

# DevOrSysAdminScripts

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## Abstract

Some “small” useful scripts for enhancing development or system-administrators tasks

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## 1 Files tree

```
. └── build_and_checks_dependencies
    ├── build_and_checks.exec.sh.tpl
    ├── build_md_from_printable_md.exec.sh
    ├── check_shell_scripts_beginnings.libr.sh
    ├── check_shell_scripts_indentation.libr.sh
    ├── check_URLs.libr.sh
    ├── common_build_and_checks.exec.sh
    ├── common_build_and_checks.exec.sh.tpl
    ├── comparisons.libr.sh
    ├── create_PDF.exec.sh
    ├── generate_from_template.libr.sh
    ├── get_common_text_glob_patterns.libr.sh
    ├── grammar_and_spell_check.libr.sh
    ├── licenses_templates
    │   ├── build_licenses_templates.exec.sh
    │   ├── license_file_header GPLv3+.tpl
    │   ├── license_file_header GPLv3+.tpl
    │   └── license_file_header GPLv3+.tpl
    ├── lines_counts.libr.sh
    ├── lines_filters.libr.sh
    ├── lines_maps.libr.sh
    ├── overwrite_if_not_equal.libr.sh
    ├── python_black_complement.libr.sh
    ├── python_isort_complement.libr.sh
    ├── split_score.exec.php
    ├── split_score.libr.php
    ├── strings_functions.libr.sh
    ├── too_long_code_lines.libr.sh
    ├── update_common_build_and_checks.exec.sh
    └── update_or_check_files_names_listing.exec.sh
    └── build_and_checks.exec.sh
    └── build_and_checks_variables
        ├── bandit_baseline.json
        ├── bandit.ini
        ├── black.toml
        ├── DevOrSysAdminScripts.html.tpl
        ├── DevOrSysAdminScripts.tex
        ├── DevOrSysAdminScripts.tex.tpl
        ├── files_listing.tex.tpl
        ├── files_names_listing.txt
        ├── .gitignore
        ├── licenses_notes.txt
        └── phpmd_baseline.xml
```

```
    └── pylintrc.toml
    └── repository_data.txt
    └── ruff.toml
    └── shellcheck.ini
    └── shellcheck_notes.txt
    └── COPYING
    └── COPYING.LESSER
    └── DevOrSysAdminScripts.html
    └── DevOrSysAdminScripts.pdf
    └── git_helpers
        ├── git_checks.libr.sh
        ├── post-commit
        ├── post_commit_renaming_comment.libr.sh
        └── pre-commit
    └── IMAP_transfert.py
    └── LiensUtiles.txt
    └── README.html
    └── README.md
    └── README.md.tpl
    └── unicode.libr.php
    └── upgrade_build_and_checks.exec.sh
    └── wget_sha512.libr.sh
```

5 directories, 61 files

```
[ 12K Feb 27 22:05] ./
└── [4.0K Feb 27 22:05] build_and_checks_dependencies/
    ├── [3.7K Feb 27 20:35] build_and_checks_exec.sh.tpl*
    ├── [3.9K Feb 23 19:39] build_md_from_printable_md_exec.sh*
    ├── [2.1K Feb 15 11:34] check_shell_scripts_beginnings.libr.sh
    ├── [4.0K Feb 24 17:34] check_shell_scripts_indentation.libr.sh
    ├── [2.9K Feb 23 17:21] check_URLs.libr.sh
    ├── [ 27K Feb 27 22:04] common_build_and_checks_exec.sh*
    ├── [ 23K Feb 27 21:22] common_build_and_checks_exec.sh.tpl
    ├── [4.7K Feb 23 17:34] comparisons.libr.sh
    ├── [ 17K Feb 27 22:04] create_PDF.exec.sh*
    ├── [3.3K Feb 19 18:48] generate_from_template.libr.sh
    ├── [1.9K Feb 19 17:18] get_common_text_glob_patterns.libr.sh
    ├── [2.2K Feb 27 19:33] grammar_and_spell_check.libr.sh
    └── [4.0K Feb 27 20:41] licenses_templates/
        ├── [ 13K Feb 27 20:41] build_licenses_templates_exec.sh*
        ├── [ 728 Dec 30 19:32] license_file_header_AGPLv3+.tpl
        ├── [ 707 Dec 27 21:48] license_file_header_GPLv3+.tpl
        └── [ 728 Dec 27 21:48] license_file_header_LGPLv3+.tpl
    └── [2.7K Feb 19 18:44] lines_counts.libr.sh
    └── [8.8K Feb 27 21:26] lines_filters.libr.sh
```

```
    └── [2.7K Feb 19 16:16]  lines_maps.libr.sh
    └── [1.8K Feb 26 16:58]  overwrite_if_not_equal.libr.sh
    └── [1.4K Jan 24 18:32]  python_black_complement.libr.sh
    └── [1.8K Feb 23 18:13]  python_isort_complement.libr.sh
    └── [1.6K Feb 3 17:57]   split_score.exec.php
    └── [1.9K Feb 3 20:11]   split_score.libr.php
    └── [ 12K Feb 26 15:37]  strings_functions.libr.sh
    └── [3.2K Feb 26 21:22]  too_long_code_lines.libr.sh
    └── [4.1K Feb 24 17:35]  update_common_build_and_checks.exec.sh*
    └── [4.8K Feb 26 22:35]  *
    └── update_or_check_files_names_listing.exec.sh**
[3.9K Feb 27 22:04]  build_and_checks.exec.sh*
└── [4.0K Feb 27 22:05]  build_and_checks_variables/
    ├── [ 15 Jan 5 20:00]  bandit_baseline.json
    ├── [ 25 Jan 5 18:49]  bandit.ini
    ├── [ 30 Feb 27 16:27]  black.toml
    ├── [5.2K Feb 14 15:05]  DevOrSysAdminScripts.html.tpl
    ├── [ 23K Feb 27 22:05]  DevOrSysAdminScripts.tex
    ├── [3.8K Feb 14 15:04]  DevOrSysAdminScripts.tex.tpl
    ├── [ 13K Feb 27 16:27]  files_listing.tex.tpl
    ├── [4.0K Feb 24 20:40]  files_names_listing.txt
    ├── [ 24 Jan 15 22:26]  .gitignore
    ├── [1.2K Feb 14 15:04]  licenses_notes.txt
    ├── [1001 Feb 26 15:37]  phpmd_baseline.xml
    ├── [ 678 Feb 24 22:38]  pylintrc.toml
    ├── [3.8K Feb 27 16:27]  repository_data.txt
    ├── [1.4K Feb 24 23:25]  ruff.toml
    ├── [ 167 Feb 19 18:39]  shellcheck.ini
    └── [2.1K Feb 19 19:36]  shellcheck_notes.txt
    └── [ 34K May 6 2024]  COPYING
    └── [7.5K Dec 27 21:48]  COPYING.LESSER
    └── [308K Feb 27 22:05]  DevOrSysAdminScripts.html
    └── [297K Feb 27 22:05]  DevOrSysAdminScripts.pdf
    └── [4.0K Feb 27 20:20]  git_helpers/
        ├── [3.5K Feb 19 17:00]  git_checks.libr.sh
        ├── [1.8K Feb 27 20:20]  post-commit
        ├── [ 13K Feb 26 19:35]  post_commit_renaming_comment.libr.sh
        └── [1.4K Feb 19 18:42]  pre-commit
    └── [8.3K Feb 27 16:27]  IMAP_transfert.py
    └── [ 830 Dec 29 19:10]  LiensUtiles.txt
    └── [7.2K Feb 23 16:51]  README.html
    └── [3.5K Feb 16 17:08]  README.md
    └── [3.6K Feb 16 16:59]  README.md.tpl
    └── [9.1K Feb 26 15:05]  unicode.libr.php
    └── [1.4K Feb 3 14:19]   upgrade_build_and_checks.exec.sh*
    └── [1.4K Feb 19 14:41]  wget_sha512.libr.sh
```

5 directories, 61 files

## 2 Listing of files

This repository is dual licensed. All the Bash scripts source code is covered by GPLv3+. All the PHP scripts source code is covered by LGPLv3+.

The text of the licenses is available at: <https://www.gnu.org/licenses/>.  
The git repository of this source code is also available at: <https://github.com/LLyaudet/DevOrSysAdminScripts/>.

Here is a listing of the dependencies of the code in this repository:

- The following dependencies are GPLv3+ licensed:  
basename, bash (and its builtins), cat, chmod, cp, cut, date, diff, dirname, find, grep, head, mkdir, mv, realpath, rm, sed, sha512sum, shellcheck, sort, tail, wc, wget, xargs
- The following dependencies are GPLv2+ licensed:  
more, pandoc, pdflatex, tree
- The following dependencies are GPLv2 licensed:  
git, pylint
- The following dependencies are LGPLv2.1+ licensed:  
notify-send
- The following dependencies are MIT licensed:  
black, isort, mypy, ruff
- The following dependencies are Apache-2.0 licensed:  
bandit
- The following dependencies are BSD-3-Clause licensed:  
phpmd
- php is licensed under PHP License v3.01
- tex is licensed under Knuth license
- pcregrep has a custom license from Cambridge University

Remark: Some commands listed under GPLv3+ are POSIX and can have different implementations under another license; for example, uutils coreutils is MIT licensed, whilst GNU coreutils is GPLv3+ licensed.

## 2.1 build\_and\_checks\_dependencies/build\_and\_checks.exec.sh.tpl

```
1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # The file "build_and_checks.exec.sh.tpl" was renamed from
25 # "build_and_checks.sh.tpl" to "build_and_checks.exec.sh.tpl".
26 # The file "build_and_checks.exec.sh" generated from the file
27 # "build_and_checks.sh.tpl" or "build_and_checks.exec.sh.tpl"
28 # was renamed from
29 # "build_and_checks.sh" to "build_and_checks.exec.sh".
30
31 build_and_checks(){
32     local LFBFL_working_directory="."
33     if [[ -n "$1" ]]; then
34         LFBFL_working_directory="$1"
35     fi
36     readonly LFBFL_working_directory
37
38     local LFBFL_verbose=""
39     if [[ "$*" == *--verbose* ]]; then
40         echo "$0 $*"
41         LFBFL_verbose="--verbose"
42     fi
43     readonly LFBFL_verbose
44 }
```

```

45     source ./wget_sha512.libr.sh
46
47 LFBFL_subdir="build_and_checks_dependencies"
48 mkdir -p "${LFBFL_subdir}/licenses_templates"
49 mkdir -p "build_and_checks_variables/temp"
50 if ! [[ -f "build_and_checks_variables/.gitignore" ]]; then
51 {
52     echo "temp/"
53     echo ""
54 } > "build_and_checks_variables/.gitignore"
55 fi
56
57 # LFBFL_dependencies_raw_content_download_URL
58 local LFBFL_dependencies_URL
59 LFBFL_dependencies_URL="https://raw.githubusercontent.com/LLyaudet/"
60 LFBFL_dependencies_URL+="DevOrSysAdminScripts/main/${LFBFL_subdir}"
61 readonly LFBFL_dependencies_URL
62
63 declare -r LFBFL_common_file_name="common_build_and_checks.exec.sh"
64 # LFBFL_script_download_URL
65 declare -r \
66     LFBFL_script="${LFBFL_dependencies_URL}/${LFBFL_common_file_name}"
67 declare -r \
68     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_common_file_name}"
69 @sha512_common_build_and_checks.exec.sh@
70 wget_sha512 "${LFBFL_file_path}" "${LFBFL_script}" \
71     "${LFBFL_correct_sha512}" "${LFBFL_verbose}" \
72 chmod +x "./${LFBFL_file_path}"
73
74 "${LFBFL_file_path}" "${LFBFL_working_directory}" \
75     "${LFBFL_dependencies_URL}" "${LFBFL_verbose}"
76 }
77
78 if [[ "$*" == *--fixed_point_build* ]]; then
79     echo "--fixed_point_build"
80     source "./build_and_checks_dependencies/lines_filters.libr.sh"
81     LFBFL_working_directory=".
82     if [[ -n "$1" ]]; then
83         LFBFL_working_directory="$1"
84     fi
85     LFBFL_variables_directory="${LFBFL_working_directory}/"
86     LFBFL_variables_directory+="build_and_checks_variables"
87     LFBFL_data_file_name="${LFBFL_variables_directory}/"
88     LFBFL_data_file_name+="repository_data.txt"
89     LFBFL_repository_name=""
90     grep_variable "${LFBFL_data_file_name}" repository_name\

```

```

91     --result-variable-prefix="LFBFL_"\ \
92     --replace-line-returns-by="" \
93 # Touching the 3 following files first let us iterate
94 # upgrade_build_and_checks 2 times instead of 3 to reach
95 # a fixed point.
96 touch "${LFBFL_variables_directory}/${LFBFL_repository_name}.tex"
97 touch "${LFBFL_working_directory}/${LFBFL_repository_name}.pdf"
98 touch "${LFBFL_working_directory}/${LFBFL_repository_name}.html"
99 # The two iterations of build_and_checks needs to complete
100 # during the same minute to have a fixed point.
101 build_and_checks "$@"
102 # build_and_checks "$@" second iteration below
103 # Then calling this script without --fixed_point_build should not
104 # yield any new superficial modifications.
105 fi
106
107 build_and_checks "$@"

```

## 2.2 build\_and\_checks\_dependencies/build\_md\_from\_printable\_md.exec.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "build_md_from_printable_md.sh"
25 # to "build_md_from_printable_md.exec.sh".
26

```

```

27 LFBFL_subdir="build_and_checks_dependencies"
28 # shellcheck source=overwrite_if_not_equal.libr.sh
29 source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
30
31 build_md_from_printable_md() {
32     declare -i LFBFL_verbose=0
33     if [[ "$*" == *--verbose* ]]; then
34         echo "$0 $*"
35         LFBFL_verbose=1
36     fi
37     readonly LFBFL_verbose
38
39     # Remove line returns here to keep lines short.
40     local LFBFL_sed_expression
41     LFBFL_sed_expression='s/(\[[a-zA-Z0-9:-]*\]: [^\n\]*)\n/\1/Mg'
42     LFBFL_sed_expression+=';s/(<http[^\\n\\]*\\n)\\1/Mg'
43     LFBFL_sed_expression+=';s/(- <http[^\\n\\]*\\n)\\1/Mg'
44     readonly LFBFL_sed_expression
45     # Since Markdown can contain code, it is limited to Markdown URLs.
46     # Hence it is way more complicated than 's/\\n//Mg' expression
47     # in other files.
48     # Another downside is that more than one pass is needed.
49
50     declare -i LFBFL_cd_result
51     pushd .
52     if [[ -n "$1" ]];
53     then
54         if [[ LFBFL_verbose -eq 1 ]]; then
55             echo "Moving to directory: $1"
56         fi
57         cd "$1" || {
58             LFBFL_cd_result=$?
59             echo "build_md_from_printable_md no such directory"
60             # shellcheck disable=SC2248
61             return ${LFBFL_cd_result}
62         }
63     fi
64
65     local LFBFL_base_name="README"
66     if [[ -n "$2" ]];
67     then
68         if [[ LFBFL_verbose -eq 1 ]]; then
69             echo "Searching md file: $2"
70         fi
71         LFBFL_base_name="$2"
72     fi

```

```

73     readonly LFBFL_base_name
74
75     if [[ -f "${LFBFL_base_name}.md.tpl" ]];
76     then
77         sed -Ez -e "${LFBFL_sed_expression}" \
78             -e "${LFBFL_sed_expression}" \
79             -e "${LFBFL_sed_expression}" \
80             -e "${LFBFL_sed_expression}" \
81             "${LFBFL_base_name}.md.tpl" \
82             > "${LFBFL_base_name}.md.temp"
83     overwrite_if_not_equal "${LFBFL_base_name}.md" \
84             "${LFBFL_base_name}.md.temp"
85   else
86     echo "No file ${LFBFL_base_name}.md.tpl"
87   fi
88
89   pandoc --from markdown --to html --standalone \
90       --shift-heading-level-by=-1 "${LFBFL_base_name}.md" \
91       -o "${LFBFL_base_name}.html.temp"
92   # Correcting pandoc HTML "by hand".
93   # https://github.com/jgm/pandoc/issues/10957
94   # With the most open-minded answer found on Internet ; ) XD.
95   # This second sed expression is what I need,
96   # but it may be unsuitable for you.
97   # Other problems:
98   # https://github.com/jgm/pandoc/issues/11484
99   local LFBFL_prewrap="s~(code \{(\n|[^}]*)\}(\n|\})"
100  LFBFL_prewrap+="~\1      white-space: pre-wrap;\n\3~M"
101  readonly LFBFL_prewrap
102  sed -i -E -e 's~( <meta .*) />~\1>~g' \
103      -e 's~<html .*>~<html lang="en">~' \
104      -e '/ code\{white-space: pre-wrap;\}/d' \
105      "${LFBFL_base_name}.html.temp"
106  sed -i -Ez -e 's~(<img(\n|^a-z0-9)(\n|^>)* ) />~\1>~Mg' \
107      -e "${LFBFL_prewrap}" \
108      "${LFBFL_base_name}.html.temp"
109  overwrite_if_not_equal "${LFBFL_base_name}.html" \
110      "${LFBFL_base_name}.html.temp"
111
112 declare -i LFBFL_popd_result
113 popd || {
114   LFBFL_popd_result=$?
115   echo "build_md_from_printable_md no popd"
116   # shellcheck disable=SC2248
117   return ${LFBFL_popd_result}
118 }

```

```

119     # java -Xss128M -jar "../jar_venv/vnu.jar" --exit-zero-always\
120     #   --verbose ${LFBFL_base_name}.html"
121 }
122
123 build_md_from_printable_md "$@"

```

### 2.3 build\_and\_checks\_dependencies/check\_shell\_scripts\_beginnings.libr.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "check_shell_scripts_beginnings.sh"
25 # to "check_shell_scripts_beginnings.libr.sh".
26
27 declare -gr LFBFL_SHELL_SCRIPT_BEGINNING="#!/usr/bin/env bash"
28
29 check_one_shell_script_beginning(){
30     declare -r LFBFL_file_name=$(basename "$1")
31     if [[ "${LFBFL_file_name}" =~ license_file_header_.*\\.sh ]]; then
32         return 0
33     fi
34     diff <(head -n 1 "$1") <(echo '#!/usr/bin/env bash')
35     # -----
36     # is of course slower than
37     # -----
38     # diff <(head -n 1 "$1") <(echo '#!/usr/bin/env bash')

```

```

39      # -----
40      # is of course slower than
41      #
42      declare -r LFBFL_head=$(head -n 1 "$1")
43      [[ "${LFBFL_head}" == "${LFBFL_SCRIPT_BEGINNING}" ]] \
44          || echo "$1:File has wrong shell script beginning."
45  }
46
47 check_shell_scripts_beginnings() {
48     shopt -s globstar
49     local LFBFL_file_name
50     local LFBFL_head
51     for LFBFL_file_name in **/*.sh; do
52         LFBFL_head=$(head -n 1 "${LFBFL_file_name}")
53         [[ "${LFBFL_head}" == "${LFBFL_SCRIPT_BEGINNING}" ]] || \
54             echo "${LFBFL_file_name}:File has wrong shell script beginning."
55     done
56 }
```

## 2.4 build\_and\_checks\_dependencies/check\_shell\_scripts\_indentation.libr.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
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9 # or (at your option) any later version.
10 #
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14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "check_shell_scripts_beginnings.sh"
25 # to "check_shell_scripts_beginnings.libr.sh".
```

```

26
27 check_one_shell_script_indentation() {
28     shopt -s lastpipe
29
30     declare -i LFBFL_file_with_error=0
31     local LFBFL_some_line
32     local LFBFL_previous_line="workeduntilsomeasshole"
33     # created a command named "workeduntilsomeasshole"
34     # and called it without neither indentation, nor parameters
35     # in a .sh script XD.
36     # Manual justification of the lines L-4 and L-3 was a serendipity.
37     # I just tried a joke and was lucky ;) :).
38     local LFBFL_line_end
39     local LFBFL_previous_line_end
40     declare -i LFBFL_line_length
41     declare -i LFBFL_line_end_length
42     declare -i LFBFL_line_start_length
43     local LFBFL_spacing
44     declare -i LFBFL_offset
45     local LFBFL_substring1
46     local LFBFL_substring2
47     declare -r LFBFL_pattern='^ *-e '
48     # This grep would have been enough without some sed commands.
49     # shellcheck disable=SC2312
50     grep -EHn -B 1 '^(\ )*' (^ |$)' "$1" \
51         | while read -r LFBFL_some_line;
52     do
53         if [[ "${LFBFL_some_line}" == "--" ]]; then
54             # When switching between code fragments, we reinit.
55             LFBFL_previous_line="workeduntilsomeasshole"
56             continue
57         fi
58         # Note how it's funny that this loop always work because we check
59         # shell scripts beginning in another script and thus we always
60         # have a line before.
61         if [[ "${LFBFL_previous_line}" == "workeduntilsomeasshole" ]]; then
62             LFBFL_previous_line="${LFBFL_some_line}"
63             continue
64         fi
65         # Remove the name of the file and then the line number
66         LFBFL_line_end=${LFBFL_some_line#*:}
67         LFBFL_line_end=${LFBFL_line_end#*:}
68         # But for the previous line '-' or ':' is used instead of ':'
69         # and filenames with '-' are much more frequent than with ':...'
70         LFBFL_line_length=${#LFBFL_some_line}
71

```

```

72     LFBFL_line_end_length=${#LFBFL_line_end}
73     LFBFL_line_start_length=$(((
74         LFBFL_line_length-LFBFL_line_end_length
75     )))
76     LFBFL_offset=$((LFBFL_line_start_length-2))
77     # Checking if increasing number of digits in the line numbers
78     # (99 -> 100).
79     LFBFL_substring1=${LFBFL_previous_line:${LFBFL_offset}:1}
80     # Nice puzzle below :) Look for comments above :)
81     case ${LFBFL_substring1} in
82         -) ((LFBFL_offset+=1));;
83         :) ((LFBFL_offset+=1));;
84         [0-9]) ((LFBFL_offset+=2));;
85         *) echo ':-(';;
86     esac
87     LFBFL_previous_line_end=${LFBFL_previous_line:${LFBFL_offset}}
88     if [[ "${LFBFL_line_end}" =~ ${LFBFL_pattern} ]]; then
89         # Line starts with spacing and -e
90         # Keep max spaces
91         LFBFL_spacing=${LFBFL_line_end%%-*}
92         LFBFL_offset=${#LFBFL_spacing}
93         LFBFL_substring1=${LFBFL_line_end:${LFBFL_offset}:3}
94         LFBFL_substring2=${LFBFL_previous_line_end:${LFBFL_offset}:3}
95         if [[ "${LFBFL_substring1}" != "${LFBFL_substring2}" ]]; then
96             echo "${LFBFL_some_line}"
97             LFBFL_file_with_error=1
98         fi
99     else
100         echo "${LFBFL_some_line}"
101         LFBFL_file_with_error=1
102     fi
103     LFBFL_previous_line="${LFBFL_some_line}"
104 done
105
106 if [[ LFBFL_file_with_error -eq 1 ]]; then
107     echo "$1:File has some lines with odd number of spaces."
108 fi
109 }
110
111 check_shell_scripts_indentation() {
112     shopt -s globstar
113     local LFBFL_file_name
114     for LFBFL_file_name in **/*.sh; do
115         check_one_shell_script_indentation "${LFBFL_file_name}"
116     done
117 }

```

## 2.5 build\_and\_checks\_dependencies/check\_URLs.libr.sh

```
1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
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6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
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22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "check_URLs.sh" to "check_URLs.libr.sh".
25 #
26 LFBFL_subdir="build_and_checks_dependencies"
27 # shellcheck source=get_common_text_glob_patterns.libr.sh
28 source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
29 # shellcheck source=lines_filters.libr.sh
30 source "./${LFBFL_subdir}/lines_filters.libr.sh"
31 #
32 check_URLs() {
33     declare -i LFBFL_verbose=0
34     if [[ "$*" == *--verbose* ]]; then
35         echo "$0 $*"
36         LFBFL_verbose=1
37     fi
38     readonly LFBFL_verbose
39     if [[ ! -o pipefail ]]; then
40         [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
41         set -o pipefail
42         trap 'set +o pipefail' RETURN
43     fi
44 }
```

```

45
46     get_COMMON_TEXT_FILES_GLOB_PATTERNS
47
48     declare -Ar LFBFL_substitutions=
49         ["http://www.gnu.org/licenses/"]="https://www.gnu.org/licenses/"
50     )
51
52     local LFBFL_pattern
53     local LFBFL_file_name
54     local LFBFL_base_file_name
55     local LFBFL_substitution
56     local LFBFL_substitution2
57     for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
58         [[ LFBFL_verbose -eq 0 ]]\
59             || echo "Iterating on pattern: ${LFBFL_pattern}"
60         find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
61             | xargs grep -H 'http:'\
62             | grep -v '| xargs grep -H 'htt"\''\
63             | grep -vP "[\'\"]http(:[^\'\"]*)[\'\"].*[\'\"]https\\1[\'\"]"
64     # Last grep just above will remove false positives from
65     # substitutions that fit on one line.
66     find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
67         | relevant_find\
68         | not_main_html_find\
69         | while read -r LFBFL_file_name;
70     do
71         [[ -f "${LFBFL_file_name}" ]] || continue
72         LFBFL_base_file_name=$(basename "${LFBFL_file_name}")
73         [[ "${LFBFL_base_file_name}" != "check_URLs.libr.sh" ]]\
74             || continue
75         [[ LFBFL_verbose -eq 0 ]]\
76             || echo "Handling the file: ${LFBFL_file_name}"
77         for LFBFL_substitution in "${!LFBFL_substitutions[@]}"; do
78             LFBFL_substitution2=\
79             ${LFBFL_substitutions[$LFBFL_substitution]}
80             if grep -q "${LFBFL_substitution}" "${LFBFL_file_name}"; then
81                 sed -i "s|${LFBFL_substitution}|${LFBFL_substitution2}|g"\'
82                 "${LFBFL_file_name}"
83             fi
84         done
85     done
86 done
87 }
```

## 2.6 build\_and\_checks\_dependencies/common\_build\_and\_checks.exec.sh

```
1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
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15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
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18 # You should have received a copy of
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20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # The file "common_build_and_checks.exec.sh.tpl" was renamed from
25 # "common_build_and_checks.sh.tpl" to
26 # "common_build_and_checks.exec.sh.tpl".
27 # The file "common_build_and_checks.exec.sh" generated from the file
28 # "common_build_and_checks.sh.tpl"
29 # or "common_build_and_checks.exec.sh.tpl"
30 # was renamed from
31 # "common_build_and_checks.sh" to "common_build_and_checks.exec.sh".
32 #
33 common_build_and_checks() {
34     # $1 LFBFL_working_directory
35     # $2 LFBFL_dependencies_URL
36     # $3 optional --verbose
37     declare -r LFBFL_working_directory="$1"
38     # declare -r LFBFL_dependencies_URL="$2" too long
39     declare -r LFBFL_start_URL="$2"
40     local LFBFL_verbose=""
41     if [[ "$*" == *--verbose* ]]; then
42         echo "$0 $*"
43         LFBFL_verbose="--verbose"
44     fi
```

```

45   readonly LFBFL_verbose
46
47   if [[ ! -o pipefail ]]; then
48     [[ "${LFBFL_verbose}" == "--verbose" ]] \
49       && echo "pipefail option activated"
50     set -o pipefail
51     trap 'set +o pipefail' RETURN
52   fi
53
54   source ./wget_sha512.libr.sh
55
56   LFBFL_subdir="build_and_checks_dependencies"
57   local LFBFL_file_name
58   local LFBFL_URL
59   local LFBFL_file_path
60
61   LFBFL_file_name="build_md_from_printable_md.exec.sh"
62   # LFBFL_script_download_URL
63   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
64   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
65   local LFBFL_correct_sha512
66   LFBFL_correct_sha512='5e6560b6f4d0792ab065e5ee5746560d68aa8e0609ff'
67   LFBFL_correct_sha512+=`953fabd5e4bc740c972956375b043f1556dee03aa49a'
68   LFBFL_correct_sha512+=`3a6edf10bd6e2586141baf435ce35d78df2213f'
69   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
70     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
71   chmod +x "./${LFBFL_file_path}"
72
73   LFBFL_file_name="check_shell_scripts_beginnings.libr.sh"
74   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
75   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
76   local LFBFL_correct_sha512
77   LFBFL_correct_sha512='e0cdfc2d653daf9f15a3447f40e41fe03a332ac4054c4'
78   LFBFL_correct_sha512+=`0950efc0b9f58912791068c081babf7a7a9e72bacd57'
79   LFBFL_correct_sha512+=`8e600bbb5e0c51466e60e91e5b6dda6173b088b'
80   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
81     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
82
83   LFBFL_file_name="check_shell_scripts_indentation.libr.sh"
84   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
85   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
86   local LFBFL_correct_sha512
87   LFBFL_correct_sha512='d473359eaef8164f8e7ab85fcdb8812b3ce46e2731ef96'
88   LFBFL_correct_sha512+=`ff46df693890131abf064c9f2b1beacbabd50aad778f'
89   LFBFL_correct_sha512+=`6d3b9b669bc0469f868f1ae69660fd4b89990f1'
90   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \

```

```

91      "${LFBFL_correct_sha512}" "${LFBFL_verbose}""
92
93  LFBFL_file_name="check_URLs.libr.sh"
94  LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
95  LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
96  local LFBFL_correct_sha512
97  LFBFL_correct_sha512='bd3d085710ce3ee75034daea6286adc21b0309cf3004a'
98  LFBFL_correct_sha512+='41b65af1878bed263c392dd8159716996420abb03cb8'
99  LFBFL_correct_sha512+='34d9b91c8859bdf8455c5b9d85d9b8d80fec062'
100 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
101     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
102
103 LFBFL_file_name="comparisons.libr.sh"
104 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
105 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
106 local LFBFL_correct_sha512
107 LFBFL_correct_sha512='1abcc547d6baf661c339489967108fd744321419e8e6d'
108 LFBFL_correct_sha512+='2a25896280a23243106dc72be30a4f400caf6789e9be'
109 LFBFL_correct_sha512+='740223b9e12d6155bb931aa94bb946455c8c5c'
110 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
111     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
112
113 LFBFL_file_name="create_PDF.exec.sh"
114 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
115 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
116 local LFBFL_correct_sha512
117 LFBFL_correct_sha512='b6616ed822c4d435a868a1745ddf907b313736e7c3388'
118 LFBFL_correct_sha512+='1ba1bb5dc63693ea90076a60abe8bc0923563c694c38'
119 LFBFL_correct_sha512+='a546891994bf068f9f7645c31585069610f8845'
120 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
121     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
122 chmod +x "./${LFBFL_file_path}"
123
124 LFBFL_file_name="generate_from_template.libr.sh"
125 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
126 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
127 local LFBFL_correct_sha512
128 LFBFL_correct_sha512='5779c3d2c64d0bb403525c410e37b0b06fcf1ef97d503'
129 LFBFL_correct_sha512+='21fd27345545a8ebea020b2d3d809ac5c1bc66f9cebe'
130 LFBFL_correct_sha512+='a8e8ea63aa539eaa179cf09a3860239c96df8e9'
131 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
132     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
133
134 LFBFL_file_name="get_common_text_glob_patterns.libr.sh"
135 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
136 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"

```

