Package 'edm1'

June 15, 2024

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.

License GPL (==3)

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.1

Imports stringr,
stringi,
dplyr,
openxlsx

Contents

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"
```

`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_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"
```

---

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
```

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
```

---

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 *v_to_datf*

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"
```

`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
```

---

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???????????"
```

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
```

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!"
```

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_datf*

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` *edm1 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 containg 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
```

`leap_yr` *bsx_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
```

---

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
```

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

```
[1] "3"   "oui"
```

nb_follow *nb_follow*

Description

Allow to get the number of certains patterns that may be after an index of a vector, 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 coordinates 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
```

---

non_unique *non_unique*

Description

Returns the element that are not unique from the input vector

Usage

```
non_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 ">". Occu can also be a vector containing all the occurence that must have the elements to be returned.

Examples

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

#[1] "oui" "non"

print(non_unique(inpt_v=c("oui", "oui", "non", "non", "peut", "peut1", "non"), occu="==-2

#[1] "oui"

print(non_unique(inpt_v=c("oui", "oui", "non", "non", "peut", "peut1", "non"), occu=">-2-

#[1] "non"

print(non_unique(inpt_v=c("oui", "oui", "non", "non", "peut", "peut1", "non"), occu=c(1,

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

`normal_dens` *normal_dens*

Description

Calculates the normal distribution probality, see examples

Usage

```
normal_dens(target_v = c(), mean, sd, step = 0.01)
```

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
`step`	is used for bounded target values for the accuracy of the output, defaults to 1 / 100

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 conjuntion 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 conjuntion 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"
```

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="c

#[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"         "000000.18"
```

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"
```

---

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\\)"
```

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"
```

---

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_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
```

`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      0.0185
2             b      0.0245
3             c      0.0150
4             d      0.0040
5             e      0.0065
6             f      0.0100
7             g      0.0055
8             h      0.0115
9             i      0.0155
10            j      0.0145
11            k      0.0145
12            l      0.0040
13            m      0.0125
14            n      0.0175
15            o      0.0180
16            p      0.0160
```

17	q	0.0120
18	r	0.0160
19	s	0.0090
20	t	0.0160
21	u	0.0215
22	v	0.0180
23	w	0.0060
24	x	0.0120
25	y	0.0115
26	z	0.0205
27	aa	0.0140
28	ab	0.0200
29	ac	0.0220
30	ad	0.0010
31	ae	0.0175
32	af	0.0130
33	ag	0.0170
34	ah	0.0165
35	ai	0.0090
36	aj	0.0195
37	ak	0.0175
38	al	0.0185
39	am	0.0175
40	an	0.0130
41	ao	0.0170
42	ap	0.0070
43	aq	0.0140
44	ar	0.0040
45	as	0.0185
46	at	0.0080
47	au	0.0105
48	av	0.0145
49	aw	0.0045
50	ax	0.0165
51	ay	0.0010
52	az	0.0100
53	ba	0.0050
54	bb	0.0035
55	bc	0.0195
56	bd	0.0240
57	be	0.0120
58	bf	0.0050
59	bg	0.0130
60	bh	0.0225
61	bi	0.0170
62	bj	0.0095
63	bk	0.0050
64	bl	0.0025
65	bm	0.0160
66	bn	0.0005
67	bo	0.0040
68	bp	0.0085
69	bq	0.0070
70	br	0.0210
71	bs	0.0090
72	bt	0.0005
73	bu	0.0060

```
74           bv      0.0070
75           bw      0.0010
76           bx      0.0080
77           by      0.0005
78           bz      0.0030
79           ca      0.0035
80           cb      0.0020
81           cc      0.0020
82           cd      0.0055
83           ce      0.0035
84           cf      0.0010
85           cg      0.0120
86           ch      0.0010
87           ci      0.0040
88           cj      0.0015
89           ck      0.0055
90           cl      0.0035
91           cm      0.0045
92           cn      0.0015
93           co      0.0030
94           cp      0.0025
95           cq      0.0015
96           cr      0.0015
97           cs      0.0010
98           ct      0.0005
99           cu      0.0005
100          cv      0.0010
101          cw      0.0020
102          cx      0.0020
103          cy      0.0015
104          cz      0.0010
105          da      0.0010
106          db      0.0005
107          dc      0.0005
108          dd      0.0005
109          de      0.0005
110          df      0.0005
111          dg      0.0005
112          dh      0.0015
113          di      0.0010
114          dj      0.0005
115          dk      0.0005
116          dl      0.0005
117          dm      0.0005
```

```
print(sort_normal_qual(inpt_datf = datf_test,
                       mean = 12,
                       sd = 2
                       ))
```

