" "13" "-"  "14" "14" "-"  "15" "15" "-"  "16" "16" "-"  "17" "17" "-"
#[16] "19" "19" "-"  "21" "21" "-"  "22" "22" "-"  "23" "23" "-"  "25" "25" "-"
#[31] "27" "27" "-"  "29" "29" "-"  "30" "30" "-"  "31" "31" "-"  "34" "34" "-"
#[46] "35" "35" "-"  "37" "37"
```

`colins_datf`	*colins_datf*

Description

Allow to insert vectors into a dataframe.

Usage

```
colins_datf(inpt_datf, target_col = list(), target_pos = list())
```

Arguments

`inpt_datf`	is the dataframe where vectors will be inserted
`target_col`	is a list containing all the vectors to be inserted
`target_pos`	is a list containing the vectors made of the columns names or numbers where the associated vectors from target_col will be inserted after

Examples

```
datf1 <- data.frame("frst_col"=c(1:5), "scd_col"=c(5:1))

print(colins_datf(inpt_datf=datf1, target_col=list(c("oui", "oui", "oui", "non", "non"),
            c("u", "z", "z", "z", "u")),
                target_pos=list(c("frst_col", "scd_col"), c("scd_col"))))

#  frst_col cur_col scd_col cur_col.1 cur_col
#1        1     oui       5       oui       u
#2        2     oui       4       oui       z
#3        3     oui       3       oui       z
#4        4     non       2       non       z
#5        5     non       1       non       u

print(colins_datf(inpt_datf=datf1, target_col=list(c("oui", "oui", "oui", "non", "non"),
            c("u", "z", "z", "z", "u")),
                target_pos=list(c(1, 2), c("frst_col"))))

#  frst_col cur_col scd_col cur_col cur_col
#1        1     oui       5       u     oui
#2        2     oui       4       z     oui
#3        3     oui       3       z     oui
#4        4     non       2       z     non
#5        5     non       1       u     non
```

---

col_to_row   *col_to_row*

Description

Allow to reverse a dataframe (cols become rows and rows become cols)

Usage

```
col_to_row(inpt_datf)
```

Arguments

inpt_datf   is the inout dataframe

Examples

```
datf_test <- data.frame(c(1:11), c(11:1))

print(col_to_row(inpt_datf = datf_test))

  X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11
1  1  2  3  4  5  6  7  8  9  10  11
2 11 10  9  8  7  6  5  4  3   2   1
```

---

converter_date *converter_date*

Description

Allow to convert any date like second/minute/hour/day/month/year to either second, minute...year. The input date should not necessarily have all its time units (second, minute...) but all the time units according to a format. Example: "snhdmy" is for second, hour, minute, day, month, year. And "mdy" is for month, day, year.

Usage

```
converter_date(inpt_date, convert_to, frmt = "snhdmy", sep_ = "-")
```

Arguments

inpt_date	is the input date
convert_to	is the time unit the input date will be converted ("s", "n", "h", "d", "m", "y")
frmt	is the format of the input date
sep_	is the separator of the input date. For example this input date "12-07-2012" has "-" as a separator

Examples

```
print(converter_date(inpt_date="14-04-11-2024", sep_="-", frmt="hdmy", convert_to="m"))

#[1] 24299.15

print(converter_date(inpt_date="14-04-11-2024", sep_="-", frmt="hdmy", convert_to="y"))

#[1] 2024.929

print(converter_date(inpt_date="14-04-11-2024", sep_="-", frmt="hdmy", convert_to="s"))

#[1] 63900626400

print(converter_date(inpt_date="63900626400", sep_="-", frmt="s", convert_to="y"))

#[1] 2024.929

print(converter_date(inpt_date="2024", sep_="-", frmt="y", convert_to="s"))

#[1] 63873964800
```

---

converter_format *converter_format*

Description

Allow to convert a format to another

Usage

```
converter_format(inpt_val, sep_ = "-", inpt_frmt, frmt, default_val = "00")
```

Arguments

inpt_val	is the input value that is linked to the format
sep_	is the separator of the value in inpt_val
inpt_frmt	is the format of the input value
frmt	is the format you want to convert to
default_val	is the default value given to the units that are not present in the input format

Examples

```
print(converter_format(inpt_val="23-12-05-1567", sep_="-",
                       inpt_frmt="shmy", frmt="snhdmy", default_val="00"))

#[1] "23-00-12-00-05-1567"

print(converter_format(inpt_val="23-12-05-1567", sep_="-",
                       inpt_frmt="shmy", frmt="Pnhdmy", default_val="00"))

#[1] "00-00-12-00-05-1567"
```

---

cost_and_taxes *cost_and_taxes*

Description

Allow to calculate basic variables related to cost and taxes from a bunch of products (elements). So put every variable you know in the following order:

Usage

```
cost_and_taxes(
  qte = NA,
  pu = NA,
  prix_ht = NA,
  tva = NA,
  prix_ttc = NA,
  prix_tva = NA,
```

```
   pu_ttc = NA,
   adjust = NA,
   prix_d_ht = NA,
   prix_d_ttc = NA,
   pu_d = NA,
   pu_d_ttc = NA
)
```

Arguments

`qte`	is the quantity of elements
`pu`	is the price of a single elements without taxes
`prix_ht`	is the duty-free price of the whole set of elements
`tva`	is the percentage of all taxes
`prix_ttc`	is the price of all the elements with taxes
`prix_tva`	is the cost of all the taxes
`pu_ttc`	is the price of a single element taxes included
`adjust`	is the discount percentage
`prix_d_ht`	is the free-duty price of an element after discount
`prix_d_ttc`	is the price with taxes of an element after discount
`pu_d`	is the price of a single element after discount and without taxes
`pu_d_ttc`	is the free-duty price of a single element after discount

Examples

```
print(cost_and_taxes(pu=45, prix_ttc=2111, qte=23))

# [1]   23.000000   45.000000   45.000000   1.039614 2111.000000 1076.000000
#[7]   45.000000        NA          NA          NA          NA          NA
```

`cumulated_rows`	*cumulated_rows*

Description

Output a vector of size that equals to the rows number of the input dataframe, with TRUE value at the indices corresponding to the row where at least a cell of any column is equal to one of the values inputed in `values_v`

Usage

```
cumulated_rows(inpt_datf, values_v = c())
```

Arguments

`inpt_datf`	is the input data.frame
`values_v`	is a vector containing all the values that a cell has to equal to return a TRUE value in the output vector at the index corresponding to the row of the cell

Examples

```
datf_teste <- data.frame(c(1:10), c(10:1))

print(datf_teste)

   c.1.10. c.10.1.
1        1      10
2        2       9
3        3       8
4        4       7
5        5       6
6        6       5
7        7       4
8        8       3
9        9       2
10      10       1

print(cumulated_rows(inpt_datf = datf_teste, values_v = c(2, 3)))

[1]   FALSE TRUE TRUE   FALSE   FALSE   FALSE   FALSE TRUE TRUE   FALSE
```

---

cumulated_rows_na   *cumulated_rows_na*

Description

Output a vector of size that equals to the rows number of the input dataframe, with TRUE value at the indices corresponding to the row where at least a cell of any column is equal to NA.

Usage

```
cumulated_rows_na(inpt_datf)
```

Arguments

inpt_datf   is the input data.frame

Examples

```
datf_teste <- data.frame(c(1, 2, 3, 4, 5, NA, 7), c(10, 9, 8, NA, 7, 6, NA))

print(datf_teste)

  c.1..2..3..4..5..NA..7. c.10..9..8..NA..7..6..NA.
1                       1                        10
2                       2                         9
3                       3                         8
4                       4                        NA
5                       5                         7
6                      NA                         6
7                       7                        NA

print(cumulated_rows_na(inpt_datf = datf_teste))
```

```
[1] FALSE FALSE FALSE  TRUE FALSE  TRUE  TRUE
```

---

cutr_v *cutr_v*

Description

Allow to reduce all the elements in a vector to a defined size of nchar

Usage

```
cutr_v(inpt_v, untl = "min")
```

Arguments

inpt_v   is the input vector

untl   is the maximum size of nchar authorized by an element, defaults to "min", it
                means the shortest element in the list

Examples

```
test_v <- c("oui", "nonon", "ez", "aa", "a", "dsfsdsds")

print(cutr_v(inpt_v=test_v, untl="min"))

#[1] "o" "n" "e" "a" "a" "d"

print(cutr_v(inpt_v=test_v, untl=3))

#[1] "oui" "non" "ez"  "aa"  "a"   "dsf"
```

---

cut_v *cut_v*

Description

Allow to convert a vector to a dataframe according to a separator.

Usage

```
cut_v(inpt_v, sep_ = "")
```

Arguments

inpt_v   is the input vector

sep_   is the separator of the elements in inpt_v, defaults to ""

Examples

```
print(cut_v(inpt_v=c("oui", "non", "oui", "non")))

#     X.o. X.u. X.i.
#oui "o"  "u"  "i"
#non "n"  "o"  "n"
#oui "o"  "u"  "i"
#non "n"  "o"  "n"

print(cut_v(inpt_v=c("ou-i", "n-on", "ou-i", "n-on"), sep_="-"))

#      X.ou. X.i.
#ou-i "ou"  "i"
#n-on "n"   "on"
#ou-i "ou"  "i"
#n-on "n"   "on"
```

```
data_gen                      data_gen
```

Description

Allo to generate in a csv all kind of data you can imagine according to what you provide

Usage

```
data_gen(
  type_ = c("number", "mixed", "string"),
  strt_l = c(0, 0, 10),
  nb_r = c(50, 10, 40),
  output = NA,
  properties = c("1-5", "1-5", "1-5"),
  type_distri = c("random", "random", "random"),
  str_source = c("a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m"
    "o", "p", "q", "r", "s", "t", "u", "w", "x", "y", "z"),
  round_l = c(0, 0, 0),
  sep_ = ","
)
```

Arguments

type_	is a vector. Its arguments designates a column, a column can be made of numbers ("number"), string ("string") or both ("mixed")
strt_l	is a vector containing for each column the row from which the data will begin to be generated
nb_r	is a vector containing for each column, the number of row full from generated data
output	is the name of the output csv file, defaults to NA so no csv will be outputed by default

`properties`	is linked to type_distri because it is the parameters ("min_val-max_val") for "random type", ("u-x") for the poisson distribution, ("u-d") for gaussian distribution
`type_distri`	is a vector which, for each column, associate a type of distribution ("random", "poisson", "gaussian"), it meas that non only the number but also the length of the string will be randomly generated according to these distribution laws
`str_source`	is the source (vector) from which the character creating random string are (default set to the occidental alphabet)
`round_l`	is a vector which, for each column containing number, associate a round value, if the type of the value is numeric
`sep_`	is the separator used to write data in the csv

Value

new generated data in addition to saving it in the output

Examples

```
print(data_gen())

#   X1    X2     X3
#1   4     2   <NA>
#2   2     4   <NA>
#3   5     2   <NA>
#4   2  abcd   <NA>
#5   4  abcd   <NA>
#6   2     4   <NA>
#7   2   abc   <NA>
#8   4   abc   <NA>
#9   4     3   <NA>
#10  4   abc   abcd
#11  5  <NA>    abc
#12  4  <NA>    abc
#13  1  <NA>     ab
#14  1  <NA>  abcde
#15  2  <NA>    abc
#16  4  <NA>      a
#17  1  <NA>   abcd
#18  4  <NA>     ab
#19  2  <NA>   abcd
#20  3  <NA>     ab
#21  3  <NA>   abcd
#22  2  <NA>      a
#23  4  <NA>    abc
#24  1  <NA>   abcd
#25  4  <NA>    abc
#26  4  <NA>     ab
#27  2  <NA>    abc
#28  5  <NA>     ab
#29  3  <NA>    abc
#30  5  <NA>   abcd
#31  2  <NA>    abc
#32  2  <NA>    abc
#33  1  <NA>     ab
#34  5  <NA>      a
```

```
#35  4 <NA>    ab
#36  1 <NA>    ab
#37  1 <NA> abcde
#38  5 <NA>   abc
#39  4 <NA>    ab
#40  5 <NA> abcde
#41  2 <NA>    ab
#42  3 <NA>    ab
#43  2 <NA>    ab
#44  4 <NA>  abcd
#45  5 <NA>  abcd
#46  3 <NA>  abcd
#47  2 <NA>  abcd
#48  3 <NA>  abcd
#49  3 <NA>  abcd
#50  4 <NA>     a

print(data_gen(strt_l=c(0, 0, 0), nb_r=c(5, 5, 5)))

#  X1    X2   X3
#1  2     a  abc
#2  3 abcde   ab
#3  4 abcde    a
#4  1     3  abc
#5  3     a abcd
```

---

data_meshup   *data_meshup*

Description

Allow to automatically arrange 1 dimensional data according to vector and parameters

Usage

```
data_meshup(
  data,
  cols = NA,
  file_ = NA,
  sep_ = ";",
  organisation = c(2, 1, 0),
  unic_sep1 = "_",
  unic_sep2 = "-"
)
```

Arguments

data   is the data provided (vector) each column is separated by a unic separator and
            each dataset from the same column is separated by another unic separator (ex:
            c("", c("d", "-", "e", "-", "f"), "", c("a", "a1", "-", "b", "-", "c", "c1"), "_")

cols   are the colnames of the data generated in a csv

file_   is the file to which the data will be outputed, defaults to NA which means that
            the functio will return the dataframe generated and won't write it to a csv file

sep_	is the separator of the csv outputed
organisation	is the way variables include themselves, for instance ,resuming precedent example, if organisation=c(1, 0) so the data output will be: d, a d, a1 e, c f, c f, c1
unic_sep1	is the unic separator between variables (default is "_")
unic_sep2	is the unic separator between datasets (default is "-")

Examples

```
print(data_meshup(data=c("_", c("-", "d", "-", "e", "-", "f"), "_",
     c("-", "a", "a1", "-", "B", "r", "uy", "-", "c", "c1"), "_"), organisation=c(1, 0)))

#  X1 X2
#1  d  a
#2  d a1
#3  e  B
#4  e  r
#5  e uy
#6  f  c
#7  f c1
```

---

date_addr	*date_addr*

Description

Allow to add or substract two dates that have the same time unit or not

Usage

```
date_addr(
  date1,
  date2,
  add = FALSE,
  frmt1,
  frmt2 = frmt1,
  sep_ = "-",
  convert_to = "dmy"
)
```

Arguments

date1	is the date from which the second date will be added or substracted
date2	is the date that will be added or will substract date1
add	equals to FALSE if you want date1 - date2 and TRUE if you want date1 + date2
frmt1	is the format of date1 (snhdmy) (second, minute, hour, day, monthn year)
frmt2	is the format of date2 (snhdmy)
sep_	is the separator of date1 and date2
convert_to	is the format of the outputed date

Examples

```
print(date_addr(date1="25-02", date2="58-12-08", frmt1="dm", frmt2="shd", sep_="-",
                convert_to="dmy"))

#[1] "18-2-0"

print(date_addr(date1="25-02", date2="58-12-08", frmt1="dm", frmt2="shd", sep_="-",
                convert_to="dmy", add=TRUE))

#[1] "3-3-0"

print(date_addr(date1="25-02-2024", date2="1-01", frmt1="dmy", frmt2="dm", sep_="-",
                convert_to="dmy", add=TRUE))

#[1] "27-3-2024"

print(date_addr(date1="25-02-2024", date2="1-01", frmt1="dmy", frmt2="dm", sep_="-",
                convert_to="dmy", add=FALSE))

#[1] "23-1-2024"

print(date_addr(date1="25-02-2024", date2="1-01", frmt1="dmy", frmt2="dm", sep_="-",
                convert_to="n", add=FALSE))

#[1] "1064596320"

print(date_addr(date1="25-02-2024", date2="1-01", frmt1="dmy", frmt2="dm", sep_="-",
                convert_to="s", add=FALSE))

#[1] "63875779200"
```

```
date_converter_reverse
```
                      date_converter_reverse

Description

Allow to convert single date value like 2025.36 year to a date like second/minutehour/day/month/year
(snhdmy)

Usage

```
date_converter_reverse(inpt_date, convert_to = "dmy", frmt = "y", sep_ = "-")
```

Arguments

inpt_date	is the input date
convert_to	is the date format the input date will be converted
frmt	is the time unit of the input date
sep_	is the separator of the outputed date

Examples

```
print(date_converter_reverse(inpt_date="2024.929", convert_to="hmy", frmt="y", sep_="-"))

#[1] "110-11-2024"

print(date_converter_reverse(inpt_date="2024.929", convert_to="dmy", frmt="y", sep_="-"))

#[1] "4-11-2024"

print(date_converter_reverse(inpt_date="2024.929", convert_to="hdmy", frmt="y", sep_="-")

#[1] "14-4-11-2024"

print(date_converter_reverse(inpt_date="2024.929", convert_to="dhym", frmt="y", sep_="-")

#[1] "4-14-2024-11"
```

---

datf_appendr *datf_appendr*

Description

Allow to append all columns of a dataframe in a vector.

Usage

```
datf_appendr(inpt_datf)
```

Arguments

inpt_datf   is the input dataframe

Examples

```
datf_teste <- data.frame("col1" = c(1:5), "col2" = c(5:1))

print(datf_appendr(inpt_datf = datf_teste))

[1] 1 2 3 4 5 5 4 3 2 1
```

---

datf_appendr2 *datf_appendr2*

Description

Allow to append all columns of a dataframe in a vector, specifying the column types ("integer" or "character"), see examples

Usage

```
datf_appendr2(inpt_datf, chs_type = "integer")
```

Arguments

inpt_datf   is the inout dataframe

Examples

```
datf_teste <- data.frame("col1" = c(1:5), "col2" = c(5:1),
  "col3" = c("oui", "oui", "oui", "non", "non"))

print(datf_appendr2(inpt_datf = datf_teste, chs_type = "integer"))

[1] 1 2 3 4 5 5 4 3 2 1

print(datf_appendr2(inpt_datf = datf_teste, chs_type = "character"))

[1] "oui" "oui" "oui" "non" "non"
```

---

datf_insertr   *datf_insertr*

Description

Insert rows after certain indexes, see examples

Usage

```
datf_insertr(inpt_datf, ids_vec, val_l)
```

Arguments

inpt_datf   is the input dataframe

ids_vec   is the ids where the rows has to be inserted after

val_l   is a list containing all the rows (vector) to be inserted, linked to eevery index
              within ids_vec

Examples

```
datf <- data.frame(c(1:4), c(4:1))
print(datf)

  c.1.4. c.4.1.
1      1      4
2      2      3
3      3      2
4      4      1

print(datf_insertr(inpt_datf = datf, ids_vec = c(1, 3), val_l = list(c("non", "non"), c("

  c.1.4. c.4.1.
```

```
1       1       4
2     non     non
21      2       3
3       3       2
5     oui     oui
4       4       1

print(datf_insertr(inpt_datf = datf, ids_vec = c(1, 3), val_l = list(c("non", "non"))))

  c.1.4. c.4.1.
1       1       4
2     non     non
21      2       3
3       3       2
5     non     non
4       4       1
```

---

datf_row_appendr   *datf_row_appendr*

Description

Allow to append all rows of a dataframe in a vector.

Usage

```
datf_row_appendr(inpt_datf)
```

Arguments

inpt_datf   is the input dataframe

Examples

```
datf_teste <- data.frame("col1" = c(1:5), "col2" = c(5:1))

print(datf_appendr(inpt_datf = datf_teste))

col1 col2 col1 col2 col1 col2 col1 col2 col1 col2
   1    5    2    4    3    3    4    2    5    1
```

---

datf_row_appendr2   *datf_row_appendr2*

Description

Allow to append all rows of a dataframe in a vector, specifying the column types ("integer" or "character"), see examples

Usage

```
datf_row_appendr2(inpt_datf, chs_type = "integer")
```

Arguments

```
inpt_datf      is the inout dataframe
```

Examples

```
datf_teste <- data.frame("col1" = c(1:5), "col2" = c(5:1),
  "col3" = c("oui", "oui", "oui", "non", "non"))

print(datf_row_appendr2(inpt_datf = datf_teste, chs_type = "integer"))

NULL

print(datf_row_appendr2(inpt_datf = datf_teste, chs_type = "character"))

 col1  col2  col3  col1  col2  col3  col1  col2  col3  col1  col2  col3  col1
  "1"   "5" "oui"   "2"   "4" "oui"   "3"   "3" "oui"   "4"   "2" "non"   "5"
 col2  col3
  "1" "non"
```

```
dcr_untl                    dcr_untl
```

Description

Allow to get the final value of a incremental or decremental loop.

Usage

```
dcr_untl(strt_val, cr_val, stop_val = 0)
```

Arguments

```
strt_val       is the start value
cr_val         is the incremental (or decremental value)
stop_val       is the value where the loop has to stop
```

Examples

```
print(dcr_untl(strt_val=50, cr_val=-5, stop_val=5))

#[1] 9

print(dcr_untl(strt_val=50, cr_val=5, stop_val=450))

#[1] 80
```

---

dcr_val   *dcr_val*

Description

Allow to get the end value after an incremental (or decremental loop)

Usage

```
dcr_val(strt_val, cr_val, stop_val = 0)
```

Arguments

strt_val   is the start value

cr_val   is the incremental or decremental value

stop_val   is the value the loop has to stop

Examples

```
print(dcr_val(strt_val=50, cr_val=-5, stop_val=5))

#[1] 5

print(dcr_val(strt_val=47, cr_val=-5, stop_val=5))

#[1] 7

print(dcr_val(strt_val=50, cr_val=5, stop_val=450))

#[1] 450

print(dcr_val(strt_val=53, cr_val=5, stop_val=450))

#[1] 448
```

---

depth_pairs_findr   *depth_pairs_findr*

Description

Takes the pair vector as an input and associate to each pair a level of depth, see examples

Usage

```
depth_pairs_findr(inpt)
```

Arguments

inpt   is the pair vector

Examples

```
print(depth_pairs_findr(c(1, 1, 2, 3, 3, 4, 4, 2, 5, 6, 7, 7, 6, 5)))

 [1] 1 1 1 2 2 2 2 1 1 2 3 3 2 1
```

---

diff_datf   *diff_datf*

Description

Returns a vector with the coordinates of the cell that are not equal between 2 dataframes (row, column).

Usage

```
diff_datf(datf1, datf2)
```

Arguments

datf1	is an an input dataframe
datf2	is an an input dataframe

Examples

```
datf1 <- data.frame(c(1:6), c("oui", "oui", "oui", "oui", "oui", "oui"), c(6:1))

datf2 <- data.frame(c(1:7), c("oui", "oui", "oui", "oui", "non", "oui", "zz"))

print(diff_datf(datf1=datf1, datf2=datf2))

#[1] 5 1 5 2
```

---

dynamic_idx_convertr
                          dynamic_idx_convertr

Description

Allow to convert the indices of vector ('from_v_ids') which are related to the each characters of a vector (from_v_val), to fit the newly established characters of the vector from_v_val, see examples.

Usage

```
dynamic_idx_convertr(from_v_ids, from_v_val)
```

Arguments

from_v_ids   is the input vector of indices

from_v_val   is the input vector of elements, or just the total number of characters of the elementsq in the vector

Examples

```
print(dynamic_idx_convertr(from_v_ids = c(1, 5), from_v_val = c("oui", "no", "ouI")))

[1] 1 2

print(dynamic_idx_convertr(from_v_ids = c(1, 6), from_v_val = c("oui", "no", "ouI")))

[1] 1 3
```

---

edm_arrangr   *edm_arranger*

Description

Arranges data according to the values of a variable, see examples

Usage