```

137 local LFBFL_correct_sha512
138 LFBFL_correct_sha512='4e0915efcc9a4088b1f79c9c7efbf7da5d68e8e1b21ff'
139 LFBFL_correct_sha512+='feb4746c9d468be80affa30babf35938e15f9161db3e'
140 LFBFL_correct_sha512+='3f6d95c913b86638563d7bd2995dc58a26f8e3a'
141 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
142     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
143
144 LFBFL_file_name="grammar_and_spell_check.libr.sh"
145 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
146 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
147 local LFBFL_correct_sha512
148 LFBFL_correct_sha512='a47f723b8e10a924c131f3779d3985758cb9933816f5f'
149 LFBFL_correct_sha512+='9b37b4518d6ab94453b71cd67adcd4659fe4757207de'
150 LFBFL_correct_sha512+='055c1aca88bd16dbc034497a36a6b5eaec4e55d'
151 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
152     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
153
154 # /licenses_templates/ -----
155 declare -r LFBFL_subdir2="${LFBFL_subdir}/licenses_templates"
156 declare -r LFBFL_start_URL2="${LFBFL_start_URL}/licenses_templates"
157 LFBFL_file_name="build_licenses_templates.exec.sh"
158 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
159 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
160 local LFBFL_correct_sha512
161 LFBFL_correct_sha512='5e8f15180c1d5661daa8ef4a77800a835a99cb02eaelf'
162 LFBFL_correct_sha512+='edee9f223a8433f9309ed7bbc353a0429813ddad0153'
163 LFBFL_correct_sha512+='d0b7d39b4e877514c9996d65d7b5fb24117a032'
164 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
165     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
166 chmod +x "./${LFBFL_file_path}"
167
168 LFBFL_file_name="license_file_header GPLv3+.tpl"
169 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
170 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
171 local LFBFL_correct_sha512
172 LFBFL_correct_sha512='9f9aa56d9b90d5003a12c5ec3370ac31aab74fc4a2524'
173 LFBFL_correct_sha512+='2c5fbcb0197b0abb8242f62dafc76eaf60faa5da173'
174 LFBFL_correct_sha512+='05924b31b64b037083532fcfd9f98445000e2d0'
175 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
176     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
177
178 LFBFL_file_name="license_file_header GPLv3+.tpl"
179 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
180 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
181 local LFBFL_correct_sha512
182 LFBFL_correct_sha512='2bdef9a729a5a9ca5ed87ef8a518877c5ee6b31b45336'

```

```

183 LFBFL_correct_sha512+='08660316a4e595fb31465a4847f4d53a2f7264118bd4'
184 LFBFL_correct_sha512+='eab7c1d1892e00bc1861455ed02898f194db067'
185 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
186     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
187
188 LFBFL_file_name="license_file_header_LGPLv3+.tpl"
189 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
190 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
191 local LFBFL_correct_sha512
192 LFBFL_correct_sha512='265fd0d086b48ab798f35a072335a4976e4eda8c256fe'
193 LFBFL_correct_sha512+='bba6c77c98ca86cdd844c6ac150c3445c80debbb3fc2'
194 LFBFL_correct_sha512+='574b5fceeeaf79ec734a759bdef5fe798067c62'
195 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
196     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
197 # -----
198
199 LFBFL_file_name="lines_counts.libr.sh"
200 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
201 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
202 local LFBFL_correct_sha512
203 LFBFL_correct_sha512='d8c22af747f1e255b773edbf705030d0064f711dd5d9'
204 LFBFL_correct_sha512+='4d8cb51049310f0fad2495103dfb7cd200500ebcc85d'
205 LFBFL_correct_sha512+='884f087a2d54fe9a47bc5c5e58b68963ee432a8'
206 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
207     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
208
209 LFBFL_file_name="lines_filters.libr.sh"
210 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
211 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
212 local LFBFL_correct_sha512
213 LFBFL_correct_sha512='1a5a7a4903168a61135b4cbd1d6ac65c65a93b6873130'
214 LFBFL_correct_sha512+='8115edfb0ff4dfe64321c7b6b1fe15a1a32aff292736'
215 LFBFL_correct_sha512+='a74645974ca01f0162e5e9f753910281e3576f0'
216 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
217     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
218
219 LFBFL_file_name="lines_maps.libr.sh"
220 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
221 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
222 local LFBFL_correct_sha512
223 LFBFL_correct_sha512='25c3e5082951260295b5f0e87ba1f2c978efdea1e8926'
224 LFBFL_correct_sha512+='072ce4d2062dc2a47bb92b9098f081e553eeae5d9154'
225 LFBFL_correct_sha512+='fdc50c9d88ae5365b776a23eb6e026b884a8374'
226 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
227     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
228

```

```

229 LFBFL_file_name="overwrite_if_not_equal.libr.sh"
230 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
231 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
232 local LFBFL_correct_sha512
233 LFBFL_correct_sha512='2781a564d264bae84c787321481dc83ae43a1ce324ee6'
234 LFBFL_correct_sha512+='d5ceb73d5a98607fad5fe9ff8d03979b898f7cd7c712'
235 LFBFL_correct_sha512+='8215d26e76874d56aa67fb63fa9de776617d24a'
236 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
237     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
238
239 LFBFL_file_name="python_black_complement.libr.sh"
240 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
241 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
242 local LFBFL_correct_sha512
243 LFBFL_correct_sha512='e28c6e0cfffe6b8eebef26bddfb440f0303d0dcc3987'
244 LFBFL_correct_sha512+='6d498d95b9d589e0800b8381124936e5103b372f509c'
245 LFBFL_correct_sha512+='aeb6213e909710a2ec1e345e076a44f0006fdbb'
246 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
247     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
248
249 LFBFL_file_name="python_isort_complement.libr.sh"
250 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
251 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
252 local LFBFL_correct_sha512
253 LFBFL_correct_sha512='97a9fa46b975d81c68f910d5a7d1efcd476c1a4be6570'
254 LFBFL_correct_sha512+='37066f5178cd5761d1079d86bd266a83000c37149327'
255 LFBFL_correct_sha512+='3b8d7647da5dea4c962ea3a4c3643cb4e07b778'
256 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
257     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
258
259 LFBFL_file_name="split_score.exec.php"
260 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
261 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
262 local LFBFL_correct_sha512
263 LFBFL_correct_sha512='2f7ff107a43716109b1acbd7d89870d05577af00a981a'
264 LFBFL_correct_sha512+='05f162a054c96387fb99544f8225c333b1212f74326c'
265 LFBFL_correct_sha512+='f9ec6196e796f6257dfbba9347ac8c57b4f09db'
266 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
267     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
268
269 LFBFL_file_name="split_score.libr.php"
270 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
271 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
272 local LFBFL_correct_sha512
273 LFBFL_correct_sha512='1413898a4fb4f31ca17993fd6110f7e1f32adf31c22c4'
274 LFBFL_correct_sha512+='7fa46a31d3c1511a3112a611e04fac19bb838d4476d9'

```

```

275 LFBFL_correct_sha512+='ecf77a28dd48d3d2732df7392c50e38262852d7'
276 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
277     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
278
279 LFBFL_file_name="strings_functions.libr.sh"
280 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
281 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
282 local LFBFL_correct_sha512
283 LFBFL_correct_sha512='f29cce1e27d2b9483716326938b09b4e9cffdc23f5a39'
284 LFBFL_correct_sha512+='1516dd6b1514903b3484b38e9c585c85ff389e5d90a0'
285 LFBFL_correct_sha512+='2ffda748385aac01a078dc8aae06f78c08579b6'
286 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
287     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
288
289 LFBFL_file_name="too_long_code_lines.libr.sh"
290 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
291 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
292 local LFBFL_correct_sha512
293 LFBFL_correct_sha512='433858315341224e32d3e90c6f0c611ba17f88b3d3cd7'
294 LFBFL_correct_sha512+='53296c1294c4b838e8b59031e5395bdd16ad898a9030'
295 LFBFL_correct_sha512+='4c89b03779abcf7f68e418b832eb56505f92cf'
296 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
297     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
298
299 LFBFL_file_name="update_or_check_files_names_listing.exec.sh"
300 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
301 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
302 local LFBFL_correct_sha512
303 LFBFL_correct_sha512='bf330ba727703e9763a04bd7a05f7ad037531f75f420b'
304 LFBFL_correct_sha512+='90595d4d8b886310170bfb2f6c423b8d7fb5ab3b5394'
305 LFBFL_correct_sha512+='413b3b17d2afcde53019c0ce25730716e77aba8'
306 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
307     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
308 chmod +x "./${LFBFL_file_path}"
309
310 shopt -s globstar
311 # shellcheck source=check_shell_scripts_beginnings.libr.sh
312 source "./${LFBFL_subdir}/check_shell_scripts_beginnings.libr.sh"
313 # shellcheck source=check_shell_scripts_indentation.libr.sh
314 source "./${LFBFL_subdir}/check_shell_scripts_indentation.libr.sh"
315 # shellcheck source=check_URLs.libr.sh
316 source "./${LFBFL_subdir}/check_URLs.libr.sh"
317 # shellcheck source=comparisons.libr.sh
318 source "./${LFBFL_subdir}/comparisons.libr.sh"
319 # shellcheck source=generate_from_template.libr.sh
320 source "./${LFBFL_subdir}/generate_from_template.libr.sh"

```

```

321 # shellcheck source=get_common_text_glob_patterns.libr.sh
322 source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
323 # shellcheck source=grammar_and_spell_check.libr.sh
324 source "./${LFBFL_subdir}/grammar_and_spell_check.libr.sh"
325 # shellcheck source=lines_counts.libr.sh
326 source "./${LFBFL_subdir}/lines_counts.libr.sh"
327 # shellcheck source=lines_filters.libr.sh
328 source "./${LFBFL_subdir}/lines_filters.libr.sh"
329 # shellcheck source=lines_maps.libr.sh
330 source "./${LFBFL_subdir}/lines_maps.libr.sh"
331 # shellcheck source=overwrite_if_not_equal.libr.sh
332 source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
333 # shellcheck source=python_black_complement.libr.sh
334 source "./${LFBFL_subdir}/python_black_complement.libr.sh"
335 # shellcheck source=python_isort_complement.libr.sh
336 source "./${LFBFL_subdir}/python_isort_complement.libr.sh"
337 # shellcheck source=strings_functions.libr.sh
338 source "./${LFBFL_subdir}/strings_functions.libr.sh"
339 # shellcheck source=too_long_code_lines.libr.sh
340 source "./${LFBFL_subdir}/too_long_code_lines.libr.sh"

341
342 local LFBFL_data_file_name=\
343 "build_and_checks_variables/repository_data.txt"
344
345 declare -i LFBFL_max_line_length
346 grep_variable "${LFBFL_data_file_name}" max_line_length\
347 --result-variable-prefix="LFBFL_"
348
349 local LFBFL_update_max_length="s/^line-length = [0-9]*$"
350 LFBFL_update_max_length+="/line-length = ${LFBFL_max_line_length}/"
351 sed -E -e "${LFBFL_update_max_length}" \
352 build_and_checks_variables/black.toml\
353 > build_and_checks_variables/black.toml.temp
354 overwrite_if_not_equal build_and_checks_variables/black.toml\
355 build_and_checks_variables/black.toml.temp
356
357 declare -i LFBFL_upgrade_venvs=0
358 declare -r LFBFL_upgrade_venvs_ts_file=\
359 "build_and_checks_variables/upgrade_venvs_ts"
360 declare -i LFBFL_upgrade_venvs_ts
361 declare -i LFBFL_current_ts
362 local LFBFL_upgrade_venvs_answer
363
364 local upgrade_venvs_time_interval_in_seconds=""
365 grep_variable "${LFBFL_data_file_name}" \
366 upgrade_venvs_time_interval_in_seconds

```

```

367 case ${upgrade_venvs_time_interval_in_seconds} in
368     wat) upgrade_venvs_time_interval_in_seconds=${RANDOM};;
369     watyouwant?) upgrade_venvs_time_interval_in_seconds=${SRANDOM};;
370     *) echo "No wat for you?";; #TempsDeCerveauDisponible XD SC2249 ;;
371 esac
372
373 if [[ -f "${LFBFL_upgrade_venvs_ts_file}" ]]; then
374     LFBFL_upgrade_venvs_ts=$(
375         stat -c %Y "${LFBFL_upgrade_venvs_ts_file}"
376     )
377     LFBFL_current_ts=$((date +%s)
378     ((LFBFL_current_ts--=LFBFL_upgrade_venvs_ts))
379     ((LFBFL_current_ts--=upgrade_venvs_time_interval_in_seconds)))
380     if [[ LFBFL_current_ts -gt 0 ]]; then
381         LFBFL_upgrade_venvs=1
382     fi
383 else
384     LFBFL_upgrade_venvs=1
385 fi
386 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
387     local LFBFL2_upgrade_venvs=""
388     grep_variable "${LFBFL_data_file_name}" upgrade_venvs \
389     --result-variable-prefix="LFBFL2_"
390     if [[ "${LFBFL2_upgrade_venvs}" != "auto" ]]; then
391         read -r -n 1 -t 10 \
392             -p "Upgrade venvs and composer global? [Y/n]" \
393             LFBFL_upgrade_venvs_answer
394         if [[ "${LFBFL_upgrade_venvs_answer}" == "n" ]]; then
395             LFBFL_upgrade_venvs=0
396         fi
397     fi
398 fi
399
400 echo "Building license headers"
401 "./${LFBFL_subdir2}/build_licenses_templates.exec.sh" \
402     "${LFBFL_working_directory}" "${LFBFL_verbose}"
403
404 echo "Building README.md"
405 "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh" \
406     "${LFBFL_working_directory}" "README" "${LFBFL_verbose}"
407
408 echo "Building other MarkDown files"
409 local LFBFL_some_directory
410 declare -r LFBFL_readme="${LFBFL_working_directory}/README.md.tpl"
411 find "${LFBFL_working_directory}" -name "*.md.tpl" \
412     | relevant_find\

```

```

413     | while read -r LFBFL_file_path;
414 do
415     [[ "${LFBFL_file_path}" == "${LFBFL_readme}" ]] && continue
416     echo "Found template ${LFBFL_file_path}"
417     LFBFL_some_directory=$(dirname "${LFBFL_file_path}")
418     LFBFL_file_name=$(basename "${LFBFL_file_path}")
419     LFBFL_file_name=${LFBFL_file_name%.md.tpl}
420     "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh" \
421         "${LFBFL_some_directory}" "${LFBFL_file_name}" \
422         "${LFBFL_verbose}"
423 done
424
425 declare -i LFBFL_cd_result
426 pushd .
427 cd "${LFBFL_working_directory}" || {
428     LFBFL_cd_result=$?
429     echo "common_build_and_checks.exec.sh no such directory"
430     # shellcheck disable=SC2248
431     return ${LFBFL_cd_result}
432 }
433
434 echo "Running shellcheck"
435 find . -name "*.sh" \
436     | relevant_find \
437     | while read -r LFBFL_file_path;
438 do
439     shellcheck --rcfile=build_and_checks_variables/shellcheck.ini \
440         "${LFBFL_file_path}"
441 done
442
443 echo "---Python---"
444 echo "Running isort"
445 local LFBFL_isort_venv=""
446 grep_variable "${LFBFL_data_file_name}" isort_venv \
447     --result-variable-prefix="LFBFL_" \
448     --replace-line-returns-by=""
449 if [[ -n "${LFBFL_isort_venv}" ]]; then
450     if command -v deactivate
451     then
452         deactivate
453     fi
454     # shellcheck disable=SC1090,SC1091
455     source "${LFBFL_isort_venv}/bin/activate"
456 fi
457 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
458     pip install --upgrade isort

```

```

459     fi
460     isort .
461     if [[ -n "${LFBFL_isort_venv}" ]]; then
462         deactivate
463     fi
464     python_isort_complement
465
466     echo "Running black"
467     local LFBFL_black_venv=""
468     grep_variable "${LFBFL_data_file_name}" black_venv\
469         --result-variable-prefix="LFBFL_"\
470         --replace-line-returns-by=""
471     if [[ -n "${LFBFL_black_venv}" ]]; then
472         if command -v deactivate
473             then
474                 deactivate
475             fi
476             # shellcheck disable=SC1090,SC1091
477             source "${LFBFL_black_venv}/bin/activate"
478         fi
479     if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
480         pip install --upgrade black
481     fi
482     black --config build_and_checks_variables/black.toml .
483     if [[ -n "${LFBFL_black_venv}" ]]; then
484         deactivate
485     fi
486     python_black_complement
487
488     local LFBFL_mypy_venv=""
489     grep_variable "${LFBFL_data_file_name}" mypy_venv\
490         --result-variable-prefix="LFBFL_"\
491         --replace-line-returns-by=""
492     if [[ -n "${LFBFL_mypy_venv}" ]]; then
493         if command -v deactivate
494             then
495                 deactivate
496             fi
497             # shellcheck disable=SC1090,SC1091
498             source "${LFBFL_mypy_venv}/bin/activate"
499         fi
500     if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
501         pip install --upgrade mypy
502     fi
503     shopt -s lastpipe
504     local LFBFL_directory_path

```

```

505 declare -i LFBFL_no_toml=1
506 find . -name "pyproject.toml" \
507   | relevant_find \
508   | while read -r LFBFL_file_path;
509 do
510   if grep -q "Typing :: Typed" "${LFBFL_file_path}"; then
511     echo "Running mypy"
512     LFBFL_directory_path=$(dirname "${LFBFL_file_path}")
513     mypy "${LFBFL_directory_path}"
514   fi
515   LFBFL_no_toml=0
516 done
517 if [[ LFBFL_no_toml -eq 1 ]]; then
518   echo "Running mypy"
519   mypy .
520 fi
521 if [[ -n "${LFBFL_mypy_venv}" ]]; then
522   deactivate
523 fi
524
525 echo "Running bandit"
526 LFBFL_bandit_venv=""
527 grep_variable "${LFBFL_data_file_name}" bandit_venv \
528   --result-variable-prefix="LFBFL_" \
529   --replace-line-returns-by=""
530 if [[ -n "${LFBFL_bandit_venv}" ]]; then
531   if command -v deactivate
532   then
533     deactivate
534   fi
535   # shellcheck disable=SC1090,SC1091
536   source "${LFBFL_bandit_venv}/bin/activate"
537 fi
538 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
539   pip install --upgrade bandit
540 fi
541 bandit --ini build_and_checks_variables/bandit.ini \
542   -b build_and_checks_variables/bandit_baseline.json \
543   -r .
544 # Saving new baseline in temp if necessary.
545 bandit --ini build_and_checks_variables/bandit.ini \
546   -f json -o build_and_checks_variables/temp/bandit_baseline.json \
547   -r .
548 if [[ -n "${LFBFL_bandit_venv}" ]]; then
549   deactivate
550 fi

```

```

551
552     echo "Running pylint"
553     LFBFL_pylint_venv=""
554     grep_variable "${LFBFL_data_file_name}" pylint_venv\
555         --result-variable-prefix="LFBFL_"\
556         --replace-line-returns-by=""
557     if [[ -n "${LFBFL_pylint_venv}" ]]; then
558         if command -v deactivate
559             then
560                 deactivate
561             fi
562             # shellcheck disable=SC1090,SC1091
563             source "${LFBFL_pylint_venv}/bin/activate"
564         fi
565         if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
566             pip install --upgrade pylint
567         fi
568         pylint --rcfile build_and_checks_variables/pylintrc.toml\
569             --recursive=y .
570         if [[ -n "${LFBFL_pylint_venv}" ]]; then
571             deactivate
572         fi
573
574     echo "Running ruff"
575     LFBFL_ruff_venv=""
576     grep_variable "${LFBFL_data_file_name}" ruff_venv\
577         --result-variable-prefix="LFBFL_"\
578         --replace-line-returns-by=""
579     if [[ -n "${LFBFL_ruff_venv}" ]]; then
580         if command -v deactivate
581             then
582                 deactivate
583             fi
584             # shellcheck disable=SC1090,SC1091
585             source "${LFBFL_ruff_venv}/bin/activate"
586         fi
587         if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
588             pip install --upgrade ruff
589         fi
590         ruff check --config build_and_checks_variables/ruff.toml
591         if [[ -n "${LFBFL_ruff_venv}" ]]; then
592             deactivate
593         fi
594         echo "---Python end---"
595
596     echo "---PHP---"

```

```

597 echo "Running PHPMD"
598 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
599   composer global require phpmd/phpmd
600 fi
601
602 local LFBFL_phpmd_baseline="build_and_checks_variables/"
603 LFBFL_phpmd_baseline+="phpmd_baseline.xml"
604 readonly LFBFL_phpmd_baseline
605
606 local LFBFL_temp_phpmd_baseline="build_and_checks_variables/temp/"
607 LFBFL_temp_phpmd_baseline+="phpmd_baseline.xml"
608 readonly LFBFL_temp_phpmd_baseline
609
610 local LFBFL_phpmd_rulesets="cleancode,codesize,controversial,"
611 LFBFL_phpmd_rulesets+="design,naming,unusedcode"
612 readonly LFBFL_phpmd_rulesets
613
614 phpmd --color --baseline-file "${LFBFL_phpmd_baseline}" \
615   . text "${LFBFL_phpmd_rulesets}"
616 # Saving new baseline in temp if necessary.
617 rm "${LFBFL_temp_phpmd_baseline}"
618 phpmd --color --generate-baseline \
619   --baseline-file "${LFBFL_temp_phpmd_baseline}" \
620   . text "${LFBFL_phpmd_rulesets}"
621 echo "---PHP end---"
622
623 echo "----JS----"
624 LFBFL_npm_lint_directories=""
625 grep_variable "${LFBFL_data_file_name}" npm_lint_directories \
626   --result-variable-prefix="LFBFL_"
627 if [[ -n "${LFBFL_npm_lint_directories}" ]]; then
628   echo "Running ESLint"
629   local LFBFL_JS_directory
630   echo "${LFBFL_npm_lint_directories}" \
631     | sed -e 's/\n/\n/g' \
632     | while read -r LFBFL_JS_directory;
633   do
634     (cd "${LFBFL_JS_directory}" && npm run lint)
635   done
636 fi
637 echo "----JS end---"
638
639 echo "Analyzing too long lines"
640 # shellcheck disable=SC2248
641 too_long_code_lines ${LFBFL_max_line_length} "$@"
642

```

```

643 echo "Analyzing shell scripts beginnings"
644 check_shell_scripts_beginnings\
645     | relevant_grep
646
647 echo "Analyzing shell scripts indentation"
648 check_shell_scripts_indentation\
649     | relevant_grep
650
651 echo "Analyzing URLs"
652 check_URLs "$@" \
653     | relevant_grep
654
655 echo "Analyzing strange characters: hover over in doubt"
656 # shellcheck disable=SC1111
657 LFBFL_usual_characters="\x00-\x7Fàâéèëïïôûç©“”└─|«»"
658 grep --exclude-dir .git --binary-files=without-match --color=always\
659     -nPr "[^${LFBFL_usual_characters}]" .
660
661 echo "Checking listed files"
662 "./${LFBFL_subdir}/update_or_check_files_names_listing.exec.sh"
663
664 echo "Creating the PDF file of the listing of the source code"
665 "./${LFBFL_subdir}/create_PDF.exec.sh" "${LFBFL_verbose}"
666
667 if [[ -f "build_and_checks_variables/post_build.sh" ]]; then
668     ./build_and_checks_variables/post_build.sh
669 fi
670
671 # -----
672 # It is at the end that all the HTML files are generated and that
673 # we can check there are no mistakes.
674 echo "Running Nu W3C HTML CSS and SVG validator"
675 local upgrade_vnu_jar_time_interval_in_seconds=""
676 grep_variable "${LFBFL_data_file_name}" \
677     upgrade_vnu_jar_time_interval_in_seconds
678 if [[ "${upgrade_vnu_jar_time_interval_in_seconds}" == "wat" ]];
679 then
680     upgrade_vnu_jar_time_interval_in_seconds=${RANDOM}
681 fi
682
683 declare -i LFBFL_vnu_jar_ts
684 local LFBFL_vnu_jar_path=""
685 grep_variable "${LFBFL_data_file_name}" vnu_jar_path\
686     --result-variable-prefix="LFBFL_"\ \
687     --replace-line-returns-by=""
688 if [[ -f "${LFBFL_vnu_jar_path}" ]]; then

```

```

689 LFBFL_vnu_jar_ts=$(stat -c %Y "${LFBFL_vnu_jar_path}")
690 LFBFL_current_ts=$(date +%s)
691 ((LFBFL_current_ts==LFBFL_vnu_jar_ts))
692 ((LFBFL_current_ts==upgrade_vnu_jar_time_interval_in_seconds))
693 if [[ LFBFL_current_ts -gt 0 ]]; then
694     echo $'!/\\ATTENTION: Nu W3C validator is too old./!\\\''
695     echo "Go get the latest version here:"
696     echo "https://github.com/validator/validator/releases"
697 fi
698 declare -r LFBFL_files_for_Nu=$((
699     find . -iregex ".*\.(css|html|svg|xhtml)\" \
700     | relevant_find
701 ))
702 declare -a LFBFL_files_for_Nu2
703 mapfile -t LFBFL_files_for_Nu2 <<< "${LFBFL_files_for_Nu}"
704 readonly LFBFL_files_for_Nu2
705 java -Xss128M -jar "${LFBFL_vnu_jar_path}" --exit-zero-always\
706     --verbose "${LFBFL_files_for_Nu2[@]}@"
707 fi
708 # -----
709 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
710     touch "${LFBFL_upgrade_venvs_ts_file}"
711 fi
712
713 declare -i LFBFL_popd_result
714 popd || {
715     LFBFL_popd_result=$?
716     echo "common_build_and_checks.exec.sh no popd"
717     # shellcheck disable=SC2248
718     return ${LFBFL_popd_result}
719 }
720 }
721 }
722
723 common_build_and_checks "$@"

```

## 2.7 build\_and\_checks\_dependencies/common\_build\_and\_checks.exec.sh.tpl

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,

```

```

9  # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
24 # The file "common_build_and_checks.exec.sh.tpl" was renamed from
25 # "common_build_and_checks.sh.tpl" to
26 # "common_build_and_checks.exec.sh.tpl".
27 # The file "common_build_and_checks.exec.sh" generated from the file
28 # "common_build_and_checks.sh.tpl"
29 # or "common_build_and_checks.exec.sh.tpl"
30 # was renamed from
31 # "common_build_and_checks.sh" to "common_build_and_checks.exec.sh".
32
33 common_build_and_checks() {
34     # $1 LFBFL_working_directory
35     # $2 LFBFL_dependencies_URL
36     # $3 optional --verbose
37     declare -r LFBFL_working_directory="$1"
38     # declare -r LFBFL_dependencies_URL="$2" too long
39     declare -r LFBFL_start_URL="$2"
40     local LFBFL_verbose=""
41     if [[ "$*" == *--verbose* ]]; then
42         echo "$0 $*"
43         LFBFL_verbose="--verbose"
44     fi
45     readonly LFBFL_verbose
46
47     if [[ ! -o pipefail ]]; then
48         [[ "${LFBFL_verbose}" == "--verbose" ]] \
49             && echo "pipefail option activated"
50         set -o pipefail
51         trap 'set +o pipefail' RETURN
52     fi
53
54     source ./wget_sha512.libr.sh

```

```

55
56     LFBFL_subdir="build_and_checks_dependencies"
57     local LFBFL_file_name
58     local LFBFL_URL
59     local LFBFL_file_path
60
61     LFBFL_file_name="build_md_from_printable_md.exec.sh"
62     # LFBFL_script_download_URL
63     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
64     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
65     @sha512_build_md_from_printable_md.exec.sh@
66     wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
67         "${LFBFL_correct_sha512}" "${LFBFL_verbose}""
68     chmod +x "./${LFBFL_file_path}"
69
70     LFBFL_file_name="check_shell_scripts_beginnings.libr.sh"
71     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
72     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
73     @sha512_check_shell_scripts_beginnings.libr.sh@
74     wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
75         "${LFBFL_correct_sha512}" "${LFBFL_verbose}""
76
77     LFBFL_file_name="check_shell_scripts_indentation.libr.sh"
78     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
79     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
80     @sha512_check_shell_scripts_indentation.libr.sh@
81     wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
82         "${LFBFL_correct_sha512}" "${LFBFL_verbose}""
83
84     LFBFL_file_name="check_URLs.libr.sh"
85     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
86     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
87     @sha512_check_URLs.libr.sh@
88     wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
89         "${LFBFL_correct_sha512}" "${LFBFL_verbose}""
90
91     LFBFL_file_name="comparisons.libr.sh"
92     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
93     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
94     @sha512_comparisons.libr.sh@
95     wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
96         "${LFBFL_correct_sha512}" "${LFBFL_verbose}""
97
98     LFBFL_file_name="create_PDF.exec.sh"
99     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
100    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"

```

```

101 @sha512_create_PDF.exec.sh@
102 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
103   "${LFBFL_correct_sha512}" "${LFBFL_verbose}" \
104 chmod +x "./${LFBFL_file_path}"
105
106 LFBFL_file_name="generate_from_template.libr.sh"
107 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
108 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
109 @sha512_generate_from_template.libr.sh@
110 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
111   "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
112
113 LFBFL_file_name="get_common_text_glob_patterns.libr.sh"
114 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
115 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
116 @sha512_get_common_text_glob_patterns.libr.sh@
117 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
118   "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
119
120 LFBFL_file_name="grammar_and_spell_check.libr.sh"
121 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
122 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
123 @sha512_grammar_and_spell_check.libr.sh@
124 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
125   "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
126
127 # /licenses_templates/ -----
128 declare -r LFBFL_subdir2="${LFBFL_subdir}/licenses_templates"
129 declare -r LFBFL_start_URL2="${LFBFL_start_URL}/licenses_templates"
130 LFBFL_file_name="build_licenses_templates.exec.sh"
131 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
132 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
133 @sha512_build_licenses_templates.exec.sh@
134 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
135   "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
136 chmod +x "./${LFBFL_file_path}"
137
138 LFBFL_file_name="license_file_header_AGPLv3+.tpl"
139 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
140 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
141 @sha512_license_file_header_AGPLv3+.tpl@
142 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
143   "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
144
145 LFBFL_file_name="license_file_header_GPLv3+.tpl"
146 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"