```
 5e-04  5e-04  5e-04  5e-04  5e-04  5e-04  5e-04  0.001  0.001  0.001  0.001
  "bt"   "ct"   "db"   "dd"   "df"   "dj"   "dl"   "ad"   "bw"   "ch"   "cv"
 0.001 0.0015 0.0015 0.0015  0.002  0.002 0.0025  0.003 0.0035 0.0035  0.004
  "da"   "cj"   "cq"   "cy"   "cb"   "cw"   "bl"   "bz"   "bb"   "ce"    "d"
 0.004  0.004 0.0045  0.005 0.0055 0.0055  0.006  0.007  0.007  0.008  0.009
  "ar"   "ci"   "cm"   "bf"    "g"   "ck"   "bu"   "ap"   "bv"   "bx"    "s"
 0.009   0.01 0.0105 0.0115  0.012  0.012  0.013  0.013  0.014 0.0145  0.015
```

```
  "bs"    "f"   "au"    "y"    "x"   "cg"   "af"   "bg"   "aq"    "k"    "c"
 0.016  0.016 0.0165  0.017  0.017 0.0175 0.0175  0.018 0.0185 0.0195   0.02
   "p"    "t"   "ah"   "ag"   "bi"   "ae"   "am"    "v"   "al"   "aj"   "ab"
 0.021  0.022  0.024 0.0225 0.0215 0.0205 0.0195 0.0185 0.0185  0.018 0.0175
  "br"   "ac"   "bd"   "bh"    "u"    "z"   "bc"   "as"    "a"    "o"   "ak"
0.0175  0.017 0.0165  0.016  0.016 0.0155 0.0145 0.0145  0.014  0.013 0.0125
   "n"   "ao"   "ax"   "bm"    "r"    "i"   "av"    "j"   "aa"   "an"    "m"
 0.012  0.012 0.0115   0.01 0.0095  0.009 0.0085  0.008  0.007 0.0065  0.006
  "be"    "q"    "h"   "az"   "bj"   "ai"   "bp"   "at"   "bq"    "e"    "w"
0.0055  0.005  0.005 0.0045  0.004  0.004 0.0035 0.0035  0.003 0.0025  0.002
  "cd"   "bk"   "ba"   "aw"   "bo"    "l"   "cl"   "ca"   "co"   "cp"   "cx"
 0.002 0.0015 0.0015 0.0015  0.001  0.001  0.001  0.001  0.001  5e-04  5e-04
  "cc"   "dh"   "cr"   "cn"   "di"   "cz"   "cs"   "cf"   "ay"   "dm"   "dk"
 5e-04  5e-04  5e-04  5e-04  5e-04  5e-04
  "dg"   "de"   "dc"   "cu"   "by"   "bn"
```

`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      0.0185
2           b      0.0125
3           c      0.0210
4           d      0.0185
5           e      0.0120
6           f      0.0165
7           g      0.0065
8           h      0.0235
```

```
9            i      0.0145
10           j      0.0045
11           k      0.0060
12           l      0.0055
13           m      0.0140
14           n      0.0095
15           o      0.0195
16           p      0.0020
17           q      0.0115
18           r      0.0190
19           s      0.0165
20           t      0.0200
21           u      0.0170
22           v      0.0200
23           w      0.0180
24           x      0.0045
25           y      0.0165
26           z      0.0025
27          aa      0.0185
28          ab      0.0015
29          ac      0.0140
30          ad      0.0025
31          ae      0.0130
32          af      0.0105
33          ag      0.0240
34          ah      0.0005
35          ai      0.0130
36          aj      0.0100
37          ak      0.0230
38          al      0.0140
39          am      0.0135
40          an      0.0135
41          ao      0.0035
42          ap      0.0105
43          aq      0.0105
44          ar      0.0240
45          as      0.0030
46          at      0.0205
47          au      0.0130
48          av      0.0130
49          aw      0.0215
50          ax      0.0125
51          ay      0.0145
52          az      0.0075
53          ba      0.0110
54          bb      0.0155
55          bc      0.0170
56          bd      0.0145
57          be      0.0075
58          bf      0.0075
59          bg      0.0165
60          bh      0.0185
61          bi      0.0110
62          bj      0.0095
63          bk      0.0160
64          bl      0.0045
65          bm      0.0135
```

```
66          bn      0.0105
67          bo      0.0080
68          bp      0.0070
69          bq      0.0075
70          br      0.0040
71          bs      0.0085
72          bt      0.0045
73          bu      0.0015
74          bv      0.0005
75          bw      0.0100
76          bx      0.0005
77          by      0.0050
78          bz      0.0035
79          ca      0.0095
80          cb      0.0165