```
edm_arrangr(inpt_datf, col_order, top_n = 10, decreasing = TRUE)
```

Arguments

inpt_datf   is the input dataframe

col_order   is the column names or the column number of the variable that will be used to arrange data

top_n   is the top values

Examples

```
print(edm_arrangr(inpt_datf = mtcars, col_order = "wt", top_n = 15, decreasing = FALSE))

               mpg cyl  disp  hp drat    wt qsec vs am gear carb
Lotus Europa   30.4   4  95.1 113 3.77 1.513 16.90  1  1    5    2
Honda Civic    30.4   4  75.7  52 4.93 1.615 18.52  1  1    4    2
Toyota Corolla 33.9   4  71.1  65 4.22 1.835 19.90  1  1    4    1
Fiat X1-9      27.3   4  79.0  66 4.08 1.935 18.90  1  1    4    1
Porsche 914-2  26.0   4 120.3  91 4.43 2.140 16.70  0  1    5    2
Fiat 128       32.4   4  78.7  66 4.08 2.200 19.47  1  1    4    1
Datsun 710     22.8   4 108.0  93 3.85 2.320 18.61  1  1    4    1
Toyota Corona  21.5   4 120.1  97 3.70 2.465 20.01  1  0    3    1
Mazda RX4      21.0   6 160.0 110 3.90 2.620 16.46  0  1    4    4
Ferrari Dino   19.7   6 145.0 175 3.62 2.770 15.50  0  1    5    6
Volvo 142E     21.4   4 121.0 109 4.11 2.780 18.60  1  1    4    2
Mazda RX4 Wag  21.0   6 160.0 110 3.90 2.875 17.02  0  1    4    4
Merc 230       22.8   4 140.8  95 3.92 3.150 22.90  1  0    4    2
```

```
Ford Pantera L 15.8   8 351.0 264 4.22 3.170 14.50  0  1    5    4
Merc 240D      24.4   4 146.7  62 3.69 3.190 20.00  1  0    4    2


print(edm_arrangr(inpt_datf = mtcars, col_order = "wt", top_n = 10, decreasing = TRUE))
                     mpg cyl  disp  hp drat    wt  qsec vs am gear carb
Lincoln Continental 10.4   8 460.0 215 3.00 5.424 17.82  0  0    3    4
Chrysler Imperial   14.7   8 440.0 230 3.23 5.345 17.42  0  0    3    4
Cadillac Fleetwood  10.4   8 472.0 205 2.93 5.250 17.98  0  0    3    4
Merc 450SE          16.4   8 275.8 180 3.07 4.070 17.40  0  0    3    3
Pontiac Firebird    19.2   8 400.0 175 3.08 3.845 17.05  0  0    3    2
Camaro Z28          13.3   8 350.0 245 3.73 3.840 15.41  0  0    3    4
Merc 450SLC         15.2   8 275.8 180 3.07 3.780 18.00  0  0    3    3
Merc 450SL          17.3   8 275.8 180 3.07 3.730 17.60  0  0    3    3
Duster 360          14.3   8 360.0 245 3.21 3.570 15.84  0  0    3    4
Maserati Bora       15.0   8 301.0 335 3.54 3.570 14.60  0  1    5    8
Dodge Challenger    15.5   8 318.0 150 2.76 3.520 16.87  0  0    3    2
```

---

edm_group_by1   *edm_group_by1*

Description

Performs a group by (different algorythm than edm_group_by2), see examples

Usage

```
edm_group_by1(inpt_datf, grp_v = c())
```

Arguments

inpt_datf   is the input dataframe

grp_v   is the vector containiong the column names or the column numbers to perform
               the group by, see examples

Examples

```
datf <- data.frame("col1" = c("A", "B", "B", "A", "C", "B"),
                   "col2" = c("E", "R", "E", "E", "R", "R"),
                   "col3" = c("P", "P", "O", "O", "P", "O"))

print(datf)

  col1 col2 col3
1    A    E    P
2    B    R    P
3    B    E    O
4    A    E    O
5    C    R    P
6    B    R    O

print(edm_group_by1(inpt_datf = datf, grp_v = c("col1")))
```

```
   col1 col2 col3
1    A    E    P
4    A    E    O
2    B    R    P
3    B    E    O
6    B    R    O
5    C    R    P

print(edm_group_by1(inpt_datf = datf, grp_v = c("col1", "col2")))

   col1 col2 col3
1    A    E    P
4    A    E    O
2    B    R    P
6    B    R    O
3    B    E    O
5    C    R    P

print(edm_group_by1(inpt_datf = datf, grp_v = c("col2", "col1", "col3")))

   col2 col1 col3
1    E    A    P
4    E    A    O
3    E    B    O
2    R    B    P
6    R    B    O
5    R    C    P

print(edm_group_by1(inpt_datf = datf, grp_v = c("col2", "col1", "col3")))

   col2 col1 col3
1    E    A    P
4    E    A    O
3    E    B    O
2    R    B    P
6    R    B    O
5    R    C    P
```

```
edm_group_by2
```
edm_group_by2

Description

Performs a group by (different algorythm that edm_group_by1), see examples

Usage

```
edm_group_by2(inpt_datf, grp_v)
```

Arguments

`inpt_datf`	is the input dataframe
`grp_v`	is the vector containiong the column names or the column numbers to perform the group by, see examples

Examples

```
datf <- data.frame("col1" = c("A", "B", "B", "A", "C", "B"),
                   "col2" = c("E", "R", "E", "E", "R", "R"),
                   "col3" = c("P", "P", "O", "O", "P", "O"))
print(datf)

  col1 col2 col3
1   A    E    P
2   B    R    P
3   B    E    O
4   A    E    O
5   C    R    P
6   B    R    O


print(edm_group_by2(inpt_datf = datf, grp_v = c("col1")))

  col1 col2 col3
1   A    E    P
4   A    E    O
2   B    R    P
3   B    E    O
6   B    R    O
5   C    R    P


print(edm_group_by2(inpt_datf = datf, grp_v = c("col1", "col2")))

  col1 col2 col3
1   A    E    P
4   A    E    O
3   B    E    O
2   B    R    P
6   B    R    O
5   C    R    P


print(edm_group_by2(inpt_datf = datf, grp_v = c("col2", "col1")))

  col2 col1 col3
1   E    A    P
4   E    A    O
3   E    B    O
2   R    B    P
6   R    B    O
5   R    C    P
```

---

edm_pivot_longer1   *edm_pivot_longer1*

Description

Performs a pivot longer on dataframe, see examples. The synthax for variables must be value_id-modalitie_var1.modalitie_var2...

Usage

```
edm_pivot_longer1(
  inpt_datf,
  col_vars = c(),
  col_vars_to = c(),
  individual_col,
  null_value = c(0),
  nvr_here = "?"
)
```

Arguments

inpt_datf   is the input dataframe

col_vars   is a vector containing the column names or column numbers of the variables

col_vars_to   is a vector containing the varaiables to which will be assign the modalities, see examples

individual_col
         is the column name or the column number of the individuals

Examples

```
datf <- data.frame("individuals" = c(1, 2, 3),
                   c(1, 2, 3),
                   c(6, 0, 2),
                   c(7, 0, 0),
                   c(0, 0, 0),
                   c(1, 0, 4),
                   c(3, 0, 8),
                   c(9, 0 , 0),
                   c(11, 0, 5))

colnames(datf)[2:ncol(datf)] <- c("val1-A.R",
                                  "val1-A.T",
                                  "val1-B.R",
                                  "val1-B.T",
                                  "val2-A.R",
                                  "val2-A.T",
                                  "val2-B.R",
                                  "val2-B.T")

datf2 <- data.frame("individuals" = c(1, 2, 3),
                   c(7, 0, 2),
                   c(1, 0, 4),
                   c(9, 0, 8),
                   c(11, 22, 5))
colnames(datf2)[2:ncol(datf2)] <- c(

                       "val1-A",
                       "val1-B",
                       "val2-A",
                       "val2-B"
                   )

print(datf)
```

```
   individuals val1-A.R val1-A.T val1-B.R val1-B.T val2-A.R val2-A.T val2-B.R
1            1        1        6        7        0        1        3        9
2            2        2        0        0        0        0        0        0
3            3        3        2        0        0        4        8        0
  val2-B.T
1       11
2        0
3        5


print(edm_pivot_longer1(inpt_datf = datf,
                        col_vars = c(2:9),
                        individual_col = 1,
                        col_vars_to = c("Shape", "Way"),
                        null_value = c(0)))

  individuals Shape Way val1 val2
1           1     A   R    1    1
2           1     A   T    6    3
3           1     B   R    7    9
4           1     B   T    0   11
5           2     A   R    2    0
6           3     A   R    3    4
7           3     A   T    2    8
8           3     B   T    0    5


print(datf2)

  individuals val1-A val1-B val2-A val2-B
1           1      7      1      9     11
2           2      0      0      0     22
3           3      2      4      8      5


print(edm_pivot_longer1(inpt_datf = datf2,
                        col_vars = c(2:5),
                        individual_col = 1,
                        col_vars_to = c("Shape"),
                        null_value = c(0)))

  individuals Shape val1 val2
1           1     A    7    9
2           1     B    1   11
3           2     B    0   22
4           3     A    2    8
5           3     B    4    5
```

---

edm_pivot_longer2   *edm_pivot_longer2*

Description

Performs a pivot longer on dataframe keeping the null values, see examples. The synthax for variables must be value_id-modalitie_var1.modalitie_var2...

Usage

```
edm_pivot_longer2(inpt_datf, col_vars = c(), col_vars_to = c(), individual_col)
```

Arguments

inpt_datf	is the input dataframe
col_vars	is a vector containing the column names or column numbers of the variables
col_vars_to	is a vector containing the varaiables to which will be assign the modalities, see examples
individual_col	
	is the column name or the column number of the individuals

Examples

```
datf <- data.frame("individuals" = c(1, 2, 3),
                   c(1, 2, 3),
                   c(6, 0, 2),
                   c(7, 0, 0),
                   c(0, 0, 0),
                   c(1, 0, 4),
                   c(3, 0, 8),
                   c(9, 0 , 0),
                   c(11, 0, 5))

colnames(datf)[2:ncol(datf)] <- c("val1-A.R",
                                  "val1-A.T",
                                  "val1-B.R",
                                  "val1-B.T",
                                  "val2-A.R",
                                  "val2-A.T",
                                  "val2-B.R",
                                  "val2-B.T")

datf2 <- data.frame("individuals" = c(1, 2, 3),
                   c(7, 0, 2),
                   c(1, 0, 4),
                   c(9, 0, 8),
                   c(11, 22, 5))
colnames(datf2)[2:ncol(datf2)] <- c(

                   "val1-A",
                   "val1-B",
                   "val2-A",
                   "val2-B"
              )

print(datf)

  individuals val1-A.R val1-A.T val1-B.R val1-B.T val2-A.R val2-A.T val2-B.R
1           1        1        6        7        0        1        3        9
2           2        2        0        0        0        0        0        0
3           3        3        2        0        0        4        8        0
  val2-B.T
1       11
2        0
```

```
3         5

print(edm_pivot_longer2(inpt_datf = datf,
                        col_vars = c(2:9),
                        individual_col = 1,
                        col_vars_to = c("Shape", "Way")))

    individuals Shape Way val1 val2
1             1     A   R    1    1
2             1     A   T    6    3
3             1     B   R    7    9
4             1     B   T    0   11
5             2     A   R    2    0
6             2     A   T    0    0
7             2     B   R    0    0
8             2     B   T    0    0
9             3     A   R    3    4
10            3     A   T    2    8
11            3     B   R    0    0
12            3     B   T    0    5

print(datf2)

  individuals val1-A val1-B val2-A val2-B
1           1      7      1      9     11
2           2      0      0      0     22
3           3      2      4      8      5

print(edm_pivot_longer2(inpt_datf = datf2,
                        col_vars = c(2:5),
                        individual_col = 1,
                        col_vars_to = c("Shape")))

  individuals Shape val1 val2
1           1     A    7    9
2           1     B    1   11
3           2     A    0    0
4           2     B    0   22
5           3     A    2    8
6           3     B    4    5
```

---

edm_pivot_wider1   *edm_pivot_wider1*

Description

Performs a pivot wider to a dataframe, see examples.

Usage

```
edm_pivot_wider1(inpt_datf, col_vars = c(), col_vals = c(), individual_col)
```

Arguments

`inpt_datf`	is the input dataframe
`col_vars`	is a vector containig the column names or column numbers of the variables to pivot
`col_vals`	is a vector containing the column numbers or column names of the values to pivot
`individual_col`	is the column name or column number of the individuals

Examples

```
datf2 <- data.frame("individual" = c(1, 1, 1, 2, 3, 3),
                    "var1" = c("A", "A", "B", "B", "B", "A"),
                    "val1" = c(6, 7, 1, 0, 4, 2),
                    "val2" = c(3, 9, 11, 22, 5, 8))
datf <- data.frame("individual" = c(1, 1, 1, 2, 3, 3),
                    "var1" = c("A", "A", "B", "B", "B", "A"),
                    "var2" = c("R", "T", "T", "R", "T", "R"),
                    "val1" = c(6, 7, 1, 0, 4, 2),
                    "val2" = c(3, 9, 11, 22, 5, 8))
print(datf)

  individual var1 var2 val1 val2
1          1    A    R    6    3
2          1    A    T    7    9
3          1    B    T    1   11
4          2    B    R    0   22
5          3    B    T    4    5
6          3    A    R    2    8

print(datf2)

  individual var1 val1 val2
1          1    A    6    3
2          1    A    7    9
3          1    B    1   11
4          2    B    0   22
5          3    B    4    5
6          3    A    2    8

print(edm_pivot_wider1(
                    inpt_datf = datf,
                    col_vars = c(2, 3),
                    col_vals = c(4, 5),
                    individual_col = 1)
    )

  individuals val1-A.R val1-A.T val1-B.R val1-B.T val2-A.R val2-A.T val2-B.R
1           1        6        7        0        1        3        9        0
2           2        0        0        0        0        0        0       22
3           3        2        0        0        4        8        0        0
  val2-B.T
1       11
2        0
3        5
```

```
print(edm_pivot_wider1(
                    inpt_datf = datf2,
                    col_vars = c(2),
                    col_vals = c(3, 4),
                    individual_col = 1)
    )

  individuals val1-A val1-B val2-A val2-B
1           1      7      1      9     11
2           2      0      0      0     22
3           3      2      4      8      5
```

---

edm_pivot_wider2   *edm_pivot_wider2*

Description

Performs a pivot wider to a dataframe with a different algorythm than edm_pivot_wider, see examples.

Usage

```
edm_pivot_wider2(inpt_datf, col_vars = c(), col_vals = c(), individual_col)
```

Arguments

inpt_datf   is the input dataframe

col_vars   is a vector containig the column names or column numbers of the variables to
                pivot

col_vals   is a vector containing the column numbers or column names of the values to
                pivot

individual_col
                is the column name or column number of the individuals

Examples

```
datf2 <- data.frame("individual" = c(1, 1, 1, 2, 3, 3),
                    "var1" = c("A", "A", "B", "B", "B", "A"),
                    "val1" = c(6, 7, 1, 0, 4, 2),
                    "val2" = c(3, 9, 11, 22, 5, 8))
datf <- data.frame("individual" = c(1, 1, 1, 2, 3, 3),
                    "var1" = c("A", "A", "B", "B", "B", "A"),
                    "var2" = c("R", "T", "T", "R", "T", "R"),
                    "val1" = c(6, 7, 1, 0, 4, 2),
                    "val2" = c(3, 9, 11, 22, 5, 8))
print(datf)

  individual var1 var2 val1 val2
1          1    A    R    6    3
2          1    A    T    7    9
3          1    B    T    1   11
```

```
4          2    B    R    0    22
5          3    B    T    4    5
6          3    A    R    2    8

print(datf2)

  individual var1 val1 val2
1          1    A    6    3
2          1    A    7    9
3          1    B    1    11
4          2    B    0    22
5          3    B    4    5
6          3    A    2    8

print(edm_pivot_wider2(
                   inpt_datf = datf,
                   col_vars = c(2, 3),
                   col_vals = c(4, 5),
                   individual_col = 1)
   )

  individuals val1-A.R val1-A.T val1-B.R val1-B.T val2-A.R val2-A.T val2-B.R
1           1        6        7        0        1        3        9        0
2           2        0        0        0        0        0        0       22
3           3        2        0        0        4        8        0        0
  val2-B.T
1       11
2        0
3        5

print(edm_pivot_wider2(
                   inpt_datf = datf2,
                   col_vars = c(2),
                   col_vals = c(3, 4),
                   individual_col = 1)
   )

  individuals val1-A val1-B val2-A val2-B
1           1      7      1      9     11
2           2      0      0      0     22
3           3      2      4      8      5
```

```
elements_equalifier
```
elements_equalifier

Description

Takes an input vector with elements that have different occurence, and output a vector with all these elements with the same number of occurence, see examples

Usage

```
elements_equalifier(inpt_v, untl = 3)
```

Arguments

inpt_v	is the input vector
untl	is how many times each elements will be in the output vector

Examples

```
print(elements_equalifier(letters, untl = 2))

 [1] "a" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k" "l" "m" "n" "o" "p" "q" "r" "s"
[20] "t" "u" "v" "w" "x" "y" "z" "a" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k" "l"
[39] "m" "n" "o" "p" "q" "r" "s" "t" "u" "v" "w" "x" "y" "z"

print(elements_equalifier(c(letters, letters[-1]), untl = 2))

 [1] "a" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k" "l" "m" "n" "o" "p" "q" "r" "s"
[20] "t" "u" "v" "w" "x" "y" "z" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k" "l" "m"
[39] "n" "o" "p" "q" "r" "s" "t" "u" "v" "w" "x" "y" "z" "a"
```

---

equalizer_v	*equalizer_v*

Description

Takes a vector of character as an input and returns a vector with the elements at the same size. The size can be chosen via depth parameter.

Usage

```
equalizer_v(inpt_v, depth = "max", default_val = "?")
```

Arguments

inpt_v	is the input vector containing all the characters
depth	is the depth parameter, defaults to "max" which means that it is equal to the character number of the element(s) in inpt_v that has the most
default_val	is the default value that will be added to the output characters if those has an inferior length (characters) than the value of depth

Examples

```
print(equalizer_v(inpt_v=c("aa", "zzz", "q"), depth=2))

#[1] "aa" "zz" "q?"

print(equalizer_v(inpt_v=c("aa", "zzz", "q"), depth=12))

#[1] "aa??????????" "zzz?????????" "q???????????"
```

extract_normal   *extract_normal*

Description

Allow to extract values that fits a normal distribution from any kind of dataset, see examples and parameters

Usage

```
extract_normal(
  inpt_datf,
  mean,
  sd,
  accuracy,
  round_value = 1,
  normalised = FALSE,
  n = NA,
  tries = 3
)
```

Arguments

`inpt_datf`	is the input dataset as a dataframe, values/modalities are in the first column and frequency (not normalised) is in the second column
`mean`	is the mean of the target normal distribution
`sd`	is the standard deviation of the target normal distribution
`accuracy`	is how much of a difference beetween the points of the targeted normal distribution and the actual points is tolerated
`round_value`	is the round value for the normal distribution used under the hood to compare the dataset and extract the best points, defaults to 1
`normalised`	is if the input frequency is divided by n, if TRUE the parameter `n` must be filled
`n`	is the number of points
`tries`	is how many normal distributions are used under the hood to compare their points to the those in the input dataset, defaults to 3. The higher it is, the higher the number of different points from the input dataset will be in accordance for the normal distribution the function tries to build from the dataset. It does not increase by a lot but can be non-negligible and note that the higher the number of tries is, the higher the execution time of the function will be.

Examples

```
sample_val <- round(rnorm(n = 72000, mean = 12, sd = 2), 1)
sample_freq <- unique_total(sample_val)
sample_qual <- infinite_char_seq(n = length(sample_freq))
datf_test <- data.frame(sample_qual, sample_freq)
n <- nrow(datf_test)
print(datf_test)

   sample_qual sample_freq
```

```
1              a            72
2              b          1155
3              c          1255
4              d           743
5              e           696
6              f          1028
7              g          1160
8              h          1219
9              i          1353
10             j          1336
11             k          1308
12             l           485
13             m          1306
14             n          1429
15             o           623
16             p          1172
17             q          1054
18             r           999
19             s           125
20             t          1461
21             u          1430
22             v           341
23             w          1453
24             x           427
25             y           869
26             z          1395
27            aa           841
28            ab           952
29            ac           246
30            ad           468
31            ae           237
32            af           555
33            ag          1297
34            ah           571
35            ai           349
36            aj           773
37            ak          1086
38            al          1281
39            am          1471
40            an          1236
41            ao           394
42            ap          1433
43            aq          1328
44            ar           976
45            as           640
46            at           308
47            au           698
48            av           864
49            aw          1346
50            ax          1349
51            ay             6
52            az          1071
53            ba           248
54            bb           929
55            bc           925
56            bd           452
57            be           207
```

```
58        bf        546
59        bg         62
60        bh        107
61        bi       1184
62        bj        739
63        bk        624
64        bl        850
65        bm       1408
66        bn        620
67        bo        202
68        bp         10
69        bq        700
70        br        397
71        bs       1291
72        bt        178
73        bu        397
74        bv       1089
75        bw       1301
76        bx        328
77        by       1348
78        bz         97
79        ca       1452
80        cb          4
81        cc        100
82        cd        593
83        ce        503
84        cf        164
85        cg         32
86        ch        259
87        ci       1089
88        cj        249
89        ck        165
90        cl         42
91        cm        143
92        cn        467
93        co        347
94        cp        143
95        cq         69
96        cr         18
97        cs        290
98        ct         55
99        cu        141
100       cv         86
101       cw        303
102       cx         88
103       cy         16
104       cz        213
105       da          3
106       db         75
107       dc         32
108       dd         66
109       de        105
110       df         34
111       dg         56
112       dh         17
113       di         22
114       dj        120
```

```
115        dk        54
116        dl         9
117        dm         8
118        dn        36
119        do        20
120        dp        26
121        dq        54
122        dr         8
123        ds        10
124        dt         4
125        du        53
126        dv        29
127        dw         1
128        dx         8
129        dy        10
130        dz         4
131        ea        22
132        eb         9
133        ec        17
134        ed        55
135        ee        21
136        ef         6
137        eg         4
138        eh         3
139        ei         7
140        ej         1
141        ek         4
142        el         2
143        em         5
144        en         4
145        eo         1
146        ep         2
147        eq         3
148        er         8
149        es         4
150        et         3
151        eu         3
152        ev         2
153        ew         2
154        ex         2
155        ey         1
156        ez         2
157        fa         2
158        fb         1

teste <- extract_normal(inpt_datf = datf_test,
                   mean = 10,
                   sd = 2,
                   accuracy = .1,
                   round_value = 1,
                   normalised = FALSE,
                   tries = 5)

print(length(unique(teste[, 1]))) / n)

[1] 0.2848101 # so nearly 28.5 % of the different points were in
 #accordance with the construction of the target normal distribution
```