```

```

147 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}""
148 @sha512_license_file_header_GPLv3+.tpl@
149 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
150     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
151
152 LFBFL_file_name="license_file_header_LGPLv3+.tpl"
153 LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
154 LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}""
155 @sha512_license_file_header_LGPLv3+.tpl@
156 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
157     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
158 # -----
159
160 LFBFL_file_name="lines_counts.libr.sh"
161 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
162 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}""
163 @sha512_lines_counts.libr.sh@
164 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
165     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
166
167 LFBFL_file_name="lines_filters.libr.sh"
168 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
169 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}""
170 @sha512_lines_filters.libr.sh@
171 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
172     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
173
174 LFBFL_file_name="lines_maps.libr.sh"
175 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
176 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}""
177 @sha512_lines_maps.libr.sh@
178 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
179     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
180
181 LFBFL_file_name="overwrite_if_not_equal.libr.sh"
182 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
183 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}""
184 @sha512_overwrite_if_not_equal.libr.sh@
185 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
186     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
187
188 LFBFL_file_name="python_black_complement.libr.sh"
189 LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
190 LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}""
191 @sha512_python_black_complement.libr.sh@
192 wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \

```

```

193      "${LFBFL_correct_sha512}" "${LFBFL_verbose}""
194
195      LFBFL_file_name="python_isort_complement.libr.sh"
196      LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
197      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
198      @sha512_python_isort_complement.libr.sh@
199      wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
200          "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
201
202      LFBFL_file_name="split_score.exec.php"
203      LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
204      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
205      @sha512_split_score.exec.php@
206      wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
207          "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
208
209      LFBFL_file_name="split_score.libr.php"
210      LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
211      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
212      @sha512_split_score.libr.php@
213      wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
214          "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
215
216      LFBFL_file_name="strings_functions.libr.sh"
217      LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
218      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
219      @sha512_strings_functions.libr.sh@
220      wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
221          "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
222
223      LFBFL_file_name="too_long_code_lines.libr.sh"
224      LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
225      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
226      @sha512_too_long_code_lines.libr.sh@
227      wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
228          "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
229
230      LFBFL_file_name="update_or_check_files_names_listing.exec.sh"
231      LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
232      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
233      @sha512_update_or_check_files_names_listing.exec.sh@
234      wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}" \
235          "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
236      chmod +x "./${LFBFL_file_path}"
237
238      shopt -s globstar

```

```

239 # shellcheck source=check_shell_scripts_beginnings.libr.sh
240 source "./${LFBFL_subdir}/check_shell_scripts_beginnings.libr.sh"
241 # shellcheck source=check_shell_scripts_indentation.libr.sh
242 source "./${LFBFL_subdir}/check_shell_scripts_indentation.libr.sh"
243 # shellcheck source=check_URLs.libr.sh
244 source "./${LFBFL_subdir}/check_URLs.libr.sh"
245 # shellcheck source=comparisons.libr.sh
246 source "./${LFBFL_subdir}/comparisons.libr.sh"
247 # shellcheck source=generate_from_template.libr.sh
248 source "./${LFBFL_subdir}/generate_from_template.libr.sh"
249 # shellcheck source=get_common_text_glob_patterns.libr.sh
250 source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
251 # shellcheck source=grammar_and_spell_check.libr.sh
252 source "./${LFBFL_subdir}/grammar_and_spell_check.libr.sh"
253 # shellcheck source=lines_counts.libr.sh
254 source "./${LFBFL_subdir}/lines_counts.libr.sh"
255 # shellcheck source=lines_filters.libr.sh
256 source "./${LFBFL_subdir}/lines_filters.libr.sh"
257 # shellcheck source=lines_maps.libr.sh
258 source "./${LFBFL_subdir}/lines_maps.libr.sh"
259 # shellcheck source=overwrite_if_not_equal.libr.sh
260 source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
261 # shellcheck source=python_black_complement.libr.sh
262 source "./${LFBFL_subdir}/python_black_complement.libr.sh"
263 # shellcheck source=python_isort_complement.libr.sh
264 source "./${LFBFL_subdir}/python_isort_complement.libr.sh"
265 # shellcheck source=strings_functions.libr.sh
266 source "./${LFBFL_subdir}/strings_functions.libr.sh"
267 # shellcheck source=too_long_code_lines.libr.sh
268 source "./${LFBFL_subdir}/too_long_code_lines.libr.sh"
269
270 local LFBFL_data_file_name=\
271 "build_and_checks_variables/repository_data.txt"
272
273 declare -i LFBFL_max_line_length
274 grep_variable "${LFBFL_data_file_name}" max_line_length\
275 --result-variable-prefix="LFBFL_"
276
277 local LFBFL_update_max_length="s/^line-length = [0-9]*$"
278 LFBFL_update_max_length+="/line-length = ${LFBFL_max_line_length}/"
279 sed -E -e "${LFBFL_update_max_length}" \
280     build_and_checks_variables/black.toml\
281     > build_and_checks_variables/black.toml.temp
282 overwrite_if_not_equal build_and_checks_variables/black.toml\
283     build_and_checks_variables/black.toml.temp
284

```

```

285 declare -i LFBFL_upgrade_venvs=0
286 declare -r LFBFL_upgrade_venvs_ts_file=\"
287 "build_and_checks_variables/upgrade_venvs_ts"
288 declare -i LFBFL_upgrade_venvs_ts
289 declare -i LFBFL_current_ts
290 local LFBFL_upgrade_venvs_answer
291
292 local upgrade_venvs_time_interval_in_seconds=""
293 grep_variable "${LFBFL_data_file_name}" \
294     upgrade_venvs_time_interval_in_seconds
295 case ${upgrade_venvs_time_interval_in_seconds} in
296     wat) upgrade_venvs_time_interval_in_seconds=${RANDOM};;
297     watyouwant?) upgrade_venvs_time_interval_in_seconds=${SRANDOM};;
298     *) echo "No wat for you?";; #TempsDeCerveauDisponible XD SC2249 ;;
299 esac
300
301 if [[ -f "${LFBFL_upgrade_venvs_ts_file}" ]]; then
302     LFBFL_upgrade_venvs_ts=$(
303         stat -c %Y "${LFBFL_upgrade_venvs_ts_file}"
304     )
305     LFBFL_current_ts=$(date +%s)
306     ((LFBFL_current_ts--=LFBFL_upgrade_venvs_ts))
307     ((LFBFL_current_ts--=upgrade_venvs_time_interval_in_seconds))
308     if [[ LFBFL_current_ts -gt 0 ]]; then
309         LFBFL_upgrade_venvs=1
310     fi
311 else
312     LFBFL_upgrade_venvs=1
313 fi
314 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
315     local LFBFL2_upgrade_venvs=""
316     grep_variable "${LFBFL_data_file_name}" upgrade_venvs \
317         --result-variable-prefix="LFBFL2_"
318     if [[ "${LFBFL2_upgrade_venvs}" != "auto" ]]; then
319         read -r -n 1 -t 10 \
320             -p "Upgrade venvs and composer global? [Y/n]" \
321             LFBFL_upgrade_venvs_answer
322         if [[ "${LFBFL_upgrade_venvs_answer}" == "n" ]]; then
323             LFBFL_upgrade_venvs=0
324         fi
325     fi
326 fi
327
328 echo "Building license headers"
329 "./${LFBFL_subdir2}/build_licenses_templates.exec.sh" \
330     "${LFBFL_working_directory}" "${LFBFL_verbose}"

```

```

331
332 echo "Building README.md"
333 "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh" \
334     "${LFBFL_working_directory}" "README" "${LFBFL_verbose}"
335
336 echo "Building other MarkDown files"
337 local LFBFL_some_directory
338 declare -r LFBFL_readme="${LFBFL_working_directory}/README.md.tpl"
339 find "${LFBFL_working_directory}" -name "*.md.tpl" \
340     | relevant_find \
341     | while read -r LFBFL_file_path;
342 do
343     [[ "${LFBFL_file_path}" == "${LFBFL_readme}" ]] && continue
344     echo "Found template ${LFBFL_file_path}"
345     LFBFL_some_directory=$(dirname "${LFBFL_file_path}")
346     LFBFL_file_name=$(basename "${LFBFL_file_path}")
347     LFBFL_file_name=${LFBFL_file_name%.md.tpl}
348     "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh" \
349         "${LFBFL_some_directory}" "${LFBFL_file_name}" \
350         "${LFBFL_verbose}"
351 done
352
353 declare -i LFBFL_cd_result
354 pushd .
355 cd "${LFBFL_working_directory}" || {
356     LFBFL_cd_result=$?
357     echo "common_build_and_checks.exec.sh no such directory"
358     # shellcheck disable=SC2248
359     return ${LFBFL_cd_result}
360 }
361
362 echo "Running shellcheck"
363 find . -name "*.sh" \
364     | relevant_find \
365     | while read -r LFBFL_file_path;
366 do
367     shellcheck --rcfile=build_and_checks_variables/shellcheck.ini \
368         "${LFBFL_file_path}"
369 done
370
371 echo "---Python---"
372 echo "Running isort"
373 local LFBFL_isort_venv=""
374 grep_variable "${LFBFL_data_file_name}" isort_venv \
375     --result-variable-prefix="LFBFL_" \
376     --replace-line-returns-by=""

```

```

377 if [[ -n "${LFBFL_isort_venv}" ]]; then
378     if command -v deactivate
379     then
380         deactivate
381     fi
382     # shellcheck disable=SC1090,SC1091
383     source "${LFBFL_isort_venv}/bin/activate"
384 fi
385 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
386     pip install --upgrade isort
387 fi
388 isort .
389 if [[ -n "${LFBFL_isort_venv}" ]]; then
390     deactivate
391 fi
392 python_isort_complement
393
394 echo "Running black"
395 local LFBFL_black_venv=""
396 grep_variable "${LFBFL_data_file_name}" black_venv \
397     --result-variable-prefix="LFBFL_" \
398     --replace-line-returns-by=""
399 if [[ -n "${LFBFL_black_venv}" ]]; then
400     if command -v deactivate
401     then
402         deactivate
403     fi
404     # shellcheck disable=SC1090,SC1091
405     source "${LFBFL_black_venv}/bin/activate"
406 fi
407 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
408     pip install --upgrade black
409 fi
410 black --config build_and_checks_variables/black.toml .
411 if [[ -n "${LFBFL_black_venv}" ]]; then
412     deactivate
413 fi
414 python_black_complement
415
416 local LFBFL_mypy_venv=""
417 grep_variable "${LFBFL_data_file_name}" mypy_venv \
418     --result-variable-prefix="LFBFL_" \
419     --replace-line-returns-by=""
420 if [[ -n "${LFBFL_mypy_venv}" ]]; then
421     if command -v deactivate
422     then

```

```

423         deactivate
424     fi
425     # shellcheck disable=SC1090,SC1091
426     source "${LFBFL_mypy_venv}/bin/activate"
427   fi
428   if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
429     pip install --upgrade mypy
430   fi
431   shopt -s lastpipe
432   local LFBFL_directory_path
433   declare -i LFBFL_no_toml=1
434   find . -name "pyproject.toml" \
435     | relevant_find \
436     | while read -r LFBFL_file_path;
437   do
438     if grep -q "Typing :: Typed" "${LFBFL_file_path}"; then
439       echo "Running mypy"
440       LFBFL_directory_path=$(dirname "${LFBFL_file_path}")
441       mypy "${LFBFL_directory_path}"
442     fi
443     LFBFL_no_toml=0
444   done
445   if [[ LFBFL_no_toml -eq 1 ]]; then
446     echo "Running mypy"
447     mypy .
448   fi
449   if [[ -n "${LFBFL_mypy_venv}" ]]; then
450     deactivate
451   fi
452
453   echo "Running bandit"
454   LFBFL_bandit_venv=""
455   grep_variable "${LFBFL_data_file_name}" bandit_venv \
456     --result-variable-prefix="LFBFL_" \
457     --replace-line-returns-by=""
458   if [[ -n "${LFBFL_bandit_venv}" ]]; then
459     if command -v deactivate
460     then
461       deactivate
462     fi
463     # shellcheck disable=SC1090,SC1091
464     source "${LFBFL_bandit_venv}/bin/activate"
465   fi
466   if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
467     pip install --upgrade bandit
468   fi

```

```

469 bandit --ini build_and_checks_variables/bandit.ini \
470   -b build_and_checks_variables/bandit_baseline.json \
471   -r .
472 # Saving new baseline in temp if necessary.
473 bandit --ini build_and_checks_variables/bandit.ini \
474   -f json -o build_and_checks_variables/temp/bandit_baseline.json \
475   -r .
476 if [[ -n "${LFBFL_bandit_venv}" ]]; then
477   deactivate
478 fi
479
480 echo "Running pylint"
481 LFBFL_pylint_venv=""
482 grep_variable "${LFBFL_data_file_name}" pylint_venv \
483   --result-variable-prefix="LFBFL_" \
484   --replace-line-returns-by=""
485 if [[ -n "${LFBFL_pylint_venv}" ]]; then
486   if command -v deactivate
487     then
488       deactivate
489     fi
490   # shellcheck disable=SC1090,SC1091
491   source "${LFBFL_pylint_venv}/bin/activate"
492 fi
493 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
494   pip install --upgrade pylint
495 fi
496 pylint --rcfile build_and_checks_variables/pylintrc.toml \
497   --recursive=y .
498 if [[ -n "${LFBFL_pylint_venv}" ]]; then
499   deactivate
500 fi
501
502 echo "Running ruff"
503 LFBFL_ruff_venv=""
504 grep_variable "${LFBFL_data_file_name}" ruff_venv \
505   --result-variable-prefix="LFBFL_" \
506   --replace-line-returns-by=""
507 if [[ -n "${LFBFL_ruff_venv}" ]]; then
508   if command -v deactivate
509     then
510       deactivate
511     fi
512   # shellcheck disable=SC1090,SC1091
513   source "${LFBFL_ruff_venv}/bin/activate"
514 fi

```

```

515 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
516     pip install --upgrade ruff
517 fi
518 ruff check --config build_and_checks_variables/ruff.toml
519 if [[ -n "${LFBFL_ruff_venv}" ]]; then
520     deactivate
521 fi
522 echo "---Python end---"
523
524 echo "---PHP---"
525 echo "Running PHPMD"
526 if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
527     composer global require phpmd/phpmd
528 fi
529
530 local LFBFL_phpmd_baseline="build_and_checks_variables/"
531 LFBFL_phpmd_baseline+="phpmd_baseline.xml"
532 readonly LFBFL_phpmd_baseline
533
534 local LFBFL_temp_phpmd_baseline="build_and_checks_variables/temp/"
535 LFBFL_temp_phpmd_baseline+="phpmd_baseline.xml"
536 readonly LFBFL_temp_phpmd_baseline
537
538 local LFBFL_phpmd_rulesets="cleancode,codesize,controversial,"
539 LFBFL_phpmd_rulesets+="design,naming,unusedcode"
540 readonly LFBFL_phpmd_rulesets
541
542 phpmd --color --baseline-file "${LFBFL_phpmd_baseline}" \
543     . text "${LFBFL_phpmd_rulesets}"
544 # Saving new baseline in temp if necessary.
545 rm "${LFBFL_temp_phpmd_baseline}"
546 phpmd --color --generate-baseline \
547     --baseline-file "${LFBFL_temp_phpmd_baseline}" \
548     . text "${LFBFL_phpmd_rulesets}"
549 echo "---PHP end---"
550
551 echo "---JS---"
552 LFBFL_npm_lint_directories=""
553 grep_variable "${LFBFL_data_file_name}" npm_lint_directories\
554     --result-variable-prefix="LFBFL_"
555 if [[ -n "${LFBFL_npm_lint_directories}" ]]; then
556     echo "Running ESLint"
557     local LFBFL_JS_directory
558     echo "${LFBFL_npm_lint_directories}"\
559         | sed -e 's/\n/g'\
560         | while read -r LFBFL_JS_directory;

```

```

561     do
562         (cd "${LFBFL_JS_directory}" && npm run lint)
563     done
564 fi
565 echo "---JS end---"
566
567 echo "Analyzing too long lines"
568 # shellcheck disable=SC2248
569 too_long_code_lines ${LFBFL_max_line_length} "$@"
570
571 echo "Analyzing shell scripts beginnings"
572 check_shell_scripts_beginnings\
573     | relevant_grep
574
575 echo "Analyzing shell scripts indentation"
576 check_shell_scripts_indentation\
577     | relevant_grep
578
579 echo "Analyzing URLs"
580 check_URLs "$@" \
581     | relevant_grep
582
583 echo "Analyzing strange characters: hover over in doubt"
584 # shellcheck disable=SC1111
585 LFBFL_usual_characters="\x00-\x7Fàâéèëïïôûç©“”└┘|«»"
586 grep --exclude-dir .git --binary-files=without-match --color=always\
587     -nPr "[^${LFBFL_usual_characters}]" .
588
589 echo "Checking listed files"
590 "./${LFBFL_subdir}/update_or_check_files_names_listing.exec.sh"
591
592 echo "Creating the PDF file of the listing of the source code"
593 "./${LFBFL_subdir}/create_PDF.exec.sh" "${LFBFL_verbose}"
594
595 if [[ -f "build_and_checks_variables/post_build.sh" ]]; then
596     ./build_and_checks_variables/post_build.sh
597 fi
598
599 # -----
600 # It is at the end that all the HTML files are generated and that
601 # we can check there are no mistakes.
602 echo "Running Nu W3C HTML CSS and SVG validator"
603 local upgrade_vnu_jar_time_interval_in_seconds=""
604 grep_variable "${LFBFL_data_file_name}" \
605     upgrade_vnu_jar_time_interval_in_seconds
606 if [[ "${upgrade_vnu_jar_time_interval_in_seconds}" == "wat" ]];
```

```

607     then
608         upgrade_vnu_jar_time_interval_in_seconds=${RANDOM}
609     fi
610
611     declare -i LFBFL_vnu_jar_ts
612     local LFBFL_vnu_jar_path=""
613     grep_variable "${LFBFL_data_file_name}" vnu_jar_path\
614         --result-variable-prefix="LFBFL_"\
615         --replace-line-returns-by=""
616     if [[ -f "${LFBFL_vnu_jar_path}" ]]; then
617         LFBFL_vnu_jar_ts=$(stat -c %Y "${LFBFL_vnu_jar_path}")
618         LFBFL_current_ts=$(date +s)
619         ((LFBFL_current_ts-=LFBFL_vnu_jar_ts))
620         ((LFBFL_current_ts-=upgrade_vnu_jar_time_interval_in_seconds))
621         if [[ LFBFL_current_ts -gt 0 ]]; then
622             echo $'!/\\ATTENTION: Nu W3C validator is too old./!\\\''
623             echo "Go get the latest version here:"
624             echo "https://github.com/validator/validator/releases"
625         fi
626         declare -r LFBFL_files_for_Nu=$(
627             find . -iregex ".*\.(css|html|svg|xhtml)" \
628                 | relevant_find
629         )
630         declare -a LFBFL_files_for_Nu2
631         mapfile -t LFBFL_files_for_Nu2 <<< "${LFBFL_files_for_Nu}"
632         readonly LFBFL_files_for_Nu2
633         java -Xss128M -jar "${LFBFL_vnu_jar_path}" --exit-zero-always\
634             --verbose "${LFBFL_files_for_Nu2[@]}"
635     fi
636     # -----
637
638     if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
639         touch "${LFBFL_upgrade_venvs_ts_file}"
640     fi
641
642     declare -i LFBFL_popd_result
643     popd || {
644         LFBFL_popd_result=$?
645         echo "common_build_and_checks.exec.sh no popd"
646         # shellcheck disable=SC2248
647         return ${LFBFL_popd_result}
648     }
649 }
650
651 common_build_and_checks "$@"

```

## 2.8 build\_and\_checks\_dependencies/comparisons.libr.sh

```
1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # The file "comparisons.sh" was renamed to "comparisons.libr.sh".
25
26 equal() {
27     # Returns 1 if all the arguments strings are equal.
28     # Renvoie 1 dans $? si toutes les chaînes en arguments sont égales.
29     # J'ai rerepensé au 3-way-merge
30     # et à mon article sur le principe de première différence
31     # appliqué à la largeur modulaire, de clique ou de rang avec
32     # l'idée d'un principe de première différence ternaire.
33     declare -i LFBFL_first=1
34     local LFBFL_current
35     local LFBFL_arg
36     for LFBFL_arg in "$@"; do
37         if [[ LFBFL_first -eq 1 ]]; then
38             LFBFL_current="${LFBFL_arg}"
39             LFBFL_first=0
40             continue
41         fi
42         if [[ "${LFBFL_current}" != "${LFBFL_arg}" ]]; then
43             return 0
44         fi
```

```

45     done
46     return 1
47 }
48
49 some_distinct() {
50     ! equal "$@"
51 }
52
53 all_distinct() {
54     # Returns 1 if all the arguments strings are distinct.
55     declare -ir LFBFL_ij_max=$#
56     declare -i LFBFL_i
57     declare -i LFBFL_j
58     for ((LFBFL_i=1; LFBFL_i<=LFBFL_ij_max; ++LFBFL_i)); do
59         for ((LFBFL_j=1; LFBFL_j<=LFBFL_ij_max; ++LFBFL_j)); do
60             [[ LFBFL_i -eq LFBFL_j ]] && continue
61             [[ "${!LFBFL_i}" == "${!LFBFL_j}" ]] && return 0
62         done
63     done
64     return 1
65 }
66
67 all_distinct2() {
68     # Returns 1 if all the arguments strings are distinct.
69     local LFBFL_element
70     local LFBFL_previous_element
71     if [[ $# -eq 0 ]]; then
72         return 1
73     fi
74     # Not setting pipefail since the result would still be incorrect.
75     # shellcheck disable=SC2312
76     printf "%s\n" "$@" \
77         | sort\
78         | {
79             read -r LFBFL_previous_element\
80             && while read -r LFBFL_element; do
81                 if [[ "${LFBFL_previous_element}" == "${LFBFL_element}" ]];
82                 then
83                     return 0
84                 fi
85                 LFBFL_previous_element="${LFBFL_element}"
86             done
87             return 1
88         }
89     }
90

```

```

91 all_distinct3() {
92     # Returns 1 if all the arguments strings are distinct.
93     # This is the fastest of all 3; but note that version 2 is faster
94     # than this one if a call to sort is added.
95     if [[ $# -eq 0 ]]; then
96         return 1
97     fi
98     # Not setting pipefail since the result would still be incorrect.
99     # shellcheck disable=SC2162,SC2312
100    printf "%s\n" "$@" \
101        | uniq -d\
102        | read
103    }
104
105 some_equal() {
106     ! all_distinct "$@"
107 }
108
109 some_equal2() {
110     ! all_distinct2 "$@"
111 }
112
113 some_equal3() {
114     ! all_distinct3 "$@"
115 }
116
117 max() {
118     # Returns the maximum string among the arguments.
119     # Renvoie la chaîne la plus grande parmi celles proposées.
120     # $1=$sort command with the flags you want to be applied.
121     # $ max sort a b c
122     # C
123     if [[ $# -eq 0 ]]; then
124         return 1
125     fi
126     if [[ ! -o pipefail ]]; then
127         set -o pipefail
128         trap 'set +o pipefail' RETURN
129     fi
130     printf "%s\n" "${@:2}" \
131         | eval "$1 -r" \
132         | head -1
133    }
134
135 min() {
136     # Returns the minimum string among the arguments.

```

```

137 # Renvoie la chaîne la plus petite parmi celles proposées.
138 # $1=$sort command with the flags you want to be applied.
139 # $ min sort a b c
140 # a
141 if [[ $# -eq 0 ]]; then
142     return 1
143 fi
144 if [[ ! -o pipefail ]]; then
145     set -o pipefail
146     trap 'set +o pipefail' RETURN
147 fi
148 printf "%s\n" "${@:2}" \
149     | eval "$1" \
150     | head -1
151 }
152
153 is_substring(){
154     # $1=$string
155     # $2=$substring
156     declare -r LFBFL_var_1=$((
157         echo "$1" \
158         | sed -e 's/\\/\&/g' -e "s/'/\\\\\&/g"
159     ))
160     declare -r LFBFL_var_2=$((
161         echo "$2" \
162         | sed -e 's/\\/\&/g' -e "s/'/\\\\\&/g"
163     ))
164     local LFBFL_var_3="\$a = '$LFBFL_var_1';"
165     LFBFL_var_3+=" \$b = preg_quote('$LFBFL_var_2');"
166     LFBFL_var_3+=" \$c = '/'.addcslashes(\$b, '/').'/';"
167     LFBFL_var_3+=" die(1 - preg_match(\$c, \$a));"
168     readonly LFBFL_var_3
169     php -r "{$LFBFL_var_3}"
170     return $?
171 }
172
173 is_subfile(){
174     # $1=$file_name
175     # $2=$sub_file_name
176     local LFBFL_var_1="\$a = file_get_contents('$1');"
177     LFBFL_var_1+=" \$b = preg_quote(file_get_contents('$2'));"'
178     LFBFL_var_1+=" \$c = '/'.addcslashes(\$b, '/').'/';"
179     LFBFL_var_1+=" die(1 - preg_match(\$c, \$a));"
180     readonly LFBFL_var_1
181     php -r "{$LFBFL_var_1}"
182     return $?

```

```

183 }
184
185 alias min_from_int_sort="min 'sort --numeric-sort'"
186 alias max_from_int_sort="max 'sort --numeric-sort'"

```

## 2.9 build\_and\_checks\_dependencies/create\_PDF.exec.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "create_PDF.sh" to "create_PDF.exec.sh".
25
26 LFBFL_subdir="build_and_checks_dependencies"
27 # shellcheck source=generate_from_template.libr.sh
28 source "./${LFBFL_subdir}/generate_from_template.libr.sh"
29 # shellcheck source=lines_counts.libr.sh
30 source "./${LFBFL_subdir}/lines_counts.libr.sh"
31 # shellcheck source=lines_filters.libr.sh
32 source "./${LFBFL_subdir}/lines_filters.libr.sh"
33 # shellcheck source=lines_maps.libr.sh
34 source "./${LFBFL_subdir}/lines_maps.libr.sh"
35 # shellcheck source=overwrite_if_not_equal.libr.sh
36 source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
37 # shellcheck source=strings_functions.libr.sh
38 source "./${LFBFL_subdir}/strings_functions.libr.sh"
39

```

```

40  create_PDF() {
41      declare -i LFBFL_verbose=0
42      if [[ "$*" == *--verbose* ]]; then
43          echo "$0 $*"
44          LFBFL_verbose=1
45      fi
46      readonly LFBFL_verbose
47
48      if [[ ! -o pipefail ]]; then
49          [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
50          set -o pipefail
51          trap 'set +o pipefail' RETURN
52      fi
53
54      local LFBFL_subdir2="build_and_checks_variables"
55      local LFBFL_data_file_name="${LFBFL_subdir2}/repository_data.txt"
56      local LFBFL_repository_name=""
57      grep_variable "${LFBFL_data_file_name}" repository_name \
58          --result-variable-prefix="LFBFL_" \
59          --replace-line-returns-by=""
60
61      local LFBFL_abstract=""
62      grep_variable "${LFBFL_data_file_name}" abstract \
63          --result-variable-prefix="LFBFL_"
64
65      local LFBFL_acknowledgments=""
66      grep_variable "${LFBFL_data_file_name}" acknowledgments \
67          --result-variable-prefix="LFBFL_"
68
69      local LFBFL_author_email=""
70      grep_variable "${LFBFL_data_file_name}" author_email \
71          --result-variable-prefix="LFBFL_" \
72          --replace-line-returns-by=""
73
74      local LFBFL_author_full_name=""
75      grep_variable "${LFBFL_data_file_name}" author_full_name \
76          --result-variable-prefix="LFBFL_" \
77          --replace-line-returns-by=" "
78
79      local LFBFL_author_website=""
80      grep_variable "${LFBFL_data_file_name}" author_website \
81          --result-variable-prefix="LFBFL_" \
82          --replace-line-returns-by=""
83
84      declare -i LFBFL_max_line_length
85      grep_variable "${LFBFL_data_file_name}" max_line_length \

```

```

86      --result-variable-prefix="LFBFL_"
87
88 declare -r LFBFL_current_date=$(date -I"date")
89
90 declare -r LFBFL_current_git_SHA1=$(git rev-parse HEAD)
91
92 declare -ir LFBFL_number_of_commits=$(((
93     git shortlog\
94     | space_starting_lines\
95     | wc -l
96 ))
97
98 declare -ir LFBFL_all_code_lines_count=$((code_lines_count_all "$@"))
99 declare -ir LFBFL_not_empty_code_lines_count=$(((
100     code_lines_count_not_empty "$@"
101 ))
102 declare -ir LFBFL_empty_code_lines_count=$(((
103     code_lines_count_empty "$@"
104 ))
105
106 local LFBFL_number_of_lines="$${LFBFL_all_code_lines_count}"
107 LFBFL_number_of_lines+=" total lines,"
108 LFBFL_number_of_lines+=" ${LFBFL_not_empty_code_lines_count}"
109 LFBFL_number_of_lines+=" not empty lines,"
110 LFBFL_number_of_lines+=" ${LFBFL_empty_code_lines_count}"
111 LFBFL_number_of_lines+=" empty lines."
112 readonly LFBFL_number_of_lines
113
114 # see https://gitlab.com/OldManProgrammer/unix-tree/-/issues
115 # ?show=eyJpaWQiOii0MyIsImZlbGxfcGF0aCI6Ik9sZE1hb1Byb2dyYWlt
116 # ZXIvdW5peC10cmVlIiwiaWQiOjE4NTE0NTgzOH0%3D
117 tree -a --gitignore\
118     -I "node_modules/"\
119     -I "__pycache__/"\
120     -I ".mypy_cache/"\
121     -I ".ruff_cache/"\
122     -I ".git/"\
123     | replace_non_ascii_spaces\
124     > "${LFBFL_subdir2}/temp/current_tree_light.txt"
125
126 tree -a -DFh --gitignore\
127     -I "node_modules/"\
128     -I "__pycache__/"\
129     -I ".mypy_cache/"\
130     -I ".ruff_cache/"\
131     -I ".git/"

```