81          cc      0.0030
82          cd      0.0005
83          ce      0.0025
84          cf      0.0010
85          cg      0.0020
86          ch      0.0040
87          ci      0.0055
88          cj      0.0025
89          ck      0.0010
90          cl      0.0010
91          cm      0.0005
92          cn      0.0015
93          co      0.0005
94          cp      0.0075
95          cq      0.0040
96          cr      0.0020
97          cs      0.0005
98          ct      0.0025
99          cu      0.0030
100         cv      0.0010
101         cw      0.0050
102         cx      0.0005
103         cy      0.0005
104         cz      0.0015
105         da      0.0005
106         db      0.0040
107         dc      0.0010
108         dd      0.0005
109         de      0.0025
110         df      0.0005
111         dg      0.0005
112         dh      0.0005
113         di      0.0005
114         dj      0.0005
115         dk      0.0005

print(sort_normal_qual(inpt_datf = datf_test,
                       mean = 12,
                       sd = 2
                       ))

 5e-04  5e-04  5e-04  5e-04  5e-04  5e-04  5e-04  5e-04  0.001  0.001  0.001
```

```
   "bv"   "cd"   "co"   "cx"   "da"   "df"   "dh"   "dj"   "cf"   "cl"   "dc"
0.0015 0.0015  0.002 0.0025 0.0025 0.0025  0.003  0.003 0.0035  0.004  0.004
   "bu"   "cz"   "cg"    "z"   "ce"   "ct"   "as"   "cu"   "bz"   "ch"   "db"
0.0045 0.0045  0.005 0.0055 0.0065 0.0075 0.0075 0.0075 0.0085 0.0095   0.01
    "x"   "bt"   "cw"   "ci"    "g"   "az"   "bf"   "cp"   "bs"   "bj"   "aj"
0.0105 0.0105  0.011 0.0115 0.0125  0.013  0.013 0.0135 0.0135  0.014 0.0145
   "af"   "aq"   "ba"    "q"    "b"   "ae"   "au"   "am"   "bm"   "ac"    "i"
0.0145  0.016 0.0165 0.0165  0.017  0.018 0.0185 0.0185 0.0195   0.02  0.021
   "bd"   "bk"    "s"   "bg"    "u"    "w"    "d"   "bh"    "o"    "v"    "c"
 0.023  0.024 0.0235 0.0215 0.0205   0.02  0.019 0.0185 0.0185  0.017 0.0165
   "ak"   "ag"    "h"   "aw"   "at"    "t"    "r"   "aa"    "a"   "bc"   "cb"
0.0165 0.0165 0.0155 0.0145  0.014  0.014 0.0135  0.013  0.013 0.0125  0.012
    "y"    "f"   "bb"   "ay"   "al"    "m"   "an"   "av"   "ai"   "ax"    "e"
 0.011 0.0105 0.0105   0.01 0.0095 0.0095  0.008 0.0075 0.0075  0.007  0.006
   "bi"   "bn"   "ap"   "bw"   "ca"    "n"   "bo"   "bq"   "be"   "bp"    "k"
0.0055  0.005 0.0045 0.0045  0.004  0.004 0.0035  0.003 0.0025 0.0025 0.0025
    "l"   "by"   "bl"    "j"   "cq"   "br"   "ao"   "cc"   "de"   "cj"   "ad"
 0.002  0.002 0.0015 0.0015  0.001  0.001  5e-04  5e-04  5e-04  5e-04  5e-04
   "cr"    "p"   "cn"   "ab"   "cv"   "ck"   "dk"   "di"   "dg"   "dd"   "cy"
 5e-04  5e-04  5e-04  5e-04
   "cs"   "cm"   "bx"   "ah"
```

`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
```

swipr *swipr*

Description

Returns an ordered dataframes according to the elements order given. The input datafram has two columns, one with the ids whoch 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"),

        "col2"=c("B", "B", "G", "S", "B", "S", "G", "B", "G"))

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

datf <- data.frame("col1"=c("Af", "Arg", "Al", "Al", "Arg", "Arg", "Arg", "Arm", "Arm"),

        "col2"=c("B", "B", "G", "S", "B", "S", "G", "B", "G"))

print(swipr(inpt_datf=datf, how_to=c("G", "S", "B"), id_w="col2", id_ids="col1"))

#   col1 col2
#1   Af    B
#2  Arg    G
#3   Al    G
#4   Al    S
#5  Arg    S
#6  Arg    B
#7  Arg    B
#8  Arm    G
#9  Arm    B
```

`test_order` *same_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
```

`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
```

`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(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(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
#[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"
```

Index