```
print(teste)
```

```
   values    frequency
1       dw 0.0001406866
2       dw 0.0001406866
3       dw 0.0001406866
4       el 0.0002813731
5       el 0.0002813731
6       el 0.0002813731
7       el 0.0002813731
8       da 0.0004220597
9       da 0.0004220597
10      cb 0.0005627462
11      cb 0.0005627462
12      em 0.0007034328
13      ay 0.0008441193
14      ay 0.0008441193
15      ei 0.0009848059
16      ei 0.0009848059
17      ei 0.0009848059
18      dm 0.0011254924
19      bp 0.0014068655
20      cy 0.0022509848
21      cy 0.0022509848
22      cy 0.0022509848
23      dh 0.0023916714
24      dh 0.0023916714
25      cr 0.0025323579
26      ee 0.0029544176
27      di 0.0030951041
28      dp 0.0036578503
29      dp 0.0036578503
30      cg 0.0045019696
31      cg 0.0045019696
32      df 0.0047833427
33      dn 0.0050647158
34      cl 0.0059088351
35      cl 0.0059088351
36      du 0.0074563872
37      du 0.0074563872
38      dg 0.0078784468
39      dg 0.0078784468
40      bg 0.0087225661
41      bg 0.0087225661
42      dd 0.0092853123
43      cq 0.0097073720
44      cq 0.0097073720
45       a 0.0101294316
46      cv 0.0120990433
47      cx 0.0123804164
48      cx 0.0123804164
49      bz 0.0136465954
50      cc 0.0140686550
51      bh 0.0150534609
52      bh 0.0150534609
53      dj 0.0168823860
```

```
54      s 0.0175858188
55      s 0.0175858188
56     cm 0.0201181767
57     cf 0.0230725943
58     ck 0.0232132808
59     bt 0.0250422060
60     bt 0.0250422060
61     be 0.0291221159
62     be 0.0291221159
63     cz 0.0299662352
64     cz 0.0299662352
65     be 0.0291221159
66     bo 0.0284186832
67     bt 0.0250422060
68     ck 0.0232132808
69     ck 0.0232132808
70     cm 0.0201181767
71     cu 0.0198368036
72      s 0.0175858188
73     dj 0.0168823860
74     bh 0.0150534609
75     bh 0.0150534609
76     de 0.0147720878
77     bz 0.0136465954
78     bz 0.0136465954
79     cx 0.0123804164
80     cv 0.0120990433
81     db 0.0105514913
82      a 0.0101294316
83     cq 0.0097073720
84     dd 0.0092853123
85     dd 0.0092853123
86     bg 0.0087225661
87     bg 0.0087225661
88     dg 0.0078784468
89     dk 0.0075970737
90     du 0.0074563872
91     cl 0.0059088351
92     cl 0.0059088351
93     dn 0.0050647158
94     df 0.0047833427
95     df 0.0047833427
96     cg 0.0045019696
97     dv 0.0040799100
98     dp 0.0036578503
99     di 0.0030951041
100    di 0.0030951041
101    ee 0.0029544176
102    cr 0.0025323579
103    dh 0.0023916714
104    cy 0.0022509848
105    cy 0.0022509848
106    cy 0.0022509848
107    cy 0.0022509848
108    dl 0.0012661790
109    dm 0.0011254924
110    ei 0.0009848059
```

```
111    ei 0.0009848059
112    ay 0.0008441193
113    ay 0.0008441193
114    em 0.0007034328
115    em 0.0007034328
116    cb 0.0005627462
117    cb 0.0005627462
118    da 0.0004220597
119    da 0.0004220597
120    el 0.0002813731
121    el 0.0002813731
122    el 0.0002813731
123    el 0.0002813731
124    dw 0.0001406866
125    dw 0.0001406866
126    dw 0.0001406866
```

extrt_only_v   *extrt_only_v*

Description

Returns the elements from a vector "inpt_v" that are in another vector "pttrn_v"

Usage

```
extrt_only_v(inpt_v, pttrn_v)
```

Arguments

inpt_v   is the input vector

pttrn_v   is the vector contining all the elements that can be in inpt_v

Examples

```
print(extrt_only_v(inpt_v=c("oui", "non", "peut", "oo", "ll", "oui", "non", "oui", "oui"),
    pttrn_v=c("oui")))

#[1] "oui" "oui" "oui" "oui"
```

fillr   *fillr*

Description

Allow to fill a vector by the last element n times

Usage

```
fillr(inpt_v, ptrn_fill = "\\.\\.\\.\\d")
```

Arguments

`inpt_v`	is the input vector
`ptrn_fill`	is the pattern used to detect where the function has to fill the vector by the last element n times. It defaults to "...\d" where "\d" is the regex for an int value. So this paramater has to have "\d" which designates n.

Examples

```
print(fillr(c("a", "b", "...3", "c")))

#[1] "a" "b" "b" "b" "b" "c"
```

`fixer_nest_v`   *fixer_nest_v*

Description

Retur the elements of a vector "wrk_v" (1) that corresponds to the pattern of elements in another vector "cur_v" (2) according to another vector "pttrn_v" (3) that contains the patterof elements.

Usage

```
fixer_nest_v(cur_v, pttrn_v, wrk_v)
```

Arguments

`cur_v`	is the input vector
`pttrn_v`	is the vector containing all the patterns that may be contained in cur_v
`wrk_v`	is a vector containing all the indexes of cur_v taken in count in the function

Examples

```
print(fixer_nest_v(cur_v=c("oui", "non", "peut-etre", "oui", "non", "peut-etre"),
            pttrn_v=c("oui", "non", "peut-etre"),
                wrk_v=c(1, 2, 3, 4, 5, 6)))

#[1] 1 2 3 4 5 6

print(fixer_nest_v(cur_v=c("oui", "non", "peut-etre", "oui", "non", "peut-etre"),
                pttrn_v=c("oui", "non"),
                wrk_v=c(1, 2, 3, 4, 5, 6)))

#[1]  1  2 NA  4  5 NA
```

```
fold_rec                fold_rec
```

Description

Allow to get all the files recursively from a path according to an end and start depth value. If you want to have an other version of this function that uses a more sophisticated algorythm (which can be faster), check file_rec2. Depth example: if i have dir/dir2/dir3, dir/dir2b/dir3b, i have a depth equal to 3

Usage

```
fold_rec(xmax, xmin = 1, pathc = ".")
```

Arguments

xmax	is the end depth value
xmin	is the start depth value
pathc	is the reference path

```
fold_rec2               fold_rec2
```

Description

Allow to find the directories and the subdirectories with a specified end and start depth value from a path. This function might be more powerfull than file_rec because it uses a custom algorythm that does not nee to perform a full recursive search before tuning it to only find the directories with a good value of depth. Depth example: if i have dir/dir2/dir3, dir/dir2b/dir3b, i have a depth equal to 3

Usage

```
fold_rec2(xmax, xmin = 1, pathc = ".")
```

Arguments

xmax	is the depth value
xmin	is the minimum value of depth
pathc	is the reference path, from which depth value is equal to 1

---

format_date *format_date*

Description

Allow to convert xx-month-xxxx date type to xx-xx-xxxx

Usage

```
format_date(f_dialect, sentc, sep_in = "-", sep_out = "-")
```

Arguments

f_dialect	are the months from the language of which the month come
sentc	is the date to convert
sep_in	is the separator of the dat input (default is "-")
sep_out	is the separator of the converted date (default is "-")

Examples

```
print(format_date(f_dialect=c("janvier", "février", "mars", "avril", "mai", "juin",
"juillet", "aout", "septembre", "octobre", "novembre", "décembre"), sentc="11-septembre-2

#[1] "11-09-2023"
```

---

geo_min *geo_min*

Description

Return a dataframe containing the nearest geographical points (row) according to established geographical points (column).

Usage

```
geo_min(inpt_datf, established_datf)
```

Arguments

inpt_datf	is the input dataframe of the set of geographical points to be classified, its firts column is for latitude, the second for the longitude and the third, if exists, is for the altitude. Each point is one row.
established_datf	
	is the dataframe containing the coordiantes of the established geographical points

Examples

```
in_ <- data.frame(c(11, 33, 55), c(113, -143, 167))

in2_ <- data.frame(c(12, 55), c(115, 165))

print(geo_min(inpt_datf=in_, established_datf=in2_))

#          X1        X2
#1   245.266        NA
#2 24200.143        NA
#3        NA 127.7004

in_ <- data.frame(c(51, 23, 55), c(113, -143, 167), c(6, 5, 1))

in2_ <- data.frame(c(12, 55), c(115, 165), c(2, 5))

print(geo_min(inpt_datf=in_, established_datf=in2_))

#         X1        X2
#1        NA 4343.720
#2 26465.63        NA
#3        NA 5825.517
```

---

get_rec	*get_rec*

Description

Allow to get the value of directorie depth from a path.

Usage

```
get_rec(pathc = ".")
```

Arguments

pathc	is the reference path example: if i have dir/dir2/dir3, dir/dir2b/dir3b, i have a depth equal to 3

---

globe	*globe*

Description

Allow to calculate the distances between a set of geographical points and another established geographical point. If the altitude is not filled, so the result returned won't take in count the altitude.

Usage

```
globe(lat_f, long_f, alt_f = NA, lat_n, long_n, alt_n = NA)
```

Arguments

`lat_f`	is the latitude of the established geographical point
`long_f`	is the longitude of the established geographical point
`alt_f`	is the altitude of the established geographical point, defaults to NA
`lat_n`	is a vector containing the latitude of the set of points
`long_n`	is a vector containing the longitude of the set of points
`alt_n`	is a vector containing the altitude of the set of points, defaults to NA

Examples

```
print(globe(lat_f=23, long_f=112, alt_f=NA, lat_n=c(2, 82), long_n=c(165, -55), alt_n=NA)

#[1] 6342.844 7059.080

print(globe(lat_f=23, long_f=112, alt_f=8, lat_n=c(2, 82), long_n=c(165, -55), alt_n=c(8,

#[1] 6342.844 7059.087
```

---

glue_groupr_v   *glue_groupr_v*

Description

Takes an input vector and returns the same vector unlike that certain elements will be glued as an unique element according to thoses designated in a special vector, see examples.

Usage

```
glue_groupr_v(inpt_v, group_v = c(), untl)
```

Arguments

`inpt_v`	is the input vector
`is`	a vector containing all the elements that will be glued in the output vector

Examples

```
print(glue_groupr_v(inpt_v = c("o", "-", "-", "u", "i", "-", "n",
 "o", "-", "-", "-", "zz", "/", "/"), group_v = c("-", "/")))

[1] "o"    "--"   "u"    "i"    "-"    "n"    "o"    "---" "zz"   "//"

print(glue_groupr_v(inpt_v = c("o", "-", "-", "u", "i", "-", "n",
 "o", "-", "-", "-", "-", "zz", "/", "/"), group_v = c("-", "/"), untl = 3))

[1] "o"    "--"   "u"    "i"    "-"    "n"    "o"    "---" "-"    "zz"   "//"

print(glue_groupr_v(inpt_v = c("o", "-", "-", "u", "i", "-", "n",
"o", "-", "-", "-", "-", "zz", "/", "/"), group_v = c("-", "/"), untl = 2))

[1] "o"   "--" "u"   "i"   "-"   "n"   "o"   "--" "--" "zz" "//"
```

```
grep_all                      grep_all
```

Description

Allow to perform a grep function on multiple input elements

Usage

```
grep_all(inpt_v, pattern_v)
```

Arguments

inpt_v   is the input vectors to grep elements from

pattern_v   is a vector contaning the patterns to grep

Examples

```
print(grep_all(inpt_v = c(1:14, "z", 1:7, "z", "a", "z"),
               pattern_v = c("z", "4")))

[1] 15 23 25  4 14 19

print(grep_all(inpt_v = c(1:14, "z", 1:7, "z", "a", "z"),
               pattern_v = c("z", "^4$")))

[1] 15 23 25  4 19

print(grep_all(inpt_v = c(1:14, "z", 1:7, "z", "a", "z"),
               pattern_v = c("z")))

[1] 15 23 25
```

```
grep_all2                     grep_all2
```

Description

Performs the grep_all function with another algorythm, potentially faster

Usage

```
grep_all2(inpt_v, pattern_v)
```

Arguments

inpt_v   is the input vectors to grep elements from

pattern_v   is a vector contaning the patterns to grep

Examples

```
print(grep_all2(inpt_v = c(1:14, "z", 1:7, "z", "a", "z"),
                pattern_v = c("z", "4")))

[1] 15 23 25  4 14 19

print(grep_all2(inpt_v = c(1:14, "z", 1:7, "z", "a", "z"),
                pattern_v = c("z", "^4$")))

[1] 15 23 25  4 19

print(grep_all2(inpt_v = c(1:14, "z", 1:7, "z", "a", "z"),
                pattern_v = c("z")))

[1] 15 23 25
```

---

groupr_datf   *groupr_datf*

Description

Allow to create groups from a dataframe. Indeed, you can create conditions that lead to a flag value
for each cell of the input dataframeaccording to the cell value. This function is based on see_datf
and nestr_datf2 functions.

Usage

```
groupr_datf(
  inpt_datf,
  condition_lst,
  val_lst,
  conjunction_lst,
  rtn_val_pos = c()
)
```

Arguments

inpt_datf   is the input dataframe

condition_lst
               is a list containing all the condition as a vector for each group

val_lst   is a list containing all the values associated with condition_lst as a vector for
               each group

conjunction_lst
               is a list containing all the conjunctions associated with condition_lst and val_lst
               as a vector for each group

rtn_val_pos   is a vector containing all the group flag value like this ex: c("flag1", "flag2",
               "flag3")

Examples

```
interactive()

datf1 <- data.frame(c(1, 2, 1), c(45, 22, 88), c(44, 88, 33))

val_lst <- list(list(c(1), c(1)), list(c(2)), list(c(44, 88)))

condition_lst <- list(c(">", "<"), c("%%"), c("==", "=="))

conjunction_lst <- list(c("|"), c(), c("|"))

rtn_val_pos <- c("+", "++", "+++")

print(groupr_datf(inpt_datf=datf1, val_lst=val_lst, condition_lst=condition_lst,
conjunction_lst=conjunction_lst, rtn_val_pos=rtn_val_pos))

#     X1  X2  X3
#1 <NA>   +  +++
#2   ++  ++  +++
#3 <NA> +++    +
```

---

gsub_mult	*gsub_mult*

Description

Performs a gsub operation with n patterns and replacements.

Usage

```
gsub_mult(inpt_v, pattern_v = c(), replacement_v = c())
```

Arguments

inpt_v   is a vector containing all the elements that contains expressions to be substituted

pattern_v   is a vector containing all the patterns to be substituted in any elements of inpt_v

replacement_v

        is a vector containing the expression that are going to substituate those provided by pattern_v

Examples

```
print(gsub_mult(inpt_v = c("X and Y programming languages are great", "More X, more X!"),
            pattern_v = c("X", "Y", "Z"),
            replacement_v = c("C", "R", "GO")))
[1] "C and R programming languages are great"
[2] "More C, more C!"
```

`historic_sequence1` *historic_sequence1*

Description

Allow to perform a pivot wider on a sequencial dataset (here the type is dataframe), each variable will be dupplicated in a column to show the value to this variable at n - 1 for each individual, see examples.

Usage

```
historic_sequence1(inpt_datf, bf_ = 1)
```

Arguments

inpt_datf   is the input dataframe

bf_   is the number of previous value of the individual it will search for, see examples

Examples

```
set.seed(123)
var1 <- round(runif(n = 14, min = 100, max = 122))
set.seed(123)
var2 <- round(runif(n = 14, min = 14, max = 20))

datf <- data.frame("ids" = c(20, 20, 20, 20, 19, 19, 19, 18, 18, 18, 18,
                             17, 17, 17),
                   "individual" = c("oui", "non", "peut1", "peut2",
                                         "oui", "peut1", "peut2"),
                   "var1" = var1,
                   "var2" = var2)
print(datf)

   ids individual var1 var2
1   20        oui  106   16
2   20        non  117   19
3   20      peut1  109   16
4   20      peut2  119   19
5   19        oui  121   20
6   19      peut1  101   14
7   19      peut2  112   17
8   18        oui  120   19
9   18        non  112   17
10  18      peut1  110   17
11  18      peut2  121   20
12  17        oui  110   17
13  17      peut1  115   18
14  17      peut2  113   17

historic_sequence1(inpt_datf = datf, bf_ = 2)

  id_seq individual var1-1 var1-2 var2-1 var2-2
1     20        oui    121    120     20     19
2     20        non     NA    112     NA     17
```

```
3    20      peut1    101    110    14    17
4    20      peut2    112    121    17    20
5    19        oui    120    110    19    17
6    19      peut1    110    115    17    18
7    19      peut2    121    113    20    17

historic_sequence1(inpt_datf = datf, bf_ = 3)

  id_seq individual var1-1 var1-2 var1-3 var2-1 var2-2 var2-3
1    20        oui    121    120    110    20     19     17
2    20        non     NA    112     NA    NA     17     NA
3    20      peut1    101    110    115    14     17     18
4    20      peut2    112    121    113    17     20     17
```

---

historic_sequence2 *historic_sequence2*

Description

Allow to perform a pivot wider on a sequencial dataset (here the type is dataframe), each variable will be dupplicated in a column to show the value to this variable at n - 1 for each individual, see examples.

Usage

```
historic_sequence2(inpt_datf, bf_ = 1)
```

Arguments

inpt_datf	is the input dataframe
bf_	is the number of previous value of the individual it will search for, see examples

Examples

```
set.seed(123)
var1 <- round(runif(n = 14, min = 100, max = 122))
set.seed(123)
var2 <- round(runif(n = 14, min = 14, max = 20))

datf <- data.frame("ids" = c(20, 20, 20, 20, 19, 19, 19, 18, 18, 18, 18,
                             17, 17, 17),
                   "individual" = c("oui", "non", "peut1", "peut2",
                                        "oui", "peut1", "peut2"),
                   "var1" = var1,
                   "var2" = var2)
print(datf)

   ids individual var1 var2
1   20        oui  106   16
2   20        non  117   19
3   20      peut1  109   16
4   20      peut2  119   19
5   19        oui  121   20
```

```
6   19       peut1  101    14
7   19       peut2  112    17
8   18         oui  120    19
9   18         non  112    17
10  18       peut1  110    17
11  18       peut2  121    20
12  17         oui  110    17
13  17       peut1  115    18
14  17       peut2  113    17

print(historic_sequence2(inpt_datf = datf, bf_ = 2))

  id_seq individual var1-0 var1-1 var1-2 var2-0 var2-1 var2-2
1    20         oui    106    121    120     16     20     19
2    20         non    117     NA    112     19     NA     17
3    20       peut1    109    101    110     16     14     17
4    20       peut2    119    112    121     19     17     20
5    19         oui    121    120    110     20     19     17
6    19       peut1    101    110    115     14     17     18
7    19       peut2    112    121    113     17     20     17

print(historic_sequence2(inpt_datf = datf, bf_ = 3))

  id_seq individual var1-0 var1-1 var1-2 var1-3 var2-0 var2-1 var2-2 var2-3
1    20         oui    106    121    120    110     16     20     19     17
2    20         non    117     NA    112     NA     19     NA     17     NA
3    20       peut1    109    101    110    115     16     14     17     18
4    20       peut2    119    112    121    113     19     17     20     17
```

---

how_normal   *how_normal*

Description

Allow to get how much a sequence of numbers fit a normal distribution with chosen parameters, see examples

Usage

```
how_normal(inpt_datf, normalised = TRUE, mean = 0, sd = 1)
```

Arguments

inpt_datf	is the input dataframe containing all the values in the first column and their frequency (normalised or no), in the second column
normalised	is a boolean, takes TRUE if the frequency for each value is divided by n, FALSE if not
mean	is the mean of the normal distribution that the dataset tries to fit
sd	is the standard deviation of the normal distribution the dataset tries to fit

Examples

```
sample_val <- round(rnorm(n = 12000, mean = 6, sd = 1.25), 1)
sample_freq <- unique_total(sample_val)
datf_test <- data.frame(unique(sample_val), sample_freq)
print(datf_test)
```

```
   unique.sample_val. sample_freq
1              6.9         306
2              8.3          63
3              7.7         148
4              5.6         363
5              6.5         349
6              4.6         202
7              6.6         324
8              6.7         335
9              6.0         406
10             5.7         365
11             7.9         109
12             6.2         420
13             5.9         386
14             4.5         185
15             5.1         326
16             6.1         360
17             5.5         346
18             6.3         375
19             7.4         207
20             7.6         162
21             4.2         129
22             3.9         102
23             5.2         325
24             2.3           7
25             5.8         387
26             6.4         319
27             9.1          21
28             7.0         280
29             8.8          27
30             4.9         218
31             8.1          98
32             3.0          25
33             8.4          66
34             4.3         160
35             7.2         267
36             8.7          40
37             5.3         313
38             4.1         127
39             5.0         275
40             4.0         119
41             9.3          13
42             4.4         196
43             6.8         313
44             7.1         247
45             3.5          57
46             7.8         139
47             3.6          57
48             7.5         189
49             7.3         215
```

```
50              4.7       230
51              3.2        36
52              9.5         8
53              3.8        79
54              8.2        62
55              5.4       343
56              8.5        55
57              4.8       207
58              3.7        79
59              8.6        33
60              3.3        38
61              3.4        43
62              8.9        21
63              8.0       105
64              3.1        23
65              9.0        27
66             10.0         5
67              2.5        10
68              2.9        16
69              9.7         7
70              2.7        11
71             10.5         1
72              9.4        13
73              9.2        16
74              2.6        16
75              9.9         3
76              2.8        10
77              2.4        10
78              1.9         2
79              2.0         6
80             10.2         2
81              9.6         3
82             11.3         1
83              1.8         1
84              2.2         3
85              2.1         2
86              1.6         1
87             10.6         1
88              9.8         1
89             10.4         1
90              1.7         1
```

```
print(how_normal(inpt_datf = datf_test,
                 normalised = FALSE,
                 mean = 6,
                 sd = 1))
```

```
[1] 9.003683
```

```
print(how_normal(inpt_datf = datf_test,
                 normalised = FALSE,
                 mean = 5,
                 sd = 1))
```

```
[1] 9.098484
```

---

how_unif	*how_unif*

Description

Allow to see how much a sequence of numbers fit a uniform distribution, see examples

Usage

```
how_unif(inpt_v, normalised = TRUE)
```

Arguments

normalised   is a boolean, takes TRUE if the frequency for each value is divided by n, FALSE
              if not

inpt_datf   is the input dataframe containing all the values in the first column and their
              frequencyu at the second column

Examples

```
sample_val <- round(runif(n = 12000, min = 24, max = 27), 1)
sample_freq <- unique_total(sample_val)
datf_test <- data.frame(unique(sample_val), sample_freq)

print(datf_test)

   unique.sample_val. sample_freq
1               24.4          400
2               24.8          379
3               25.5          414
4               26.0          366
5               26.6          400
6               25.7          419
7               24.3          389
8               24.1          423
9               26.1          404
10              26.5          406
11              26.2          356
12              26.8          407
13              24.6          388
14              25.3          402
15              26.3          388
16              25.4          422
17              25.0          436
18              25.9          373
19              25.2          423
20              25.6          388
21              27.0          202
22              24.2          380
23              24.9          404
24              25.1          417
25              26.4          401
26              26.7          431
27              24.5          392
```

```
28              24.0            218
29              26.9            407
30              25.8            371
31              24.7            394

print(how_unif(inpt_datf = datf_test, normalised = FALSE))

[1] 0.0752957

sample_val <- round(rnorm(n = 12000, mean = 24, sd = 7), 1)
sample_freq <- unique_total(sample_val)
datf_test <- data.frame(unique(sample_val), sample_freq)

print(how_unif(inpt_datf = datf_test, normalised = FALSE))

[1] 0.7797352
```

---

id_keepr   *id_keepr*

Description

Allow to get the original indexes after multiple equality comparaison according to the original number of row

Usage