```

132     | replace_non_ascii_spaces\
133     > "${LFBFL_subdir2}/temp/current_tree.txt.temp"
134
135 local LFBFL_temp_files_listing="./${LFBFL_subdir2}/temp/"
136 LFBFL_temp_files_listing+="files_listing.tex.tpl.temp"
137 readonly LFBFL_temp_files_listing
138 : > "${LFBFL_temp_files_listing}"
139 local LFBFL_temp_files_listing2="./${LFBFL_subdir2}/temp/"
140 LFBFL_temp_files_listing2+="files_listing.html.tpl.temp"
141 readonly LFBFL_temp_files_listing2
142 : > "${LFBFL_temp_files_listing2}"
143 # HTML <li> elements, hence "lis".
144 local LFBFL_temp_files_lis
145 LFBFL_temp_files_lis="./${LFBFL_subdir2}/temp/files_lis.html.tpl"
146 readonly LFBFL_temp_files_lis
147 : > "${LFBFL_temp_files_lis}"
148 # shellcheck disable=SC2248
149 get_split_score_simple 1 ${LFBFL_max_line_length} /
150 declare -r LFBFL_score_command="${get_split_score_result}"
151 local LFBFL_score_command_properties="${get_split_score_result2}"
152 readonly LFBFL_score_command_properties
153 # shellcheck disable=SC2248
154 get_split_score_simple 1 ${LFBFL_max_line_length} ':'
155 declare -r LFBFL_score_command2="${get_split_score_result}"
156 local LFBFL_score_command_properties2="${get_split_score_result2}"
157 readonly LFBFL_score_command_properties2
158 declare -r LFBFL_suffix='%'
159 declare -i LFBFL_i=0
160 local LFBFL_cleaned_path1
161 local LFBFL_cleaned_path2
162 local LFBFL_new_lines
163 local LFBFL_new_lines2
164 local LFBFL_new_lines3
165 # Remove line returns here to keep lines short.
166 sed -Ez 's/\\n/Mg' "./${LFBFL_subdir2}/files_names_listing.txt" \
167   | grep -v '^//'\
168   | while read -r LFBFL_file_name;
169 do
170   echo "Listing file for tex/HTML : ${LFBFL_file_name}"
171   # echo "Listing file for tex : ${LFBFL_file_name}"
172   # LFBFL_base_file_name=$(basename "${LFBFL_file_name}")
173   LFBFL_cleaned_path1="${LFBFL_file_name//_/\\"}"
174   LFBFL_cleaned_path2=$(
175     echo "${LFBFL_file_name}"\
176       | sed -e 's//:/g' -e 's/\./g'
177   )

```

```

178 LFBFL_new_lines=" ${LFBFL_cleaned_path1}"
179 if [[ ${#LFBFL_new_lines} -gt LFBFL_max_line_length ]]; then
180     # shellcheck disable=SC2248
181     repeated_split_last_line "${LFBFL_new_lines}" \
182         " "\\\
183             ${LFBFL_max_line_length}\ \
184                 "${LFBFL_suffix}" \
185                     "${LFBFL_score_command}" \
186                         "${LFBFL_score_command_properties}" \
187                             "\ \" \
188 LFBFL_new_lines=${repeated_split_last_line_result}
189 fi
190 LFBFL_new_lines2=" ${LFBFL_cleaned_path2}"
191 if [[ ${#LFBFL_new_lines2} -gt LFBFL_max_line_length ]]; then
192     # shellcheck disable=SC2248
193     repeated_split_last_line "${LFBFL_new_lines2}" \
194         " "\\\
195             ${LFBFL_max_line_length}\ \
196                 "${LFBFL_suffix}" \
197                     "${LFBFL_score_command2}" \
198                         "${LFBFL_score_command_properties2}" \
199                             LFBFL_new_lines2=${repeated_split_last_line_result}
200 fi
201 LFBFL_new_lines3="${LFBFL_file_name}"
202 if [[ ${#LFBFL_new_lines3} -gt LFBFL_max_line_length ]]; then
203     # shellcheck disable=SC2248
204     repeated_split_last_line "${LFBFL_new_lines3}" \
205         " "\\\
206             ${LFBFL_max_line_length}\ \
207                 "${LFBFL_suffix}" \
208                     "${LFBFL_score_command}" \
209                         "${LFBFL_score_command_properties}" \
210                             LFBFL_new_lines3=${repeated_split_last_line_result}
211 fi
212 {
213     echo "\subsection{"
214     echo " ${LFBFL_file_name}" \
215         | sed -e "s| ${LFBFL_file_name}|${LFBFL_new_lines}|g" \
216             -e 's/_/\\_/_g'
217     echo "}"
218     echo "\label{"
219     echo " ${LFBFL_cleaned_path2}" \
220         | sed -e "s| ${LFBFL_cleaned_path2}|${LFBFL_new_lines2}|g"
221     echo "}"
222     echo ""
223     echo "\VerbatimInput [numbers=left,xleftmargin=-5mm] { "

```

```

224     echo "  ${LFBFL_file_name}" \
225         | sed -e "s|  ${LFBFL_file_name}|${LFBFL_new_lines3}|g"
226     echo }}"
227     echo ""
228     echo ""
229 } >> "${LFBFL_temp_files_listing}"
230
231 # echo "Listing file for HTML : ${LFBFL_file_name}"
232 ((++LFBFL_i))
233 LFBFL_new_lines="${LFBFL_file_name}"
234 if [[ ${#LFBFL_file_name} -gt LFBFL_max_line_length ]]; then
235     # shellcheck disable=SC2248
236     repeated_split_last_line "${LFBFL_new_lines}" \
237         "-->" \
238         ${LFBFL_max_line_length} \
239         "<!--" \
240         "${LFBFL_score_command}" \
241         "${LFBFL_score_command_properties}"
242     LFBFL_new_lines=${repeated_split_last_line_result}
243 fi
244 {
245     echo "<h3 id=\"subsection2.${LFBFL_i}\">2.${LFBFL_i}"
246     # shellcheck disable=SC2001
247     echo "${LFBFL_file_name}" \
248         | sed -e "s|${LFBFL_file_name}|${LFBFL_new_lines}|g"
249     echo "</h3>"
250     echo "<pre class=\"numbered_lines\">"
251     sed -e 's/&/&/' -e 's/</</' -e 's/>/>/' \
252         < "${LFBFL_file_name}"
253     echo "</pre>"
254     echo ""
255     echo ""
256 } >> "${LFBFL_temp_files_listing2}"
257 {
258     echo "      <li><a href=\"#subsection2.${LFBFL_i}\">>" \
259     # shellcheck disable=SC2001
260     echo "${LFBFL_file_name}" \
261         | sed -e "s|${LFBFL_file_name}|${LFBFL_new_lines}|g"
262     echo "          </a></li>" \
263 } >> "${LFBFL_temp_files_lis}"
264 done
265 overwrite_if_not_equal "./${LFBFL_subdir2}/files_listing.tex.tpl" \
266     "${LFBFL_temp_files_listing}"
267 sed -i -e "s|\n</pre>|</pre>|g" "${LFBFL_temp_files_listing2}"
268 overwrite_if_not_equal \
269     "./${LFBFL_subdir2}/temp/files_listing.html.tpl" \

```

```

270      "${LFBFL_temp_files_listing2}""
271
272  # We verify if some lines are beyond max_line_length characters
273  # in current_tree_light.txt and current_tree.txt.
274  declare -ar LFBFL_trees=(  

275      "current_tree_light.txt"  

276      "current_tree.txt.temp"  

277  )
278  local LFBFL_tree_path
279  local LFBFL_line
280  local LFBFL_prefix
281  local LFBFL_line_start
282  declare -ir LFBFL_overlength=$((LFBFL_max_line_length+1))
283  for LFBFL_tree in "${LFBFL_trees[@]}"; do
284      LFBFL_tree_path="${LFBFL_subdir2}/temp/${LFBFL_tree}"
285      # shellcheck disable=SC2248
286      grep '.\${LFBFL_overlength}'\" "\${LFBFL_tree_path}" \
287          | while read -r LFBFL_line;
288  do
289      # echo "LFBFL_line: \${LFBFL_line}"
290      LFBFL_prefix=$(  

291          echo "\${LFBFL_line}" \  

292          | sed -E -e 's/(.*)-[^\-]+$/\1/g' -e 's/[^\-]+$/\g'  

293      )
294      LFBFL_prefix+="| "
295      # echo "LFBFL_prefix: \${LFBFL_prefix}"
296      LFBFL_file_name=$(  

297          echo "\${LFBFL_line}" \  

298          | sed -E 's|.* ([a-zA-Z0-9\._/-]+) .*\|\1|g'  

299      )
300      # echo "LFBFL_file_name: \${LFBFL_file_name}"
301      LFBFL_line_start=$(  

302          echo "\${LFBFL_line}" \  

303          | sed -E -e "s/(.*)[\ ]*\${LFBFL_file_name}/\1/g" \  

304              -e 's/ *$/\g'  

305      )
306      # echo "LFBFL_line_start: \${LFBFL_line_start}"
307      LFBFL_line=$(  

308          echo "\${LFBFL_line}" \  

309          | sed -E -e 's/[\ /\\\]/g' -e 's/\]/\\\]/g'  

310      )
311      LFBFL_new_lines="\${LFBFL_prefix}\${LFBFL_file_name}"
312      if [[ ${#LFBFL_new_lines} -gt LFBFL_max_line_length ]]; then
313          # shellcheck disable=SC2248
314          repeated_split_last_line "\${LFBFL_new_lines}" \  

315          "\${LFBFL_prefix}"\

```

```

316             ${LFBFL_max_line_length}\ \
317             \" \
318             \" \
319             \" \
320             LFBFL_new_lines=${repeated_split_last_line_result}
321         fi
322         sed -i -e\
323             "s/${LFBFL_line}/${LFBFL_line_start}\n${LFBFL_new_lines}/g" \
324             "${LFBFL_tree_path}"
325     done
326 done
327
328 overwrite_if_not_equal "${LFBFL_subdir2}/temp/current_tree.txt" \
329 "${LFBFL_subdir2}/temp/current_tree.txt.temp" 1 1
330
331 declare -r LFBFL_tex_path_start=\
332 "./${LFBFL_subdir2}/temp/${LFBFL_repository_name}.tex"
333 declare -r LFBFL_html_path_start=\
334 "./${LFBFL_subdir2}/temp/${LFBFL_repository_name}.html"
335
336 if [[ -f "./${LFBFL_subdir2}/${LFBFL_repository_name}.tex.tpl" ]]; \
337 then
338     # If there is a template, we init the process from it.
339     cp "./${LFBFL_subdir2}/${LFBFL_repository_name}.tex.tpl" \
340         "${LFBFL_tex_path_start}.1"
341 elif [[ -f "./${LFBFL_subdir2}/${LFBFL_repository_name}.tex" ]]; \
342 then
343     # Otherwise if there is a tex file, we init the process from it.
344     cp "./${LFBFL_subdir2}/${LFBFL_repository_name}.tex" \
345         "${LFBFL_tex_path_start}.1"
346 else
347     echo "Neither .tex.tpl, nor .tex in ./${LFBFL_subdir2}/"
348 fi
349
350 # Same logic with repository HTML file.
351 if [[ -f "./${LFBFL_subdir2}/${LFBFL_repository_name}.html.tpl" ]]; \
352 then
353     cp "./${LFBFL_subdir2}/${LFBFL_repository_name}.html.tpl" \
354         "${LFBFL_html_path_start}.1"
355 elif [[ -f "./${LFBFL_repository_name}.html" ]]; then
356     cp "./${LFBFL_repository_name}.html" "${LFBFL_html_path_start}.1"
357 else
358     echo "Neither .html.tpl in ./${LFBFL_subdir2}/, nor .html in ./"
359 fi
360
361 # shellcheck disable=SC2001

```

```

362 echo "${LFBFL_abstract}" \
363   | sed -e 's/\n/\n/g' \
364   > "./${LFBFL_subdir2}/temp/abstract_temp"
365
366 # shellcheck disable=SC2001
367 echo "${LFBFL_acknowledgments}" \
368   | sed -e 's/\n/\n/g' \
369   > "./${LFBFL_subdir2}/temp/acknowledgments_temp"
370
371 # But the filling still occurs, in case the dev want to refill
372 # part of the tex/html file that he modified with @token@
373 # using some computed results.
374 # Tex filling:
375 if [[ -f "${LFBFL_tex_path_start}.1" ]]; then
376   sed -i "s|@repository_name@|${LFBFL_repository_name}|g" \
377     "${LFBFL_tex_path_start}.1"
378
379 insert_file_at_token "${LFBFL_tex_path_start}.1" @abstract@ \
380   "./${LFBFL_subdir2}/temp/abstract_temp" \
381   "${LFBFL_tex_path_start}.2"
382
383 insert_file_at_token "${LFBFL_tex_path_start}.2" \
384   @acknowledgments@ \
385   "./${LFBFL_subdir2}/temp/acknowledgments_temp" \
386   "${LFBFL_tex_path_start}.3"
387
388 sed -i -e "s|@author_email@|${LFBFL_author_email}|g" \
389   -e "s|@author_full_name@|${LFBFL_author_full_name}|g" \
390   -e "s|@author_website@|${LFBFL_author_website}|g" \
391   -e "s|@current_date@|${LFBFL_current_date}|g" \
392   -e "s|@current_git_SHA1@|${LFBFL_current_git_SHA1}|g" \
393   -e "s|@number_of_commits@|${LFBFL_number_of_commits}|g" \
394   -e "s|@number_of_lines@|${LFBFL_number_of_lines}|g" \
395   "${LFBFL_tex_path_start}.3"
396
397 pushd "./${LFBFL_subdir2}/temp/" || (echo "pushd failed" && exit)
398 sed -i \
399   -e '/@current_tree_light@/{r current_tree_light.txt' -e 'd}' \
400   -e '/@current_tree@/{r current_tree.txt' -e 'd}' \
401   "${LFBFL_repository_name}.tex.3"
402 popd || (echo "popd failed" && exit)
403
404 insert_file_at_token "${LFBFL_tex_path_start}.3" \
405   @files_listing_VerbatimInput@ \
406   "./${LFBFL_subdir2}/files_listing.tex.tpl" \
407   "${LFBFL_tex_path_start}.4"

```

```

408     overwrite_if_not_equal \
409     "./${LFBFL_subdir2}/${LFBFL_repository_name}.tex" \
410     "${LFBFL_tex_path_start}.4" 1
411   fi
413
414   # HTML filling:
415   declare -i LFBFL_HTML_updated=0
416   if [[ -f "${LFBFL_html_path_start}.1" ]]; then
417     sed -i "s|@repository_name@|${LFBFL_repository_name}|g" \
418     "${LFBFL_html_path_start}.1"
419
420     insert_file_at_token "${LFBFL_html_path_start}.1" @abstract@ \
421     "./${LFBFL_subdir2}/temp/abstract_temp" \
422     "${LFBFL_html_path_start}.2"
423
424     insert_file_at_token "${LFBFL_html_path_start}.2" \
425     @acknowledgments@ \
426     "./${LFBFL_subdir2}/temp/acknowledgments_temp" \
427     "${LFBFL_html_path_start}.3"
428
429     sed -i -e "s|@author_email@|${LFBFL_author_email}|g" \
430           -e "s|@author_full_name@|${LFBFL_author_full_name}|g" \
431           -e "s|@author_website@|${LFBFL_author_website}|g" \
432           -e "s|@current_date@|${LFBFL_current_date}|g" \
433           -e "s|@current_git_SHA1@|${LFBFL_current_git_SHA1}|g" \
434           -e "s|@number_of_commits@|${LFBFL_number_of_commits}|g" \
435           -e "s|@number_of_lines@|${LFBFL_number_of_lines}|g" \
436     "${LFBFL_html_path_start}.3"
437
438     insert_file_at_token "${LFBFL_html_path_start}.3" \
439     @files_lis@ "${LFBFL_temp_files_lis}" \
440     "${LFBFL_html_path_start}.4"
441
442     pushd "./${LFBFL_subdir2}/temp/" || (echo "pushd failed" && exit)
443     sed -i \
444       -e '/@current_tree_light@/{r current_tree_light.txt' -e 'd}' \
445       -e '/@current_tree@/{r current_tree.txt' -e 'd}' \
446       "${LFBFL_repository_name}.html.4"
447     popd || (echo "popd failed" && exit)
448
449     insert_file_at_token "${LFBFL_html_path_start}.4" \
450     @files_listing_HTMLPreInput@ \
451     "./${LFBFL_subdir2}/temp/files_listing.html.tpl" \
452     "${LFBFL_html_path_start}.5"
453

```

```

454     overwrite_if_not_equal "./${LFBFL_repository_name}.html" \
455         "${LFBFL_html_path_start}.5" 1
456     LFBFL_HTML_updated=$?
457 fi
458
459 # The HTML contains everything including listings with source code.
460 # If it doesn't get updated,
461 # then it is useless to recompute the PDF.
462 if [[ LFBFL_HTML_updated -eq 0 ]]; then
463     return
464 fi
465
466 if [[ LFBFL_verbose -eq 1 ]]; then
467     for ((i=0; i<3; i++)); do
468         pdflatex "./${LFBFL_subdir2}/${LFBFL_repository_name}.tex"
469         done
470 else
471     for ((i=0; i<3; i++)); do
472         pdflatex "./${LFBFL_subdir2}/${LFBFL_repository_name}.tex" \
473             > /dev/null
474         done
475 fi
476
477 LFBFL_files_to_temp=( \
478     "${LFBFL_repository_name}.aux" \
479     "${LFBFL_repository_name}.log" \
480     "${LFBFL_repository_name}.out" \
481     "${LFBFL_repository_name}.toc"
482 )
483 for LFBFL_file_name in "${LFBFL_files_to_temp[@]}"; do
484     mv "${LFBFL_file_name}" "${LFBFL_subdir2}/temp/"
485 done
486 }
487
488 create_PDF "$@"

```

## 2.10 build\_and\_checks\_dependencies/generate\_from\_template.libr.sh

```

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2 # This file is part of DevOrSysAdminScripts library.
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8 # either version 3 of the License,

```

```

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16 # See the GNU General Public License for more details.
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20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "generate_from_template.sh" to
25 # "generate_from_template.libr.sh".
26
27 LFBFL_subdir="build_and_checks_dependencies"
28 # shellcheck source=lines_filters.libr.sh
29 source "./${LFBFL_subdir}/lines_filters.libr.sh"
30 # shellcheck source=overwrite_if_not_equal.libr.sh
31 source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
32
33 generate_from_template_with_block_comments() {
34     # $1=base_file_name
35     # $2=target_file_name
36     # $3=enter_block_comment
37     # $4=exit_block_comment
38     local LFBFL_temp
39     LFBFL_temp="$2.generate_from_template_with_block_comments.temp"
40     readonly LFBFL_temp
41     {
42         echo "$3"
43         cat "$1"
44         echo "$4"
45     } > "${LFBFL_temp}"
46     overwrite_if_not_equal "$2" "${LFBFL_temp}"
47 }
48
49 generate_from_template_with_line_comments() {
50     # $1=base_file_name
51     # $2=target_file_name
52     # $3=line_comment_prefix
53     # $4=optional_post_processing
54     # $5=file_prefix

```

```

55 local LFBFL_temp
56 LFBFL_temp="$2.generate_from_template_with_line_comments.temp"
57 readonly LFBFL_temp
58 if [[ -n "$5" ]]; then
59     echo "$5" \
60         > "${LFBFL_temp}"
61 fi
62 sed -e "s/^/$3/g" "$1" \
63     >> "${LFBFL_temp}"
64 if [[ -n "$4" ]]; then
65     eval "$4"
66 fi
67 overwrite_if_not_equal "$2" "${LFBFL_temp}"
68 }
69
70 split_file_in_two() {
71     # $1=$file_name
72     # $2=$token assume that token is the only thing on his line.
73     # $3=$file_name_part1
74     # $4=$file_name_part2
75     declare -ir LFBFL_line_number=$(((
76         grep -n "$2" "$1" \
77             | head --lines=1 \
78             | cut -f 1 -d ':'
79     )))
79     declare -ir LFBFL_line_count=$(ll_wc -l -n "$1")
80     declare -ir LFBFL_lines_after=$(((
81         LFBFL_line_count - LFBFL_line_number
82     )))
83     head --lines="$((LFBFL_line_number - 1))" "$1" \
84         > "$3"
85     tail --lines="${LFBFL_lines_after}" "$1" \
86         > "$4"
87 }
88
89
90 insert_file_at_token() {
91     # $1=$file_name
92     # $2=$token assume that token is the only thing on his line.
93     # $3=$file_name_to_insert
94     # $4=$file_name_result
95     declare -r LFBFL_start_file_name="$1.insert_file_at_token1.temp"
96     declare -r LFBFL_end_file_name="$1.insert_file_at_token2.temp"
97     local LFBFL_result_file_name
98     if [[ -n "$4" ]]; then
99         LFBFL_result_file_name="$4"
100    else

```

```

101     LFBFL_result_file_name="$1.insert_file_at_token3.temp"
102 fi
103 readonly LFBFL_result_file_name
104 split_file_in_two "$1" "$2" "${LFBFL_start_file_name}" \
105   "${LFBFL_end_file_name}"
106 cat "${LFBFL_start_file_name}" "$3" "${LFBFL_end_file_name}" \
107   > "${LFBFL_result_file_name}"
108 rm "${LFBFL_start_file_name}" "${LFBFL_end_file_name}"
109 if [[ -z "$4" ]]; then
110   overwrite_if_not_equal "$1" "${LFBFL_result_file_name}"
111 fi
112 }
```

## 2.11 build\_and\_checks\_dependencies/get\_common\_text\_glob\_patterns.libr.sh

```

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23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "get_common_text_glob_patterns.sh"
25 # to "get_common_text_glob_patterns.libr.sh".
26
27 get_COMMON_TEXT_PATHS_GLOB_PATTERNS() {
28   if [[ -n "${COMMON_TEXT_PATHS_GLOB_PATTERNS}" ]]; then
29     return
30   fi
31 }
```

```

32 declare -agr COMMON_TEXT_PATHS_GLOB_PATTERNS=
33   '**/*.c'
34   '**/*.css'
35   '**/*.h'
36   '**/*.htm'
37   '**/*.html'
38   '**/*.js'
39   '**/*.json'
40   '**/*.md'
41   '**/*.php'
42   '**/*.py'
43   '**/*.sh'
44   '**/*.sql'
45   '**/*.tex'
46   '**/*.toml'
47   '**/*.tpl'
48   '**/*.ts'
49   '**/*.txt'
50   '**/*.yml'
51   '**/COPYING'
52   '**/COPYING.LESSER'
53   '**/pre-commit'
54   '**/post-commit'
55   '**/.gitignore'
56   '**/py.typed'
57 )
58 }
59
60
61 get_COMMON_TEXT_FILES_GLOB_PATTERNS() {
62   if [[ -n "${COMMON_TEXT_FILES_GLOB_PATTERNS}" ]]; then
63     return
64   fi
65
66   declare -agr COMMON_TEXT_FILES_GLOB_PATTERNS=
67   '*.c'
68   '*.css'
69   '*.h'
70   '*.htm'
71   '*.html'
72   '*.js'
73   '*.json'
74   '*.md'
75   '*.php'
76   '*.py'
77   '*.sh'

```

```

78     '*.sql'
79     '*.tex'
80     '*.toml'
81     '*.tpl'
82     '*.ts'
83     '*.txt'
84     '*.yml'
85     'COPYING'
86     'COPYING.LESSER'
87     'pre-commit'
88     'post-commit'
89     '.gitignore'
90     'py.typed'
91   )
92 }
```

## 2.12 build\_and\_checks\_dependencies/grammar\_and\_spell\_check.libr.sh

```

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23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "grammar_and_spell_check.sh"
25 # to "grammar_and_spell_check.libr.sh".
26 #
27 LFBFL_subdir="build_and_checks_dependencies"
28 # shellcheck source=get_common_text_glob_patterns.libr.sh
```

```

29  source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
30  # shellcheck source=lines_filters.libr.sh
31  source "./${LFBFL_subdir}/lines_filters.libr.sh"
32
33  grammar_and_spell_check() {
34      declare -i LFBFL_verbose=0
35      if [[ "$*" == *--verbose* ]]; then
36          echo "$0 $*"
37          LFBFL_verbose=1
38      fi
39      readonly LFBFL_verbose
40
41      if [[ ! -o pipefail ]]; then
42          [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
43          set -o pipefail
44          trap 'set +o pipefail' RETURN
45      fi
46
47      get_COMMON_TEXT_FILES_GLOB_PATTERNS
48      local LFBFL_grammar_or_spell_checker_command=""
49      grep_variable "$1" grammar_or_spell_checker_command\
50          --result-variable-prefix="LFBFL_"\
51          --replace-line-returns-by=""
52      declare -r LFBFL_command="${LFBFL_grammar_or_spell_checker_command}"
53      if [[ -z "${LFBFL_command}" ]]; then
54          return
55      fi
56      local LFBFL_file_path
57      local LFBFL_pattern
58      local LFBFL_eval_string
59      for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
60          [[ LFBFL_verbose -eq 0 ]]\|
61              || echo "Iterating on pattern: ${LFBFL_pattern}"
62          find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
63              | while read -r LFBFL_file_path;
64      do
65          LFBFL_eval_string="${LFBFL_command} ${LFBFL_file_path}"
66          eval "${LFBFL_eval_string}"
67      done
68  done
69 }

```

## 2.13 build\_and\_checks\_dependencies/licenses\_templates/build\_licenses\_templates.exec.sh

```

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2 # This file is part of DevOrSysAdminScripts library.

```

```

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18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "build_licenses_templates.sh"
25 # to "build_licenses_templates.exec.sh".
26
27 LFBFL_subdir="build_and_checks_dependencies"
28 # shellcheck source=comparisons.libr.sh
29 source "./${LFBFL_subdir}/comparisons.libr.sh"
30 # shellcheck source=generate_from_template.libr.sh
31 source "./${LFBFL_subdir}/generate_from_template.libr.sh"
32 # shellcheck source=lines_filters.libr.sh
33 source "./${LFBFL_subdir}/lines_filters.libr.sh"
34 # shellcheck source=overwrite_if_not_equal.libr.sh
35 source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
36
37 build_licenses_templates() {
38     local LFBFL_working_directory=$1
39     if [[ -z "$1" ]]; then
40         LFBFL_working_directory=."
41     fi
42     readonly LFBFL_working_directory
43     declare -i LFBFL_verbose=0
44     if [[ "$*" == *--verbose* ]]; then
45         echo "$0 $*"
46         LFBFL_verbose=1
47     fi
48     readonly LFBFL_verbose

```

```

49
50     if [[ ! -o pipefail ]]; then
51         [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
52         set -o pipefail
53         trap 'set +o pipefail' RETURN
54     fi
55
56     # Source
57     local LFBFL_license_source_subdir
58     LFBFL_license_source_subdir="./${LFBFL_subdir}/licenses_templates/"
59     readonly LFBFL_license_source_subdir
60     local LFBFL_source_license_prefix="${LFBFL_license_source_subdir}"
61     LFBFL_source_license_prefix+="license_file_header_"
62     readonly LFBFL_source_license_prefix
63     # Target
64     local LFBFL_license_target_subdir
65     LFBFL_license_target_subdir="${LFBFL_working_directory}/"
66     LFBFL_license_target_subdir="build_and_checks_variables/temp/"
67     readonly LFBFL_license_target_subdir
68     local LFBFL_target_license_prefix="${LFBFL_license_target_subdir}"
69     LFBFL_target_license_prefix+="license_file_header_"
70     readonly LFBFL_target_license_prefix
71
72     declare -ar LFBFL_licenses=(
73         "AGPLv3+"
74         "GPLv3+"
75         "LGPLv3+"
76     )
77
78     # -----
79     # Various language definitions for text file formats
80     declare -ar LFBFL_block_comment_languages=(
81         "c"
82         "py"
83     )
84     declare -ar LFBFL_block_comment_enters=(
85         '/**'
86         '"""'
87     )
88     declare -ar LFBFL_block_comment_exits=(
89         '*/'
90         '""'
91     )
92     equal "${#LFBFL_block_comment_languages[@]}"\ \
93         "${#LFBFL_block_comment_enters[@]}"\ \
94         "${#LFBFL_block_comment_exits[@]}"

```

```

95 declare -i LFBFL_equal_result=$?
96 if [[ LFBFL_equal_result -eq 0 ]]; then
97     echo $'!/\\Problem with the definitions of languages arrays 1/!\\\''
98 fi
99
100 declare -ar LFBFL_line_comment_languages=(
101     "sh"
102     "tex"
103 )
104 declare -ar LFBFL_line_comment_prefixes=(
105     '# '
106     '% '
107 )
108 equal "${#LFBFL_line_comment_languages[@]}"\ \
109     "${#LFBFL_line_comment_prefixes[@]}"
110 LFBFL_equal_result=$?
111 if [[ LFBFL_equal_result -eq 0 ]]; then
112     echo $'!/\\Problem with the definitions of languages arrays 2/!\\\''
113 fi
114 # -----
115
116 # -----
117 # We generate the license header templates adapted to various text
118 # files formats.
119 # Kamoulox do endfor, Jacques Beauregard XD
120 # (C'est toujours mieux que l'inverse :) !)
121 # for do endfor -> for do done (Fort Doux Donne) .
122 local LFBFL_some_license
123 local LFBFL_license_prefix
124 local LFBFL_license_prefix2
125 local LFBFL_extension
126 local LFBFL_license_file_name
127 local LFBFL_enter_string
128 local LFBFL_exit_string
129 local LFBFL_temp2
130 local LFBFL_prefix_string
131 local LFBFL_intermediate_file_name
132 local LFBFL_file_prefix
133 declare -i LFBFL_generate_from_template_result
134 for LFBFL_some_license in "${LFBFL_licenses[@]}"; do
135     LFBFL_license_prefix="${LFBFL_source_license_prefix}"
136     LFBFL_license_prefix+="${LFBFL_some_license}"
137     LFBFL_license_prefix2="${LFBFL_target_license_prefix}"
138     LFBFL_license_prefix2+=" ${LFBFL_some_license}"
139     for ((i=0; i<${#LFBFL_block_comment_languages[@]}; i++)); do
140         LFBFL_extension=${LFBFL_block_comment_languages[i]}

```

```

141 LFBFL_license_file_name="${LFBFL_license_prefix2}"
142 LFBFL_license_file_name+=".${LFBFL_extension}"
143 LFBFL_enter_string=${LFBFL_block_comment_enters[i]}
144 LFBFL_exit_string=${LFBFL_block_comment_exits[i]}
145 generate_from_template_with_block_comments \
146     "${LFBFL_license_prefix}.tpl"\ \
147     "${LFBFL_license_file_name}.tpl"\ \
148     "${LFBFL_enter_string}" "${LFBFL_exit_string}"
149 LFBFL_generate_from_template_result=$?
150 if [[ LFBFL_verbose -eq 1 ]]; then
151     if [[ LFBFL_generate_from_template_result -eq 1 ]]; then
152         echo\
153             "License template ${LFBFL_license_file_name}.tpl updated"
154     elif [[ LFBFL_generate_from_template_result -eq 2 ]]; then
155         echo\
156             "License template ${LFBFL_license_file_name}.tpl created"
157     fi
158 fi
159 done
160 LFBFL_temp2=".generate_from_template_with_line_comments.temp"
161 for ((i=0; i<${#LFBFL_line_comment_languages[@]}; i++)); do
162     LFBFL_extension=${LFBFL_line_comment_languages[i]}
163     LFBFL_license_file_name="${LFBFL_license_prefix2}"
164     LFBFL_license_file_name+=".${LFBFL_extension}"
165     LFBFL_prefix_string=${LFBFL_line_comment_prefixes[i]}
166     LFBFL_intermediate_file_name="${LFBFL_license_file_name}.tpl"
167     LFBFL_intermediate_file_name+=".${LFBFL_temp2}"
168     LFBFL_file_prefix=""
169     if [[ "${LFBFL_extension}" == "sh" ]]; then
170         LFBFL_file_prefix="#!/usr/bin/env bash"
171     fi
172     generate_from_template_with_line_comments \
173         "${LFBFL_license_prefix}.tpl"\ \
174         "${LFBFL_license_file_name}.tpl"\ \
175         "${LFBFL_prefix_string}" \
176         "sed -Ei -e 's/\s*$/g' '${LFBFL_intermediate_file_name}'"\ \
177         "${LFBFL_file_prefix}"
178     LFBFL_generate_from_template_result=$?
179     if [[ LFBFL_verbose -eq 1 ]]; then
180         if [[ LFBFL_generate_from_template_result -eq 1 ]]; then
181             echo\
182                 "License template ${LFBFL_license_file_name}.tpl updated"
183         elif [[ LFBFL_generate_from_template_result -eq 2 ]]; then
184             echo\
185                 "License template ${LFBFL_license_file_name}.tpl created"
186     fi

```

```

187         fi
188     done
189 done
190 # -----
191
192 # Now that base license templates generated languages license
193 # templates in working directory, we can go there.
194 declare -i LFBFL_cd_result
195 pushd .
196 cd "${LFBFL_working_directory}" || {
197     LFBFL_cd_result=$?
198     echo "build_licenses_templates no such directory"
199     # shellcheck disable=SC2248
200     return ${LFBFL_cd_result}
201 }
202
203 local LFBFL_data_file_name="build_and_checks_variables/"
204 LFBFL_data_file_name+="repository_data.txt"
205 readonly LFBFL_data_file_name
206 local LFBFL_repository_name=""
207 grep_variable "${LFBFL_data_file_name}" repository_name \
208     --result-variable-prefix="LFBFL_" \
209     --replace-line-returns-by=""
210 local LFBFL_license=""
211 grep_variable "${LFBFL_data_file_name}" license \
212     --result-variable-prefix="LFBFL_"
213 local LFBFL_license2=""
214 grep_variable "${LFBFL_data_file_name}" license2 \
215     --result-variable-prefix="LFBFL_"
216 local LFBFL_author_full_name=""
217 grep_variable "${LFBFL_data_file_name}" author_full_name \
218     --result-variable-prefix="LFBFL_" \
219     --replace-line-returns-by=" "
220
221 LFBFL_license_prefix="build_and_checks_variables/temp/"
222 LFBFL_license_prefix+="license_file_header_"
223 readonly LFBFL_license_prefix
224 LFBFL_license_prefix2="${LFBFL_license_prefix}${LFBFL_license}"
225 readonly LFBFL_license_prefix2
226 declare -r \
227     LFBFL_license_prefix3="${LFBFL_license_prefix}${LFBFL_license2}"
228
229 # First year according to current state of git repository.
230 declare -ir LFBFL_first_year=$(((
231     git log \
232     | grep 'Date:' \

```

```

233     | cut -f 8 -d ' '\
234     | tail -1
235 )
236 # Last year according to current state of git repository.
237 declare -ir LFBFL_last_year=$(( \
238     git log\
239     | grep 'Date:'\
240     | cut -f 8 -d ' '\
241     | head -1
242 )
243 local LFBFL_copyright_string
244 LFBFL_copyright_string="${LFBFL_first_year}-${LFBFL_last_year}"
245 LFBFL_copyright_string+="$ ${LFBFL_author_full_name}"
246 readonly LFBFL_copyright_string
247
248 prepare_filled_license_file_block() {
249     # $1=license_file_name
250     sed -e "s/@repository_name@/${LFBFL_repository_name}/g" \
251         -e "s/@copyright_string@/${LFBFL_copyright_string}/g" \
252         "$1.tpl" \
253         > "$1.temp"
254     overwrite_if_not_equal "$1" "$1.temp"
255     declare -r LFBFL_result=$?
256     if [[ LFBFL_verbose -eq 1 ]]; then
257         if [[ LFBFL_result -eq 1 ]]; then
258             echo "License template $1 updated"
259         elif [[ LFBFL_result -eq 2 ]]; then
260             echo "License template $1 created"
261         fi
262     fi
263     head --lines=-1 "$1" \
264         | tail --lines=+2 \
265         > "$1.temp"
266     # Strange world: tail --lines=-1 was working
267     # to exclude first line.
268     # I tested it months ago, and saw with my eyes the start and end
269     # block comments removed with:
270     # head --lines=-1 "$1" | tail --lines=-1.
271     # Now, man page says to use --lines=+2 instead.
272     # Welcome in the world where AI change your environment and your
273     # documentation on the fly...
274 }
275
276 declare -Ar LFBFL_all_block_comment_languages=( \
277     ["c"]="c"
278     ["php"]="c"

```

```

279     ["py"]="py"
280 )
281
282 local LFBFL_key
283 local LFBFL_dest
284 local LFBFL_license_file_name2
285 declare -i LFBFL_not_subfile
286 declare -i LFBFL_not_subfile2
287 for LFBFL_key in "${!LFBFL_all_block_comment_languages[@]}"; do
288     LFBFL_dest=${LFBFL_all_block_comment_languages[$LFBFL_key]}
289     LFBFL_license_file_name="${LFBFL_license_prefix2}.${LFBFL_dest}"
290     prepare_filled_license_file_block "${LFBFL_license_file_name}"
291     if [[ -n "${LFBFL_license2}" ]]; then
292         LFBFL_license_file_name2="${LFBFL_license_prefix3}"
293         LFBFL_license_file_name2+=".${LFBFL_dest}"
294         prepare_filled_license_file_block "${LFBFL_license_file_name2}"
295     fi
296     find . -type f -name "*.${LFBFL_key}" -printf '%P\n' \
297         | relevant_find \
298         | while read -r LFBFL_file_name;
299     do
300         is_subfile "${LFBFL_file_name}" \
301             "${LFBFL_license_file_name}.temp"
302         LFBFL_not_subfile=$?
303         LFBFL_not_subfile2=1
304         if [[ -n "${LFBFL_license2}" ]]; then
305             is_subfile "${LFBFL_file_name}" \
306                 "${LFBFL_license_file_name2}.temp"
307             LFBFL_not_subfile2=$?
308         fi
309         if [[ LFBFL_not_subfile -ge 1 && LFBFL_not_subfile2 -ge 1 ]]; then
310             echo "File ${LFBFL_file_name} has no/wrong license header?"
311         fi
312     done
313     rm "${LFBFL_license_file_name}.temp"
314     if [[ -n "${LFBFL_license2}" ]]; then
315         rm "${LFBFL_license_file_name2}.temp"
316     fi
317 done
318
319 prepare_filled_license_file_line() {
320     # $1=LFBFL_license_file_name
321     sed -e "s/@repository_name@/${LFBFL_repository_name}/g" \
322         -e "s/@copyright_string@/${LFBFL_copyright_string}/g" \
323         "$1.tpl"\ \

```

```

325      > "$1.temp"
326  overwrite_if_not_equal "$1" "$1.temp"
327  declare -r LFBFL_result=$?
328  if [[ LFBFL_verbose -eq 1 ]]; then
329      if [[ LFBFL_result -eq 1 ]]; then
330          echo "License template $1 updated"
331      elif [[ LFBFL_result -eq 2 ]]; then
332          echo "License template $1 created"
333      fi
334  fi
335 }
336
337 declare -Ar LFBFL_all_line_comment_languages=(
338     ["sh"]="sh"
339     ["tex"]="tex"
340 )
341
342 for LFBFL_key in "${!LFBFL_all_line_comment_languages[@]}"; do
343     LFBFL_dest=${LFBFL_all_line_comment_languages[$LFBFL_key]}
344     LFBFL_license_file_name="${LFBFL_license_prefix2}.${LFBFL_dest}"
345     prepare_filled_license_file_line "${LFBFL_license_file_name}"
346     if [[ -n "${LFBFL_license2}" ]]; then
347         LFBFL_license_file_name2="${LFBFL_license_prefix3}"
348         LFBFL_license_file_name2+=".${LFBFL_dest}"
349         prepare_filled_license_file_line "${LFBFL_license_file_name2}"
350     fi
351     find . -type f -name "*.${LFBFL_key}" -printf '%P\n' \
352         | relevant_find \
353         | while read -r LFBFL_file_name;
354     do
355         is_subfile "${LFBFL_file_name}" "${LFBFL_license_file_name}"
356         LFBFL_not_subfile=$?
357         LFBFL_not_subfile2=1
358         if [[ -n "${LFBFL_license2}" ]]; then
359             is_subfile "${LFBFL_file_name}" "${LFBFL_license_file_name2}"
360             LFBFL_not_subfile2=$?
361         fi
362         if [[ LFBFL_not_subfile -ge 1 && LFBFL_not_subfile2 -ge 1 ]]; then
363             echo "File ${LFBFL_file_name} has no/wrong license header?"
364         fi
365     done
366 done
367
368 declare -i LFBFL_popd_result
369 popd || {

```

```

371     LFBFL_popd_result=$?
372     echo "build_licenses_templates no popd"
373     # shellcheck disable=SC2248
374     return ${LFBFL_popd_result}
375   }
376 }
377
378 build_licenses_templates "$@"

```

## 2.14 build\_and\_checks\_dependencies/licenses\_templates/license\_file\_header\_AGPLv3+.tpl

```

1 This file is part of @repository_name@ library.
2
3 @repository_name@ is free software:
4 you can redistribute it and/or modify it under the terms
5 of the GNU Affero General Public License
6 as published by the Free Software Foundation,
7 either version 3 of the License,
8 or (at your option) any later version.
9
10 @repository_name@ is distributed in the hope
11 that it will be useful,
12 but WITHOUT ANY WARRANTY;
13 without even the implied warranty of
14 MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
15 See the GNU Affero General Public License for more details.
16
17 You should have received a copy of
18 the GNU Affero General Public License
19 along with @repository_name@.
20 If not, see <https://www.gnu.org/licenses/>.
21
22 ©Copyright @copyright_string@

```

## 2.15 build\_and\_checks\_dependencies/licenses\_templates/license\_file\_header\_GPLv3+.tpl

```

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2
3 @repository_name@ is free software:
4 you can redistribute it and/or modify it under the terms
5 of the GNU General Public License
6 as published by the Free Software Foundation,
7 either version 3 of the License,
8 or (at your option) any later version.
9
10 @repository_name@ is distributed in the hope

```

```

11  that it will be useful,
12  but WITHOUT ANY WARRANTY;
13  without even the implied warranty of
14  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
15  See the GNU General Public License for more details.

16
17  You should have received a copy of
18  the GNU General Public License
19  along with @repository_name@.
20  If not, see <https://www.gnu.org/licenses/>.

21
22  ©Copyright @copyright_string@

```

## **2.16 build\_and\_checks\_dependencies/licenses\_templates/license\_file\_header\_LGPLv3+.tpl**

```

1  This file is part of @repository_name@ library.

2
3  @repository_name@ is free software:
4  you can redistribute it and/or modify it under the terms
5  of the GNU Lesser General Public License
6  as published by the Free Software Foundation,
7  either version 3 of the License,
8  or (at your option) any later version.

9
10 @repository_name@ is distributed in the hope
11 that it will be useful,
12 but WITHOUT ANY WARRANTY;
13 without even the implied warranty of
14 MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
15 See the GNU Lesser General Public License for more details.

16
17  You should have received a copy of
18  the GNU Lesser General Public License
19  along with @repository_name@.
20  If not, see <https://www.gnu.org/licenses/>.

21
22  ©Copyright @copyright_string@

```

## **2.17 build\_and\_checks\_dependencies/lines\_counts.libr.sh**

```

1  #!/usr/bin/env bash
2  # This file is part of DevOrSysAdminScripts library.
3  #
4  # DevOrSysAdminScripts is free software:
5  # you can redistribute it and/or modify it under the terms
6  # of the GNU General Public License

```

```

7  # as published by the Free Software Foundation,
8  # either version 3 of the License,
9  # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "lines_counts.sh" to
25 # "lines_counts.libr.sh".
26
27 LFBFL_subdir="build_and_checks_dependencies"
28 # shellcheck source=get_common_text_glob_patterns.libr.sh
29 source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
30 # shellcheck source=lines_filters.libr.sh
31 source "./${LFBFL_subdir}/lines_filters.libr.sh"
32
33 all_code_lines(){
34     if [[ ! -o pipefail ]]; then
35         set -o pipefail
36         trap 'set +o pipefail' RETURN
37     fi
38     [[ "$*" != *--verbose* ]]
39     declare -ir LFBFL_verbose=$?
40     get_COMMON_TEXT_FILES_GLOB_PATTERNS
41     local LFBFL_pattern
42     for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
43         [[ LFBFL_verbose -eq 1 ]]\
44             && echo "Iterating on pattern: ${LFBFL_pattern}"
45         find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
46             | xargs grep -H -v 'a(?!a)a'
47     done
48 }
49
50 all_self_code_lines(){
51     if [[ ! -o pipefail ]]; then
52         set -o pipefail

```

```

53     trap 'set +o pipefail' RETURN
54 fi
55 # below and another lines, see SC2145 false positive
56 all_code_lines "$@" \
57   | relevant_grep\
58   | not_license_grep\
59   | not_main_tex_grep\
60   | not_main_html_grep
61 }
62
63 all_self_empty_code_lines() {
64   if [[ ! -o pipefail ]]; then
65     set -o pipefail
66     trap 'set +o pipefail' RETURN
67   fi
68   all_self_code_lines "$@" \
69   | empty_lines_after_file_name
70 }
71
72 all_self_not_empty_code_lines() {
73   if [[ ! -o pipefail ]]; then
74     set -o pipefail
75     trap 'set +o pipefail' RETURN
76   fi
77   all_self_code_lines "$@" \
78   | not_empty_lines_after_file_name
79 }
80
81 code_lines_count_all() {
82   if [[ ! -o pipefail ]]; then
83     set -o pipefail
84     trap 'set +o pipefail' RETURN
85   fi
86   all_self_code_lines "$@" \
87   | wc -l
88 }
89
90 code_lines_count_empty() {
91   if [[ ! -o pipefail ]]; then
92     set -o pipefail
93     trap 'set +o pipefail' RETURN
94   fi
95   all_self_empty_code_lines "$@" \
96   | wc -l
97 }
98

```

```

99  code_lines_count_not_empty(){
100     if [[ ! -o pipefail ]]; then
101         set -o pipefail
102         trap 'set +o pipefail' RETURN
103     fi
104     all_self_not_empty_code_lines "$@" \
105         | wc -l
106 }

```

## 2.18 build\_and\_checks\_dependencies/lines\_filters.libr.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
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6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "lines_filters.sh" to
25 # "lines_filters.libr.sh".
26 #
27 # The goal of this file is to have some common line filters
28 # for bash processing and pipes.
29 # As is the case for other .sh files in this repository,
30 # it can be copied somewhere in your home directory
31 # and sourced in your .bashrc.
32
33 ll_wc() {
34     # current options to wc:
35     # -c --bytes

```

```

36  # -m --chars
37  # -l --lines
38  # --files0-from # Incompatible with cat,
39  #           # another thing intentional by ?
40  #           # I don't see the meaning of "files0".
41  # -L --max-line-length
42  # -w --words
43  # --help
44  # --version
45  # New option by Laurent Lyaudet (and probably other before):
46  # -n --no-filenames display only number(s)
47  # I think I did that the first time many years ago (Teliae ?).
48  # Since then, they added it as ignored... (-n)
49  if [[ ! -o pipefail ]]; then
50      set -o pipefail
51      trap 'set +o pipefail' RETURN
52  fi
53  declare -a ll_wc_var_args=()
54  declare -i ll_wc_var_number_only=0
55  declare -i ll_wc_var_i=0
56  for ll_wc_var_arg in "$@"; do
57      # echo "$ll_wc_var_arg"
58      if [[ "${ll_wc_var_arg}" == "-n" ]]; then
59          ll_wc_var_number_only=1
60      elif [[ "${ll_wc_var_arg}" == "--no-filenames" ]]; then
61          ll_wc_var_number_only=1
62      elif [[ ll_wc_var_number_only -eq 0 ]]; then
63          ll_wc_var_args[ll_wc_var_i]="${ll_wc_var_arg}"
64          ll_wc_var_i=$((ll_wc_var_i + 1))
65      elif [[ "${ll_wc_var_arg}" =~ -* ]]; then
66          ll_wc_var_args[ll_wc_var_i]="${ll_wc_var_arg}"
67          ll_wc_var_i=$((ll_wc_var_i + 1))
68      fi
69  done
70  # typeset -p ll_wc_var_args
71  # echo "$ll_wc_var_number_only"
72  if [[ ll_wc_var_number_only -gt 0 ]]; then
73      # Too simple code, only the base use case is handled now.
74      # Convenient but incomplete.
75      # With more time,
76      # the simpler would be to submit a patch to GNU coreutils,
77      # unless blockade from assholes.
78      # Otherwise, it may be more simply handled in PHP or Python
79      # (argparse, etc.).
80      # You'll need to start by improving cat first,
81      # with --files0-from handling.

```

```

82      # wc does not display file_name when stream...
83      # hence cat of last arg "${!#}"
84      cat "${!#}" \
85          | wc "${ll_wc_var_args[@]}"
86  else
87      # echo "normal"
88      wc "${ll_wc_var_args[@]}"
89  fi
90 }
91
92 # I submitted a patch for wc :).
93 # echo "https://domain/list-path/2024-05/msg00013.html" | \
94 #     sed -e 's|domain|lists.gnu.org|' \
95 #         -e 's|list-path|archive/html/bug-coreutils|'
96 # I found another way to have a long URL fit on 70 characters.
97 # If it is merged, the following would be better:
98 # If --no-filenames option available,
99 # we redefine ll_wc command as an alias.
100 wc_help_text=$(wc --help)
101 if [[ "${wc_help_text}" == *"--no-filenames"* ]]; then
102     alias ll_wc='wc'
103 fi
104
105 # Trace avant le (2e ?) renommage
106 # de wget_sha512.sh à wget_sha512.libr.sh.
107 # $ ll_wc wget_sha512.sh
108 # 41 189 1224 wget_sha512.sh
109 # $ ll_wc -n wget_sha512.sh
110 #     41    189    1224
111 # $ ll_wc -l wget_sha512.sh
112 # 41 wget_sha512.sh
113 # $ ll_wc -l -n wget_sha512.sh
114 # 41
115
116 in_place_grep() {
117     declare -r LFBFL_temp="${!#}.in_place_grep.temp"
118     grep "$@" \
119         > "${LFBFL_temp}"
120     declare -ir LFBFL_lines_before=$((ll_wc -l -n "${!#}"))
121     declare -ir LFBFL_lines_after=$((ll_wc -l -n "${LFBFL_temp}))"
122     # echo "$LFBFL_lines_before"
123     # echo "$LFBFL_lines_after"
124     if [[ "${LFBFL_lines_before}" == "${LFBFL_lines_after}" ]]; then
125         rm "${LFBFL_temp}"
126         return
127     fi

```

```

128     mv "${LFBFL_temp}" "${!#}"
129 }
130
131 grep_variable() {
132     # $1=$file
133     # $2=$variable_name
134     # Options :
135     # --replace-line-returns-by=""
136     # --result-variable-prefix="LFBFL_" for example
137     declare -r LFBFL_regexp="(?<^$2=).*$"
138     local LFBFL_arg
139     # echo $LFBFL_regexp
140     local LFBFL_variable_value
141     if [[ "$*" == *--replace-line-returns-by=* ]]; then
142         local LFBFL_s_replace=""
143         for LFBFL_arg in "$@"; do
144             if [[ "${LFBFL_arg}" == --replace-line-returns-by=* ]]; then
145                 LFBFL_s_replace=${LFBFL_arg##--replace-line-returns-by=}
146                 break
147             fi
148         done
149         LFBFL_variable_value=$((
150             grep -oP "${LFBFL_regexp}" "$1" \
151             | sed -Ez -e 's/\n/'"${LFBFL_s_replace}"'/Mg'
152         )
153         # We remove the trailing replace string,
154         # since the intent is only to replace the intermediate \n.
155         if [[ -n "${LFBFL_s_replace}" ]]; then
156             LFBFL_variable_value=${LFBFL_variable_value%"${LFBFL_s_replace}"}
157             fi
158         else
159             LFBFL_variable_value=$(grep -oP "${LFBFL_regexp}" "$1")
160             fi
161         local LFBFL_prefix=""
162         for LFBFL_arg in "$@"; do
163             if [[ "${LFBFL_arg}" == --result-variable-prefix=* ]]; then
164                 LFBFL_prefix=${LFBFL_arg##--result-variable-prefix=}
165                 break
166             fi
167         done
168         declare -r LFBFL_variable_name="${LFBFL_prefix}${2}"
169         # echo "${LFBFL_variable_name} : ${LFBFL_variable_value}"
170         # The declare line may be dropped by a local or declare
171         # in outer scope.
172         # declare -g "${LFBFL_variable_name}"
173         # So the assignment must be done on another line.

```

```

174     printf -v "${LFBFL_variable_name}" "%s" "${LFBFL_variable_value}"
175     # echo "${!LFBFL_variable_name}"
176 }
177
178 empty_lines() {
179     grep '^$'
180 }
181
182 not_empty_lines() {
183     grep -v '^$'
184 }
185
186 space_starting_lines() {
187     grep '^[ ]'
188 }
189
190 not_space_starting_lines() {
191     grep '^[^ ]'
192 }
193
194 empty_lines_after_file_name() {
195     grep '^[:^]\+:$'
196 }
197
198 not_empty_lines_after_file_name() {
199     grep -v '^[:^]\+:$'
200 }
201
202 space_starting_lines_after_file_name() {
203     grep '^[:^]\+: '
204 }
205
206 not_space_starting_lines_after_file_name() {
207     grep '^[:^]\+:[^ ]'
208 }
209
210 not_JS_dependencies_find() {
211     grep -vE -e "^(|/)node_modules/" \
212             -e "^(|/)package-lock\.json$"
213 }
214
215 not_JS_dependencies_grep() {
216     grep -vE -e "^([:^]+/)?node_modules/" \
217             -e "^([:^]+/)?package-lock\.json:""
218 }
219

```

```

220  not_dependencies_find() {
221      not_JS_dependencies_find
222  }
223
224  not_dependencies_grep() {
225      not_JS_dependencies_grep
226  }
227
228  not_python_cache_find() {
229      grep -vE -e "^(|/)__pycache__/" \
230          -e "^(|/)\.mypy_cache/" \
231          -e "^(|/)\.ruff_cache/"
232  }
233
234  not_python_cache_grep() {
235      grep -vE -e "^([:]+)?:__pycache__/" \
236          -e "^([:]+)?:\.\mypy_cache/" \
237          -e "^([:]+)?:\.\ruff_cache/"
238  }
239
240  not_cache_find() {
241      not_python_cache_find
242  }
243
244  not_cache_grep() {
245      not_python_cache_grep
246  }
247
248  not_git_find() {
249      grep -vE "^(|/)\.git/"
250  }
251
252  not_git_grep() {
253      grep -vE "^([:]+)?:\.\git/"
254  }
255
256  not_archive_find() {
257      grep -vE "(\.gz|\.\rar|\.\tar|\.\tgz|\.\whl)$"
258  }
259
260  not_archive_grep() {
261      grep -vE "^([:]+)(\.\gz|\.\rar|\.\tar|\.\tgz|\.\whl):"
262  }
263
264  not_license_find() {
265      grep -vE -e "^(|/)COPYING$"\n

```

```

266         -e "(^|/)COPYING\.LESSER$"
267     }
268
269     not_license_grep() {
270         grep -vE -e "^([:]+) ?COPYING:" \
271             -e "^([:]+) ?COPYING\.LESSER:"
272     }
273
274     not_main_tex_find() {
275         local LFBFL_repository_name=""
276         grep_variable build_and_checks_variables/repository_data.txt \
277             repository_name \
278             --result-variable-prefix="LFBFL_" \
279             --replace-line-returns-by="" \
280         grep -vE "^(|/) ${LFBFL_repository_name}\.tex$"
281     }
282
283     not_main_tex_grep() {
284         local LFBFL_repository_name=""
285         grep_variable build_and_checks_variables/repository_data.txt \
286             repository_name \
287             --result-variable-prefix="LFBFL_" \
288             --replace-line-returns-by="" \
289         grep -vE "^([:]+) ?${LFBFL_repository_name}\.tex:"
290     }
291
292     not_main_html_find() {
293         local LFBFL_repository_name=""
294         grep_variable build_and_checks_variables/repository_data.txt \
295             repository_name \
296             --result-variable-prefix="LFBFL_" \
297             --replace-line-returns-by="" \
298         grep -vE "^(|/) ${LFBFL_repository_name}\.html$"
299     }
300
301     not_main_html_grep() {
302         local LFBFL_repository_name=""
303         grep_variable build_and_checks_variables/repository_data.txt \
304             repository_name \
305             --result-variable-prefix="LFBFL_" \
306             --replace-line-returns-by="" \
307         grep -vE "^([:]+) ?${LFBFL_repository_name}\.html:"
308     }
309
310     not_temp_file_find() {
311         grep -vE "^(|/)build_and_checks_variables/temp/.*$"

```

```

312     }
313
314     not_temp_file_grep() {
315         grep -vE "^([:]+/)?"build_and_checks_variables/temp/[[:]*:"
316     }
317
318     relevant_find() {
319         if [[ ! -o pipefail ]]; then
320             set -o pipefail
321             trap 'set +o pipefail' RETURN
322         fi
323         not_dependencies_find\
324             | not_cache_find\
325             | not_git_find\
326             | not_archive_find\
327             | not_temp_file_find
328     }
329
330     relevant_grep() {
331         if [[ ! -o pipefail ]]; then
332             set -o pipefail
333             trap 'set +o pipefail' RETURN
334         fi
335         not_dependencies_grep\
336             | not_cache_grep\
337             | not_git_grep\
338             | not_archive_grep\
339             | not_temp_file_grep
340     }

```

## 2.19 build\_and\_checks\_dependencies/lines\_maps.libr.sh

```

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```

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22 #
23 # ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "lines_maps.sh" to "lines_maps.libr.sh".
25
26 # https://en.wikibooks.org/wiki/Unicode/Character_reference/2000-2FFF
27 # Some invisible unicode characters that are a problem:
28 # 2000-200F 2028-202F 205F 2060-206F
29 # [
30 #   '2000', '2001', '2002', '2003', '2004', '2005', '2006', '2007',
31 #   '2008', '2009', '200A', '200B', '200C', '200D', '200E', '200F',
32 #   '2028', '2029', '202A', '202B', '202C', '202D', '202E', '202F',
33 #   '205F',
34 #   '2060', '2061', '2062', '2063', '2064', '2065', '2066', '2067',
35 #   '2068', '2069', '206A', '206B', '206C', '206D', '206E', '206F',
36 # ]
37 replace_non_ascii_spaces() {
38     sed -e 's/\xc2\x{a0}/ /g' \
39         -e 's/\xe2\x{80}\x{80}/ /g' \
40         -e 's/\xe2\x{80}\x{81}/ /g' \
41         -e 's/\xe2\x{80}\x{82}/ /g' \
42         -e 's/\xe2\x{80}\x{83}/ /g' \
43         -e 's/\xe2\x{80}\x{84}/ /g' \
44         -e 's/\xe2\x{80}\x{85}/ /g' \
45         -e 's/\xe2\x{80}\x{86}/ /g' \
46         -e 's/\xe2\x{80}\x{87}/ /g' \
47         -e 's/\xe2\x{80}\x{88}/ /g' \
48         -e 's/\xe2\x{80}\x{89}/ /g' \
49         -e 's/\xe2\x{80}\x{8a}/ /g' \
50         -e 's/\xe2\x{80}\x{8b}/ /g' \
51         -e 's/\xe2\x{80}\x{8c}/ /g' \
52         -e 's/\xe2\x{80}\x{8d}/ /g' \
53         -e 's/\xe2\x{80}\x{8e}/ /g' \
54         -e 's/\xe2\x{80}\x{8f}/ /g' \
55         -e 's/\xe2\x{80}\x{a8}/ /g' \
56         -e 's/\xe2\x{80}\x{a9}/ /g' \
57         -e 's/\xe2\x{80}\x{aa}/ /g' \
58         -e 's/\xe2\x{80}\x{ab}/ /g' \
59         -e 's/\xe2\x{80}\x{ac}/ /g' \
60         -e 's/\xe2\x{80}\x{ad}/ /g'

```

```

61      -e 's/>\xe2\x80\xae/ /g' \
62      -e 's/>\xe2\x80\xaf/ /g' \
63      -e 's/>\xe2\x81\x9f/ /g' \
64      -e 's/>\xe2\x81\xa0/ /g' \
65      -e 's/>\xe2\x81\xa1/ /g' \
66      -e 's/>\xe2\x81\xa2/ /g' \
67      -e 's/>\xe2\x81\xa3/ /g' \
68      -e 's/>\xe2\x81\xa4/ /g' \
69      -e 's/>\xe2\x81\xa5/ /g' \
70      -e 's/>\xe2\x81\xa6/ /g' \
71      -e 's/>\xe2\x81\xa7/ /g' \
72      -e 's/>\xe2\x81\xa8/ /g' \
73      -e 's/>\xe2\x81\xa9/ /g' \
74      -e 's/>\xe2\x81\xaa/ /g' \
75      -e 's/>\xe2\x81\xab/ /g' \
76      -e 's/>\xe2\x81\xac/ /g' \
77      -e 's/>\xe2\x81\xad/ /g' \
78      -e 's/>\xe2\x81\xae/ /g' \
79      -e 's/>\xe2\x81\xaf/ /g'
80  }

```

## 2.20 build\_and\_checks\_dependencies/overwrite\_if\_not\_equal.libr.sh

```

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```

```

24 # This file was renamed from "overwrite_if_not_equal.sh"
25 # to "overwrite_if_not_equal.libr.sh".
26
27 overwrite_if_not_equal() {
28     # $1=$target_file_name
29     # $2=$temp_file_name
30     # $3=$keep_temp
31     # $4=$tree_mode : when the two files are the output of tree command,
32     # we ignore if all the differences are only on directories.
33     # Return 0 target was the same
34     #         1 target was different
35     #         2 target did not already exist
36     if [[ ! -f "$1" ]]; then
37         if [[ -n "$3" ]]; then
38             cp -p "$2" "$1"
39         else
40             mv "$2" "$1"
41         fi
42         return 2
43     fi
44     declare -i LFBFL_is_equal
45     if [[ -n "$4" ]]; then
46         # Not setting pipefail since the result would still be incorrect.
47         # shellcheck disable=SC2312
48         diff "$1" "$2" \
49             | grep -E "^(>|<)" \
50             | grep -v "/$"
51         LFBFL_is_equal=${PIPESTATUS[2]}
52     else
53         diff -q "$1" "$2"
54         LFBFL_is_equal=1-$?
55     fi
56     if [[ LFBFL_is_equal -eq 1 ]]; then
57         if [[ -z "$3" ]]; then
58             rm "$2"
59         fi
60         return 0
61     fi
62     if [[ -n "$3" ]]; then
63         cp -p "$2" "$1"
64     else
65         mv "$2" "$1"
66     fi
67     return 1
68 }

```

## 2.21 build\_and\_checks\_dependencies/python\_black\_complement.libr.sh