```
id_keepr(inpt_datf, col_v = c(), el_v = c(), rstr_l = NA)
```

Arguments

inpt_datf   is the input dataframe

col_v   is the vector containing the column numbers or names to be compared to their respective elements in "el_v"

el_v   is a vector containing the elements that may be contained in their respective column described in "col_v"

rstr_l   is a list containing the vector composed of the indexes of the elements chosen for each comparison. If the length of the list is inferior to the lenght of comparisons, so the last vector of rstr_l will be the same as the last one to fill make rstr_l equal in term of length to col_v and el_v

Examples

```
datf1 <- data.frame(c("oui", "oui", "oui", "non", "oui"),
     c("opui", "op", "op", "zez", "zez"), c(5:1), c(1:5))

print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op")))

#[1] 2 3

print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op"),
```

```
      rstr_l=list(c(1:5), c(3, 2, 2, 2, 3)))))

#[1] 2 3

print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op"),
      rstr_l=list(c(1:5), c(3)))))

#[1] 3

print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op"), rstr_l=list(c(1:5))))

#[1] 2 3
```

---

incr_fillr   *incr_fillr*

Description

Take a vector uniquely composed by double and sorted ascendingly, a step, another vector of elements whose length is equal to the length of the first vector, and a default value. If an element of the vector is not equal to its predecessor minus a user defined step, so these can be the output according to the parameters (see example):

Usage

```
incr_fillr(inpt_v, wrk_v = NA, default_val = NA, step = 1)
```

Arguments

inpt_v	is the asending double only composed vector
wrk_v	is the other vector (size equal to inpt_v), defaults to NA
default_val	is the default value put when the difference between two following elements of inpt_v is greater than step, defaults to NA
step	is the allowed difference between two elements of inpt_v

Examples

```
print(incr_fillr(inpt_v=c(1, 2, 4, 5, 9, 10),
                 wrk_v=NA,
                 default_val="increasing"))

#[1]  1  2  3  4  5  6  7  8  9 10

print(incr_fillr(inpt_v=c(1, 1, 2, 4, 5, 9),
                 wrk_v=c("ok", "ok", "ok", "ok", "ok"),
                 default_val=NA))

#[1] "ok" "ok" "ok" NA   "ok" "ok" NA   NA   NA

print(incr_fillr(inpt_v=c(1, 2, 4, 5, 9, 10),
                 wrk_v=NA,
                 default_val="NAN"))
```

```
#[1] "1"   "2"    "NAN" "4"    "5"    "NAN" "NAN" "NAN" "9"    "10"
```

---

infinite_char_seq   *infinite_char_seq*

Description

Allow to generate an infinite sequence of unique letters

Usage

```
infinite_char_seq(n, base_char = letters)
```

Arguments

n   is how many sequence of numbers will be generated

base_char   is the vector containing the elements from which the sequence is generated

Examples

```
print(infinite_char_seq(28))

 [1] "a"  "b"  "c"  "d"  "e"  "f"  "g"  "h"  "i"  "j"  "k"  "l"  "m"  "n"  "o"
[16] "p"  "q"  "r"  "s"  "t"  "u"  "v"  "w"  "x"  "y"  "a"  "aa" "ab"
```

---

inner_all   *inner_all*

Description

Allow to apply inner join on n dataframes, datatables, tibble

Usage

```
inner_all(..., keep_val = FALSE, id_v)
```

Arguments

...   are all the dataframes etc

keep_val   is if you want to keep the id column

id_v   is the common id of all the dataframes etc

Examples

```
datf1 <- data.frame(
        "id1"=c(1:5),
        "var1"=c("oui", "oui", "oui", "non", "non")
)

datf2 <- data.frame(
        "id1"=c(1, 2, 3, 7, 9),
        "var1"=c("oui2", "oui2", "oui2", "non2", "non2")
)

print(inner_all(datf1, datf2, keep_val=FALSE, id_v="id1"))

id1 var1.x var1.y
1   1    oui   oui2
2   2    oui   oui2
3   3    oui   oui2
```

---

insert_datf   *insert_datf*

Description

Allow to insert dataframe into another dataframe according to coordinates (row, column) from the dataframe that will be inserted

Usage

```
insert_datf(datf_in, datf_ins, ins_loc)
```

Arguments

datf_in   is the dataframe that will be inserted

datf_ins   is the dataset to be inserted

ins_loc   is a vector containing two parameters (row, column) of the begining for the insertion

Examples

```
datf1 <- data.frame(c(1, 4), c(5, 3))

datf2 <- data.frame(c(1, 3, 5, 6), c(1:4), c(5, 4, 5, "ereer"))

print(insert_datf(datf_in=datf2, datf_ins=datf1, ins_loc=c(4, 2)))

#   c.1..3..5..6. c.1.4. c.5..4..5...ereer..
# 1             1      1                    5
# 2             3      2                    4
# 3             5      3                    5
# 4             6      1                    5

print(insert_datf(datf_in=datf2, datf_ins=datf1, ins_loc=c(3, 2)))
```

```
#   c.1..3..5..6. c.1.4. c.5..4..5...ereer..
# 1            1     1                    5
# 2            3     2                    4
# 3            5     1                    5
# 4            6     4                    3

print(insert_datf(datf_in=datf2, datf_ins=datf1, ins_loc=c(2, 2)))

#   c.1..3..5..6. c.1.4. c.5..4..5...ereer..
# 1            1     1                    5
# 2            3     1                    5
# 3            5     4                    3
# 4            6     4                 ereer
```

---

intersect_all   *intersect_all*

Description

Allows to calculate the intersection between n vectors

Usage

```
intersect_all(...)
```

Arguments

...   is all the vector you want to calculate the intersection from

Examples

```
print(intersect_all(c(1:5), c(1, 2, 3, 6), c(1:4)))

[1] 1 2 3
```

---

intersect_mod   *intersect_mod*

Description

Returns the mods that have elements in common

Usage

```
intersect_mod(datf, inter_col, mod_col, n_min, descendly_ordered = NA)
```

Arguments

`datf`	is the input dataframe
`inter_col`	is the column name or the column number of the values that may be commun betwee the different mods
`mod_col`	is the column name or the column number of the mods in the dataframe
`n_min`	is the minimum elements in common a mod should have to be taken in count
`ordered_descendly`	in case that the elements in commun are numeric, this option can be enabled by giving a value of TRUE or FALSE see examples

Examples

```
datf <- data.frame("col1"=c("oui", "oui", "oui", "oui", "oui", "oui",
                    "non", "non", "non", "non", "ee", "ee", "ee"), "col2"=c(1:6, 2:5, 1:

print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=2))

   col1 col2
2   oui    2
3   oui    3
7   non    2
8   non    3
12   ee    2
13   ee    3

print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=3))

   col1 col2
2   oui    2
3   oui    3
4   oui    4
5   oui    5
7   non    2
8   non    3
9   non    4
10  non    5

print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=5))

  col1 col2
1  oui    1
2  oui    2
3  oui    3
4  oui    4
5  oui    5
6  oui    6

datf <- data.frame("col1"=c("non", "non", "oui", "oui", "oui", "oui",
                    "non", "non", "non", "non", "ee", "ee", "ee"), "col2"=c(1:6, 2:5, 1

print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=3))

   col1 col2
8   non    3
9   non    4
```

```
10  non    5
3   oui    3
4   oui    4
5   oui    5
```

---

inter_max   *inter_max*

Description

Takes as input a list of vectors composed of ints or floats ascendly ordered (intervals) that can have
a different step to one of another element ex: list(c(0, 2, 4), c(0, 4), c(1, 2, 2.3)). The function will
return the list of lists altered according to the maximum step found in the input list.

Usage

```
inter_max(inpt_l, max_ = -1000, get_lst = TRUE)
```

Arguments

inpt_l	is the input list
max_	is a value you are sure is the minimum step value of all the sub-lists
get_lst	is the parameter that, if set to True, will keep the last values of vectors in the return value if the last step exceeds the end value of the vector.

Examples

```
print(inter_max(inpt_l=list(c(0, 2, 4), c(0, 4), c(1, 2, 2.3)), get_lst=TRUE))

#[[1]]
#[1] 0 4
#
#[[2]]
#[1] 0 4
#
#[[3]]
#[1] 1.0 2.3

print(inter_max(inpt_l=list(c(0, 2, 4), c(0, 4), c(1, 2, 2.3)), get_lst=FALSE))

# [[1]]
#[1] 0 4
#
#[[2]]
#[1] 0 4
#
#[[3]]
#[1] 1
```

---

inter_min *inter_min*

Description

Takes as input a list of vectors composed of ints or floats ascendly ordered (intervals) that can have a different step to one of another element ex: list(c(0, 2, 4), c(0, 4), c(1, 2, 2.3)). This function will return the list of vectors with the same steps preserving the begin and end value of each interval. The way the algorythmn searches the common step of all the sub-lists is also given by the user as a parameter, see `how_to` paramaters.

Usage

```
inter_min(
  inpt_l,
  min_ = 1000,
  sensi = 3,
  sensi2 = 3,
  how_to_op = c("divide"),
  how_to_val = c(3)
)
```

Arguments

`inpt_l`	is the input list containing all the intervals
`min_`	is a value you are sure is superior to the maximum step value in all the intervals
`sensi`	is the decimal accuracy of how the difference between each value n to n+1 in an interval is calculated
`sensi2`	is the decimal accuracy of how the value with the common step is calculated in all the intervals
`how_to_op`	is a vector containing the operations to perform to the pre-common step value, defaults to only "divide". The operations can be "divide", "substract", "multiply" or "add". All type of operations can be in this parameter.
`how_to_val`	is a vector containing the value relatives to the operations in `hot_to_op`, defaults to 3 output from ex:

Examples

```
print(inter_min(inpt_l=list(c(0, 2, 4), c(0, 4), c(1, 2, 2.3))))

# [[1]]
# [1] 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8
#[20] 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7
#[39] 3.8 3.9 4.0
#
#[[2]]
# [1] 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8
#[20] 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7
#[39] 3.8 3.9 4.0
#
#[[3]]
```

```
# [1] 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3
```

---

isnt_divisible   *isnt_divisible*

Description

Takes a vector as an input and returns all the elements that are not divisible by all choosen numbers from another vector.

Usage

```
isnt_divisible(inpt_v = c(), divisible_v = c())
```

Arguments

inpt_v   is the input vector

divisible_v   is the vector containing all the numbers that will try to divide those contained in inpt_v

Examples

```
 print(isnt_divisible(inpt_v=c(1:111), divisible_v=c(2, 4, 5)))

# [1]    1    3    7    9   11   13   17   19   21   23   27   29   31   33   37   39   41   43   47
#[20]   49   51   53   57   59   61   63   67   69   71   73   77   79   81   83   87   89   91   93
#[39]   97   99  101  103  107  109  111
```

---

is_divisible   *is_divisible*

Description

Takes a vector as an input and returns all the elements that are divisible by all choosen numbers from another vector.

Usage

```
is_divisible(inpt_v = c(), divisible_v = c())
```

Arguments

inpt_v   is the input vector

divisible_v   is the vector containing all the numbers that will try to divide those contained in inpt_v

Examples

```
print(is_divisible(inpt_v=c(1:111), divisible_v=c(2, 4, 5)))

#[1]  20  40  60  80 100
```

---

join_n_lvl	*join_n_lvl*

Description

Allow to see the progress of the multi-level joins of the different variables modalities. Here, multi-level joins is a type of join that usually needs a concatenation of two or more variables to make a key. But here, there is no need to proceed to a concatenation. See examples.

Usage

```
join_n_lvl(frst_datf, scd_datf, join_type = c(), lst_pair = list())
```

Arguments

frst_datf	is the first data.frame (table)
scd_datf	is the second data.frame (table)
join_type	is a vector containing all the join type ("left", "inner", "right") for each variable
lst_pair	is a lis of vectors. The vectors refers to a multi-level join. Each vector should have a length of 1. Each vector should have a name. Its name refers to the column name of multi-level variable and its value refers to the column name of the join variable.

Examples

```
datf3 <- data.frame("vil"=c("one", "one", "one", "two", "two", "two"),
                    "charac"=c(1, 2, 2, 1, 2, 2),
                    "rev"=c(1250, 1430, 970, 1630, 2231, 1875),
                    "vil2" = c("one", "one", "one", "two", "two", "two"),
                    "idl2" = c(1:6))
datf4 <- data.frame("vil"=c("one", "one", "one", "two", "two", "three"),
                    "charac"=c(1, 2, 2, 1, 1, 2),
                    "rev"=c(1.250, 1430, 970, 1630, 593, 456),
                    "vil2" = c("one", "one", "one", "two", "two", "two"),
                    "idl2" = c(2, 3, 1, 5, 5, 5))

print(join_n_lvl(frst_datf=datf3, scd_datf=datf4, lst_pair=list(c("charac" = "vil"), c("v
               join_type=c("inner", "left")))

[1] "pair: charac vil"
|  |   0%
1
|= |  50%
2
|==| 100%
[1] "pair: vil2 idl2"
```

```
|  |   0%
one
|= |  50%
two
|==| 100%

  main_id.x vil.x charac.x rev.x vil2.x idl2.x main_id.y vil.y charac.y rev.y
1 1oneone1   one        1  1250    one      1     <NA>  <NA>       NA    NA
2 2oneone2   one        2  1430    one      2     <NA>  <NA>       NA    NA
3 2oneone3   one        2   970    one      3 2oneone3   one        2  1430
4 1twotwo4   two        1  1630    two      4     <NA>  <NA>       NA    NA
  vil2.y idl2.y
1  <NA>     NA
2  <NA>     NA
3   one      3
4  <NA>     NA
```

---

just_anything   *just_anything*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_anything(inpt_v, symbol_ = "-", anything_v = c())
```

Arguments

inpt_v   is the input vector

symbol_   is the chosen symbol to replace numbers

Examples

```
print(just_anything(inpt_v = c("oui222jj644", "oui122jj"),
symbol_ = "-", anything_v = letters))

[1] "oui-jj-" "oui-jj"
```

---

just_anything2   *just_anything2*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_anything2(inpt_v, symbol_ = "-", anything_v = c())
```

Arguments

inpt_v	is the input vector
symbol_	is the chosen symbol to replace numbers

Examples

```
print(just_anything2(inpt_v = c("oui222jj44", "oui122jj"),
  symbol_ = "-", anything_v = letters))

[1] "oui---jj--" "oui---jj"
```

---

just_anything3   *just_anything3*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_anything3(inpt_v, anything_v = c())
```

Arguments

inpt_v	is the input vector

Examples

```
print(just_anything3(inpt_v = c("oui222jj644", "oui122jj"),
 anything_v = letters))

[1] "ouijj" "ouijj"
```

---

just_chr   *just_chr*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_chr(inpt_v, symbol_ = "-")
```

Arguments

inpt_v	is the input vector
symbol_	is the chosen symbol to replace numbers

Examples

```
print(just_chr(inpt_v = c("oui222jj644", "oui122jj"),
    symbol_ = "-"))

[1] "oui-jj-" "oui-jj"
```

---

just_chr2 *just_chr2*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_chr2(inpt_v, symbol_ = "-")
```

Arguments

inpt_v   is the input vector

symbol_   is the chosen symbol to replace numbers

Examples

```
print(just_chr2(inpt_v = c("oui222jj44", "oui122jj"),
    symbol_ = "-"))

[1] "oui---jj--" "oui---jj"
```

---

just_chr3 *just_chr3*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_chr3(inpt_v)
```

Arguments

inpt_v   is the input vector

Examples

```
print(just_chr3(inpt_v = c("oui222jj644", "oui122jj")))

[1] "ouijj" "ouijj"
```

```
just_nb                    just_nb
```

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_nb(inpt_v, symbol_ = "-")
```

Arguments

inpt_v	is the input vector
symbol_	is the chosen symbol to replace numbers

Examples

```
print(just_nb(inpt_v = c("oui222jj644", "oui122jj"),
    symbol_ = "-"))

[1] "-222-44" "-122-"
```

```
just_nb2                   just_nb2
```

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_nb2(inpt_v, symbol_ = "-")
```

Arguments

inpt_v	is the input vector
symbol_	is the chosen symbol to replace numbers

Examples

```
print(just_nb2(inpt_v = c("oui222jj44", "oui122jj"),
    symbol_ = "-"))

[1] "---222--44" "---122--"
```

---

just_nb3   *just_nb3*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_nb3(inpt_v)
```

Arguments

inpt_v   is the input vector

Examples

```
print(just_nb3(inpt_v = c("oui222jj644", "oui122jj")))

[1] 222644 122
```

---

just_not_anything   *just_not_anything*

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_not_anything(inpt_v, symbol_ = "-", anything_v = c())
```

Arguments

inpt_v   is the input vector

symbol_   is the chosen symbol to replace numbers

Examples

```
print(just_not_anything(inpt_v = c("oui222jj644", "oui122jj"),
    symbol_ = "-", anything_v = letters))

[1] "-222-644" "-122-"
```

```
just_not_anything2 just_not_anything2
```

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_not_anything2(inpt_v, symbol_ = "-", anything_v = c())
```

Arguments

inpt_v	is the input vector
symbol_	is the chosen symbol to replace numbers

Examples

```
print(just_not_anything2(inpt_v = c("oui222jj44", "oui122jj"),
    symbol_ = "-", anything_v = letters))

[1] "---222-44" "---122--"
```

```
just_not_anything3 just_not_anything3
```

Description

Extract only the letters from all elements of a vector, see examples

Usage

```
just_not_anything3(inpt_v, anything_v = c())
```

Arguments

inpt_v	is the input vector

Examples

```
print(just_not_anything3(inpt_v = c("oui222jj644", "oui122jj"),
    anything_v = letters))

[1] "222644" "122"
```

---

leap_yr   *leap_year*

Description

Get if the year is leap

Usage

```
leap_yr(year)
```

Arguments

year   is the input year

Examples

```
print(leap_yr(year=2024))

#[1] TRUE
```

---

left_all   *left_all*

Description

Allow to apply left join on n dataframes, datatables, tibble

Usage

```
left_all(..., keep_val = FALSE, id_v)
```

Arguments

...   are all the dataframes etc

keep_val   is if you want to keep the id column

id_v   is the common id of all the dataframes etc

Examples

```
datf1 <- data.frame(
        "id1"=c(1:5),
        "var1"=c("oui", "oui", "oui", "non", "non")
)

datf2 <- data.frame(
        "id1"=c(1, 2, 3, 7, 9),
        "var1"=c("oui2", "oui2", "oui2", "non2", "non2")
)
```

```
print(left_all(datf1, datf2, datf2, datf2, keep_val=FALSE, id_v="id1"))

  id1 var1.x var1.y var1.x.x var1.y.y
1  1    oui   oui2     oui2     oui2
2  2    oui   oui2     oui2     oui2
3  3    oui   oui2     oui2     oui2
4  4    non  <NA>     <NA>     <NA>
5  5    non  <NA>     <NA>     <NA>#'
print(left_all(datf1, datf2, datf2, keep_val=FALSE, id_v="id1"))

  id1 var1.x var1.y var1
1  1    oui   oui2 oui2
2  2    oui   oui2 oui2
3  3    oui   oui2 oui2
4  4    non  <NA> <NA>
5  5    non  <NA> <NA>
```

---

letter_to_nb   *letter_to_nb*

Description

Allow to get the number of a spreadsheet based column by the letter ex: AAA = 703

Usage

```
letter_to_nb(letter)
```

Arguments

letter   is the letter (name of the column)

Examples

```
print(letter_to_nb("rty"))

#[1] 12713
```

---

list_files   *list_files*

Description

A list.files() based function addressing the need of listing the files with extension a or or extension
b ...

Usage

```
list_files(patternc, pathc = ".")
```

Arguments

`patternc`	is a vector containing all the exensions you want
`pathc`	is the path, can be a vector of multiple path because list.files() supports it.

`lst_flatnr`   *lst_flatnr*

Description

Flatten a list to a vector

Usage

```
lst_flatnr(inpt_l)
```

Arguments

`inpt_l`	is the input list

Examples

```
print(lst_flatnr(inpt_l=list(c(1, 2), c(5, 3), c(7, 2, 7))))

#[1] 1 2 5 3 7 2 7
```

`match_by`   *match_by*

Description

Allow to match elements by ids, see examples.

Usage

```
match_by(to_match_v = c(), inpt_v = c(), inpt_ids = c())
```

Arguments

`to_match_v`	is the vector containing all the elements to match
`inpt_v`	is the input vector containong all the elements that could contains the elements to match. Each elements is linked to an element from inpt_ids at any given index, see examples. So inpt_v and inpt_ids must be the same size
`inpt_ids`	is the vector containing all the ids for the elements in inpt_v. An element is linked to the id x is both are at the same index. So inpt_v and inpt_ids must be the same size

Examples

```
print(match_by(to_match_v = c("a"), inpt_v = c("a", "z", "a", "p", "p", "e", "e", "a"),
               inpt_ids = c(1, 1, 1, 2, 2, 3, 3, 3)))

[1] 1 8

print(match_by(to_match_v = c("a"), inpt_v = c("a", "z", "a", "a", "p", "e", "e", "a"),
               inpt_ids = c(1, 1, 1, 2, 2, 3, 3, 3)))

[1] 1 4 8

print(match_by(to_match_v = c("a", "e"), inpt_v = c("a", "z", "a", "a", "p", "e", "e", "a
               inpt_ids = c(1, 1, 1, 2, 2, 3, 3, 3)))

[1] 1 4 8 6
```

---

match_na_omit	*match_na_omit*

Description

Performs a match, but remove the NA values in the output if there is one or many, see examples.

Usage

```
match_na_omit(x, table)
```

Arguments

| x | is the vector of the patterns to be matched |
| table | is the vector that may contain the patterns to be matched |

Examples

```
match_na_omit(x = c("oui", "non", "2"), table = c("1", "oui", "oui", "ee", "non"))

[1] 2 5
```

---

multitud	*multitud*

Description

From a list containing vectors allow to generate a vector following this rule: list(c("a", "b"), c("1", "2"), c("A", "Z", "E")) –> c("a1A", "b1A", "a2A", "b2A", a1Z, ...)