```
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23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "python_black_complement.sh"
25 # to "python_black_complement.libr.sh".
26 #
27 # It was rejected to enhance black with this currently.
28 # https://github.com/psf/black/issues/2370
29 # And moreover, at some point, I saw the reverse rule
30 # in black or pylint to add an empty line...
31 # This regexp may give false positives,
32 # but that's not the end of the world.
33 check_no_empty_line_after_python_function_docstring() {
34     echo "Checking empty lines after Python function docstrings"
35     pcregrep -M $'def [^"]*"""([^\"]|"(?!")")*"""\n\n(?!\\s*def)' \
36         -- **/*.py
37 }
38
39 python_black_complement() {
40     check_no_empty_line_after_python_function_docstring
41 }
```

## 2.22 build\_and\_checks\_dependencies/python\_isort\_complement.libr.sh

```
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23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "python_isort_complement.sh"
25 # to "python_isort_complement.libr.sh".
26
27 LFBFL_subdir="build_and_checks_dependencies"
28 # shellcheck source=lines_filters.libr.sh
29 source "./${LFBFL_subdir}/lines_filters.libr.sh"
30 # shellcheck source=overwrite_if_not_equal.libr.sh
31 source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
32
33 check_collections_abc_place() {
34     echo "Checking import of _collections_abc is at the right place"
35     if [[ ! -o pipefail ]]; then
36         set -o pipefail
37         trap 'set +o pipefail' RETURN
38     fi
39     declare -r LFBFL_temp=".check_collections_abc_place.temp"
40     local LFBFL_file_name
41     find . -name "*.py" \
42         | relevant_find \
43         | while read -r LFBFL_file_name;
44     do
```

```

45      [ [ -f "${LFBFL_file_name}" ] ] || continue
46      sed -Ez 's/(\nfrom _collections_abc[^\\n]*)/\\1\\n/Mg' \
47          "${LFBFL_file_name}" \
48          > "${LFBFL_file_name}${LFBFL_temp}"
49      overwrite_if_not_equal "${LFBFL_file_name}" \
50          "${LFBFL_file_name}${LFBFL_temp}"
51      done
52  }
53
54  python_isort_complement() {
55      check_collections_abc_place
56  }

```

## 2.23 build\_and\_checks\_dependencies/split\_score.exec.php

```

1 #!/usr/bin/php
2 <?php
3 /*
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24
25 ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
26 2026-01-04T13:38+01:00: This file was renamed from
27 "split_line_at_most.exec.php"
28 to
29 "split_score.exec.php".
30 This file was renamed from
31 "call_split_score_after_before_or_before_after.exec.php" to

```

```

32 "split_line_at_most.exec.php".
33 This file was renamed from
34 "call_split_score_after_before_or_before_after.php" to
35 "call_split_score_after_before_or_before_after.exec.php".
36 */
37
38 require_once('./build_and_checks_dependencies/split_score.libr.php');
39
40 /*
41 php -r\
42 '$require_once("./build_and_checks_dependencies/"\
43 '$split_score.libr.php');'\
44 '$echo(generate_split_score'\
45 '$(true, 70, [\'/\'])(\'/\', 60, true));'
46 */
47
48 // The first cast "(int) generate_split_score" is to avoid false
49 // positive errors on possible XSS if output is unescaped.
50 echo(
51     (int) generate_split_score(
52         (bool) $argv[1], (int) $argv[2], explode(',', $argv[3]),
53         ($argv[4], (int) $argv[5], (bool) $argv[6])
54 );

```

## **2.24 build\_and\_checks\_dependencies/split\_score.libr.php**

```

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```

```

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24 ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
25 2026-01-04T13:38+01:00: This file was renamed from
26 "split_line_at_most.libr.php"
27 to
28 "split_score.libr.php".
29 This file was renamed from "split_line_at_most.php" to
30 "split_line_at_most.libr.php".
31 */
32
33 function generate_split_score(
34     $b_after_before,
35     $i_max_length,
36     $a_delimiter_strings_domain,
37 ) {
38     return function(
39         $s_delimiter_string,
40         $i_cut_position,
41         $b_is_cut_after,
42     ) use ($b_after_before, $i_max_length, $a_delimiter_strings_domain) {
43         if(
44             !in_array(
45                 $s_delimiter_string, $a_delimiter_strings_domain, true
46             )
47         ) {
48             // I do not handle regexps for the moment.
49             // I'm too brainfucked. I just want to finish this feature fast
50             // for HTML and Tex/PDF listings generation with HTML and Tex on
51             // at most 70 characters.
52             return 0;
53         }
54         if($b_is_cut_after === $b_after_before) {
55             // When $b_after_before,
56             // always way better to cut after '/' than before it.
57             // When !$b_after_before (aka before_after),
58             // always way better to cut before '/' than after it.
59             return 1 + $i_max_length + $i_cut_position;
60         }
61         return 1 + $i_cut_position;
62     };
63 }

```

## 2.25 build\_and\_checks\_dependencies/strings\_functions.libr.sh

```
1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # I think I created a file strings_functions.sh or renamed to
25 # strings_functions.sh at some point, before committing.
26 # Hence, someone must have changed or reversed the name of this file
27 # to string_functions.sh at some point.
28 # This file was renamed from "string_functions.sh" to
29 # "strings_functions.libr.sh".
30
31 LFBFL_subdir="build_and_checks_dependencies"
32 # shellcheck source=get_common_text_glob_patterns.libr.sh
33 source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
34 # shellcheck source=comparisons.libr.sh
35 source "./${LFBFL_subdir}/comparisons.libr.sh"
36
37 split_line_at() {
38     # $1=$line
39     # $2=$position
40     declare -g split_line_at_result_beginning="${1:0:$2}"
41     declare -g split_line_at_result_end="${1:$2}"
42     # echo "$split_line_at_result_beginning"
43     # echo "$split_line_at_result_end"
44 }
```

```

45
46 split_score_simple(){
47     # $1=$after_before
48     # $2=$delimiters_strings_domain concatenated characters/delimiters
49     # $3=$delimiter_string a single character
50     # $4=$is_cut_after
51     declare -gi split_score_result
52     if [[ "$2" != *$3* ]]; then
53         split_score_result=0
54         return
55     fi
56     if [[ "$4" == "$1" ]]; then
57         split_score_result=2
58         return
59     fi
60     split_score_result=1
61 }
62
63 get_split_score_simple(){
64     # $1=$after_before
65     # $2=$max_length
66     # $3=$delimiters_strings_domain
67     declare -g get_split_score_result="split_score_simple $1 '$3'"
68     declare -gi get_split_score_result2
69     get_split_score_result2=$((7+$1*4))
70     # if [[ $1 -eq 1 ]]; then
71     #     get_split_score_result2=7
72     # else
73     #     get_split_score_result2=11
74     # fi
75 }
76
77 get_split_score_exec(){
78     declare -g SPLIT_SCORE_EXEC="./build_and_checks_dependencies"
79     SPLIT_SCORE_EXEC+="/split_score.exec.php"
80 }
81
82 split_score(){
83     # $1=$after_before
84     # $2=$max_length
85     # $3=$delimiters_strings_domain concatenated characters/delimiters
86     # $4=$delimiter_string a single character
87     # $5=$cut_position
88     # $6=$is_cut_after
89     get_split_score_exec
90     declare -r LFBFL_command="${SPLIT_SCORE_EXEC} $1 $2 '$3' '$4' $5 $6"

```

```

91     declare -gi split_score_result
92     split_score_result=$(eval "${LFBFL_command}")
93 }
94
95 # This function is currently not called,
96 # hence we need that shellcheck disable.
97 # shellcheck disable=SC2034
98 get_split_score() {
99     # $1=$after_before
100    # $1=$max_length
101    # $2=$delimiters_strings_domain
102    declare -g get_split_score_result="split_score $1 $2 '$3'"
103    declare -gi get_split_score_result2
104    get_split_score_result2=$((5+$1*4))
105 }
106
107 split_line_at_most() {
108     # $1=$line
109     # $2=$max_length of beginning result string
110     # $3=$split_score_command
111     # negative score means do not consider as a possible split
112     # $4=$split_score_command_properties :
113     # These properties are flags.
114     # If someday some property is not a flag,
115     # then create split_score_command_properties2.
116     # - null or 0 no property;
117     # - 1 split score doesn't depend on which delimiter matches;
118     # - 2 split score doesn't depend on the current position;
119     # - 4 any split score after is always larger
120     #     than any split score before;
121     # - 8 any split score before is always larger
122     #     than any split score after;
123     # $5=$forbidden_previous_character
124     # $6=$split_score_command_delimiter_strings_domain
125     # optimisation if small domain
126     # - this argument can be "null", then we will use $3 only instead,
127     #     in that case, only mono-character strings are considered,
128     # - this argument can be an array of characters,
129     #     optimize accordingly,
130     # - this argument can be an array of strings,
131     #     optimize accordingly,
132     # - this argument can be an array of regexps,
133     #     optimize accordingly.
134     # Not sure an array of regexps makes more sense than a single
135     # one. Maybe they could be both cases with corresponding
136     # optimizations. Same for a single character or substring.

```

```

137 #
138 # Note that we're always looking for the last position to split
139 # among maximum score;
140 # if some position gets as score from 2 delimiters,
141 # its score is always the maximum of the two corresponding scores.
142 declare -g split_line_at_most_result_start
143 declare -g split_line_at_most_result_end
144 declare -A LFBFL_positions
145 # echo "$1 $2 $3 $4"
146 # For my use case in bash scripts, I will need only an array of
147 # characters. See get_split_score_after_before().
148 if [[ -n "$6" ]]; then
149     echo "split_line_at_most() \$4 NOT IMPLEMENTED YET"
150 fi
151 if [[ $2 -ge ${#1} ]]; then
152     split_line_at_most_result_start=$1
153     split_line_at_most_result_end=""
154     return
155 fi
156 declare -r LFBFL_sort_command="sort --numeric-sort"
157 declare -ir LFBFL_length_minus_1=$(( ${#1} - 1 ))
158 declare -ir LFBFL_i_max=$(( ${#1} - 1 ))
159 min "${LFBFL_sort_command}" "${LFBFL_length_minus_1}" "$2"
160 )
161 declare -i LFBFL_i
162 declare -i LFBFL_j
163 local LFBFL_current_char
164
165 # At the beginning, each position has score 0.
166 for ((LFBFL_i=0; LFBFL_i<=LFBFL_i_max; ++LFBFL_i)) do
167     LFBFL_positions["${LFBFL_i}"]="0"
168 done
169 LFBFL_j=$((LFBFL_i+1))
170 LFBFL_positions["${LFBFL_j}"]="0"
171
172 # If we have a forbidden previous character,
173 # we mark the forbidden positions with -1.
174 if [[ -n "$5" ]]; then
175     for ((LFBFL_i=0; LFBFL_i<LFBFL_i_max; ++LFBFL_i)) do
176         LFBFL_j=$((LFBFL_i+1))
177         LFBFL_current_char="${1:$LFBFL_i:1}"
178         if [[ "${LFBFL_current_char}" == "$5" ]]; then
179             LFBFL_positions["${LFBFL_j}"]="-1"
180         fi
181     done
182 fi

```

```

183
184     if [[ "$4" == "7" ]]; then
185         for ((LFBFL_j=LFBFL_i_max; LFBFL_j>0; --LFBFL_j)) do
186             LFBFL_i=$((LFBFL_j-1))
187             LFBFL_current_char="${1:$LFBFL_i:1}"
188             eval "$3 '\${LFBFL_current_char}' 0"
189             # echo "\${split_score_result}|${LFBFL_i}"
190             if [[ split_score_result -ge 1 ]]; then
191                 # echo "\${split_score_result}|${LFBFL_i}"
192                 if [[ ${LFBFL_positions["${LFBFL_i}"]} != "-1" ]]; then
193                     LFBFL_positions["${LFBFL_i}"]=$(((
194                         max "${LFBFL_sort_command}" \
195                         "${LFBFL_positions["${LFBFL_i}"]}") \
196                         "${split_score_result}"))
197                 )
198             fi
199         fi
200         eval "$3 '\${LFBFL_current_char}' 1"
201         # echo "\${split_score_result}|${LFBFL_j}"
202         if [[ split_score_result -ge 1 ]]; then
203             # echo "\${split_score_result}|${LFBFL_j}"
204             if [[ ${LFBFL_positions["${LFBFL_j}"]} != "-1" ]]; then
205                 LFBFL_positions["${LFBFL_j}"]=$(((
206                     max "${LFBFL_sort_command}" \
207                     "${LFBFL_positions["${LFBFL_j}"]}") \
208                     "${split_score_result}"))
209             )
210             break
211         fi
212     fi
213     done
214 else
215     for ((LFBFL_i=0; LFBFL_i<LFBFL_i_max; ++LFBFL_i)) do
216         LFBFL_j=$((LFBFL_i+1))
217         LFBFL_current_char="${1:$LFBFL_i:1}"
218         eval "$3 '\${LFBFL_current_char}' ${LFBFL_i} 0"
219         # echo "\${split_score_result}|${LFBFL_i}"
220         if [[ split_score_result -ge 1 ]]; then
221             # echo "\${split_score_result}|${LFBFL_i}"
222             if [[ ${LFBFL_positions["${LFBFL_i}"]} != "-1" ]]; then
223                 LFBFL_positions["${LFBFL_i}"]=$(((
224                     max "${LFBFL_sort_command}" \
225                     "${LFBFL_positions["${LFBFL_i}"]}") \
226                     "${split_score_result}"))
227             )
228         fi

```

```

229     fi
230     eval "$3'${LFBFL_current_char}' ${LFBFL_j} 1"
231     # echo "${split_score_result}|${LFBFL_j}"
232     if [[ split_score_result -ge 1 ]]; then
233         # echo "${split_score_result}|${LFBFL_j}"
234         if [[ ${LFBFL_positions["${LFBFL_j}"]} != "-1" ]]; then
235             LFBFL_positions["${LFBFL_j}"]=$(((
236                 max "${LFBFL_sort_command}" \
237                 "${LFBFL_positions["${LFBFL_j}"]}") \
238                 "${split_score_result}")
239             )
240         fi
241     fi
242     done
243 fi
244 declare -ir LFBFL_max_score=$(((
245     max 'sort --numeric-sort' "${LFBFL_positions[@]}"))
246 ))
247 local LFBFL_value
248 declare -i LFBFL_best_position
249 for ((LFBFL_i=0; LFBFL_i<=LFBFL_i_max; ++LFBFL_i)) do
250     local LFBFL_value=${LFBFL_positions[$LFBFL_i]}
251     # echo "${LFBFL_i} ${LFBFL_value}"
252     if [[ "${LFBFL_value}" == "${LFBFL_max_score}" ]]; then
253         LFBFL_best_position=$((LFBFL_i))
254     fi
255 done
256 # shellcheck disable=SC2248
257 split_line_at "$1" ${LFBFL_best_position}
258 split_line_at_most_result_start="${split_line_at_result_beginning}"
259 split_line_at_most_result_end="${split_line_at_result_end}"
260 # echo "$split_line_at_most_result_start"
261 # echo "$split_line_at_most_result_end"
262 }
263
264 split_last_line() {
265     # $1=$new_lines
266     # $2=$prefix
267     # $3=$max_length
268     # $4=$suffix
269     # $5=$split_score_command
270     # $6=$split_score_command_properties
271     # $7=$forbidden_previous_character ('\\' usually)
272     # In general, a prefix/suffix can be a required line prefix/suffix
273     # for all final lines like a comment prefix,
274     # or it can be a continuation line prefix/suffix applied only

```

```

275 # when splitting a line in 2 lines,
276 # or it can be a prefix/suffix for the string made of all the lines.
277 # Clearly, there is no gain to couple handling a prefix/suffix for
278 # the string made of all the lines in this function.
279 # Since we add a prefix/suffix when splitting,
280 # it is easy to see that we do not need to distinguish between
281 # required line prefix/suffix and continuation line prefix/suffix.
282 # The $2 and $4 arguments are given as concatenation of the
283 # required and continuation line prefixes/suffixes as needed by the
284 # user.
285 # Thus lines arguments should be given already prefixed
286 # and suffixed.
287 # This is logic, since it would be cumbersome to handle prefixing
288 # or not already splitted lines in this function
289 # (see repeated_split_last_line).
290 # The given max_length is the goal.
291 # This function adapts the effective max position for the split by
292 # taking into account the length of the suffix.
293 if [[ ! -o pipefail ]]; then
294     set -o pipefail
295     trap 'set +o pipefail' RETURN
296 fi
297
298 declare -g split_last_line_result="$1"
299 declare -ir LFBFL_max_length_plus=$((3 + 1))
300 declare -ir LFBFL_length2=$((3 - ${#4}))
301 declare -r LFBFL-regexp='.'${LFBFL_max_length_plus}"'\}'$'
302 if
303     echo "$1" \
304         | sed -e 's/\n/\n/g' \
305         | grep -q "${LFBFL_regex}";
306 then
307     declare -r LFBFL_start=$((
308         echo "$1" \
309             | sed -e 's/\n/\n/g' \
310             | head --lines=-1 \
311             | sed -z 's/\n/\n/g'
312     ))
313     # echo "start: $LFBFL_start"
314     declare -r LFBFL_last_line=$((
315         echo "$1" \
316             | sed -e 's/\n/\n/g' \
317             | tail --lines=1
318     ))
319     # echo "last_line: ${LFBFL_last_line}"
320     split_last_line_result=""

```

```

321 if [[ -n "${LFBFL_start}" ]]; then
322     split_last_line_result="${LFBFL_start}\n"
323 fi
324 if [[ -n "$5" ]]; then
325     split_line_at_most "${LFBFL_last_line}" "${LFBFL_length2}" \
326         "$5" "$6" "$7"
327     split_last_line_result+="${split_line_at_most_result_start}$4"
328     split_last_line_result+="\n"
329     split_last_line_result+="$2${split_line_at_most_result_end}"
330 else
331     split_last_line_result+="${LFBFL_last_line}:0:${LFBFL_length2} }"
332     split_last_line_result+="\$4\n"
333     split_last_line_result+="$2${LFBFL_last_line}: ${LFBFL_length2} }"
334 fi
335 fi
336 }
337
338 repeated_split_last_line() {
339     declare -g repeated_split_last_line_result="$1"
340     local LFBFL_result="$1x"
341     until
342         [[ "${LFBFL_result}" == "${repeated_split_last_line_result}" ]];
343     do
344         split_last_line "${repeated_split_last_line_result}" "$2" "$3" \
345             "$4" "$5" "$6" "$7"
346         LFBFL_result="${repeated_split_last_line_result}"
347         repeated_split_last_line_result="${split_last_line_result}"
348         # echo "${repeated_split_last_line_result}"
349     done
350 }

```

## 2.26 build\_and\_checks\_dependencies/too\_long\_code\_lines.libr.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
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9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;

```

```

14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "too_long_code_lines.sh"
25 # to "too_long_code_lines.libr.sh".
26
27 LFBFL_subdir="build_and_checks_dependencies"
28 # shellcheck source=get_common_text_glob_patterns.libr.sh
29 source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
30 # shellcheck source=lines_filters.libr.sh
31 source "./${LFBFL_subdir}/lines_filters.libr.sh"
32
33 too_long_code_lines(){
34     # Options:
35     #   --verbose
36     #   --max-line-length
37     local LFBFL_arg
38
39     declare -i LFBFL_verbose=0
40     if [[ "$*" == *--verbose* ]]; then
41         echo "$0 $*"
42         LFBFL_verbose=1
43     fi
44     readonly LFBFL_verbose
45
46     declare -i LFBFL_max_line_length=70
47     for LFBFL_arg in "$@"; do
48         if [[ "${LFBFL_arg}" == --max-line-length=* ]]; then
49             LFBFL_arg=${LFBFL_arg#--max-line-length=}
50             LFBFL_max_line_length=$(( ${LFBFL_arg} ))
51             break
52         fi
53     done
54
55     if [[ ! -o pipefail ]]; then
56         [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
57         set -o pipefail
58         trap 'set +o pipefail' RETURN
59     fi

```

```

60
61     get_COMMON_TEXT_FILES_GLOB_PATTERNS
62     local LFBFL_pattern
63     local LFBFL_long_line
64     local LFBFL_file_name
65     local LFBFL_line
66     local LFBFL_extension
67     local LFBFL_base_name
68     declare -ir LFBFL_overlength=$((LFBFL_max_line_length+1))
69     for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
70         [[ LFBFL_verbose -eq 0 ]] \
71             || echo "Iterating on pattern: ${LFBFL_pattern}"
72     # shellcheck disable=SC2248
73     find . -type f -name "${LFBFL_pattern}" -printf '%P\n' \
74         | relevant_find \
75         | not_license_find \
76         | xargs grep -H '.\${LFBFL_overlength}' \
77         | while read -r LFBFL_long_line;
78     do
79         LFBFL_file_name=${LFBFL_long_line%%:*} # Drop long ':' suffix
80         LFBFL_line=${LFBFL_long_line#*:} # Drop short '*' prefix
81         LFBFL_line="${LFBFL_line%/*}" # Drop/Replace '/' suffix by ''
82         LFBFL_extension=${LFBFL_file_name##*.} # Drop long '.' prefix
83         LFBFL_base_name=${LFBFL_file_name%.*} # Drop short '..' suffix
84         if [[ "${LFBFL_extension}" == "html" ]]; then
85             if [[ -f "${LFBFL_base_name}.md" ]]; then
86                 continue
87             fi
88             if grep --quiet --fixed-strings -- "${LFBFL_line}" \
89                 "./build_and_checks_variables/temp/files_listing.html.tpl"
90             then
91                 continue
92             fi
93             echo "${LFBFL_long_line}"
94         elif [[ "${LFBFL_extension}" == "md" ]]; then
95             if ! [[ -f "${LFBFL_base_name}.md.tpl" ]]; then
96                 echo "${LFBFL_long_line}"
97             fi
98         else
99             echo "${LFBFL_long_line}"
100        fi
101    done
102  done
103 }

```

## 2.27 build\_and\_checks\_dependencies/update\_common\_build\_and\_checks.exec.sh

```
1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "update_common_build_and_checks.sh"
25 # to "update_common_build_and_checks.exec.sh".
26
27 source "overwrite_if_not_equal.libr.sh"
28
29 update_common_build_and_checks() {
30     declare -i LFBFL_verbose=0
31     if [[ "$*" == *--verbose* ]]; then
32         echo "$0 $*"
33         LFBFL_verbose=1
34     fi
35     readonly LFBFL_verbose
36
37     if [[ ! -o pipefail ]]; then
38         [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
39         set -o pipefail
40         trap 'set +o pipefail' RETURN
41     fi
42
43     declare -r LFBFL_common_file_name="common_build_and_checks.exec.sh"
44     cp "./${LFBFL_common_file_name}.tpl"\
```

```

45     "./${LFBFL_common_file_name}.temp"
46
47 declare -ar LFBFL_file_names=(
48     "build_md_from_printable_md.exec.sh"
49     "check_shell_scripts_beginnings.libr.sh"
50     "check_shell_scripts_indentation.libr.sh"
51     "check_URLs.libr.sh"
52     "comparisons.libr.sh"
53     "create_PDF.exec.sh"
54     "generate_from_template.libr.sh"
55     "get_common_text_glob_patterns.libr.sh"
56     "grammar_and_spell_check.libr.sh"
57     "licenses_templates/build_licenses_templates.exec.sh"
58     "licenses_templates/license_file_header_AGPLv3+.tpl"
59     "licenses_templates/license_file_header_GPLv3+.tpl"
60     "licenses_templates/license_file_header_LGPLv3+.tpl"
61     "lines_counts.libr.sh"
62     "lines_filters.libr.sh"
63     "lines_maps.libr.sh"
64     "update_or_check_files_names_listing.exec.sh"
65     "overwrite_if_not_equal.libr.sh"
66     "python_black_complement.libr.sh"
67     "python_isort_complement.libr.sh"
68     "split_score.exec.php"
69     "split_score.libr.php"
70     "strings_functions.libr.sh"
71     "too_long_code_lines.libr.sh"
72 )
73
74 local LFBFL_file_name
75 local LFBFL_file_sha512
76 local LFBFL_file_sha512_all
77 local LFBFL_base_file_name
78 for LFBFL_file_name in "${LFBFL_file_names[@]}"; do
79     LFBFL_file_sha512=$((
80         sha512sum "./${LFBFL_file_name}" \
81         | cut -f1 -d' '
82     ))
83     LFBFL_file_sha512_all+="local LFBFL_correct_sha512\n"
84     LFBFL_file_sha512_all+="$ LFBFL_correct_sha512="
85     LFBFL_file_sha512_all+="'${LFBFL_file_sha512:0:45}'\n"
86     LFBFL_file_sha512_all+="$ LFBFL_correct_sha512\+="
87     LFBFL_file_sha512_all+="'${LFBFL_file_sha512:45:44}'\n"
88     LFBFL_file_sha512_all+="$ LFBFL_correct_sha512\+="
89     LFBFL_file_sha512_all+="'${LFBFL_file_sha512:89}'"
90     LFBFL_base_file_name=$(basename "${LFBFL_file_name}")

```

```

91     sed -i \
92         "s|@sha512_{$LFBFL_base_file_name}@|${LFBFL_file_sha512_all}|g" \
93         "./${LFBFL_common_file_name}.temp"
94 done
95
96 overwrite_if_not_equal "./${LFBFL_common_file_name}" \
97     "./${LFBFL_common_file_name}.temp"
98
99 declare -r LFBFL_main_file_name="build_and_checks.exec.sh"
100 cp "./${LFBFL_main_file_name}.tpl" "../${LFBFL_main_file_name}.temp"
101
102 LFBFL_file_sha512=$( \
103     sha512sum "./${LFBFL_common_file_name}" \
104     | cut -f1 -d' '
105 )
106 LFBFL_file_sha512_all="local LFBFL_correct_sha512\n"
107 LFBFL_file_sha512_all+=" LFBFL_correct_sha512="
108 LFBFL_file_sha512_all+="${LFBFL_file_sha512:0:45}'\n"
109 LFBFL_file_sha512_all+=" LFBFL_correct_sha512\+="
110 LFBFL_file_sha512_all+="${LFBFL_file_sha512:45:44}'\n"
111 LFBFL_file_sha512_all+=" LFBFL_correct_sha512\+="
112 LFBFL_file_sha512_all+="${LFBFL_file_sha512:89}'"
113 sed -i \
114     "s|@sha512_{$LFBFL_common_file_name}@|${LFBFL_file_sha512_all}|g" \
115     "./${LFBFL_main_file_name}.temp"
116
117 overwrite_if_not_equal "../${LFBFL_main_file_name}" \
118     "../${LFBFL_main_file_name}.temp"
119 }
120
121 update_common_build_and_checks "$@"

```

## 2.28 build\_and\_checks\_dependencies/update\_or\_check\_files\_names\_listing.exec.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,

```

```

13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24
25 # 2025-12-30T21:33+01:00: This file was moved from
26 # "./build_and_checks_dependencies/listings"
27 # to
28 # "./build_and_checks_dependencies".
29 # This file was renamed from "update_or_check_files_names_listing.sh"
30 # to "update_or_check_files_names_listing.exec.sh".
31 # This file was renamed from "update_or_check_file_names_listing.sh"
32 # to "update_or_check_files_names_listing.sh"?
33
34 LFBFL_subdir="build_and_checks_dependencies"
35 # shellcheck source=lines_filters.libr.sh
36 source "./${LFBFL_subdir}/lines_filters.libr.sh"
37 # shellcheck source=strings_functions.libr.sh
38 source "./${LFBFL_subdir}/strings_functions.libr.sh"
39
40 update_or_check_files_names_listing() {
41     declare -i LFBFL_verbose=0
42     if [[ "$*" == *--verbose* ]]; then
43         echo "$0 $*"
44         LFBFL_verbose=1
45     fi
46     readonly LFBFL_verbose
47
48     declare -i LFBFL_write=0
49     if [[ "$*" == *--write* ]]; then
50         LFBFL_write=1
51     fi
52     readonly LFBFL_write
53
54     declare -i LFBFL_append=0
55     if [[ "$*" == *--append* ]]; then
56         LFBFL_append=1
57     fi
58     readonly LFBFL_append

```

```

59
60     if [[ ! -o pipefail ]]; then
61         [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
62         set -o pipefail
63         trap 'set +o pipefail' RETURN
64     fi
65
66     LFBFL_subdir2="build_and_checks_variables"
67     local LFBFL_listing="./${LFBFL_subdir2}/files_names_listing.txt"
68     readonly LFBFL_listing
69     local LFBFL_data_file_name="./${LFBFL_subdir2}/repository_data.txt"
70     readonly LFBFL_data_file_name
71
72     declare -i LFBFL_max_line_length
73     grep_variable "${LFBFL_data_file_name}" max_line_length\
74         --result-variable-prefix="LFBFL_"
75
76     if [[ LFBFL_write -eq 1 ]]; then
77         : > "${LFBFL_listing}"
78     fi
79     # Remove line returns here to keep lines short.
80     sed -Ez 's/\n//Mg' "${LFBFL_listing}" \
81         > "${LFBFL_listing}.temp"
82     shopt -s dotglob
83     # shellcheck disable=SC2248
84     get_split_score_simple 1 ${LFBFL_max_line_length} /
85     declare -r LFBFL_split_score_command="${get_split_score_result}"
86     local LFBFL_split_score_command_properties
87     LFBFL_split_score_command_properties="${get_split_score_result2}"
88     readonly LFBFL_split_score_command_properties
89     local LFBFL_suffix=\\\\" # instead of '\\" to avoid shellcheck SC1003
90     readonly LFBFL_suffix
91     local LFBFL_file_name
92     local LFBFL_base_file_name
93     local LFBFL_split_file_name
94     find . -type f -printf '%P\n' \
95         | relevant_find\
96         | sort\
97         | while read -r LFBFL_file_name;
98     do
99         git check-ignore -q "${LFBFL_file_name}" && continue
100        LFBFL_base_file_name=$(basename "${LFBFL_file_name}")
101        [[ "${LFBFL_base_file_name}" != files_names_listing.txt* ]] \
102            || continue
103        if [[ "${LFBFL_base_file_name}" == *.md ]]; then
104            if [[ -f "${LFBFL_file_name}.tpl" ]]; then

```

```

105         continue
106     fi
107 fi
108 # shellcheck disable=SC2248
109 repeated_split_last_line "${LFBFL_file_name}" \
110     """\
111     ${LFBFL_max_line_length}\"
112     "${LFBFL_suffix}"\
113     "${LFBFL_split_score_command}"\
114     "${LFBFL_split_score_command_properties}""
115 LFBFL_split_file_name="${repeated_split_last_line_result}"
116 if [[ LFBFL_write -eq 1 ]]; then
117     # shellcheck disable=SC2001
118     echo "${LFBFL_file_name}"\
119         | sed -e "s|${LFBFL_file_name}|${LFBFL_split_file_name}|g"\"
120         >> "${LFBFL_listing}"
121     continue
122 fi
123 if grep -q "${LFBFL_file_name}\$" "${LFBFL_listing}.temp"; then
124     :
125 else
126     echo\
127         "The file ${LFBFL_file_name} is not listed in ${LFBFL_listing}.""
128     if [[ LFBFL_append -eq 1 ]]; then
129         # shellcheck disable=SC2001
130         echo "${LFBFL_file_name}"\
131             | sed -e "s|${LFBFL_file_name}|${LFBFL_split_file_name}|g"\"
132             >> "${LFBFL_listing}"
133     fi
134 fi
135 done
136
137 while read -r LFBFL_file_name;
138 do
139     [[ "${LFBFL_file_name}" != '/*' ]] || continue
140     LFBFL_base_file_name=$(basename "${LFBFL_file_name}")
141     if ! [[ -f "${LFBFL_file_name}" ]]; then
142         echo\
143             "The non-file ${LFBFL_file_name} is listed in ${LFBFL_listing}."
144     fi
145     done < "${LFBFL_listing}.temp"
146
147 rm "${LFBFL_listing}.temp"
148 shopt -u dotglob
149 shopt -s globstar
150
```

```

151     if [[ LFBFL_verbose -eq 1 ]]; then
152         cat "${LFBFL_listing}"
153     fi
154 }
155
156 update_or_check_files_names_listing "$@"

```

## **2.29 build\_and\_checks\_variables/.gitignore**

```

1 temp/
2 upgrade_venvs_ts
3

```

## **2.30 build\_and\_checks\_variables/bandit.ini**

```

1 # FILE: .bandit
2 [bandit]

```

## **2.31 build\_and\_checks\_variables/bandit\_baseline.json**

```

1 {"results":[]}

```

## **2.32 build\_and\_checks\_variables/black.toml**

```

1 [tool.black]
2 line-length = 70

```

## **2.33 build\_and\_checks\_variables/DevOrSysAdminScripts.html.tpl**

```

1 <!DOCTYPE html>
2 <html lang="en">
3 <!--
4 This file is part of DevOrSysAdminScripts library.
5
6 DevOrSysAdminScripts is free software:
7 you can redistribute it and/or modify it under the terms
8 of the GNU Lesser General Public License
9 as published by the Free Software Foundation,
10 either version 3 of the License,
11 or (at your option) any later version.
12
13 DevOrSysAdminScripts is distributed in the hope
14 that it will be useful,
15 but WITHOUT ANY WARRANTY;
16 without even the implied warranty of
17 MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

```

```

18 See the GNU Lesser General Public License for more details.
19
20 You should have received a copy of
21 the GNU Lesser General Public License
22 along with DevOrSysAdminScripts.
23 If not, see <https://www.gnu.org/licenses/>.
24
25 ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
26 -->
27 <head>
28 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
29 <meta name="generator" content="DevOrSysAdminScripts">
30 <style>
31 .title{
32   margin: 2ex auto;
33   text-align: center;
34 }
35 .titlemain{
36   margin: 1ex 2ex 2ex 1ex;
37 }
38 .titlerest{
39   font-size: 1.17em;
40   margin: 0ex 2ex;
41 }
42 table{
43   border-collapse: collapse;
44 }
45 td{
46   padding: 0;
47 }
48 pre{
49   text-align: left;
50   margin-left: 0ex;
51   margin-right: auto;
52 }
53 pre.numbered_lines:before{
54   background: snow;
55   border-right: 1px black solid;
56   color: #010101;
57   content: attr(line-numbers);
58   float: left;
59   padding: 0 1ch;
60   text-align: right;
61 }
62 blockquote{
63   margin-left: 4ex;

```

```

64     margin-right: 4ex;
65     text-align: left;
66   }
67 ol.level1, ol.level2{
68   list-style-type: none;
69   /*
70   list-style-type: decimal;
71   Previous rule is shorter and more efficient if you need only level1.
72   But you don't have accessible counter if you use decimal.
73   */
74 }
75 ol.level1{
76   counter-reset: level1;
77 }
78 ol.level2{
79   counter-reset: level2;
80 }
81 ol.level1 li:before{
82   content: counter(level1) ". ";
83   counter-increment: level1;
84 }
85 ol.level2 li:before{
86   content: counter(level1) "." counter(level2) " ";
87   counter-increment: level2;
88 }
89 </style>
90 <title>@repository_name@</title>
91 </head>
92 <body >
93 <table class="title">
94   <tr>
95     <td style="padding:1ex">
96       <h1 class="titlemain">@repository_name@</h1>
97       <h2 class="titlerest">
98         @author_full_name@
99         <br>
100        <a href="@author_website@">
101          <span style="font-family:monospace">
102            @author_website@
103            </span>
104          </a>
105          <br>
106          <a href="mailto:@author_email@">
107            <span style="font-family:monospace">
108              @author_email@
109            </span>

```

```

110          </a>
111      </h2>
112  </td>
113 </tr>
114 </table>
115
116 <blockquote class="abstract">
117   <span style="font-weight:bold">Abstract:</span>
118   @abstract@
119 </blockquote>
120 <p>Current version: @current_date@</p>
121 <p>Current number of commits: @number_of_commits@</p>
122 <p>Current git SHA1: @current_git_SHA1@</p>
123 <p>
124 Code lines: @number_of_lines@
125 </p>
126
127
128 <h2>Contents</h2>
129
130 <ol class="level1">
131   <li><a href="#section1">Files Tree</a></li>
132   <li><a href="#section2">Listing of files</a><br>
133     <ol class="level2">
134       @files_lis@
135     </ol>
136   </li>
137 </ol>
138
139
140 <h2 id="section1">1 Files tree</h2>
141 <pre class="verbatim">
142 @current_tree_light@
143 </pre>
144 <pre class="verbatim">
145 @current_tree@
146 </pre>
147
148
149 <h2 id="section2">2 Listing of files</h2>
150
151 <p>
152 This repository is dual licensed.
153 All the Bash scripts source code is covered by GPLv3+.
154 All the PHP scripts source code is covered by LGPLv3+.
155 </p>
```

```

156
157 <p>
158 The text of the licenses is available at:
159 <a href="https://www.gnu.org/licenses/"><span
160     style="font-family:monospace">
161 >https://www.gnu.org/licenses/</span></a>.
162 The git repository of this source code is also available at:
163 <a href="https://github.com/LLyaudet/@repository_name@/"><span
164     style="font-family:monospace">
165 >https://github.com/LLyaudet/@repository_name@</span></a>.
166 </p>
167
168 <div>
169 <p>
170 Here is a listing of the dependencies of the code in this repository:
171 </p>
172 <ul>
173 <li> The following dependencies are GPLv3+ licensed:<br>
174 basename, bash (and its builtins), cat, chmod, cp, cut, date, diff,
175 dirname, find, grep, head, mkdir, mv, realpath, rm, sed, sha512sum,
176 shellcheck, sort, tail, wc, wget, xargs
177 <li> The following dependencies are GPLv2+ licensed:<br>
178 more, pandoc, pdftex, pdflatex, tree
179 <li> The following dependencies are GPLv2 licensed:<br>
180 git, pylint
181 <li> The following dependencies are LGPLv2.1+ licensed:<br>
182 notify-send
183 <li> The following dependencies are MIT licensed:<br>
184 black, isort, mypy, ruff
185 <li> The following dependencies are Apache-2.0 licensed:<br>
186 bandit
187 <li> The following dependencies are BSD-3-Clause licensed:<br>
188 phpmd
189 <li> php is licensed under PHP License v3.01
190 <li> tex is licensed under Knuth license
191 <li> pcregrep has a custom license from Cambridge University
192 </ul>
193 </div>
194
195 <p>
196 Remark: Some commands listed under GPLv3+ are POSIX
197 and can have different implementations under another license;
198 for example, uutils coreutils is MIT licensed,
199 whilst GNU coreutils is GPLv3+ licensed.
200 </p>
201
```

```

202 @files_listing_HTMLPreInput@
203
204 <p>
205 @acknowledgments@
206 </p>
207
208 <script>
209 "use strict";
210 const pres = Array.from(
211   document.getElementsByClassName('numbered_lines')
212 );
213 pres.forEach(
214   (pre) => {
215     const nb = Array.from(pre.innerText.matchAll("\n")).length + 1;
216     let numbers = "";
217     for(let i = 1; i <= nb; ++i){
218       numbers += i.toString();
219       if(i < nb){ numbers += "\n "; }
220     }
221     pre.setAttribute('line-numbers', numbers);
222   }
223 );
224 </script>
225 </html>

```

## 2.34 build\_and\_checks\_variables/DevOrSysAdminScripts.tex.tpl

```

1 % This file is part of DevOrSysAdminScripts library.
2 %
3 % DevOrSysAdminScripts is free software:
4 % you can redistribute it and/or modify it under the terms
5 % of the GNU Lesser General Public License
6 % as published by the Free Software Foundation,
7 % either version 3 of the License,
8 % or (at your option) any later version.
9 %
10 % DevOrSysAdminScripts is distributed in the hope
11 % that it will be useful,
12 % but WITHOUT ANY WARRANTY;
13 % without even the implied warranty of
14 % MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
15 % See the GNU Lesser General Public License for more details.
16 %
17 % You should have received a copy of
18 % the GNU Lesser General Public License
19 % along with DevOrSysAdminScripts.

```

```

20 % If not, see <https://www.gnu.org/licenses/>.
21 %
22 % ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
23
24 % 2025-12-29T17:08+01:00: This file was moved from
25 % "./latex"
26 % to
27 % "./build_and_checks_variables".
28
29 \documentclass{article}
30
31 \usepackage[utf8]{inputenc}
32 \usepackage[T1]{fontenc}
33 \usepackage{subfigure}
34 \usepackage{amsmath}
35 \usepackage{amssymb}
36 \usepackage{amsthm}
37 \usepackage[pdfTeX]{hyperref}
38 \usepackage{tikz}
39 \usepackage{caption}
40 \usepackage[round]{natbib}
41 \usepackage{fancyhdr}
42 \usepackage{amsfonts}
43 \usepackage{times}
44 \usepackage{ifpdf}
45 \usepackage{latextsym}
46 \usepackage{graphicx}
47 \usepackage{enumerate}
48 \usepackage{pmbboxdraw}
49 \usepackage{fancyvrb}
50 \usepackage[french,english]{babel}
51
52 % *** les environnements ***
53 %\theoremstyle{break}
54 \newtheorem{definition}{Definition}[section]
55 \newtheorem{proposition}[definition]{Proposition}
56 \newtheorem{theorem}[definition]{Theorem}
57 \newtheorem{lemma}[definition]{Lemma}
58 \newtheorem{corollary}[definition]{Corollary}
59 \newtheorem{remark}[definition]{Remark}
60 \newtheorem{openproblem}[definition]{Open problem}
61
62 \begin{document}
63
64 \author{
65   @author_full_name@\\

```

```

66   \url{@author_website@} \\
67   \href{mailto:@author_email@}{@author_email@}
68 }
69 \title{@repository_name@}
70
71 \maketitle
72 \begin{abstract}
73 @abstract@
74 \end{abstract}
75
76 Current version: @current_date@
77
78 Current number of commits: @number_of_commits@
79
80 Current git SHA1: @current_git_SHA1@
81
82 Code lines: @number_of_lines@
83
84 \tableofcontents
85 \newpage
86
87 \section{Files tree}
88 \label{section:tree}
89
90 \begin{verbatim}
91 @current_tree_light@
92 \end{verbatim}
93
94 \begin{verbatim}
95 @current_tree@
96 \end{verbatim}
97
98 \section{Listing of files}
99 \label{section:listing}
100
101 This repository is dual licensed.
102 All the Bash scripts source code is covered by GPLv3+.
103 All the PHP scripts source code is covered by LGPLv3+.
104
105 The text of the licenses is available at:
106 \url{https://www.gnu.org/licenses/}.
107 The git repository of this source code is also available at:
108 \url{https://github.com/LLyaudet/@repository_name@/}.
109
110 Here is a listing of the dependencies of the code in this repository:
111 \begin{itemize}

```

```

112 \item The following dependencies are GPLv3+ licensed:\newline
113 basename, bash (and its builtins), cat, chmod, cp, cut, date, diff,
114 dirname, find, grep, head, mkdir, mv, realpath, rm, sed, sha512sum,
115 shellcheck, sort, tail, wc, wget, xargs
116 \item The following dependencies are GPLv2+ licensed:\newline
117 more, pandoc, pdftex, pdflatex, tree
118 \item The following dependencies are GPLv2 licensed:\newline
119 git, pylint
120 \item The following dependencies are LGPLv2.1+ licensed:\newline
121 notify-send
122 \item The following dependencies are MIT licensed:\newline
123 black, isort, mypy, ruff
124 \item The following dependencies are Apache-2.0 licensed:\newline
125 bandit
126 \item The following dependencies are BSD-3-Clause licensed:\newline
127 phpmdb
128 \item php is licensed under PHP License v3.01
129 \item tex is licensed under Knuth license
130 \item pcregrep has a custom license from Cambridge University
131 \end{itemize}

132
133 Remark: Some commands listed under GPLv3+ are POSIX
134 and can have different implementations under another license;
135 for example, uutils coreutils is MIT licensed,
136 whilst GNU coreutils is GPLv3+ licensed.

137
138 @files_listing_VerbatimInput@
139
140 @acknowledgments@
141
142 \end{document}

```

## 2.35 build\_and\_checks\_variables/files\_listing.tex.tpl

```

1 \subsection{
2     build\_and\_checks\_dependencies/build\_and\_checks.exec.sh.tpl
3 }
4 \label{
5     build_and_checks_dependencies:build_and_checksexecshtpl
6 }
7
8 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
9 build_and_checks_dependencies/build_and_checks.exec.sh.tpl
10 }
11
12

```

```

13 \subsection{
14   build\_and\_checks\_dependencies/%
15 build\_md\_from\_printable\_md.exec.sh
16 }
17 \label{
18   build_and_checks_dependencies:build_md_from_printable_mdexecsh
19 }
20
21 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
22 build_and_checks_dependencies/build_md_from_printable_md.exec.sh
23 }
24
25
26 \subsection{
27   build\_and\_checks\_dependencies/%
28 check\_shell\_scripts\_beginnings.libr.sh
29 }
30 \label{
31   build_and_checks_dependencies:check_shell_scripts_beginningslibrsh
32 }
33
34 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
35 build_and_checks_dependencies/check_shell_scripts_beginnings.libr.sh
36 }
37
38
39 \subsection{
40   build\_and\_checks\_dependencies/%
41 check\_shell\_scripts\_indentation.libr.sh
42 }
43 \label{
44   build_and_checks_dependencies:check_shell_scripts_indentationlibrsh
45 }
46
47 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
48 build_and_checks_dependencies/check_shell_scripts_indentation.libr.sh
49 }
50
51
52 \subsection{
53   build\_and\_checks\_dependencies/check\_URLs.libr.sh
54 }
55 \label{
56   build_and_checks_dependencies:check_URLslibrsh
57 }
58

```

```

59  \VerbatimInput[numbers=left,xleftmargin=-5mm] {
60  build_and_checks_dependencies/check_URLs.libr.sh
61  }
62
63
64  \subsection{
65      build\_and\_checks\_dependencies/common\_build\_and\_checks.exec.sh
66  }
67  \label{
68      build_and_checks_dependencies:common_build_and_checksexecsh
69  }
70
71  \VerbatimInput[numbers=left,xleftmargin=-5mm] {
72  build_and_checks_dependencies/common_build_and_checks.exec.sh
73  }
74
75
76  \subsection{
77      build\_and\_checks\_dependencies/%
78 common\_build\_and\_checks.exec.sh.tpl
79  }
80  \label{
81      build_and_checks_dependencies:common_build_and_checksexecstpl
82  }
83
84  \VerbatimInput[numbers=left,xleftmargin=-5mm] {
85  build_and_checks_dependencies/common_build_and_checks.exec.sh.tpl
86  }
87
88
89  \subsection{
90      build\_and\_checks\_dependencies/comparisons.libr.sh
91  }
92  \label{
93      build_and_checks_dependencies:comparisonslibrsh
94  }
95
96  \VerbatimInput[numbers=left,xleftmargin=-5mm] {
97  build_and_checks_dependencies/comparisons.libr.sh
98  }
99
100
101 \subsection{
102     build\_and\_checks\_dependencies/create\_PDF.exec.sh
103  }
104 \label{

```

```

105     build_and_checks_dependencies:create_PDFexecsh
106 }
107
108 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
109 build_and_checks_dependencies/create_PDF.exec.sh
110 }
111
112 \subsection{
113     build\_\_and\_\_checks\_\_dependencies/generate\_from\_template.libr.sh
114 }
115 \label{
116     build_and_checks_dependencies:generate_from_templatelibrsh
117 }
118 }
119
120 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
121 build_and_checks_dependencies/generate_from_template.libr.sh
122 }
123
124 \subsection{
125     build\_\_and\_\_checks\_\_dependencies/%
126 get\_common\_text\_glob\_patterns.libr.sh
127 }
128 \label{
129     build_and_checks_dependencies:get_common_text_glob_patternslibrsh
130 }
131 }
132
133 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
134 build_and_checks_dependencies/get_common_text_glob_patterns.libr.sh
135 }
136
137 \subsection{
138     build\_\_and\_\_checks\_\_dependencies/grammar\_and\_\_spell\_\_check.libr.sh
139 }
140 \label{
141     build_and_checks_dependencies:grammar_and_spell_checklibrsh
142 }
143 }
144
145 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
146 build_and_checks_dependencies/grammar_and_spell_check.libr.sh
147 }
148
149 \subsection{

```

```

151     build\_and\_checks\_dependencies/licenses\_templates/%
152 build\_licenses\_templates.exec.sh
153 }
154 \label{
155     build_and_checks_dependencies:licenses_templates:%
156 build_licenses_templatesexecsh
157 }
158
159 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
160 build_and_checks_dependencies/licenses_templates/%
161 build_licenses_templates.exec.sh
162 }
163
164
165 \subsection{
166     build\_and\_checks\_dependencies/licenses\_templates/%
167 license\_file\_header\_AGPLv3+.tpl
168 }
169 \label{
170     build_and_checks_dependencies:licenses_templates:%
171 license_file_header_AGPLv3+tpl
172 }
173
174 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
175 build_and_checks_dependencies/licenses_templates/%
176 license_file_header_AGPLv3+.tpl
177 }
178
179
180 \subsection{
181     build\_and\_checks\_dependencies/licenses\_templates/%
182 license\_file\_header\_GPLv3+.tpl
183 }
184 \label{
185     build_and_checks_dependencies:licenses_templates:%
186 license_file_header_GPLv3+tpl
187 }
188
189 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
190 build_and_checks_dependencies/licenses_templates/%
191 license_file_header_GPLv3+.tpl
192 }
193
194
195 \subsection{
196     build\_and\_checks\_dependencies/licenses\_templates/%

```

```

197 license\_file\_header\_LGPLv3+.tpl
198 }
199 \label{
200     build_and_checks_dependencies:licenses_templates:%
201 license_file_header_LGPLv3+tpl
202 }
203
204 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
205 build_and_checks_dependencies/licenses_templates/%
206 license_file_header_LGPLv3+.tpl
207 }
208
209
210 \subsection{
211     build\_\_and\_\_checks\_\_dependencies/lines\_counts.libr.sh
212 }
213 \label{
214     build_and_checks_dependencies:lines_countslibrsh
215 }
216
217 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
218 build_and_checks_dependencies/lines_counts.libr.sh
219 }
220
221
222 \subsection{
223     build\_\_and\_\_checks\_\_dependencies/lines\_filters.libr.sh
224 }
225 \label{
226     build_and_checks_dependencies:lines_filterslibrsh
227 }
228
229 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
230 build_and_checks_dependencies/lines_filters.libr.sh
231 }
232
233
234 \subsection{
235     build\_\_and\_\_checks\_\_dependencies/lines\_maps.libr.sh
236 }
237 \label{
238     build_and_checks_dependencies:lines_mapslibrsh
239 }
240
241 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
242 build_and_checks_dependencies/lines_maps.libr.sh

```

```

243 }
244
245
246 \subsection{
247     build\_and\_checks\_dependencies/overwrite\_if\_not\_equal.libr.sh
248 }
249 \label{
250     build_and_checks_dependencies:overwrite_if_not_equallibrsh
251 }
252
253 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
254 build_and_checks_dependencies/overwrite_if_not_equal.libr.sh
255 }
256
257
258 \subsection{
259     build\_and\_checks\_dependencies/python\_black\_complement.libr.sh
260 }
261 \label{
262     build_and_checks_dependencies:python_black_complementlibrsh
263 }
264
265 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
266 build_and_checks_dependencies/python_black_complement.libr.sh
267 }
268
269
270 \subsection{
271     build\_and\_checks\_dependencies/python\_isort\_complement.libr.sh
272 }
273 \label{
274     build_and_checks_dependencies:python_isort_complementlibrsh
275 }
276
277 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
278 build_and_checks_dependencies/python_isort_complement.libr.sh
279 }
280
281
282 \subsection{
283     build\_and\_checks\_dependencies/split\_score.exec.php
284 }
285 \label{
286     build_and_checks_dependencies:split_scoreexecphp
287 }
288

```

```

289 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
290 build_and_checks_dependencies/split_score.exec.php
291 }
292
293
294 \subsection{
295     build_and_checks_dependencies/split\_score.libr.php
296 }
297 \label{
298     build_and_checks_dependencies:split_scorelibrphp
299 }
300
301 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
302 build_and_checks_dependencies/split_score.libr.php
303 }
304
305
306 \subsection{
307     build_and_checks_dependencies/strings\_functions.libr.sh
308 }
309 \label{
310     build_and_checks_dependencies:string_functionslibrsh
311 }
312
313 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
314 build_and_checks_dependencies/strings_functions.libr.sh
315 }
316
317
318 \subsection{
319     build_and_checks_dependencies/too\_long\_code\_lines.libr.sh
320 }
321 \label{
322     build_and_checks_dependencies:too_long_code_lineslibrsh
323 }
324
325 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
326 build_and_checks_dependencies/too_long_code_lines.libr.sh
327 }
328
329
330 \subsection{
331     build_and_checks_dependencies/%
332 update_common_build_and_checks.exec.sh
333 }
334 \label{

```

```

335     build_and_checks_dependencies:update_common_build_and_checksexecsh
336 }
337
338 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
339 build_and_checks_dependencies/update_common_build_and_checks.exec.sh
340 }
341
342 \subsection{
343     build\_\_and\_\_checks\_\_dependencies/%
344 update\_\_or\_\_check\_\_files\_\_names\_\_listing.exec.sh
345 }
346 \label{
347     build_and_checks_dependencies:%
348 update_or_check_files_names_listingexecsh
349 }
350
351
352 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
353 build_and_checks_dependencies/%
354 update_or_check_files_names_listing.exec.sh
355 }
356
357 \subsection{
358     build\_\_and\_\_checks\_\_variables/.gitignore
359 }
360 \label{
361     build_and_checks_variables:gitignore
362 }
363
364
365 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
366 build_and_checks_variables/.gitignore
367 }
368
369 \subsection{
370     build\_\_and\_\_checks\_\_variables/bandit.ini
371 }
372 \label{
373     build_and_checks_variables:banditini
374 }
375
376
377 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
378 build_and_checks_variables/bandit.ini
379 }
380

```

```

381 \subsection{
382   build\_and\_checks\_variables/bandit\_baseline.json
383 }
384 \label{
385   build_and_checks_variables:bandit_baselinejson
386 }
387 }

388 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
389 build_and_checks_variables/bandit_baseline.json
390 }
391 }

392

393 \subsection{
394   build\_and\_checks\_variables/black.toml
395 }
396 \label{
397   build_and_checks_variables:blacktoml
398 }
399 }

400 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
401 build_and_checks_variables/black.toml
402 }
403 }

404

405 \subsection{
406   build\_and\_checks\_variables/DevOrSysAdminScripts.html.tpl
407 }
408 \label{
409   build_and_checks_variables:DevOrSysAdminScriptsthmltpl
410 }
411 }

412 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
413 build_and_checks_variables/DevOrSysAdminScripts.html.tpl
414 }
415 }

416

417 \subsection{
418   build\_and\_checks\_variables/DevOrSysAdminScripts.tex.tpl
419 }
420 \label{
421   build_and_checks_variables:DevOrSysAdminScriptstexttpl
422 }
423 }

424 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
425 build_and_checks_variables/DevOrSysAdminScripts.tex.tpl
426 }

```

```

427 }
428
429
430 \subsection{
431     build\_\_and\_\_checks\_\_variables/files\_listing.tex.tpl
432 }
433 \label{
434     build_and_checks_variables:files_listingtextpl
435 }
436
437 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
438 build_and_checks_variables/files_listing.tex.tpl
439 }
440
441
442 \subsection{
443     build\_\_and\_\_checks\_\_variables/files\_names\_listing.txt
444 }
445 \label{
446     build_and_checks_variables:files_names_listingtxt
447 }
448
449 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
450 build_and_checks_variables/files_names_listing.txt
451 }
452
453
454 \subsection{
455     build\_\_and\_\_checks\_\_variables/licenses\_notes.txt
456 }
457 \label{
458     build_and_checks_variables:licenses_notestxt
459 }
460
461 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
462 build_and_checks_variables/licenses_notes.txt
463 }
464
465
466 \subsection{
467     build\_\_and\_\_checks\_\_variables/phpmd\_baseline.xml
468 }
469 \label{
470     build_and_checks_variables:phpmd_baselinexml
471 }
472

```

```

473 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
474 build_and_checks_variables/phpmd_baseline.xml
475 }
476
477 \subsection{
478     build\_and\_checks\_variables/pylintrc.toml
479 }
480 \label{
481     build_and_checks_variables:pylintrctoml
482 }
483
484 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
485 build_and_checks_variables/pylintrc.toml
486 }
487
488
489 \subsection{
490     build\_and\_checks\_variables/repository\_data.txt
491 }
492 \label{
493     build_and_checks_variables:repository_datatxt
494 }
495
496 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
497 build_and_checks_variables/repository_data.txt
498 }
499
500
501 \subsection{
502     build\_and\_checks\_variables/ruff.toml
503 }
504 \label{
505     build_and_checks_variables:rufftoml
506 }
507
508 \VerbatimInput [numbers=left, xleftmargin=-5mm] {
509 build_and_checks_variables/ruff.toml
510 }
511
512
513 \subsection{
514     build\_and\_checks\_variables/shellcheck.ini
515 }
516 \label{
517     build_and_checks_variables:shellcheckini
518 }
```

```

519 }
520
521 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
522 build_and_checks_variables/shellcheck.ini
523 }
524
525
526 \subsection{
527     build_and_checks_variables/shellcheck_notes.txt
528 }
529 \label{
530     build_and_checks_variables:shellcheck_notestxt
531 }
532
533 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
534 build_and_checks_variables/shellcheck_notes.txt
535 }
536
537
538 \subsection{
539     build_and_checks_exec.sh
540 }
541 \label{
542     build_and_checks_execsh
543 }
544
545 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
546 build_and_checks_exec.sh
547 }
548
549
550 \subsection{
551     COPYING
552 }
553 \label{
554     COPYING
555 }
556
557 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
558 COPYING
559 }
560
561
562 \subsection{
563     COPYING.LESSER
564 }

```

```

565 \label{
566     COPYINGLESSER
567 }
568
569 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
570 COPYING.LESSER
571 }
572
573 \subsection{
574     git\_helpers/git\_checks.libr.sh
575 }
576 \label{
577     git_helpers:git_checkslibrsh
578 }
579
580 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
581 git_helpers/git_checks.libr.sh
582 }
583
584
585 \subsection{
586     git\_helpers/post-commit
587 }
588 \label{
589     git_helpers:post-commit
590 }
591
592 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
593 git_helpers/post-commit
594 }
595
596
597 \subsection{
598     git\_helpers/post\_commit\_renaming\_comment.libr.sh
599 }
600 \label{
601     git_helpers:post_commit_renaming_commentlibrsh
602 }
603
604 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
605 git_helpers/post_commit_renaming_comment.libr.sh
606 }
607
608
609 \subsection{

```

```

611     git\_helpers/pre-commit
612 }
613 \label{
614     git_helpers:pre-commit
615 }
616
617 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
618 git_helpers/pre-commit
619 }
620
621
622 \subsection{
623     IMAP\_transfert.py
624 }
625 \label{
626     IMAP_transfertpy
627 }
628
629 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
630 IMAP_transfert.py
631 }
632
633
634 \subsection{
635     LiensUtiles.txt
636 }
637 \label{
638     LiensUtilestxt
639 }
640
641 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
642 LiensUtiles.txt
643 }
644
645
646 \subsection{
647     README.md.tpl
648 }
649 \label{
650     READMEmdtpl
651 }
652
653 \VerbatimInput [numbers=left,xleftmargin=-5mm] {
654 README.md.tpl
655 }
656

```

```

657 \subsection{
658     unicode.libr.php
659 }
660 \label{
661     unicodelibrphp
662 }
663 \\
664 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
665     unicode.libr.php
666 }
667 \\
668 \\
669 \subsection{
670     upgrade\_build\_and\_checks.exec.sh
671 }
672 \label{
673     upgrade_build_and_checksexecsh
674 }
675 \\
676 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
677     upgrade_build_and_checks.exec.sh
678 }
679 \\
680 \\
681 \subsection{
682     wget\_sha512.libr.sh
683 }
684 \label{
685     wget_sha512librsh
686 }
687 \\
688 \VerbatimInput[numbers=left,xleftmargin=-5mm] {
689     wget_sha512.libr.sh
690 }
691 \\
692 \\
693

```

### **2.36 build\_and\_checks\_variables/files\_names\_listing.txt**

```

1 // This file is part of DevOrSysAdminScripts library.
2 //
3 // DevOrSysAdminScripts is free software:
4 // you can redistribute it and/or modify it under the terms
5 // of the GNU Lesser General Public License
6 // as published by the Free Software Foundation,