Usage

```
multitud(l, sep_ = "")
```

Arguments

l   is the list

sep_   is the separator between elements (default is set to "" as you see in the example)

Examples

```
print(multitud(l=list(c("a", "b"), c("1", "2"), c("A", "Z", "E"), c("Q", "F")), sep_="/")

#[1] "a/1/A/Q" "b/1/A/Q" "a/2/A/Q" "b/2/A/Q" "a/1/Z/Q" "b/1/Z/Q" "a/2/Z/Q"
#[8] "b/2/Z/Q" "a/1/E/Q" "b/1/E/Q" "a/2/E/Q" "b/2/E/Q" "a/1/A/F" "b/1/A/F"
#[15] "a/2/A/F" "b/2/A/F" "a/1/Z/F" "b/1/Z/F" "a/2/Z/F" "b/2/Z/F" "a/1/E/F"
#[22] "b/1/E/F" "a/2/E/F" "b/2/E/F"
```

---

nb2_follow   *nb2_follow*

Description

Allows to get the number and pattern of potential continuous pattern after an index of a vector, see examples

Usage

```
nb2_follow(inpt_v, inpt_idx, inpt_follow_v = c())
```

Arguments

inpt_v   is the input vector

inpt_idx   is the index

inpt_follow_v
                is a vector containing the patterns that are potentially just after inpt_nb

Examples

```
print(nb2_follow(inpt_v = c(1:12), inpt_idx = 4, inpt_follow_v = c(5)))

[1] 1 5
# we have 1 times the pattern 5 just after the 4nth index of inpt_v

print(nb2_follow(inpt_v = c(1, "non", "oui", "oui", "oui", "nop", 5), inpt_idx = 2, inpt_

[1] "3"    "oui"

# we have 3 times continuously the pattern 'oui' and 0 times the pattern 5 just after the

print(nb2_follow(inpt_v = c(1, "non", "5", "5", "5", "nop", 5), inpt_idx = 2, inpt_follow

[1] "3" "5"
```

---

nb_follow   *nb_follow*

Description

Allow to get the number of certains patterns that may be after an index of a vector continuously, see examples

Usage

```
nb_follow(inpt_v, inpt_idx, inpt_follow_v = c())
```

Arguments

inpt_v   is the input vector

inpt_idx   is the index

inpt_follow_v
        is a vector containing all the potential patterns that may follow the element in the vector at the index inpt_idx

Examples

```
print(nb_follow(inpt_v = c(1:13), inpt_idx = 6, inpt_follow_v = c(5:9)))

[1] 3

print(nb_follow(inpt_v = c("ou", "nn", "pp", "zz", "zz", "ee", "pp"), inpt_idx = 2,
            inpt_follow_v = c("pp", "zz")))

[1] 3
```

---

nb_to_letter   *nb_to_letter*

Description

Allow to get the letter of a spreadsheet based column by the number ex: 703 = AAA

Usage

```
nb_to_letter(x)
```

Arguments

x   is the number of the column

Examples

```
print(nb_to_letter(5))

[1] "e"

print(nb_to_letter(27))

[1] "aa"

print(nb_to_letter(51))

[1] "ay"

print(nb_to_letter(52))

[1] "az"

print(nb_to_letter(53))

[1] "ba"

print(nb_to_letter(675))

[1] "yy"

print(nb_to_letter(676))

[1] "yz"

print(nb_to_letter(677))

[1] "za"

print(nb_to_letter(702))

[1] "zz"

print(nb_to_letter(703))

[1] "aaa"

print(nb_to_letter(18211))

[1] "zxk"

print(nb_to_letter(18277))

[1] "zzy"

print(nb_to_letter(18278))

[1] "zzz"

print(nb_to_letter(18279))

[1] "aaaa"
```

```
nestr_datf1          nestr_datf1
```

Description

Allow to write a value (1a) to a dataframe (1b) to its cells that have the same coordinates (row and column) than the cells whose value is equal to a another special value (2a), from another another dataframe (2b). The value (1a) depends of the cell value coordinates of the third dataframe (3b). If a cell coordinates (1c) of the first dataframe (1b) does not correspond to the coordinates of a good returning cell value (2a) from the dataframe (2b), so this cell (1c) can have its value changed to the same cell coordinates value (3a) of a third dataframe (4b), if (4b) is not set to NA.

Usage

```
nestr_datf1(
  inptf_datf,
  inptt_pos_datf,
  nestr_datf,
  yes_val = TRUE,
  inptt_neg_datf = NA
)
```

Arguments

inptf_datf   is the input dataframe (1b)

inptt_pos_datf

       is the dataframe (2b) that corresponds to the (1a) values

nestr_datf   is the dataframe (2b) that has the special value (2a)

yes_val   is the special value (2a)

inptt_neg_datf

       is the dataframe (4b) that has the (3a) values, defaults to NA

Examples

```
print(nestr_datf1(inptf_datf=data.frame(c(1, 2, 1), c(1, 5, 7)),
inptt_pos_datf=data.frame(c(4, 4, 3), c(2, 1, 2)),
inptt_neg_datf=data.frame(c(44, 44, 33), c(12, 12, 12)),
nestr_datf=data.frame(c(TRUE, FALSE, TRUE), c(FALSE, FALSE, TRUE)), yes_val=TRUE))

#  c.1..2..1. c.1..5..7.
#1          4         12
#2         44         12
#3          3          2

print(nestr_datf1(inptf_datf=data.frame(c(1, 2, 1), c(1, 5, 7)),
inptt_pos_datf=data.frame(c(4, 4, 3), c(2, 1, 2)),
inptt_neg_datf=NA,
nestr_datf=data.frame(c(TRUE, FALSE, TRUE), c(FALSE, FALSE, TRUE)), yes_val=TRUE))

#   c.1..2..1. c.1..5..7.
```

```
#1             4             1
#2             2             5
#3             3             2
```

---

nestr_datf2   *nestr_datf2*

Description

Allow to write a special value (1a) in the cells of a dataframe (1b) that correspond (row and column)
to whose of another dataframe (2b) that return another special value (2a). The cells whose coordi-
nates do not match the coordinates of the dataframe (2b), another special value can be written (3a)
if not set to NA.

Usage

```
nestr_datf2(inptf_datf, rtn_pos, rtn_neg = NA, nestr_datf, yes_val = T)
```

Arguments

inptf_datf	is the input dataframe (1b)
rtn_pos	is the special value (1a)
rtn_neg	is the special value (3a)
nestr_datf	is the dataframe (2b)
yes_val	is the special value (2a)

Examples

```
print(nestr_datf2(inptf_datf=data.frame(c(1, 2, 1), c(1, 5, 7)), rtn_pos="yes",
rtn_neg="no", nestr_datf=data.frame(c(TRUE, FALSE, TRUE), c(FALSE, FALSE, TRUE)), yes_val

#  c.1..2..1. c.1..5..7.
#1       yes         no
#2        no         no
#3       yes        yes
```

---

nest_v   *nest_v*

Description

Nest two vectors according to the following parameters.

Usage

```
nest_v(f_v, t_v, step = 1, after = 1)
```

Arguments

f_v	is the vector that will welcome the nested vector t_v
t_v	is the imbriquator vector
step	defines after how many elements of f_v the next element of t_v can be put in the output
after	defines after how many elements of f_v, the begining of t_v can be put

Examples

```
print(nest_v(f_v=c(1, 2, 3, 4, 5, 6), t_v=c("oui", "oui2", "oui3", "oui4", "oui5", "oui6"
     step=2, after=2))

#[1] "1"    "2"    "oui" "3"    "4"    "oui2" "5"    "6"    "oui3" "oui4"
```

---

new_ordered   *new_ordered*

Description

Returns the indexes of elements contained in "w_v" according to "f_v"

Usage

```
new_ordered(f_v, w_v, nvr_here = NA)
```

Arguments

f_v	is the input vector
w_v	is the vector containing the elements that can be in f_v
nvr_here	is a value you are sure is not present in f_v

Examples

```
print(new_ordered(f_v=c("non", "non", "non", "oui"), w_v=c("oui", "non", "non")))

#[1] 4 1 2
```

```
normal_dens            normal_dens
```

Description

Calculates the normal distribution probality, see examples

Usage

```
normal_dens(target_v = c(), mean, sd)
```

Arguments

`target_v`	is the target value(s) (one or bounded), see examples
`mean`	is the mean of the normal distribution
`sd`	is the standard deviation of the normal distribution

Examples

```
print(normal_dens(target_v = 13, mean = 12, sd = 2))

[1] 0.1760327

print(normal_dens(target_v = c(9, 11), mean = 12, sd = 1.5, step = 0.01))

[1] 0.2288579

print(normal_dens(target_v = c(1, 18), mean = 12, sd = 1.5, step = 0.01))

[1] 0.9999688
```

```
occu                    occu
```

Description

Allow to see the occurence of each variable in a vector. Returns a datafame with, as the first column, the all the unique variable of the vector and , in he second column, their occurence respectively.

Usage

```
occu(inpt_v)
```

Arguments

`inpt_v`	the input dataframe

Examples

```
print(occu(inpt_v=c("oui", "peut", "peut", "non", "oui")))

#   var occurence
#1  oui        2
#2 peut        2
#3  non        1
```

---

old_to_new_idx   *old_to_new_idx*

Description

Allow to convert index of elements in a vector `inpt_v` to index of an vector type 1:sum(nchar(inpt_v)), see examples

Usage

```
old_to_new_idx(inpt_v = c())
```

Arguments

inpt_v   is the input vector

Examples

```
print(old_to_new_idx(inpt_v = c("oui", "no", "eeee")))

[1] 1 1 1 2 2 3 3 3 3
```

---

pairs_findr   *pairs_findr*

Description

Takes a character as input and detect the pairs of pattern, like the parenthesis pais if the pattern is "(" and then ")"

Usage

```
pairs_findr(inpt, ptrn1 = "(", ptrn2 = ")")
```

Arguments

inpt   is the input character

ptrn1   is the first pattern ecountered in the pair

ptrn2   is the second pattern in the pair

Examples

```
print(pairs_findr(inpt="ze+(yu*45/(jk+zz)*(o()p))-(re*(rt+qs)-fg)"))

[[1]]
 [1] 4 1 1 3 2 2 3 4 6 5 5 6

[[2]]
 [1]  4 11 17 19 21 22 24 25 27 31 37 41
```

---

pairs_findr_merger *pairs_findr_merger*

Description

Takes two different outputs from pairs_findr and merge them. Can be usefull when the pairs consists
in different patterns, for example one output from the pairs_findr function with ptrn1 = "(" and ptrn2
= ")", and a second output from the pairs_findr function with ptrn1 = "" and ptrn2 = "".

Usage

```
pairs_findr_merger(lst1 = list(), lst2 = list())
```

Arguments

lst1	is the first ouput from pairs findr function
lst2	is the second ouput from pairs findr function

Examples

```
print(pairs_findr_merger(lst1=list(c(1, 2, 3, 3, 2, 1), c(3, 4, 5, 7, 8, 9)),
                         lst2=list(c(1, 1), c(1, 2))))

[[1]]
[1] 1 1 2 3 4 4 3 2

[[2]]
[1] 1 2 3 4 5 7 8 9

print(pairs_findr_merger(lst1=list(c(1, 2, 3, 3, 2, 1), c(3, 4, 5, 7, 8, 9)),
                         lst2=list(c(1, 1), c(1, 11))))

[[1]]
[1] 1 2 3 4 4 3 2 1

[[2]]
[1]  1  3  4  5  7  8  9 11

print(pairs_findr_merger(lst1=list(c(1, 2, 3, 3, 2, 1), c(3, 4, 5, 8, 10, 11)),
                         lst2=list(c(4, 4), c(6, 7))))

[[1]]
[1] 1 2 3 4 4 3 2 1
```

```
[[2]]
[1]  3  4  5  6  7  8 10 11

print(pairs_findr_merger(lst1=list(c(1, 2, 3, 3, 2, 1), c(3, 4, 5, 7, 10, 11)),
                         lst2=list(c(4, 4), c(8, 9))))

[[1]]
[1] 1 2 3 3 4 4 2 1

[[2]]
[1]  3  4  5  7  8  9 10 11

print(pairs_findr_merger(lst1=list(c(1, 2, 3, 3, 2, 1), c(3, 4, 5, 7, 10, 11)),
                         lst2=list(c(4, 4), c(18, 19))))

[[1]]
[1] 1 2 3 3 2 1 4 4

[[2]]
[1]  3  4  5  7 10 11 18 19

print(pairs_findr_merger(lst1 = list(c(1, 1, 2, 2, 3, 3), c(1, 25, 26, 32, 33, 38)),
                         lst2 = list(c(1, 1, 2, 2, 3, 3), c(7, 11, 13, 17, 19, 24))))

[[1]]
 [1] 1 2 2 3 3 4 4 1 5 5 6 6

[[2]]
 [1]  1  7 11 13 17 19 24 25 26 32 33 38

print(pairs_findr_merger(lst1 = list(c(1, 1, 2, 2, 3, 3), c(2, 7, 9, 10, 11, 15)),
                         lst2 = list(c(3, 2, 1, 1, 2, 3, 4, 4), c(1, 17, 18, 22, 23, 29,

[[1]]
 [1] 6 5 1 1 2 2 3 3 4 4 5 6 7 7

[[2]]
 [1]  1  2  7  9 10 11 15 17 18 22 23 29 35 40

print(pairs_findr_merger(lst1 = list(c(1, 1), c(22, 23)),
                         lst2 = list(c(1, 1, 2, 2), c(3, 21, 27, 32))))

[[1]]
[1] 1 1 2 2 3 3

[[2]]
[1]  3 21 22 23 27 32
```

```
pairs_insertr          pairs_insertr
```

Description

Takes a character representing an arbitrary condition (like ReGeX for example) or an information (to a parser for example), vectors containing all the pair of pattern that potentially surrounds condition (flagged_pair_v and corr_v), and a vector containing all the conjunction character, as input and returns the character with all or some of the condition surrounded by the pair characters. See examples. All the pair characters are inserted according to the closest pair they found priotizing those found next to the condition and on the same depth-level and , if not found, the pair found at the n+1 depth-level.

Usage

```
pairs_insertr(
  inpt,
  algo_used = c(1:3),
  flagged_pair_v = c(")", "]"),
  corr_v = c("(", "["),
  flagged_conj_v = c("&", "|")
)
```

Arguments

inpt	is the input character representing an arbitrary condition, like ReGex for example, or information to a parser for example
algo_used	is a vector containing one or more of the 3 algorythms used. The first algorythm will simply put the pair of parenthesis at the condition surrounded and/or after a character flagged (in flagged_conj_v) as a conjunction. The second algorythm will put parenthesis at the condition that are located after other conditions that are surrounded by a pair. The third algorythm will put a pair at all the condition, it is very powerfull but takes a longer time. See examples and make experience to see which combination of algorythm(s) is the most efficient for your use case.
flagged_pair_v	
	is a vector containing all the first character of the pairs
corr_v	is a vector containing all the last character of the pairs
flagged_conj_v	
	is a vector containing all the conjunction character

Examples

```
print(pairs_insertr(inpt = "([one]|two|twob)three(four)", algo_used = c(1)))

[1] "([one]|[two]|[twob])three(four)"

print(pairs_insertr(inpt = "(one|[two]|twob)three(four)", algo_used = c(2)))

[1] "(one|[two]|[twob])(three)(four)"

print(pairs_insertr(inpt = "(oneA|[one]|two|twob)three(four)", algo_used = c(1, 2)))

[1] "(oneA|[one]|[two]|[twob])(three)(four)"

print(pairs_insertr(inpt = "(oneA|[one]|two|twob)three(four)", algo_used = c(1, 2, 3)))

[1] "([oneA]|[one]|[two]|[twob])(three)(four)"
```

```
print(pairs_insertr(inpt = "(oneA|[one]|two|twob)three(four)", algo_used = c(3)))

[1] "([oneA]|[one]|(two)|(twob))(three)(four)"

print(pairs_insertr(inpt = "(oneA|[one]|two|twob)three((four))", algo_used = c(3)))

[1] "([oneA]|[(one)]|(two)|(twob))(three)((four))"
```

---

pairs_insertr2   *pairs_insertr2*

Description

Takes a character representing an arbitrary condition (like ReGeX for example) or an information (to a parser for example), vectors containing all the pair of pattern that potentially surrounds condition (flagged_pair_v and corr_v), and a vector containing all the conjunction character, as input and returns the character with all or some of the condition surrounded by the pair characters. See examples. All the pair characters are inserted according to the closest pair they found priotizing those found next to the condition and on the same depth-level and , if not found, the pair found at the n+1 depth-level.

Usage

```
pairs_insertr2(
  inpt,
  algo_used = c(1:3),
  flagged_pair_v = c(")", "]"),
  corr_v = c("(", "["),
  flagged_conj_v = c("&", "|"),
  method = c("(", ")")
)
```

Arguments

inpt	is the input character representing an arbitrary condition, like ReGex for example, or information to a parser for example
algo_used	is a vector containing one or more of the 3 algorythms used. The first algorythm will simply put the pair of parenthesis at the condition surrounded and/or after a character flagged (in flagged_conj_v) as a conjunction. The second algorythm will put parenthesis at the condition that are located after other conditions that are surrounded by a pair. The third algorythm will put a pair at all the condition, it is very powerfull but takes a longer time. See examples and make experience to see which combination of algorythm(s) is the most efficient for your use case.
flagged_pair_v	is a vector containing all the first character of the pairs
corr_v	is a vector containing all the last character of the pairs
flagged_conj_v	is a vector containing all the conjunction character
method	is length 2 vector containing as a first index, the first character of the pair inserted, and at the last index, the second and last character of the pair

Examples

```
print(pairs_insertr2(inpt = "([one]|two|twob)three(four)", algo_used = c(1), method = c("

[1] "([one]|(two)|(twob))three(four)"

print(pairs_insertr2(inpt = "([one]|two|twob)three(four)", algo_used = c(1), method = c("

[1] "([one]|[two]|[twob])three(four)"

print(pairs_insertr2(inpt = "(oneA|[one]|two|twob)three(four)", algo_used = c(1, 2)))

[1] "(oneA|[one]|(two)|(twob))(three)(four)"

print(pairs_insertr2(inpt = "(oneA|[one]|two|twob)three(four)", algo_used = c(1, 2), meth
                     flagged_pair_v = c(")", "]", "#"), corr_v = c("(", "[", "-")))

[1] "(oneA|[one]|-two#|-twob#)-three#(four)"

print(pairs_insertr2(inpt = "(oneA|[one]|two|twob)three(four)", algo_used = c(1, 2, 3)))

[1] "((oneA)|[one]|(two)|(twob))(three)(four)"

print(pairs_insertr2(inpt = "(oneA|[one]|two|twob)three(four)", algo_used = c(3), method

[1] "([oneA]|[one]|[two]|[twob])[three](four)"

print(pairs_insertr2(inpt = "(oneA|[one]|two|twob)three((four))", algo_used = c(3)))

[1] "((oneA)|[one]|(two)|(twob))(three)((four))"
```

---

paste_datf   *paste_datf*

Description

Return a vector composed of pasted elements from the input dataframe at the same index.

Usage

```
paste_datf(inpt_datf, sep = "")
```

Arguments

inpt_datf   is the input dataframe
sep   is the separator between pasted elements, defaults to ""

Examples

```
print(paste_datf(inpt_datf=data.frame(c(1, 2, 1), c(33, 22, 55))))

[1] "133" "222" "155"
```

paste_datf2 *paste_datf2*

Description

Return a vector composed of pasted elements from the input dataframe at the same column.

Usage

```
paste_datf2(inpt_datf, sep = "")
```

Arguments

inpt_datf   is the input dataframe

sep   is the separator between pasted elements, defaults to ""

Examples

```
print(paste_datf2(inpt_datf=data.frame(c(1, 2, 1), c(33, 22, 55))))

#[1] "121" "332255"
```

pattern_generator *pattern_generator*

Description

Allow to create patterns which have a part that is varying randomly each time.

Usage

```
pattern_generator(base_, from_, nb, hmn = 1, after = 1, sep = "")
```

Arguments

base_   is the pattern that will be kept

from_   is the vector from which the elements of the random part will be generated

nb   is the number of random pattern chosen for the varying part

hmn   is how many of varying pattern from the same base will be created

after   is set to 1 by default, it means that the varying part will be after the fixed part, set to 0 if you want the varying part to be before

sep   is the separator between all patterns in the returned value

Examples

```
print(pattern_generator(base_="oui", from_=c("er", "re", "ere"), nb=1, hmn=3))

# [1] "ouier" "ouire" "ouier"

print(pattern_generator(base_="oui", from_=c("er", "re", "ere"), nb=2, hmn=3, after=0, se

# [1] "er-re-o-u-i"  "ere-re-o-u-i" "ere-er-o-u-i"
```

---

pattern_gettr   *pattern_gettr*

Description

Search for pattern(s) contained in a vector in another vector and return a list containing matched one (first index) and their position (second index) according to these rules: First case: Search for patterns strictly, it means that the searched pattern(s) will be matched only if the patterns containded in the vector that is beeing explored by the function are present like this c("pattern_searched", "other", ..., "pattern_searched") and not as c("other_thing pattern_searched other_thing", "other", ..., "pattern_searched other_thing") Second case: It is the opposite to the first case, it means that if the pattern is partially present like in the first position and the last, it will be considered like a matched pattern. REGEX can also be used as pattern

Usage

```
pattern_gettr(
  word_,
  vct,
  occ = c(1),
  strict,
  btwn,
  all_in_word = "yes",
  notatall = "###"
)
```

Arguments

word_	is the vector containing the patterns
vct	is the vector being searched for patterns
occ	a vector containing the occurence of the pattern in word_ to be matched in the vector being searched, if the occurence is 2 for the nth pattern in word_ and only one occurence is found in vct so no pattern will be matched, put "forever" to no longer depend on the occurence for the associated pattern
strict	a vector containing the "strict" condition for each nth vector in word_ ("strict" is the string to activate this option)
btwn	is a vector containing the condition ("yes" to activate this option) meaning that if "yes", all elements between two matched patern in vct will be returned , so the patterns you enter in word_ have to be in the order you think it will appear in vct

all_in_word	is a value (default set to "yes", "no" to activate this option) that, if activated, won't authorized a previous matched pattern to be matched again
notatall	is a string that you are sure is not present in vct

Examples

```
print(pattern_gettr(word_=c("oui", "non", "erer"), vct=c("oui", "oui", "non", "oui",
 "non", "opp", "opp", "erer", "non", "ok"), occ=c(1, 2, 1),
 btwn=c("no", "yes", "no"), strict=c("no", "no", "ee")))

#[[1]]
#[1] 1 5 8
#
#[[2]]
#[1] "oui"  "non"  "opp"  "opp"  "erer"
```

---

pattern_tuning   *pattern_tuning*

Description

Allow to tune a pattern very precisely and output a vector containing its variations n times.

Usage

```
pattern_tuning(
  pattrn,
  spe_nb,
  spe_l,
  exclude_type,
  hmn = 1,
  rg = c(1, nchar(pattrn))
)
```

Arguments

pattrn	is the character that will be tuned
spe_nb	is the number of new character that will be replaced
spe_l	is the source vector from which the new characters will replace old ones
exclude_type	is character that won't be replaced
hmn	is how many output the function will return
rg	is a vector with two parameters (index of the first letter that will be replaced, index of the last letter that will be replaced) default is set to all the letters from the source pattern

Examples

```
print(pattern_tuning(pattrn="oui", spe_nb=2, spe_l=c("e", "r", "T", "O"), exclude_type="o

#[1] "orT" "oTr" "oOi"
```

---

power_to_char   *power_to_char*

Description

Convert a scientific number to a string representing normally the number.

Usage

```
power_to_char(inpt_v = c())
```

Arguments

inpt_v   is the input vector containing scientific number, but also other elements that
                won't be taken in count

Examples

```
print(power_to_char(inpt_v = c(22 * 10000000, 12, 9 * 0.0000002)))

[1] "2200000000" "12"          "0.0000018"
```

---

pre_to_post_idx   *pre_to_post_idx*

Description

Allow to convert indexes from a pre-vector to post-indexes based on a current vector, see examples

Usage

```
pre_to_post_idx(inpt_v = c(), inpt_idx = c(1:length(inppt_v)))
```

Arguments

inpt_v   is the new vector
inpt_idx   is the vector containing the pre-indexes

Examples

```
print(pre_to_post_idx(inpt_v = c("oui", "no", "eee"), inpt_idx = c(1:8)))

[1] 1 1 1 2 2 3 3 3

As if the first vector was c("o", "u", "i", "n", "o", "e", "e", "e")
```

---

ptrn_switchr *ptrn_switchr*

Description

Allow to switch, copy pattern for each element in a vector. Here a pattern is the values that are separated by a same separator. Example: "xx-xxx-xx" or "xx/xx/xxxx". The xx like values can be swicthed or copied from whatever index to whatever index. Here, the index is like this 1-2-3 etcetera, it is relative of the separator.

Usage

```
ptrn_switchr(inpt_l, f_idx_l = c(), t_idx_l = c(), sep = "-", default_val = NA)
```

Arguments

inpt_l	is the input vector
f_idx_l	is a vector containing the indexes of the pattern you want to be altered.
t_idx_l	is a vector containing the indexes to which the indexes in f_idx_l are related.
sep	is the separator, defaults to "-"
default_val	is the default value , if not set to NA, of the pattern at the indexes in f_idx_l. If it is not set to NA, you do not need to fill t_idx_l because this is the vector containing the indexes of the patterns that will be set as new values relatively to the indexes in f_idx_l. Defaults to NA.

Examples

```
print(ptrn_switchr(inpt_l=c("2022-01-11", "2022-01-14", "2022-01-21",
"2022-01-01"), f_idx_l=c(1, 2, 3), t_idx_l=c(3, 2, 1)))

#[1] "11-01-2022" "14-01-2022" "21-01-2022" "01-01-2022"

print(ptrn_switchr(inpt_l=c("2022-01-11", "2022-01-14", "2022-01-21",
"2022-01-01"), f_idx_l=c(1), default_val="ee"))

#[1] "ee-01-11" "ee-01-14" "ee-01-21" "ee-01-01"
```

---

ptrn_twkr *ptrn_twkr*

Description

Allow to modify the pattern length of element in a vector according to arguments. What is here defined as a pattern is something like this xx-xx-xx or xx/xx/xxx... So it is defined by the separator

Usage

```
ptrn_twkr(
  inpt_l,
  depth = "max",
  sep = "-",
  default_val = "0",
  add_sep = TRUE,
  end_ = TRUE
)
```

Arguments

`inpt_l`	is the input vector
`depth`	is the number (numeric) of separator it will keep as a result. To keep the number of separator of the element that has the minimum amount of separator do depth="min" and depth="max" (character) for the opposite. This value defaults to "max".
`sep`	is the separator of the pattern, defaults to "-"
`default_val`	is the default val that will be placed between the separator, defaults to "00"
`add_sep`	defaults to TRUE. If set to FALSE, it will remove the separator for the patterns that are included in the interval between the depth amount of separator and the actual number of separator of the element.
`end_`	is if the default_val will be added at the end or at the beginning of each element that lacks length compared to depth

Examples

```
v <- c("2012-06-22", "2012-06-23", "2022-09-12", "2022")

ptrn_twkr(inpt_l=v, depth="max", sep="-", default_val="00", add_sep=TRUE)

#[1] "2012-06-22" "2012-06-23" "2022-09-12" "2022-00-00"

ptrn_twkr(inpt_l=v, depth=1, sep="-", default_val="00", add_sep=TRUE)

#[1] "2012-06" "2012-06" "2022-09" "2022-00"

ptrn_twkr(inpt_l=v, depth="max", sep="-", default_val="00", add_sep=TRUE, end_=FALSE)

#[1] "2012-06-22" "2012-06-23" "2022-09-12" "00-00-2022"
```

`read_edm_parser`	*read_edm_parser*

Description

Allow to read data from edm parsed dataset, see examples

Usage

```
read_edm_parser(inpt, to_find_v = c())
```

Arguments

`inpt`	is the input dataset
`to_find_v`	is the vector containing the path to find the data, see examples

Examples

```
print(read_edm_parser("(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ee1:4))",
to_find_v = c("ok", "oui", "rr", "rr2")))

[1] "6"

print(read_edm_parser("(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ee1:4))", t

[1] "56"

print(read_edm_parser("(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ee1:4))", t

[1] "56"
```

`rearangr_v`	*rearangr_v*

Description

Reanranges a vector "w_v" according to another vector "inpt_v". inpt_v contains a sequence of number. inpt_v and w_v have the same size and their indexes are related. The output will be a vector containing all the elements of w_v rearanges in descending or asending order according to inpt_v

Usage

```
rearangr_v(inpt_v, w_v, how = "increasing")
```

Arguments

`inpt_v`	is the vector that contains the sequance of number
`w_v`	is the vector containing the elements related to inpt_v
`how`	is the way the elements of w_v will be outputed according to if inpt_v will be sorted ascendigly or descendingly

Examples

```
print(rearangr_v(inpt_v=c(23, 21, 56), w_v=c("oui", "peut", "non"), how="decreasing"))

#[1] "non"  "oui"  "peut"
```

---

regex_spe_detect *regex_spe_detect*

Description

Takes a character as input and returns its regex-friendly character for R.

Usage

```
regex_spe_detect(inpt)
```

Arguments

inpt   the input character

Examples

```
print(regex_spe_detect("o"))

[1] "o"

print(regex_spe_detect("("))

[1] "\\("

print(regex_spe_detect("tr(o)m"))

[1] "tr\\(o\\)m"

print(regex_spe_detect(inpt="fggfg[fggf]fgfg(vg?fgfgf.gf)"))

[1] "fggfg\\[fggf\\]fgfg\\(vg\\?fgfgf\\.gf\\)"

print(regex_spe_detect(inpt = "---"))

[1] "\\-\\-\\-"
```

---

regroupr *regroupr*

Description

Allow to sort data like "c(X1/Y1/Z1, X2/Y1/Z2, ...)" to what you want. For example it can be to "c(X1/Y1/21, X1/Y1/Z2, ...)"

Usage

```
regroupr(
  inpt_v,
  sep_ = "-",
  order = c(1:length(unlist(strsplit(x = inpt_v[1], split = sep_)))),
  l_order = NA
)
```

Arguments

inpt_v	is the input vector containing all the data you want to sort in a specific way. All the sub-elements should be separated by a unique separator such as "-" or "/"
sep_	is the unique separator separating the sub-elements in each elements of inpt_v
order	is a vector describing the way the elements should be sorted. For example if you want this dataset "c(X1/Y1/Z1, X2/Y1/Z2, ...)" to be sorted by the last element you should have order=c(3:1), for example, and it should returns something like this c(X1/Y1/Z1, X2/Y1/Z1, X1/Y2/Z1, ...) assuming you have only two values for X.
l_order	is a list containing the vectors of values you want to order first for each sub-elements

Examples

```
vec <- multitud(l=list(c("a", "b"), c("1", "2"), c("A", "Z", "E"), c("Q", "F")), sep_="/"

print(vec)

# [1] "a/1/A/Q" "b/1/A/Q" "a/2/A/Q" "b/2/A/Q" "a/1/Z/Q" "b/1/Z/Q" "a/2/Z/Q"
# [8] "b/2/Z/Q" "a/1/E/Q" "b/1/E/Q" "a/2/E/Q" "b/2/E/Q" "a/1/A/F" "b/1/A/F"
#[15] "a/2/A/F" "b/2/A/F" "a/1/Z/F" "b/1/Z/F" "a/2/Z/F" "b/2/Z/F" "a/1/E/F"
#[22] "b/1/E/F" "a/2/E/F" "b/2/E/F"

print(regroupr(inpt_v=vec, sep_="/"))

# [1] "a/1/1/1"   "a/1/2/2"   "a/1/3/3"   "a/1/4/4"   "a/1/5/5"   "a/1/6/6"
# [7] "a/2/7/7"   "a/2/8/8"   "a/2/9/9"   "a/2/10/10" "a/2/11/11" "a/2/12/12"
#[13] "b/1/13/13" "b/1/14/14" "b/1/15/15" "b/1/16/16" "b/1/17/17" "b/1/18/18"
#[19] "b/2/19/19" "b/2/20/20" "b/2/21/21" "b/2/22/22" "b/2/23/23" "b/2/24/24"

 vec <- vec[-2]

 print(regroupr(inpt_v=vec, sep_="/"))

# [1] "a/1/1/1"   "a/1/2/2"   "a/1/3/3"   "a/1/4/4"   "a/1/5/5"   "a/1/6/6"
# [7] "a/2/7/7"   "a/2/8/8"   "a/2/9/9"   "a/2/10/10" "a/2/11/11" "a/2/12/12"
#[13] "b/1/13/13" "b/1/14/14" "b/1/15/15" "b/1/16/16" "b/1/17/17" "b/2/18/18"
#[19] "b/2/19/19" "b/2/20/20" "b/2/21/21" "b/2/22/22" "b/2/23/23"

print(regroupr(inpt_v=vec, sep_="/", order=c(4:1)))

#[1] "1/1/A/Q"   "2/2/A/Q"   "3/3/A/Q"   "4/4/A/Q"   "5/5/Z/Q"   "6/6/Z/Q"
# [7] "7/7/Z/Q"   "8/8/Z/Q"   "9/9/E/Q"   "10/10/E/Q" "11/11/E/Q" "12/12/E/Q"
#[13] "13/13/A/F" "14/14/A/F" "15/15/A/F" "16/16/A/F" "17/17/Z/F" "18/18/Z/F"
#[19] "19/19/Z/F" "20/20/Z/F" "21/21/E/F" "22/22/E/F" "23/23/E/F" "24/24/E/F"
```

---

rm_na_rows	*rm_na_rows*

Description

Allow to remove certain rows that contains NA, see examples.

Usage

```
rm_na_rows(inpt_datf, flagged_vals = c())
```

Arguments

inpt_datf   is the input dataframe

flagged_vals is a vector containing the characters that will drop any rows that contains it

Examples

```
datf <- data.frame(c(1, 2, NA, 4), c(1:4))
print(datf)

  c.1..2..NA..4. c.1.4.
1              1      1
2              2      2
3             NA      3
4              4      4

print(rm_na_rows(inpt_datf = datf))

  c.1..2..NA..4. c.1.4.
1              1      1
2              2      2
4              4      4
```

---

rm_rows   *rm_rows*

Description

Allow to remove certain rows that contains certains characters, see examples.

Usage

```
rm_rows(inpt_datf, flagged_vals = c())
```

Arguments

inpt_datf   is the input dataframe

flagged_vals is a vector containing the characters that will drop any rows that contains it

Examples

```
datf <- data.frame(c(1, 2, NA, 4), c(1:4))
print(datf)

  c.1..2..NA..4. c.1.4.
1              1      1
2              2      2
3             NA      3
4              4      4
```

```
print(rm_rows(inpt_datf = datf, flagged_vals = c(1, 4)))

  c.1..2..NA..4. c.1.4.
2             2      2
3            NA      3
```

---

row_to_col   *row_to_col*

Description

Allow to reverse a dataframe (rows become cols and cols become rows)

Usage

```
row_to_col(inpt_datf)
```

Arguments

inpt_datf   is the inout dataframe

Examples

```
datf_test <- data.frame(c(1, 11), c(2, 10), c(3, 9), c(4, 8))

print(datf_test)

  c.1..11. c.2..10. c.3..9. c.4..8.
1        1        2       3       4
2       11       10       9       8

print(row_to_col(inpt_datf = datf_test))

  1  2
1 1 11
2 2 10
3 3  9
4 4  8
```

---

r_print   *r_print*

Description

Allow to print vector elements in one row.

Usage

```
r_print(inpt_v, sep_ = "and", begn = "This is", end = ", voila!")
```

Arguments

`inpt_v`	is the input vector
`sep_`	is the separator between each elements
`begn`	is the character put at the beginning of the print
`end`	is the character put at the end of the print

Examples

```
print(r_print(inpt_v=c(1:33)))

#[1] "This is  1 and 2 and 3 and 4 and 5 and 6 and 7 and 8 and 9 and 10 and 11 and 12 and
#and 14 and 15 and 16 and 17 and 18 and 19 and 20 and 21 and 22 and 23 and 24 and 25 and
#and 27 and 28 and 29 and 30 and 31 and 32 and 33 and , voila!"
```

`save_untl`	*save_untl*

Description

Get the elements in each vector from a list that are located before certain values

Usage

```
save_untl(inpt_l = list(), val_to_stop_v = c())
```

Arguments

`inpt_l`	is the input list containing all the vectors
`val_to_stop_v`	
	is a vector containing the values that marks the end of the vectors returned in the returned list, see the examples

Examples

```
print(save_untl(inpt_l=list(c(1:4), c(1, 1, 3, 4), c(1, 2, 4, 3)), val_to_stop_v=c(3, 4))

#[[1]]
#[1] 1 2
#
#[[2]]
#[1] 1 1
#
#[[3]]
#[1] 1 2

print(save_untl(inpt_l=list(c(1:4), c(1, 1, 3, 4), c(1, 2, 4, 3)), val_to_stop_v=c(3)))

#[[1]]
#[1] 1 2
#
#[[2]]
```

```
#[1] 1 1
#
#[[3]]
#[1] 1 2 4
```

---

see_datf   *see_datf*

Description

Allow to return a dataframe with special value cells (ex: TRUE) where the condition entered are respected and another special value cell (ex: FALSE) where these are not

Usage

```
see_datf(
  datf,
  condition_l,
  val_l,
  conjunction_l = c(),
  rt_val = TRUE,
  f_val = FALSE
)
```

Arguments

datf   is the input dataframe

condition_l   is the vector of the possible conditions ("==", ">", "<", "!=", "%%", "reg", "not_reg", "sup_nchar", "inf_nchar", "nchar") (equal to some elements in a vector, greater than, lower than, not equal to, is divisible by, the regex condition returns TRUE, the regex condition returns FALSE, the length of the elements is strictly superior to X, the length of the element is strictly inferior to X, the length of the element is equal to one element in a vector), you can put the same condition n times.

val_l   is the list of vectors containing the values or vector of values related to condition_l (so the vector of values has to be placed in the same order)

conjunction_l

                contains the and or conjunctions, so if the length of condition_l is equal to 3, there will be 2 conjunctions. If the length of conjunction_l is inferior to the length of condition_l minus 1, conjunction_l will match its goal length value with its last argument as the last arguments. For example, c("&", "|", "&") with a goal length value of 5 –> c("&", "|", "&", "&", "&")

rt_val   is a special value cell returned when the conditions are respected

f_val   is a special value cell returned when the conditions are not respected

Details

This function will return an error if number only comparative conditions are given in addition to having character values in the input dataframe.

Examples

```
datf1 <- data.frame(c(1, 2, 4), c("a", "a", "zu"))

print(see_datf(datf=datf1, condition_l=c("nchar"), val_l=list(c(1))))

#      X1    X2
#1 TRUE   TRUE
#2 TRUE   TRUE
#3 TRUE  FALSE

print(see_datf(datf=datf1, condition_l=c("=="), val_l=list(c("a", 1))))

#      X1     X2
#1  TRUE   TRUE
#2 FALSE   TRUE
#3 FALSE  FALSE


print(see_datf(datf=datf1, condition_l=c("nchar"), val_l=list(c(1, 2))))

#     X1   X2
#1 TRUE TRUE
#2 TRUE TRUE
#3 TRUE TRUE

print(see_datf(datf=datf1, condition_l=c("not_reg"), val_l=list("[a-z]")))

#     X1    X2
#1 TRUE FALSE
#2 TRUE FALSE
#3 TRUE FALSE
```

```
see_diff                    see_diff
```

Description

Output the opposite of intersect(a, b). Already seen at: https://stackoverflow.com/questions/19797954/function-to-find-symmetric-difference-opposite-of-intersection-in-r

Usage

```
see_diff(vec1 = c(), vec2 = c())
```

Arguments

vec1	is the first vector
vec2	is the second vector

Examples

```
print(see_diff(c(1:7), c(4:12)))

[1] 1 2 3 8 9 10 11 12
```

```
see_diff_all          see_diff_all
```

Description

Allow to perform the opposite of intersect function to n vectors.

Usage

```
see_diff_all(...)
```

Arguments

```
...              are all the input vectors
```

Examples

```
vec1 <- c(3:6)
vec2 <- c(1:8)
vec3 <- c(12:16)

print(see_diff_all(vec1, vec2))

[1] 1 2 7 8

print(see_diff_all(vec1, vec2, vec3))

[1]  3  4  5  6  1  2  7  8 12 13 14 15 16
```

```
see_file           see_file
```

Description

Allow to get the filename or its extension

Usage

```
see_file(string_, index_ext = 1, ext = TRUE)
```

Arguments

`string_`	is the input string
`index_ext`	is the occurence of the dot that separates the filename and its extension
`ext`	is a boolean that if set to TRUE, will return the file extension and if set to FALSE, will return filename

Examples

```
print(see_file(string_="file.abc.xyz"))

#[1] ".abc.xyz"

print(see_file(string_="file.abc.xyz", ext=FALSE))

#[1] "file"

print(see_file(string_="file.abc.xyz", index_ext=2))

#[1] ".xyz"
```

---

see_idx	*see_idx*

Description

Returns a boolean vector to see if a set of elements contained in v1 is also contained in another vector (v2)

Usage

```
see_idx(v1, v2)
```

Arguments

`v1`	is the first vector
`v2`	is the second vector

Examples

```
print(see_idx(v1=c("oui", "non", "peut", "oo"), v2=c("oui", "peut", "oui")))

#[1]  TRUE FALSE  TRUE  FALSE
```

---

see_inside	*see_inside*

Description

Return a list containing all the column of the files in the current directory with a chosen file extension and its associated file and sheet if xlsx. For example if i have 2 files "out.csv" with 2 columns and "out.xlsx" with 1 column for its first sheet and 2 for its second one, the return will look like this: c(column_1, column_2, column_3, column_4, column_5, unique_separator, "1-2-out.csv", "3-3-sheet_1-out.xlsx", 4-5-sheet_2-out.xlsx)

Usage

```
see_inside(
  pattern_,
  path_ = ".",
  sep_ = c(","),
  unique_sep = "#####",
  rec = FALSE
)
```

Arguments

pattern_	is a vector containin the file extension of the spreadsheets ("xlsx", "csv"...)
path_	is the path where are located the files
sep_	is a vector containing the separator for each csv type file in order following the operating system file order, if the vector does not match the number of the csv files found, it will assume the separator for the rest of the files is the same as the last csv file found. It means that if you know the separator is the same for all the csv type files, you just have to put the separator once in the vector.
unique_sep	is a pattern that you know will never be in your input files
rec	is a boolean allows to get files recursively if set to TRUE, defaults to TRUE If x is the return value, to see all the files name, position of the columns and possible sheet name associanted with, do the following:

---

see_in_grep	*see_in_grep*

Description

Allow to get the indices of the elements of a vector that contains certyain patterns. The type of the output may change in function of the input vectors, see examples

Usage

```
see_in_grep(from_v = c(), in_v = c())
```

Arguments

from_v   is the vector that may contains elements that contains the same patterns that
                  those in in_v, see examples

in_v   is a vector that contains the patterns to find

Examples

```
print(see_in_grep(from_v = c("oui", "non", "peut"),
              in_v = c("ou", "eu", "plm")))

         ou              eu              plm
         1               3               -1

 print(see_in_grep(from_v = c("oui", "non", "peut", "oui"),
     in_v = c("ou", "eu", "plm")))

$ou
[1] 1 4

$eu
[1] 3

$plm
[1] -1
```

---

see_in_l   *see_in_l*

Description

Allow to get the patterns that are present in the elements of a vector, see examples

Usage

```
see_in_l(from_v = c(), in_v = c())
```

Arguments

from_v   is the vector that may contains elements that contains the same patterns that
                  those in in_v, see examples

in_v   is a vector that contains the patterns to find

Examples

```
print(see_in_l(from_v = c("oui", "non", "peut"),
  in_v = c("ou", "pe", "plm")))

   ou    pe   plm
 TRUE  TRUE FALSE
```

`see_mode` *see_mode*

Description

Allow to get the mode of a vector, see examples.

Usage

```
see_mode(inpt_v = c())
```

Arguments

inpt_v   is the input vector

Examples

```
print(see_mode(inpt_v = c(1, 1, 2, 2, 2, 3, 1, 2)))

[1] 2

print(see_mode(inpt_v = c(1, 1, 2, 2, 2, 3, 1)))

[1] 1
```

`selected_char` *selected_char*

Description

Allow to generate a char based on a conbinaison on characters from a vector and a number

Usage

```
selected_char(n, base_char = letters)
```

Arguments

n   is how many sequence of numbers will be generated

base_char   is the vector containing the elements from which the character is generated

Examples

```
print(selected_char(1222))

[1] "zta"
```

---

sequence_na_mean1   *sequence_na_mean1*

Description

In a dataframe generated by the function historic_sequence1, convert all NA to the mean of the
values at the same variable for the individual at the id where the NA occurs, see examples (only
accepts numeric variables)

Usage

```
sequence_na_mean1(inpt_datf, bf_)
```

Arguments

inpt_datf   is the input dataframe

Examples

```
set.seed(123)
var1 <- round(runif(n = 14, min = 100, max = 122))
set.seed(123)
var2 <- round(runif(n = 14, min = 14, max = 20))

datf <- data.frame("ids" = c(20, 20, 20, 20, 19, 19, 19, 18, 18, 18, 18,
17, 17, 17),
"individual" = c("oui", "non", "peut1", "peut2",
"oui", "peut1", "peut2"),
"var1" = var1,
"var2" = var2)
datf <- historic_sequence1(inpt_datf = datf, bf_ = 2)
datf[3, 4] <- NA
datf[6, 4] <- NA
datf[1, 3] <- NA
print(datf)

  id_seq individual var1-1 var1-2 var2-1 var2-2
1     20        oui     NA    120     20     19
2     20        non     NA    112     NA     17
3     20      peut1    101     NA     14     17
4     20      peut2    112    121     17     20
5     19        oui    120    110     19     17
6     19      peut1    110     NA     17     18
7     19      peut2    121    113     20     17

print(sequence_na_mean1(inpt_datf = datf, bf_ = 2))

  id_seq individual var1-1 var1-2 var2-1 var2-2
1     20        oui    115  120.0     20     19
2     20        non    112  112.0     17     17
3     20      peut1    101  105.5     14     17
4     20      peut2    112  121.0     17     20
5     19        oui    120  110.0     19     17
6     19      peut1    110  105.5     17     18
```

```
7    19     peut2   121  113.0    20    17
```

```
sequence_na_mean2    sequence_na_mean2
```

Description

In a dataframe generated by the function historic_sequence1, convert all NA to the mean of the values at the same variable for the individual at the id where the NA occurs, see examples (only accepts numeric variables)

Usage

```
sequence_na_mean2(inpt_datf, bf_)
```

Arguments

inpt_datf	is the input dataframe
bf_	is how at how many n -1 we look for the value of the variables for the individual at time index n

Examples

```
set.seed(123)
var1 <- round(runif(n = 14, min = 100, max = 122))
set.seed(123)
var2 <- round(runif(n = 14, min = 14, max = 20))

datf <- data.frame("ids" = c(20, 20, 20, 20, 19, 19, 19, 18, 18, 18, 18,
17, 17, 17),
"individual" = c("oui", "non", "peut1", "peut2",
"oui", "peut1", "peut2"),
"var1" = var1,
"var2" = var2)
datf <- historic_sequence2(inpt_datf = datf, bf_ = 2)
datf[3, 4] <- NA
datf[6, 4] <- NA
datf[1, 3] <- NA
print(datf)

  id_seq individual var1-0 var1-1 var1-2 var2-0 var2-1 var2-2
1    20        oui    NA    121    120     16     NA     19
2    20        non   117     NA    112     19     NA     17
3    20      peut1   109     NA    110     16     14     17
4    20      peut2   119    112    121     19     17     20
5    19        oui   121    120    110     20     19     17
6    19      peut1   101     NA    115     14     17     18
7    19      peut2   112    121    113     17     20     17

print(sequence_na_mean2(inpt_datf = datf, bf_ = 2))

  id_seq individual var1-0   var1-1 var1-2 var2-0 var2-1 var2-2
1    20        oui   117 121.0000    120     16     18     19
```

```
2    20        non   117 114.5000    112    19    18    17
3    20      peut1   109 108.3333    110    16    14    17
4    20      peut2   119 112.0000    121    19    17    20
5    19        oui   121 120.0000    110    20    19    17
6    19      peut1   101 108.3333    115    14    17    18
7    19      peut2   112 121.0000    113    17    20    17
```

---

sequence_na_med1   *sequence_na_med1*

Description

In a dataframe generated by the function historic_sequence1, convert all NA to the median of the values at the same variable for the individual at the id where the NA occurs, see examples (only accepts numeric variables)

Usage

```
sequence_na_med1(inpt_datf, bf_)
```

Arguments

inpt_datf   is the input dataframe

bf_   is how at how many n - -1 we look for the value of the variables for the individual at time index n

Examples

```
set.seed(123)
var1 <- round(runif(n = 14, min = 100, max = 122))
set.seed(123)
var2 <- round(runif(n = 14, min = 14, max = 20))

datf <- data.frame("ids" = c(20, 20, 20, 20, 19, 19, 19, 18, 18, 18, 18,
17, 17, 17),
"individual" = c("oui", "non", "peut1", "peut2",
"oui", "peut1", "peut2"),
"var1" = var1,
"var2" = var2)
datf <- historic_sequence1(inpt_datf = datf, bf_ = 2)
datf[3, 4] <- NA
datf[6, 4] <- NA
datf[1, 3] <- NA
print(datf)

  id_seq individual var1-1 var1-2 var2-1 var2-2
1     20        oui     NA    120     20     19
2     20        non     NA    112     NA     17
3     20      peut1    101     NA     14     17
4     20      peut2    112    121     17     20
5     19        oui    120    110     19     17
6     19      peut1    110     NA     17     18
7     19      peut2    121    113     20     17
```

```
print(sequence_na_med1(inpt_datf = datf, bf_ = 2))

  id_seq individual var1-1 var1-2 var2-1 var2-2
1     20        oui    115  120.0     20     19
2     20        non    112  112.0     17     17
3     20      peut1    101  105.5     14     17
4     20      peut2    112  121.0     17     20
5     19        oui    120  110.0     19     17
6     19      peut1    110  105.5     17     18
7     19      peut2    121  113.0     20     17
```

sequence_na_med2   *sequence_na_med2*

Description

In a dataframe generated by the function historic_sequence2, convert all NA to the median of the values at the same variable for the individual at the id where the NA occurs, see examples (only accepts numeric variables)

Usage

```
sequence_na_med2(inpt_datf, bf_)
```

Arguments

inpt_datf	is the input dataframe
bf_	is how at how many n -1 we look for the value of the variables for the individual at time index n

Examples

```
set.seed(123)
var1 <- round(runif(n = 14, min = 100, max = 122))
set.seed(123)
var2 <- round(runif(n = 14, min = 14, max = 20))
datf <- data.frame("ids" = c(20, 20, 20, 20, 19, 19, 19, 18, 18, 18, 18,
17, 17, 17),
"individual" = c("oui", "non", "peut1", "peut2",
"oui", "peut1", "peut2"),
"var1" = var1,
"var2" = var2)
datf <- historic_sequence2(inpt_datf = datf, bf_ = 2)
datf[3, 4] <- NA
datf[6, 4] <- NA
datf[1, 3] <- NA
print(datf)

  id_seq individual var1-0 var1-1 var1-2 var2-0 var2-1 var2-2
1     20        oui     NA    121    120     16     20     19
2     20        non    117     NA    112     19     NA     17
3     20      peut1    109     NA    110     16     14     17
```

```
4     20      peut2    119      112      121      19      17      20
5     19        oui    121      120      110      20      19      17
6     19      peut1    101       NA      115      14      17      18
7     19      peut2    112      121      113      17      20      17

print(sequence_na_med2(inpt_datf = datf, bf_ = 2))

  id_seq individual var1-0 var1-1 var1-2 var2-0 var2-1 var2-2
1     20        oui    120  121.0    120     16     20     19
2     20        non    117  114.5    112     19     18     17
3     20      peut1    109  109.0    110     16     14     17
4     20      peut2    119  112.0    121     19     17     20
5     19        oui    121  120.0    110     20     19     17
6     19      peut1    101  109.0    115     14     17     18
7     19      peut2    112  121.0    113     17     20     17
```

---

sort_date   *sort_date*

Description

Allow to sort any vector containing a date, from any kind of format (my, hdmy, ymd ...), see examples.

Usage

```
sort_date(inpt_v, frmt, sep_ = "-", ascending = FALSE, give = "value")
```

Arguments

inpt_v	is the input vector containing all the dates
frmt	is the format of the dates, (any combinaison of letters "s" for second, "n", for minute, "h" for hour, "d" for day, "m" for month and "y" for year)
sep_	is the separator used for the dates
ascending	is the used to sort the dates
give	takes only two values "index" or "value", if give == "index", the function will output the index of sorted dates from inpt_v, if give == "value", the function will output the value, it means directly the sorted dates in inpt_v, see examples

Examples

```
print(sort_date(inpt_v = c("01-11-2025", "08-08-1922", "12-04-1966")
              , frmt = "dmy", sep_ = "-", ascending = TRUE, give = "value"))

[1] "08-08-1922" "12-04-1966" "01-11-2025"

print(sort_date(inpt_v = c("01-11-2025", "08-08-1922", "12-04-1966")
              , frmt = "dmy", sep_ = "-", ascending = FALSE, give = "value"))

[1] "01-11-2025" "12-04-1966" "08-08-1922"
```

```
print(sort_date(inpt_v = c("01-11-2025", "08-08-1922", "12-04-1966")
                , frmt = "dmy", sep_ = "-", ascending = TRUE, give = "index"))

[1] 2 3 1

print(sort_date(inpt_v = c("22-01-11-2025", "11-12-04-1966", "12-12-04-1966")
                , frmt = "hdmy", sep_ = "-", ascending = FALSE, give = "value"))

[1] "22-01-11-2025" "12-12-04-1966" "11-12-04-1966"

print(sort_date(inpt_v = c("03-22-01-11-2025", "56-11-12-04-1966", "23-12-12-04-1966")
                , frmt = "nhdmy", sep_ = "-", ascending = FALSE, give = "value"))

[1] "03-22-01-11-2025" "23-12-12-04-1966" "56-11-12-04-1966"
```

---

sort_normal_qual   *sort_normal_qual*

Description

Sort qualitative modalities that have their frequency normally distributed from an unordered dataset, see examples. This function uses an another algorythm than choose_normal_qual2 which may be faster.

Usage

```
sort_normal_qual(inpt_datf)
```

Arguments

inpt_datf   is the input dataframe, containing the values in the first column and their frequency in the second

Examples

```
sample_val <- round(rnorm(n = 2000, mean = 12, sd = 2), 1)
sample_freq <- unique_total(sample_val)
sample_qual <- infinite_char_seq(n = length(sample_freq))
datf_test <- data.frame(sample_qual, sample_freq)
datf_test[, 2] <- datf_test[, 2] / sum(datf_test[, 2]) # optional

print(datf_test)

  sample_qual sample_freq
1           a 0.208695652
2           b 0.234782609
3           c 0.321739130
4           d 0.339130435
5           e 0.330434783
6           f 0.069565217
7           g 0.234782609
8           h 0.400000000
9           i 0.347826087
```

```
10                j 0.043478261
11                k 0.278260870
12                l 0.286956522
13                m 0.243478261
14                n 0.147826087
15                o 0.234782609
16                p 0.252173913
17                q 0.417391304
18                r 0.095652174
19                s 0.313043478
20                t 0.008695652
21                u 0.130434783
22                v 0.391304348
23                w 0.113043478
24                x 0.295652174
25                y 0.243478261
26                z 0.382608696
27               aa 0.008695652
28               ab 0.347826087
29               ac 0.330434783
30               ad 0.321739130
31               ae 0.347826087
32               af 0.321739130
33               ag 0.173913043
34               ah 0.278260870
35               ai 0.278260870
36               aj 0.347826087
37               ak 0.026086957
38               al 0.295652174
39               am 0.226086957
40               an 0.295652174
41               ao 0.234782609
42               ap 0.113043478
43               aq 0.234782609
44               ar 0.173913043
45               as 0.017391304
46               at 0.252173913
47               au 0.078260870
48               av 0.086956522
49               aw 0.278260870
50               ax 0.086956522
51               ay 0.200000000
52               az 0.295652174
53               ba 0.052173913
54               bb 0.165217391
55               bc 0.408695652
56               bd 0.269565217
57               be 0.104347826
58               bf 0.391304348
59               bg 0.104347826
60               bh 0.043478261
61               bi 0.200000000
62               bj 0.095652174
63               bk 0.191304348
64               bl 0.008695652
65               bm 0.165217391
66               bn 0.226086957
```

```
67          bo 0.086956522
68          bp 0.017391304
69          bq 0.121739130
70          br 0.234782609
71          bs 0.121739130
72          bt 0.078260870
73          bu 0.173913043
74          bv 0.104347826
75          bw 0.208695652
76          bx 0.017391304
77          by 0.243478261
78          bz 0.034782609
79          ca 0.017391304
80          cb 0.008695652
81          cc 0.173913043
82          cd 0.147826087
83          ce 0.060869565
84          cf 0.017391304
85          cg 0.060869565
86          ch 0.008695652
87          ci 0.208695652
88          cj 0.043478261
89          ck 0.052173913
90          cl 0.017391304
91          cm 0.017391304
92          cn 0.095652174
93          co 0.113043478
94          cp 0.017391304
95          cq 0.017391304
96          cr 0.026086957
97          cs 0.034782609
98          ct 0.017391304
99          cu 0.026086957
100         cv 0.026086957
101         cw 0.026086957
102         cx 0.017391304
103         cy 0.043478261
104         cz 0.008695652
105         da 0.034782609
106         db 0.017391304
107         dc 0.060869565
108         dd 0.008695652
109         de 0.008695652
110         df 0.017391304
111         dg 0.008695652
112         dh 0.008695652
113         di 0.017391304
114         dj 0.008695652
115         dk 0.008695652

print(sort_normal_qual(inpt_datf = datf_test))

0.00869565217391304 0.00869565217391304 0.00869565217391304 0.00869565217391304
            "aa"                "cb"                "cz"                "de"
0.00869565217391304 0.00869565217391304  0.0173913043478261  0.0173913043478261
            "dh"                "dk"                "bp"                "ca"
 0.0173913043478261  0.0173913043478261  0.0173913043478261  0.0173913043478261
```

```
              "cl"               "cp"               "ct"               "db"
0.0173913043478261 0.0260869565217391 0.0260869565217391 0.0347826086956522
              "di"               "cr"               "cv"               "bz"
0.0347826086956522 0.0434782608695652 0.0434782608695652 0.0521739130434783
              "da"               "bh"               "cy"               "ck"
0.0608695652173913 0.0695652173913043 0.0782608695652174 0.0869565217391304
              "cg"                "f"               "bt"               "ax"
0.0956521739130435 0.0956521739130435  0.104347826086957  0.11304347826087
               "r"               "cn"               "bg"                "w"
 0.11304347826087  0.121739130434783  0.147826086956522  0.165217391304348
              "co"               "bs"                "n"               "bb"
0.173913043478261  0.173913043478261  0.191304347826087                0.2
              "ag"               "bu"               "bk"               "bi"
0.208695652173913  0.226086956521739  0.234782608695652  0.234782608695652
              "bw"               "am"                "b"                "o"
0.234782608695652  0.243478260869565  0.243478260869565  0.252173913043478
              "aq"                "m"               "by"               "at"
0.278260869565217  0.278260869565217   0.28695652173913  0.295652173913043
               "k"               "ai"                "l"               "al"
0.295652173913043  0.321739130434783  0.321739130434783  0.330434782608696
              "az"                "c"               "af"               "ac"
0.347826086956522  0.347826086956522  0.382608695652174  0.391304347826087
               "i"               "ae"                "z"               "bf"
0.408695652173913  0.417391304347826                0.4  0.391304347826087
              "bc"                "q"                "h"                "v"
0.347826086956522  0.347826086956522  0.339130434782609  0.330434782608696
              "aj"               "ab"                "d"                "e"
0.321739130434783   0.31304347826087  0.295652173913043  0.295652173913043
              "ad"                "s"               "an"                "x"
0.278260869565217  0.278260869565217  0.269565217391304  0.252173913043478
              "aw"               "ah"               "bd"                "p"
0.243478260869565  0.234782608695652  0.234782608695652  0.234782608695652
               "y"               "br"               "ao"                "g"
0.226086956521739  0.208695652173913  0.208695652173913                0.2
              "bn"               "ci"                "a"               "ay"
0.173913043478261  0.173913043478261  0.165217391304348  0.147826086956522
              "cc"               "ar"               "bm"               "cd"
0.130434782608696  0.121739130434783   0.11304347826087  0.104347826086957
               "u"               "bq"               "ap"               "bv"
0.104347826086957 0.0956521739130435 0.0869565217391304 0.0869565217391304
              "be"               "bj"               "bo"               "av"
0.0782608695652174 0.0608695652173913 0.0608695652173913 0.0521739130434783
              "au"               "dc"               "ce"               "ba"
0.0434782608695652 0.0434782608695652 0.0347826086956522 0.0260869565217391
              "cj"                "j"               "cs"               "cw"
0.0260869565217391 0.0260869565217391 0.0173913043478261 0.0173913043478261
              "cu"               "ak"               "df"               "cx"
0.0173913043478261 0.0173913043478261 0.0173913043478261 0.0173913043478261
              "cq"               "cm"               "cf"               "bx"
0.0173913043478261 0.00869565217391304 0.00869565217391304 0.00869565217391304
              "as"               "dj"               "dg"               "dd"
0.00869565217391304 0.00869565217391304 0.00869565217391304
              "ch"               "bl"                "t"
```

sort_normal_qual2 *sort_normal_qual2*

Description

Sort qualitative modalities that have their frequency normally distributed from an unordered dataset, see examples. This function uses an another algorythm than choose_normal_qual which may be faster.

Usage

```
sort_normal_qual2(inpt_datf)
```

Arguments

inpt_datf   is the input dataframe, containing the values in the first column and their frequency in the second

Examples

```
sample_val <- round(rnorm(n = 2000, mean = 12, sd = 2), 1)
sample_freq <- unique_total(sample_val)
sample_qual <- infinite_char_seq(n = length(sample_freq))
datf_test <- data.frame(sample_qual, sample_freq)
datf_test[, 2] <- datf_test[, 2] / sum(datf_test[, 2])

print(datf_test)

   sample_qual sample_freq
1            a 0.208695652
2            b 0.234782609
3            c 0.321739130
4            d 0.339130435
5            e 0.330434783
6            f 0.069565217
7            g 0.234782609
8            h 0.400000000
9            i 0.347826087
10           j 0.043478261
11           k 0.278260870
12           l 0.286956522
13           m 0.243478261
14           n 0.147826087
15           o 0.234782609
16           p 0.252173913
17           q 0.417391304
18           r 0.095652174
19           s 0.313043478
20           t 0.008695652
21           u 0.130434783
22           v 0.391304348
23           w 0.113043478
24           x 0.295652174
25           y 0.243478261
```

```
26              z 0.382608696
27             aa 0.008695652
28             ab 0.347826087
29             ac 0.330434783
30             ad 0.321739130
31             ae 0.347826087
32             af 0.321739130
33             ag 0.173913043
34             ah 0.278260870
35             ai 0.278260870
36             aj 0.347826087
37             ak 0.026086957
38             al 0.295652174
39             am 0.226086957
40             an 0.295652174
41             ao 0.234782609
42             ap 0.113043478
43             aq 0.234782609
44             ar 0.173913043
45             as 0.017391304
46             at 0.252173913
47             au 0.078260870
48             av 0.086956522
49             aw 0.278260870
50             ax 0.086956522
51             ay 0.200000000
52             az 0.295652174
53             ba 0.052173913
54             bb 0.165217391
55             bc 0.408695652
56             bd 0.269565217
57             be 0.104347826
58             bf 0.391304348
59             bg 0.104347826
60             bh 0.043478261
61             bi 0.200000000
62             bj 0.095652174
63             bk 0.191304348
64             bl 0.008695652
65             bm 0.165217391
66             bn 0.226086957
67             bo 0.086956522
68             bp 0.017391304
69             bq 0.121739130
70             br 0.234782609
71             bs 0.121739130
72             bt 0.078260870
73             bu 0.173913043
74             bv 0.104347826
75             bw 0.208695652
76             bx 0.017391304
77             by 0.243478261
78             bz 0.034782609
79             ca 0.017391304
80             cb 0.008695652
81             cc 0.173913043
82             cd 0.147826087
```

```
83          ce 0.060869565
84          cf 0.017391304
85          cg 0.060869565
86          ch 0.008695652
87          ci 0.208695652
88          cj 0.043478261
89          ck 0.052173913
90          cl 0.017391304
91          cm 0.017391304
92          cn 0.095652174
93          co 0.113043478
94          cp 0.017391304
95          cq 0.017391304
96          cr 0.026086957
97          cs 0.034782609
98          ct 0.017391304
99          cu 0.026086957
100         cv 0.026086957
101         cw 0.026086957
102         cx 0.017391304
103         cy 0.043478261
104         cz 0.008695652
105         da 0.034782609
106         db 0.017391304
107         dc 0.060869565
108         dd 0.008695652
109         de 0.008695652
110         df 0.017391304
111         dg 0.008695652
112         dh 0.008695652
113         di 0.017391304
114         dj 0.008695652
115         dk 0.008695652

print(sort_normal_qual2(inpt_datf = datf_test))

0.00869565217391304 0.00869565217391304 0.00869565217391304 0.00869565217391304
           "aa"                "cb"                "cz"                "de"
0.00869565217391304 0.00869565217391304  0.0173913043478261  0.0173913043478261
           "dh"                "dk"                "bp"                "ca"
 0.0173913043478261  0.0173913043478261  0.0173913043478261  0.0173913043478261
           "cl"                "cp"                "ct"                "db"
 0.0173913043478261  0.0260869565217391  0.0260869565217391  0.0347826086956522
           "di"                "cr"                "cv"                "bz"
 0.0347826086956522  0.0434782608695652  0.0434782608695652  0.0521739130434783
           "da"                "bh"                "cy"                "ck"
 0.0608695652173913  0.0695652173913043  0.0782608695652174  0.0869565217391304
           "cg"                 "f"                "bt"                "ax"
 0.0956521739130435  0.0956521739130435  0.104347826086957   0.11304347826087
            "r"                "cn"                "bg"                 "w"
  0.11304347826087   0.121739130434783   0.147826086956522   0.165217391304348
           "co"                "bs"                 "n"                "bb"
 0.173913043478261   0.173913043478261   0.191304347826087                0.2
           "ag"                "bu"                "bk"                "bi"
 0.208695652173913   0.226086956521739   0.234782608695652   0.234782608695652
           "bw"                "am"                 "b"                 "o"
 0.234782608695652   0.243478260869565   0.243478260869565   0.252173913043478
```

```
               "aq"                   "m"                  "by"                  "at"
  0.278260869565217     0.278260869565217      0.28695652173913    0.295652173913043
                "k"                  "ai"                   "l"                  "al"
  0.295652173913043     0.321739130434783     0.321739130434783    0.330434782608696
               "az"                   "c"                  "af"                  "ac"
  0.347826086956522     0.347826086956522     0.382608695652174    0.391304347826087
                "i"                  "ae"                   "z"                  "bf"
  0.408695652173913     0.417391304347826                   0.4    0.391304347826087
               "bc"                   "q"                   "h"                   "v"
  0.347826086956522     0.347826086956522     0.339130434782609    0.330434782608696
               "aj"                  "ab"                   "d"                   "e"
  0.321739130434783      0.31304347826087     0.295652173913043    0.295652173913043
               "ad"                   "s"                  "an"                   "x"
  0.278260869565217     0.278260869565217     0.269565217391304    0.252173913043478
               "aw"                  "ah"                  "bd"                   "p"
  0.243478260869565     0.234782608695652     0.234782608695652    0.234782608695652
                "y"                  "br"                  "ao"                   "g"
  0.226086956521739     0.208695652173913     0.208695652173913                   0.2
               "bn"                  "ci"                   "a"                  "ay"
  0.173913043478261     0.173913043478261     0.165217391304348    0.147826086956522
               "cc"                  "ar"                  "bm"                  "cd"
  0.130434782608696     0.121739130434783      0.11304347826087    0.104347826086957
                "u"                  "bq"                  "ap"                  "bv"
  0.104347826086957    0.0956521739130435    0.0869565217391304   0.0869565217391304
               "be"                  "bj"                  "bo"                  "av"
 0.0782608695652174    0.0608695652173913    0.0608695652173913   0.0521739130434783
               "au"                  "dc"                  "ce"                  "ba"
 0.0434782608695652    0.0434782608695652    0.0347826086956522   0.0260869565217391
               "cj"                   "j"                  "cs"                  "cw"
 0.0260869565217391    0.0260869565217391    0.0173913043478261   0.0173913043478261
               "cu"                  "ak"                  "df"                  "cx"
 0.0173913043478261    0.0173913043478261    0.0173913043478261   0.0173913043478261
               "cq"                  "cm"                  "cf"                  "bx"
 0.0173913043478261  0.00869565217391304   0.00869565217391304  0.00869565217391304
               "as"                  "dj"                  "dg"                  "dd"
0.00869565217391304  0.00869565217391304   0.00869565217391304
               "ch"                  "bl"                   "t"
```

---

split_by_step   *split_by_step*

Description

Allow to split a string or a vector of strings by a step, see examples.

Usage

```
split_by_step(inpt_v, by)
```

Arguments

inpt_v	is the input character or vector of characters
by	is the step

Examples

```
print(split_by_step(inpt_v = c("o", "u", "i", "n", "o", "o", "u", "i", "o", "Z"), by = 2)

 [1] "ou" "in" "oo" "ui" "oZ"

print(split_by_step(inpt_v = c("o", "u", "i", "n", "o", "o", "u", "i", "o", "Z"), by = 3)

 [1] "oui" "noo" "uio" "Z"

print(split_by_step(inpt_v = c("o", "u", "i", "n", "o", "o", "u", "i", "o", "Z"), by = 4)

 [1] "ouin" "ooui" "oZ"

print(split_by_step(inpt_v = 'ouinoouioz', by = 4))

 [1] "ouin" "ooui" "oZ"
```

```
str_remove_untl          str_remove_untl
```

Description

Allow to remove pattern within elements from a vector precisely according to their occurence.

Usage

```
str_remove_untl(
  inpt_v,
  ptrn_rm_v = c(),
  untl = list(c(1)),
  nvr_following_ptrn = "NA"
)
```

Arguments

`inpt_v`	is the input vector
`ptrn_rm_v`	is a vector containing the patterns to remove
`untl`	is a list containing the occurence(s) of each pattern to remove in the elements.
`nvr_following_ptrn`	is a sequel of characters that you are sure is not present in any of the elements in inpt_v

Examples

```
vec <- c("45/56-/98mm", "45/56-/98mm", "45/56-/98-mm//")

print(str_remove_untl(inpt_v=vec, ptrn_rm_v=c("-", "/"), untl=list(c("max"), c(1))))

#[1] "4556/98mm"    "4556/98mm"    "4556/98mm//"

print(str_remove_untl(inpt_v=vec, ptrn_rm_v=c("-", "/"), untl=list(c("max"), c(1:2))))
```

```
#[1] "455698mm"   "455698mm"   "455698mm//"

print(str_remove_untl(inpt_v=vec[1], ptrn_rm_v=c("-", "/"), untl=c("max")))

#[1] "455698mm" "455698mm" "455698mm"
```

---

sub_mult   *sub_mult*

Description

Performs a sub operation with n patterns and replacements.

Usage

```
sub_mult(inpt_v, pattern_v = c(), replacement_v = c())
```

Arguments

inpt_v	is a vector containing all the elements that contains expressions to be substituted
pattern_v	is a vector containing all the patterns to be substituted in any elements of inpt_v
replacement_v	
	is a vector containing the expression that are going to substituate those provided by pattern_v

Examples

```
print(sub_mult(inpt_v = c("X and Y programming languages are great", "More X, more X!"),
               pattern_v = c("X", "Y", "Z"),
               replacement_v = c("C", "R", "GO")))

[1] "C and R programming languages are great"
[2] "More C, more X!"
```

---

successive_diff   *successive_diff*

Description

Allow to see the difference beteen the suxxessive elements of an numeric vector

Usage

```
successive_diff(inpt_v)
```

Arguments

inpt_v	is the input numeric vector

Examples

```
print(successive_diff(c(1:10)))

[1] 1 1 1 1 1

print(successive_diff(c(1:11, 13, 19)))

[1] 1 1 1 1 1 2 6
```

---

sum_group1	*sum_group1*

Description

Allow to aggregate variables according to groups, do not visually group the individual unlike
sum_group2, see examples

Usage

```
sum_group1(inpt_datf, col_grp = c(), col_to_add = c())
```

Arguments

inpt_datf	is the input dataframe
col_grp	is a vector containing the column names or the column numbers of the groups
col_to_add	is a vector containing the column names or the column numbers of the variables to aggregate

Examples

```
set.seed(123)
datf <- data.frame("country" = c("France", "Germany", "France", "Italy", "Italy", "France
                   "year" = c(2012, 2012, 2013, 2011, 2012, 2011),
                   "comp_arm" = c("higher", "lower", "higher", "higher", "lower", "lower"
                   "pop" = runif(n = 6, min = 65000000, max = 69000000),
                   "random_var" = round(x = runif(n = 6, min = 16, max = 78), digits = 0)
datf

  country year comp_arm      pop random_var
1  France 2012   higher 66150310         49
2 Germany 2012    lower 68153221         71
3  France 2013   higher 66635908         50
4   Italy 2011   higher 68532070         44
5   Italy 2012    lower 68761869         75
6  France 2011    lower 65182226         44

print(sum_group1(inpt_datf = datf, col_grp = c("country", "year"), col_to_add = c("random

  country year comp_arm      pop random_var
1  France 2012   higher 66150310         49
2 Germany 2012    lower 68153221         71
3  France 2013   higher 66635908         50
```

```
4    Italy 2011    higher 68532070           44
5    Italy 2012    lower 68761869            75
6  France 2011    lower 65182226            44
```

```
print(sum_group1(inpt_datf = datf, col_grp = c("year"), col_to_add = c("random_var", "pop
```

```
   country year comp_arm        pop random_var
1  France 2012    higher 203065400          195
2 Germany 2012    lower 203065400           195
3  France 2013    higher  66635908           50
4    Italy 2011    higher 133714296          88
5    Italy 2012    lower 203065400           195
6  France 2011    lower 133714296           88
```

```
print(sum_group1(inpt_datf = datf, col_grp = c("country"), col_to_add = c("random_var", "
```

```
   country year comp_arm        pop random_var
1  France 2012    higher 197968444          143
2 Germany 2012    lower  68153221           71
3  France 2013    higher 197968444          143
4    Italy 2011    higher 137293939          119
5    Italy 2012    lower 137293939          119
6  France 2011    lower 197968444           143
```

```
set.seed(123)
pop_v <- runif(n = 6, min = 65000000, max = 69000000)
pop_v[c(1, 3)] <- NA
set.seed(123)
datf <- data.frame("country" = c("France", "Germany", "France", "Italy", "Italy", "France
                   "year" = c(2012, 2012, 2013, 2011, 2012, 2011),
                   "comp_arm" = c("higher", "lower", "higher", "higher", "lower", "lower"
                   "pop" = pop_v,
                   "random_var" = round(x = runif(n = 6, min = 16, max = 78), digits = 0)
datf
```

```
   country year comp_arm        pop random_var
1  France 2012    higher        NA         34
2 Germany 2012    lower 68153221           65
3  France 2013    higher        NA         41
4    Italy 2011    higher 68532070          71
5    Italy 2012    lower 68761869           74
6  France 2011    lower 65182226           19
```

```
print(sum_group1(inpt_datf = datf, col_grp = c("year"), col_to_add = c("random_var", "pop
```

```
   country year comp_arm        pop random_var
1  France 2012    higher 136915090          173
2 Germany 2012    lower 136915090          173
3  France 2013    higher        NA         41
4    Italy 2011    higher 133714296          90
5    Italy 2012    lower 136915090          173
6  France 2011    lower 133714296           90
```

---

sum_group2   *sum_group2*

Description

Allow to aggregate variables according to groups, see examples

Usage

```
sum_group2(inpt_datf, col_grp = c(), col_to_add = c())
```

Arguments

`inpt_datf`	is the input dataframe
`col_grp`	is a vector containing the column names or the column numbers of the groups
`col_to_add`	is a vector containing the column names or the column numbers of the variables to aggregate

Examples

```
set.seed(123)
datf <- data.frame("country" = c("France", "Germany", "France", "Italy", "Italy", "France
                   "year" = c(2012, 2012, 2013, 2011, 2012, 2011),
                   "comp_arm" = c("higher", "lower", "higher", "higher", "lower", "lower"
                   "pop" = runif(n = 6, min = 65000000, max = 69000000),
                   "random_var" = round(x = runif(n = 6, min = 16, max = 78), digits = 0)
datf

  country year comp_arm      pop random_var
1  France 2012   higher 66150310         49
2 Germany 2012    lower 68153221         71
3  France 2013   higher 66635908         50
4   Italy 2011   higher 68532070         44
5   Italy 2012    lower 68761869         75
6  France 2011    lower 65182226         44

print(sum_group2(inpt_datf = datf, col_grp = c("country"), col_to_add = c("random_var", "

  country year comp_arm       pop random_var
1  France 2012   higher 197968444        143
3  France 2013   higher 197968444        143
6  France 2011    lower 197968444        143
2 Germany 2012    lower  68153221         71
4   Italy 2011   higher 137293939        119
5   Italy 2012    lower 137293939        119

print(sum_group2(inpt_datf = datf, col_grp = c("year"), col_to_add = c("random_var", "pop

  country year comp_arm       pop random_var
1  France 2012   higher 203065400        195
2 Germany 2012    lower 203065400        195
5   Italy 2012    lower 203065400        195
3  France 2013   higher  66635908         50
4   Italy 2011   higher 133714296         88
6  France 2011    lower 133714296         88

print(sum_group2(inpt_datf = datf, col_grp = c("country", "year"), col_to_add = c("random

  country year comp_arm       pop random_var
```

```
1  France 2012   higher 66150310        49
2 Germany 2012    lower 68153221        71
3  France 2013   higher 66635908        50
4   Italy 2011   higher 68532070        44
5   Italy 2012    lower 68761869        75
6  France 2011    lower 65182226        44

set.seed(123)
pop_v <- runif(n = 6, min = 65000000, max = 69000000)
pop_v[c(1, 3)] <- NA
set.seed(123)
datf <- data.frame("country" = c("France", "Germany", "France", "Italy", "Italy", "France
                   "year" = c(2012, 2012, 2013, 2011, 2012, 2011),
                   "comp_arm" = c("higher", "lower", "higher", "higher", "lower", "lower"
                   "pop" = pop_v,
                   "random_var" = round(x = runif(n = 6, min = 16, max = 78), digits = 0)
datf
  country year comp_arm       pop random_var
1  France 2012   higher        NA         34
2 Germany 2012    lower 68153221         65
3  France 2013   higher        NA         41
4   Italy 2011   higher 68532070         71
5   Italy 2012    lower 68761869         74
6  France 2011    lower 65182226         19

print(sum_group2(inpt_datf = datf, col_grp = c("year"), col_to_add = c("random_var", "pop

  country year comp_arm       pop random_var
1  France 2012   higher 136915090        173
2 Germany 2012    lower 136915090        173
5   Italy 2012    lower 136915090        173
3  France 2013   higher        NA         41
4   Italy 2011   higher 133714296         90
6  France 2011    lower 133714296         90
```

---

swipr   *swipr*

Description

Returns an ordered dataframes according to the elements order given. The input datafram has two columns, one with the ids which can be bonded to multiple elements in the other column.

Usage

```
swipr(inpt_datf, how_to = c(), id_w = 2, id_ids = 1)
```

Arguments

inpt_datf	is the input dataframe
how_to	is a vector containing the elements in the order wanted
id_w	is the column number or the column name of the elements
id_ids	is the column number or the column name of the ids

Examples

```
datf <- data.frame("col1"=c("Af", "Al", "Al", "Al", "Arg", "Arg", "Arg", "Arm", "Arm", "A

            "col2"=c("B", "B", "G", "S", "B", "S", "G", "B", "G", "B"))

print(swipr(inpt_datf=datf, how_to=c("G", "S", "B")))

   col1 col2
1    Af    B
2    Al    G
3    Al    S
4    Al    B
5   Arg    G
6   Arg    S
7   Arg    B
8   Arm    G
9   Arm    B
10   Al    B
```

---

test_order	*test_order*

Description

Allow to get if two vectors have their commun elements in the same order, see examples

Usage

```
test_order(inpt_v_from, inpt_v_test)
```

Arguments

is   the vector we want to test if its commun element with inpt_v_from are in the
              same order

Examples

```
print(test_order(inpt_v_from = c(1:8), inpt_v_test = c(1, 4)))

[1] TRUE

print(test_order(inpt_v_from = c(1:8), inpt_v_test = c(1, 4, 2)))

[1] FALSE
```

```
to_unique                          to_unique
```

Description

Allow to transform a vector containing elements that have more than 1 occurence to a vector with only uniques elements.

Usage

```
to_unique(inpt_v, distinct_type = "suffix", distinct_val = "number", sep = "-")
```

Arguments

inpt_v   is the input vectors

distinct_type
                  takes two values: suffix or prefix

distinct_val takes two values: number (unique sequence of number to differencfiate each
                  value) or letter (unique sequence of letters to differenciate each value)

Examples

```
print(to_unique(inpt_v = c("a", "a", "e", "a", "i", "i"),
                distinct_type = "suffix",
                distinct_val = "number",
                sep = "-"))

[1] "a-1" "a-2" "e"   "a-3" "i-1" "i-2"

print(to_unique(inpt_v = c("a", "a", "e", "a", "i", "i"),
                distinct_type = "suffix",
                distinct_val = "letter",
                sep = "-"))

[1] "a-a" "a-b" "e"   "a-c" "i-a" "i-b"

print(to_unique(inpt_v = c("a", "a", "e", "a", "i", "i"),
                distinct_type = "prefix",
                distinct_val = "number",
                sep = "/"))

[1] "1/a" "2/a" "e"   "3/a" "1/i" "2/i"

print(to_unique(inpt_v = c("a", "a", "e", "a", "i", "i"),
                distinct_type = "prefix",
                distinct_val = "letter",
                sep = "_"))

[1] "a_a" "b_a" "e"   "c_a" "a_i" "b_i"
```

---

union_all   *union_all*

Description

Allow to perform a union function to n vectors.

Usage

```
union_all(...)
```

Arguments

...   are all the input vectors

Examples

```
print(union_all(c(1, 2), c(3, 4), c(1:8)))

[1] 1 2 3 4 5 6 7 8

print(union_all(c(1, 2), c(3, 4), c(7:8)))

[1] 1 2 3 4 7 8
```

---

union_keep   *union_keep*

Description

Performs a union operation keeping the number of elements of all input vectors, see examples

Usage

```
union_keep(...)
```

Arguments

...   are all the input vectors

Examples

```
print(union_keep(c("a", "ee", "ee"), c("p", "p", "a", "i"), c("a", "a", "z")))

[1] "a"  "ee" "ee" "p"  "p"  "i"  "z"

print(union_keep(c("a", "ee", "ee"), c("p", "p", "a", "i")))

[1] "a"  "ee" "ee" "p"  "p"  "i"
```

---

unique_datf   *unique_datf*

Description

Returns the input dataframe with the unique columns or rows.

Usage

```
unique_datf(inpt_datf, col = FALSE)
```

Arguments

inpt_datf   is the input dataframe

col   is a parameter that specifies if the dataframe returned should have unique columns
               or rows, defaults to F, so the dataframe returned by default has unique rows

Examples

```
datf1 <- data.frame(c(1, 2, 1, 3), c("a", "z", "a", "p"))

print(datf1)

  c.1..2..1..3. c..a....z....a....p.. c.1..2..1..3..1
1             1                     a               1
2             2                     z               2
3             1                     a               1
4             3                     p               3

print(unique_datf(inpt_datf=datf1))

#   c.1..2..1..3. c..a....z....a....p..
#1             1                     a
#2             2                     z
#4             3                     p

datf1 <- data.frame(c(1, 2, 1, 3), c("a", "z", "a", "p"), c(1, 2, 1, 3))

print(datf1)

  c.1..2..1..3. c..a....z....a....p..
1             1                     a
2             2                     z
3             1                     a
4             3                     p

print(unique_datf(inpt_datf=datf1, col=TRUE))

#   cur_v cur_v
#1     1     a
#2     2     z
#3     1     a
#4     3     p
```

```
unique_ltr_from_v   unique_ltr_from_v
```

Description

Returns the unique characters contained in all the elements from an input vector "inpt_v"

Usage

```
unique_ltr_from_v(inpt_v, keep_v = c("?", "!", ":", "&", ",", ".", letters))
```

Arguments

`inpt_v`	is the input vector containing all the elements
`keep_v`	is the vector containing all the characters that the elements in inpt_v may contain

Examples

```
print(unique_ltr_from_v(inpt_v=c("bonjour", "lpoerc", "nonnour", "bonnour", "nonjour", "a
```

```
#[1] "b" "o" "n" "j" "u" "r" "l" "p" "e" "c" "a" "v" "i"
```

```
unique_pos         unique_pos
```

Description

Allow to find the first index of the unique values from a vector.

Usage

```
unique_pos(vec)
```

Arguments

`vec`	is the input vector

Examples

```
print(unique_pos(vec=c(3, 4, 3, 5, 6)))
```

```
#[1] 1 2 4 5
```

`unique_total`   *unique_total*

Description

Returns a vector with the total amount of occurences for each element in the input vector. The occurences of each element follow the same order as the unique function does, see examples

Usage

```
unique_total(inpt_v = c())
```

Arguments

inpt_v   is the input vector containing all the elements

Examples

```
print(unique_total(inpt_v = c(1:12, 1)))

 [1] 2 1 1 1 1 1 1 1 1 1 1 1

print(unique_total(inpt_v = c(1:12, 1, 11, 11)))

 [1] 2 1 1 1 1 1 1 1 1 1 3 1

vec <- c(1:12, 1, 11, 11)
names(vec) <- c(1:15)
print(unique_total(inpt_v = vec))

 1  2  3  4  5  6  7  8  9 10 11 12
 2  1  1  1  1  1  1  1  1  1  3  1
```

`until_stnl`   *until_stnl*

Description

Maxes a vector to a chosen length. ex: if i want my vector c(1, 2) to be 5 of length this function will return me: c(1, 2, 1, 2, 1)

Usage

```
until_stnl(vec1, goal)
```

Arguments

vec1   is the input vector

goal   is the length to reach

Examples

```
print(until_stnl(vec1=c(1, 3, 2), goal=56))

# [1] 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3
#[39] 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3 2 1 3
```

---

val_replacer *val_replacer*

Description

Allow to replace value from dataframe to another one.

Usage

```
val_replacer(datf, val_replaced, val_replacor = TRUE)
```

Arguments

datf   is the input dataframe

val_replaced is a vector of the value(s) to be replaced

val_replacor is the value that will replace val_replaced

Examples

```
print(val_replacer(datf=data.frame(c(1, "oo4", TRUE, FALSE), c(TRUE, FALSE, TRUE, TRUE)),
     val_replaced=c(TRUE), val_replacor="NA"))

#  c.1...oo4...T..F. c.T..F..T..T.
#1                1           NA
#2              oo4        FALSE
#3               NA           NA
#4            FALSE           NA
```

---

vector_replacor *vector_replacor*

Description

Allow to replace certain values in a vector.

Usage

```
vector_replacor(inpt_v = c(), sus_val = c(), rpl_val = c(), grep_ = FALSE)
```

Arguments

`inpt_v`	is the input vector
`sus_val`	is a vector containing all the values that will be replaced
`rpl_val`	is a vector containing the value of the elements to be replaced (sus_val), so sus_val and rpl_val should be the same size
`grep_`	is if the elements in sus_val should be equal to the elements to replace in inpt_v or if they just should found in the elements

Examples

```
print(vector_replacor(inpt_v=c(1:15), sus_val=c(3, 6, 8, 12),
    rpl_val=c("oui", "non", "e", "a")))

# [1] "1"   "2"   "oui" "4"   "5"   "non" "7"   "e"   "9"   "10"  "11"  "a"
#[13] "13"  "14"  "15"

print(vector_replacor(inpt_v=c("non", "zez", "pp a ftf", "fdatfd", "assistance",
"ert", "repas", "repos"),
sus_val=c("pp", "as", "re"), rpl_val=c("oui", "non", "zz"), grep_=TRUE))

#[1] "non"  "zez"  "oui"  "fdatfd" "non"  "ert"  "non"  "zz"
```

`vec_in_datf`	*vec_in_datf*

Description

Allow to get if a vector is in a dataframe. Returns the row and column of the vector in the dataframe if the vector is contained in the dataframe.

Usage

```
vec_in_datf(
  inpt_datf,
  inpt_vec = c(),
  coeff = 0,
  stop_untl = 1,
  conventional = FALSE
)
```

Arguments

`inpt_datf`	is the input dataframe
`inpt_vec`	is the vector that may be in the input dataframe
`coeff`	is the "slope coefficient" of inpt_vec
`stop_untl`	is the maximum number of the input vector the function returns, if in the dataframe
`conventional`	is if a positive slope coefficient means that the vector goes upward or downward

Examples

```
datf1 <- data.frame(c(1:5), c(5:1), c("a", "z", "z", "z", "a"))

print(datf1)

#  c.1.5. c.5.1. c..a....z....z....z....a..
#1     1     5                             a
#2     2     4                             z
#3     3     3                             z
#4     4     2                             z
#5     5     1                             a

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(5, 4, "z"), coeff=1))

#NULL

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(5, 2, "z"), coeff=1))

#[1] 5 1

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(3, "z"), coeff=1))

#[1] 3 2

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(4, "z"), coeff=-1))

#[1] 2 2

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(2, 3, "z"), coeff=-1))

#[1] 2 1

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(5, 2, "z"), coeff=-1, conventional=TRUE))

#[1] 5 1

datf1[4, 2] <- 1

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(1, "z"), coeff=-1, conventional=TRUE, stop_

#[1] 4 2 5 2
```

```
vlookup_datf              vlookup_datf
```

Description

Alow to perform a vlookup on a dataframe

Usage

```
vlookup_datf(datf, v_id, col_id = 1, included_col_id = "yes")
```

Arguments

`datf`	is the input dataframe
`v_id`	is a vector containing the ids
`col_id`	is the column that contains the ids (default is equal to 1)
`included_col_id`	
	is if the result should return the col_id (default set to yes)

Examples

```
datf1 <- data.frame(c("az1", "az3", "az4", "az2"), c(1:4), c(4:1))

print(vlookup_datf(datf=datf1, v_id=c("az1", "az2", "az3", "az4")))

#   c..az1....az3....az4....az2.. c.1.4. c.4.1.
#2                            az1    1      4
#4                            az2    4      1
#21                           az3    2      3
#3                            az4    3      2
```

`wider_datf`	*wider_datf*

Description

Takes a dataframe as an input and the column to split according to a seprator.

Usage

```
wider_datf(inpt_datf, col_to_splt = c(), sep_ = "-")
```

Arguments

`inpt_datf`	is the input dataframe
`col_to_splt`	is a vector containing the number or the colnames of the columns to split according to a separator
`sep_`	is the separator of the elements to split to new columns in the input dataframe

Examples

```
datf1 <- data.frame(c(1:5), c("o-y", "hj-yy", "er-y", "k-ll", "ooo-mm"), c(5:1))

datf2 <- data.frame("col1"=c(1:5), "col2"=c("o-y", "hj-yy", "er-y", "k-ll", "ooo-mm"))

print(wider_datf(inpt_datf=datf1, col_to_splt=c(2), sep_="-"))

#       pre_datf X.o.  X.y.
#o-y    1        "o"   "y"  5
#hj-yy  2        "hj"  "yy" 4
#er-y   3        "er"  "y"  3
#k-ll   4        "k"   "ll" 2
```

```
#ooo-mm 5        "ooo" "mm" 1

print(wider_datf(inpt_datf=datf2, col_to_splt=c("col2"), sep_="-"))

#        pre_datf X.o.  X.y.
#o-y    1        "o"   "y"
#hj-yy  2        "hj"  "yy"
#er-y   3        "er"  "y"
#k-ll   4        "k"   "ll"
#ooo-mm 5        "ooo" "mm"
```

`wide_to_narrow_idx` *wide_to_narow_idx*

Description

Allow to convert the indices of vector ('from_v_ids') which are related to each characters of a vector, to fit the newly established maximum character of the vector, see examples.

Usage

```
wide_to_narrow_idx(from_v_val = c(), from_v_ids = c(), val = 1)
```

Arguments

`from_v_val`	is the input vector of elements, or just the total number of characters of the elementsq in the vector
`from_v_ids`	is the input vector of indices
`val`	is the value - 1 from which the number of character of an element is too high, so the indices in 'from_v_ids' will be modified

Examples

```
print(wide_to_narrow_idx(from_v_val = c("oui", "no", "oui"), from_v_ids = c(4, 6, 9), val

[1] 2 4 5

print(wide_to_narrow_idx(from_v_val = c("oui", "no", "oui"), from_v_ids = c(4, 6, 9), val

[1] 2 2 3

print(wide_to_narrow_idx(from_v_val = c("oui", "no", "oui"), from_v_ids = c(4, 6, 9), val

[1] 4 6 9
```

---

write_edm_parser   *write_edm_parser*

Description

Allow to write data to edm parsed dataset, see examples

Usage

```
write_edm_parser(inpt, to_write_v, write_data)
```

Arguments

inpt   is the input dataset

to_write_v   is the vector containing the path to write the data, see examples

Examples

```
print(write_edm_parser("(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ee1:4))",
to_write_v = c("ok", "ee"), write_data = c("ii", "olm")))

[1] "(ok(ee:56)(ii:olm))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ee1:4))"

print(write_edm_parser("(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ee1:4))",
to_write_v = c("ok", "oui"), write_data = c("ii", "olm")))

[1] "(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(ii:olm)(oui(bb(rr2:1)))(ee1:4))"

print(write_edm_parser("(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ee1:4))",
to_write_v = c("ok", "oui", "oui"), write_data = c("ii", "olm")))

[1] "(ok(ee:56))(ok(oui(rr((rr2:6)(rr:5))))(oui(bb(rr2:1)))(ii:olm)(ee1:4))"

print(write_edm_parser("",
to_write_v = c(), write_data = c("ii", "olm")))

[1] "(ii:olm)"
```

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