```

```

7 // either version 3 of the License,
8 // or (at your option) any later version.
9 //
10 // DevOrSysAdminScripts is distributed in the hope
11 // that it will be useful,
12 // but WITHOUT ANY WARRANTY;
13 // without even the implied warranty of
14 // MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
15 // See the GNU Lesser General Public License for more details.
16 //
17 // You should have received a copy of
18 // the GNU Lesser General Public License
19 // along with DevOrSysAdminScripts.
20 // If not, see <https://www.gnu.org/licenses/>.
21 //
22 // ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
23 // 2024-10-31T21:37+01:00: This file was moved from
24 // "./build_and_checks_dependencies/listings"
25 // to
26 // "./build_and_checks_variables".
27 // Blasé20240517Résultat.txt
28 // Blasé20240517.sh
29 // Blasé20240518_2.txt
30 // Blasé20240518_3.txt
31 build_and_checks_dependencies/build_and_checks.exec.sh.tpl
32 build_and_checks_dependencies/build_md_from_printable_md.exec.sh
33 build_and_checks_dependencies/check_shell_scripts_beginnings.libr.sh
34 build_and_checks_dependencies/check_shell_scripts_indentation.libr.sh
35 build_and_checks_dependencies/check_URLs.libr.sh
36 build_and_checks_dependencies/common_build_and_checks.exec.sh
37 build_and_checks_dependencies/common_build_and_checks.exec.sh.tpl
38 build_and_checks_dependencies/comparisons.libr.sh
39 build_and_checks_dependencies/create_PDF.exec.sh
40 build_and_checks_dependencies/generate_from_template.libr.sh
41 build_and_checks_dependencies/get_common_text_glob_patterns.libr.sh
42 build_and_checks_dependencies/grammar_and_spell_check.libr.sh
43 build_and_checks_dependencies/licenses_templates/\
44 build_licenses_templates.exec.sh
45 build_and_checks_dependencies/licenses_templates/\
46 license_file_header_AGPLv3+.tpl
47 build_and_checks_dependencies/licenses_templates/\
48 license_file_header_GPLv3+.tpl
49 build_and_checks_dependencies/licenses_templates/\
50 license_file_header_LGPLv3+.tpl
51 build_and_checks_dependencies/lines_counts.libr.sh
52 build_and_checks_dependencies/lines_filters.libr.sh

```

```

53 build_and_checks_dependencies/lines_maps.libr.sh
54 // build_and_checks_dependencies/listings/files_listing.tex.tpl
55 build_and_checks_dependencies/overwrite_if_not_equal.libr.sh
56 build_and_checks_dependencies/python_black_complement.libr.sh
57 build_and_checks_dependencies/python_isort_complement.libr.sh
58 build_and_checks_dependencies/split_score.exec.php
59 build_and_checks_dependencies/split_score.libr.php
60 build_and_checks_dependencies/strings_functions.libr.sh
61 build_and_checks_dependencies/too_long_code_lines.libr.sh
62 build_and_checks_dependencies/update_common_build_and_checks.exec.sh
63 build_and_checks_dependencies/\
64 update_or_check_files_names_listing.exec.sh
65 build_and_checks_variables/.gitignore
66 build_and_checks_variables/bandit.ini
67 build_and_checks_variables/bandit_baseline.json
68 build_and_checks_variables/black.toml
69 build_and_checks_variables/DevOrSysAdminScripts.html.tpl
70 // build_and_checks_variables/DevOrSysAdminScripts.tex
71 build_and_checks_variables/DevOrSysAdminScripts.tex.tpl
72 build_and_checks_variables/files_listing.tex.tpl
73 build_and_checks_variables/files_names_listing.txt
74 build_and_checks_variables/licenses_notes.txt
75 build_and_checks_variables/phpmd_baseline.xml
76 build_and_checks_variables/pylintrc.toml
77 build_and_checks_variables/repository_data.txt
78 build_and_checks_variables/ruff.toml
79 build_and_checks_variables/shellcheck.ini
80 build_and_checks_variables/shellcheck_notes.txt
81 // build_and_checks_variables/upgrade_venvs_ts
82 build_and_checks.exec.sh
83 COPYING
84 COPYING.LESSER
85 // DevOrSysAdminScripts.html
86 // DevOrSysAdminScripts.pdf
87 // EncoreBlasé20240517-20240518.txt
88 git_helpers/git_checks.libr.sh
89 git_helpers/post-commit
90 git_helpers/post_commit_renaming_comment.libr.sh
91 git_helpers/pre-commit
92 IMAP_transfert.py
93 LiensUtiles.txt
94 // README.html
95 // README.md
96 README.md.tpl
97 unicode.libr.php
98 upgrade_build_and_checks.exec.sh

```

```
99 wget_sha512.libr.sh
```

## 2.37 build\_and\_checks\_variables/licenses\_notes.txt

```
1 This repository is dual licensed.
2 All the Bash scripts source code is covered by GPLv3+.
3 All the PHP scripts source code is covered by GPLv3+.
4
5 Here is a listing of the dependencies of the code in this repository:
6 - The following dependencies are GPLv3+ licensed:
7 basename, bash (and its builtins), cat, chmod, cp, cut, date, diff,
8 dirname, find, grep, head, mkdir, mv, realpath, rm, sed, sha512sum,
9 shellcheck, sort, tail, wc, wget, xargs
10 - The following dependencies are GPLv2+ licensed:
11 more, pandoc, pdftex, pdflatex, tree
12 - The following dependencies are GPLv2 licensed:
13 git, pylint
14 - The following dependencies are GPLv2.1+ licensed:
15 notify-send
16 - The following dependencies are MIT licensed:
17 black, isort, mypy, ruff
18 - The following dependencies are Apache-2.0 licensed:
19 bandit
20 - The following dependencies are BSD-3-Clause licensed:
21 phpmd
22 - php is licensed under PHP License v3.01
23 - tex is licensed under Knuth license
24 - pcregrep has a custom license from Cambridge University
25
26 Remark: Some commands listed under GPLv3+ are POSIX
27 and can have different implementations under another license;
28 for example, uutils coreutils is MIT licensed,
29 whilst GNU coreutils is GPLv3+ licensed.
```

## 2.38 build\_and\_checks\_variables/phpmd\_baseline.xml

```
1 <?xml version="1.0"?>
2 <phpmd-baseline>
3   <violation rule="PHPMD\Rule\Controversial\CamelCaseParameterName" file="build_and_
4     <violation rule="PHPMD\Rule\Naming\LongVariable" file="build_and_checks_dependen_
5       <violation rule="PHPMD\Rule\Controversial\CamelCaseVariableName" file="build_and_
6         <violation rule="PHPMD\Rule\Design\LongMethod" file="unicode.libr.php"/>
7         <violation rule="PHPMD\Rule\Controversial\CamelCaseParameterName" file="unicode.libr.php"/>
8         <violation rule="PHPMD\Rule\Naming\LongVariable" file="unicode.libr.php"/>
9         <violation rule="PHPMD\Rule\Controversial\CamelCaseVariableName" file="unicode.libr.php"/>
10        <violation rule="PHPMD\Rule\CleanCode\MissingImport" file="unicode.libr.php"/>
```

```

11      <violation rule="PHPMD\Rule\CyclomaticComplexity" file="unicode.libr.php"/>
12      <violation rule="PHPMD\Rule\Design\NpathComplexity" file="unicode.libr.php"/>
13  </phpmd-baseline>
```

## 2.39 build\_and\_checks\_variables/pylintrc.toml

```

1 [tool pylint.main]
2 exit-zero = true
3 ignore = ["node_modules"]
4 jobs = 0
5 [tool pylint.basic]
6 # We use uppercase acronyms like HTML, IMAP, etc.
7 module-rgx = "^[a-zA-Z0-9]+$"
8 function-rgx = "^[a-zA-Z0-9]+$"
9 [tool pylint."messages control"]
10 # Code like R0912 is better to order disables by category.
11 disable = [
12     "C1804",    # use-implicit-booleanness-not-comparison-to-string
13     "I0011",    # locally-disabled
14     "I0020",    # suppressed-message
15     "R0912",    # too-many-branches
16     "R0913",    # too-many-arguments
17     "R0914",    # too-many-locals
18     "R0915",    # too-many-statements
19     "R0917",    # too-many-positional-arguments
20 ]
21 enable = "all"
22 [tool pylint.reports]
23 output-format = "colorized"
```

## 2.40 build\_and\_checks\_variables/repository\_data.txt

```

1 Look at grep_variable to understand the structure of this file.
2 Basically, it has almost no structure apart from some lines
3 starting with a "variable_name=".
4 Anything else is comments.
5
6 repository_name=DevOrSysAdminScripts
7 repository_web_url=https://github.com/LLyaudet/DevOrSysAdminScripts/
8 repository_git_url=git@github.com:LLyaudet/DevOrSysAdminScripts.git
9
10 abstract=Some "small" useful scripts
11 abstract=for enhancing development or system-administrators tasks
12
13 license=GPLv3+
14 license2=LGPLv3+
```

```

15
16 author_email=Laurent.Lyaudet@gmail.com
17 author_full_name=Laurent Frédéric Bernard François Lyaudet
18 author_last_name=Lyaudet
19 author_name=Laurent Lyaudet
20 author_website=https://lyaudet.eu/laurent/
21
22 acknowledgments=Merci Dieu !
23 acknowledgments=Merci Père ! Merci Seigneur ! Merci Saint Esprit !
24
25 max_line_length=70
26
27 grammar_or_spell_checker_command=more
28
29
30 Why one venv for each Python dependency ?
31 Because no language of my knowledge did it right to handle all
32 possible dependency conflicts.
33 So in case of such a conflict, one specialized venv can get you out
34 of any problem.
35 The best solution would have been to allow install of different
36 versions of the same package, and have a mechanism:
37 - first intent, use the latest available version of a package among
38 those that satisfy the declared dependency constraints of the package
39 that has this dependency;
40 - second intent, check a dependency overload configuration file
41 with tree structure: if calling python package is A version 1.1.1
42 with dependency B itself with dependency C, use B 2.2.2 and C 3.3.3;
43 you could have along that another rule saying that when called
44 directly B 2.2.2 should use C 4.4.4;
45 and even more complicated:
46 if calling python package is A version 1.1.1 with dependency B and D
47 both themselves with dependency C, use B 2.2.2, D 0.1.0,
48 and C 3.3.3 for B, and C 4.4.4 for D;
49 once you've seen that it can never be more complicated than that once
50 the same version number guarantees that the code is the same,
51 you create a config language "à la CSS" for cascading dependencies ;)
52 XD fit into JSON the dumbest possible way and you stop bothering
53 about dependency conflicts for the rest of history of informatics.
54 {
55     "A": {
56         "1.1.1": {
57             "B": {
58                 "2.2.2": {
59                     "C": {
60                         // Dumb, you did not found it by yourself? Failed exam.

```

```

61         "3.3.3" : {}
62     }
63 }
64 },
65 "D": {
66     "0.1.0": {
67         "C": {
68             // Dumb, you did not found it by yourself? Failed exam.
69             "4.4.4" : {}
70         }
71     }
72 }
73 },
74 "B": {
75     "2.2.2": {
76         "C": {
77             // Dumb, you did not found it by yourself? Failed exam.
78             "4.4.4" : {}
79         }
80     }
81 }
82 }
83 Wonderful someone rediscovered nested structures XD
84 Seriously so many engineers or computer scientists are dumb to cry.
85
86 bandit_venv=../venv_bandit
87 black_venv=../venv_black
88 isort_venv=../venv_isort
89 mypy_venv=../venv_mypy
90 pylint_venv=../venv_pylint
91 ruff_venv=../venv_ruff
92
93
94 upgrade venvs can be auto or ask, any other value is interpreted
95 as ask.
96
97 upgrade_venvs=ask
98
99
100 time interval can be 0 to always upgrade or ask to upgrade,
101 or a number at most bash max int
102 https://superuser.com/questions/1030122/
103 what-is-the-maximum-value-of-a-numeric-bash-shell-variable
104 it should be enough to simulate never "upgrade or ask for upgrade"
105 unless you claim to live many billions years ;)
106 If it is wat, this is a random int XD (see RANDOM).

```

```

107 Note that the probability that it upgrades your dependencies is not
108 1/2, it increases over time, and is 1 after slightly
109 less than one day.
110 If it is watyouwant?, see RANDOM XD.

111 upgrade_venvs_time_interval_in_seconds=wat

113

114
115 For the Nu HTML, CSS, and SVG checker.

116
117 vnu_jar_path=../jar_venv/vnu.jar

118
119 Not fully implemented yet, it will only warn that vnu jar was not
120 updated since some time.
121 "wat" works, but "watyouwant?" joke was not repeated ;).

122
123 upgrade_vnu_jar_time_interval_in_seconds=604800

```

## 2.41 build\_and\_checks\_variables/ruff.toml

```

1 [lint]
2 select = [
3     "ALL",
4     "D211",    # blank-line-before-class no...before-class-docstring!
5 ]
6 # ignore = ["D203", "D212", "D404"]
7 ignore = [
8     "C901",    # complex-structure AKA give-me-toy-code
9     "D203",    # (want-)?incorrect-blank-line-before-class
10    "D205",   # missing-blank-line-after-summary So so cute|true ;) XD.
11    "D212",   # multi-line-summary-first-line
12    "D404",   # docstring-starts-with-this Shame! XD
13
14    # raw-string-in-exception may be useful for a real project
15    # with "dictionnaires" of errors made of constants.
16    "EM101",
17
18    # commented-out-code Of course git log is always faster...
19    # Note that if you're tired or someone else in your team is,
20    # it may catch some commit that lacked some review,
21    # or automated tests: "Last manual test succeeded, ah but when I
22    # debugged at some point I commented a part that was needed in
23    # another case."...
24    "ERA001",
25
26    "N802",   # invalid-function-name IMAP, HTML, etc.

```

```

27 "PLR0912", # too-many-branches AKA ...
28 "PLR0913", # too-many-arguments AKA ...
29 "PLR0915", # too-many-statements AKA ...
30 # Not enough reading when young makes brain slow to read and
31 # understand lengthy functions.
32 # If the project is finished, you may play with AKA rules.
33 ]
34 [lint.per-file-ignores]
35 "build_and_checks_dependencies/licenses_templates/*.py" = [
36     "INP001" # implicit-namespace-package
37 ]
38 "IMAP_transfert.py" = [
39     "T201", # print Use log instead in full applications.
40     "TRY003", # raise-vanilla-args
41 ]

```

## 2.42 build\_and\_checks\_variables/shellcheck.ini

```

1 enable=all
2 check-sourced=true
3 external-sources=true
4 source-path=".."
5 source-path="SCRIPTDIR"
6 source-path="./build_and_checks_dependencies"
7 source-path="./git_helpers"
8

```

## 2.43 build\_and\_checks\_variables/shellcheck\_notes.txt

```

1 A listing of the current suppressed warnings/errors from shellcheck:
2 - SC1090 : Can't follow non-constant source.
3             Use a directive to specify location
4             # shellcheck source=bla/bli.sh
5             Only remaining cases are in common_build_and_checks
6             when sourcing some Python venv
7             source venv/bin/active
8 - SC1091 : Not following (file not found most of the time).
9             Only remaining cases are in common_build_and_checks
10            when sourcing some Python venv
11            source venv/bin/active
12 - SC1111 : Use of slanted double quotes (valid inside single quotes)
13             False positive, but may catch some problem.
14 - SC2001 : Replace some sed with bash builtin ${a//b/c}
15             False positive when c contains \n.
16 - SC2034 : Unused variable
17             False positive for globals that are declared in functions

```

```

18      that are not currently called.
19      Somehow it can be used to detect dead code.
20 - SC2125 : Brace expansions and globs are literal.
21      False positive when assigning a variable declared with -i.
22      https://github.com/koalaman/shellcheck/issues/914
23 - SC2145 : Argument mixes string and array.
24      False positive when using "$@" line return and pipes.
25      https://github.com/koalaman/shellcheck/issues/3192
26 Example:
27     # shellcheck disable=SC2145
28     all_self_code_lines "$@\\"
29         | empty_lines_after_file_name
30 - SC2162 : read without -r will mangle backslashes.
31      False positive when read is used without variable:
32      https://github.com/koalaman/shellcheck/issues/623
33 - SC2248 : Prefer double quoting
34      False positive on returning integer values.
35      https://github.com/koalaman/shellcheck/issues/3405
36 - SC2312 : Some command is not invoked separately and thus its return
37      value is masked. Frequent with pipes.
38
39 The command to check if there is anything else:
40 grep -r "shellcheck disable" . | grep -v -e '.git' -e "=SC1090$"\ \
41 -e "=SC1091$" -e "=SC1090,SC1091$" -e "=SC1111$" -e "=SC2001$"\ \
42 -e "=SC2034$" -e "=SC2125$" -e "=SC2145$" -e "=SC2162$"\ \
43 -e "=SC2248$" -e "=SC2312$" -e "=SC2162,SC2312$"

```

## 2.44 build\_and\_checks.exec.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
5 # you can redistribute it and/or modify it under the terms
6 # of the GNU General Public License
7 # as published by the Free Software Foundation,
8 # either version 3 of the License,
9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #

```

```

18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # The file "build_and_checks.exec.sh.tpl" was renamed from
25 # "build_and_checks.sh.tpl" to "build_and_checks.exec.sh.tpl".
26 # The file "build_and_checks.exec.sh" generated from the file
27 # "build_and_checks.sh.tpl" or "build_and_checks.exec.sh.tpl"
28 # was renamed from
29 # "build_and_checks.sh" to "build_and_checks.exec.sh".
30
31 build_and_checks() {
32     local LFBFL_working_directory="."
33     if [[ -n "$1" ]]; then
34         LFBFL_working_directory="$1"
35     fi
36     readonly LFBFL_working_directory
37
38     local LFBFL_verbose=""
39     if [[ "$*" == *--verbose* ]]; then
40         echo "$0 $*"
41         LFBFL_verbose="--verbose"
42     fi
43     readonly LFBFL_verbose
44
45     source ./wget_sha512.libr.sh
46
47     LFBFL_subdir="build_and_checks_dependencies"
48     mkdir -p "${LFBFL_subdir}/licenses_templates"
49     mkdir -p "build_and_checks_variables/temp"
50     if ! [[ -f "build_and_checks_variables/.gitignore" ]]; then
51     {
52         echo "temp/"
53         echo ""
54     } > "build_and_checks_variables/.gitignore"
55   fi
56
57   # LFBFL_dependencies_raw_content_download_URL
58   local LFBFL_dependencies_URL
59   LFBFL_dependencies_URL="https://raw.githubusercontent.com/LLyaudet/"
60   LFBFL_dependencies_URL+="DevOrSysAdminScripts/main/${LFBFL_subdir}"
61   readonly LFBFL_dependencies_URL
62
63   declare -r LFBFL_common_file_name="common_build_and_checks.exec.sh"

```

```

64 # LFBFL_script_download_URL
65 declare -r \
66   LFBFL_script="${LFBFL_dependencies_URL}/${LFBFL_common_file_name}"
67 declare -r \
68   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_common_file_name}"
69 local LFBFL_correct_sha512
70 LFBFL_correct_sha512='0857eba8746a8b7b4b5363acda3c4c8cd62c08b7992d0'
71 LFBFL_correct_sha512+='2f08f301e96d781d73849c058e740c98643f00550b71'
72 LFBFL_correct_sha512+='78b50cb028ac348559665a5843376e765ab79d1'
73 wget_sha512 "${LFBFL_file_path}" "${LFBFL_script}" \
74   "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
75 chmod +x "./${LFBFL_file_path}"
76
77 "${LFBFL_file_path}" "${LFBFL_working_directory}" \
78   "${LFBFL_dependencies_URL}" "${LFBFL_verbose}"
79 }
80
81 if [[ "$*" == '--fixed_point_build*' ]]; then
82   echo "--fixed_point_build"
83   source "./build_and_checks_dependencies/lines_filters.libr.sh"
84   LFBFL_working_directory=."
85   if [[ -n "$1" ]]; then
86     LFBFL_working_directory="$1"
87   fi
88   LFBFL_variables_directory="${LFBFL_working_directory}/"
89   LFBFL_variables_directory+="build_and_checks_variables"
90   LFBFL_data_file_name="${LFBFL_variables_directory}/"
91   LFBFL_data_file_name+="repository_data.txt"
92   LFBFL_repository_name=""
93   grep_variable "${LFBFL_data_file_name}" repository_name \
94     --result-variable-prefix="LFBFL_" \
95     --replace-line-returns-by="" \
96   # Touching the 3 following files first let us iterate
97   # upgrade_build_and_checks 2 times instead of 3 to reach
98   # a fixed point.
99   touch "${LFBFL_variables_directory}/${LFBFL_repository_name}.tex"
100  touch "${LFBFL_working_directory}/${LFBFL_repository_name}.pdf"
101  touch "${LFBFL_working_directory}/${LFBFL_repository_name}.html"
102  # The two iterations of build_and_checks needs to complete
103  # during the same minute to have a fixed point.
104  build_and_checks "$@"
105  # build_and_checks "$@" second iteration below
106  # Then calling this script without --fixed_point_build should not
107  # yield any new superficial modifications.
108 fi
109

```

110 build\_and\_checks "\$@"

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90       on the Program.

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111

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113

114      The "source code" for a work means the preferred form of the work  
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116      form of a work.

117

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120      interfaces specified for a particular programming language, one that  
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125      packaging a Major Component, but which is not part of that Major  
126      Component, and (b) serves only to enable use of the work with that  
127      Major Component, or to implement a Standard Interface for which an  
128      implementation is available to the public in source code form. A  
129      "Major Component", in this context, means a major essential component  
130      (kernel, window system, and so on) of the specific operating system  
131      (if any) on which the executable work runs, or a compiler used to  
132      produce the work, or an object code interpreter used to run it.

133

134      The "Corresponding Source" for a work in object code form means all

135 the source code needed to generate, install, and (for an executable  
136 work) run the object code and to modify the work, including scripts to  
137 control those activities. However, it does not include the work's  
138 System Libraries, or general-purpose tools or generally available free  
139 programs which are used unmodified in performing those activities but  
140 which are not part of the work. For example, Corresponding Source  
141 includes interface definition files associated with source files for  
142 the work, and the source code for shared libraries and dynamically  
143 linked subprograms that the work is specifically designed to require,  
144 such as by intimate data communication or control flow between those  
145 subprograms and other parts of the work.

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211 produce it from the Program, in the form of source code under the  
212 terms of section 4, provided that you also meet all of these conditions:

213  
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215 it, and giving a relevant date.

216  
217            b) The work must carry prominent notices stating that it is  
218 released under this License and any conditions added under section  
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221  
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244  
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250 in one of these ways:

251  
252 a) Convey the object code in, or embodied in, a physical product  
253 (including a physical distribution medium), accompanied by the  
254 Corresponding Source fixed on a durable physical medium  
255 customarily used for software interchange.

256  
257 b) Convey the object code in, or embodied in, a physical product  
258 (including a physical distribution medium), accompanied by a  
259 written offer, valid for at least three years and valid for as  
260 long as you offer spare parts or customer support for that product  
261 model, to give anyone who possesses the object code either (1) a  
262 copy of the Corresponding Source for all the software in the  
263 product that is covered by this License, on a durable physical  
264 medium customarily used for software interchange, for a price no  
265 more than your reasonable cost of physically performing this  
266 conveying of source, or (2) access to copy the  
267 Corresponding Source from a network server at no charge.

268  
269 c) Convey individual copies of the object code with a copy of the  
270 written offer to provide the Corresponding Source. This  
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272 only if you received the object code with such an offer, in accord

273 with subsection 6b.

274  
275 d) Convey the object code by offering access from a designated  
276 place (gratis or for a charge), and offer equivalent access to the  
277 Corresponding Source in the same way through the same place at no  
278 further charge. You need not require recipients to copy the  
279 Corresponding Source along with the object code. If the place to  
280 copy the object code is a network server, the Corresponding Source  
281 may be on a different server (operated by you or a third party)  
282 that supports equivalent copying facilities, provided you maintain  
283 clear directions next to the object code saying where to find the  
284 Corresponding Source. Regardless of what server hosts the  
285 Corresponding Source, you remain obligated to ensure that it is  
286 available for as long as needed to satisfy these requirements.

287  
288 e) Convey the object code using peer-to-peer transmission, provided  
289 you inform other peers where the object code and Corresponding  
290 Source of the work are being offered to the general public at no  
291 charge under subsection 6d.

292  
293 A separable portion of the object code, whose source code is excluded  
294 from the Corresponding Source as a System Library, need not be  
295 included in conveying the object code work.

296  
297 A "User Product" is either (1) a "consumer product", which means any  
298 tangible personal property which is normally used for personal, family,  
299 or household purposes, or (2) anything designed or sold for incorporation  
300 into a dwelling. In determining whether a product is a consumer product,  
301 doubtful cases shall be resolved in favor of coverage. For a particular  
302 product received by a particular user, "normally used" refers to a  
303 typical or common use of that class of product, regardless of the status  
304 of the particular user or of the way in which the particular user  
305 actually uses, or expects or is expected to use, the product. A product  
306 is a consumer product regardless of whether the product has substantial  
307 commercial, industrial or non-consumer uses, unless such uses represent  
308 the only significant mode of use of the product.

309  
310 "Installation Information" for a User Product means any methods,  
311 procedures, authorization keys, or other information required to install  
312 and execute modified versions of a covered work in that User Product from  
313 a modified version of its Corresponding Source. The information must  
314 suffice to ensure that the continued functioning of the modified object  
315 code is in no case prevented or interfered with solely because  
316 modification has been made.

317  
318 If you convey an object code work under this section in, or with, or

319 specifically for use in, a User Product, and the conveying occurs as  
320 part of a transaction in which the right of possession and use of the  
321 User Product is transferred to the recipient in perpetuity or for a  
322 fixed term (regardless of how the transaction is characterized), the  
323 Corresponding Source conveyed under this section must be accompanied  
324 by the Installation Information. But this requirement does not apply  
325 if neither you nor any third party retains the ability to install  
326 modified object code on the User Product (for example, the work has  
327 been installed in ROM).

328  
329 The requirement to provide Installation Information does not include a  
330 requirement to continue to provide support service, warranty, or updates  
331 for a work that has been modified or installed by the recipient, or for  
332 the User Product in which it has been modified or installed. Access to a  
333 network may be denied when the modification itself materially and  
334 adversely affects the operation of the network or violates the rules and  
335 protocols for communication across the network.

336  
337 Corresponding Source conveyed, and Installation Information provided,  
338 in accord with this section must be in a format that is publicly  
339 documented (and with an implementation available to the public in  
340 source code form), and must require no special password or key for  
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59

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64

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71

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75

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78

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98

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100

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104 recombine or relink the Application with a modified version of  
105 the Linked Version to produce a modified Combined Work, in the  
106 manner specified by section 6 of the GNU GPL for conveying  
107 Corresponding Source.

108  
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110 Library. A suitable mechanism is one that (a) uses at run time  
111 a copy of the Library already present on the user's computer  
112 system, and (b) will operate properly with a modified version  
113 of the Library that is interface-compatible with the Linked  
114 Version.

115  
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118 GNU GPL, and only to the extent that such information is  
119 necessary to install and execute a modified version of the  
120 Combined Work produced by recombining or relinking the  
121 Application with a modified version of the Linked Version. (If  
122 you use option 4d0, the Installation Information must accompany  
123 the Minimal Corresponding Source and Corresponding Application  
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127  
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129  
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131 Library side by side in a single library together with other library  
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135  
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138 conveyed under the terms of this License.

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140 b) Give prominent notice with the combined library that part of it  
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150
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```

## **2.47 git\_helpers/git\_checks.libr.sh**

```

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21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
24 # 2024-05-31T01:57+02:00: This file was renamed from
25 # "git_checks.libr.sh"

```

```

26  # to
27  # "git_checks.libr.sh".
28 # 2024-05-31T01:57+02:00: This file was moved from
29 # "."
30 # to
31 # "./git_helpers".
32 # 2024-05-31T01:49+02:00: This file was renamed from
33 # "git_checks.libr.sh"
34 # to
35 # "git_checks.libr.sh".
36 # 2024-05-31T01:49+02:00: This file was moved from
37 # "."
38 # to
39 # "./git_helpers".
40 # This file was renamed from "git_checks.sh" to "git_checks.libr.sh".
41
42 check_files(){
43     # Checks used on Django projects.
44     declare -r LFBFL_send_summary_1="ATTENTION : models modifiés"
45     declare -r LFBFL_send_body_1="Vérifiez si besoin de migrations"
46     local LFBFL_send_body_2="Pensez aussi aux contraintes d'unicités"
47     LFBFL_send_body_2+=" dès la création du modèle"
48     readonly LFBFL_send_body_2
49     declare -r LFBFL_send_summary_2="ATTENTION : serializers modifiés"
50     declare -r LFBFL_send_body_3=\
51 "Les nouveaux preloadings sont interdits -> #Prefetch()"
52     git diff --cached --name-only\
53         > /tmp/DOSAS_django_git_check1.temp
54     if grep models /tmp/DOSAS_django_git_check1.temp;
55     then
56         notify-send "${LFBFL_send_summary_1}" "${LFBFL_send_body_1}"
57         notify-send "${LFBFL_send_summary_1}" "${LFBFL_send_body_2}"
58     fi
59     if grep serializer /tmp/DOSAS_django_git_check1.temp;
60     then
61         notify-send "${LFBFL_send_summary_2}" "${LFBFL_send_body_3}"
62     fi
63     rm /tmp/DOSAS_django_git_check1.temp
64     return 0
65 }
66
67
68 check_no_abusive_trailing_comma(){
69     # Useful for Python code, although it regularly yields
70     # false positives in Python code
71     # (but it is easy to distinguish by hand).

```

```

72 # Use `git commit --no-verify` after check.
73 declare -r LFBFL_send_summary_1="ATTENTION"
74 local LFBFL_send_body_1="Il semblerait que vous affectiez un tuple"
75 LFBFL_send_body_1+=" au lieu d'une autre valeur dans une variable."
76 readonly LFBFL_send_body_1
77 git diff --cached -r \
78     > /tmp/DOSAS_django_git_check2.temp
79 if grep ' = .*,\s*$' /tmp/DOSAS_django_git_check2.temp;
80 then
81     notify-send "${LFBFL_send_summary_1}" "${LFBFL_send_body_1}"
82     return 1
83 fi
84 rm /tmp/DOSAS_django_git_check2.temp
85 return 0
86 }
87
88
89 check_black_code_formatting(){
90     # attention ça ne marche que sur les fichiers "stagés" avec git add
91     declare -r LFBFL_files_string=$(\
92         git diff --cached --name-only\
93         | grep '\.py'
94     )
95     echo "${LFBFL_files_string}"
96     declare -a LFBFL_some_files
97     mapfile -t LFBFL_some_files <<< "${LFBFL_files_string}"
98     readonly LFBFL_some_files
99     declare -i LFBFL_error=0
100    # Not very useful since LFBFL_file should be local to the loop by
101    # default.
102    local LFBFL_file
103    for LFBFL_file in "${LFBFL_some_files[@]}"; do
104        echo "Black will check formatting on file ${LFBFL_file}"
105        if ! black --check --diff "${LFBFL_file}";
106        then
107            LFBFL_error=1
108        fi
109    done
110    # shellcheck disable=SC2248
111    return ${LFBFL_error}
112 }

```

## 2.48 git\_helpers/post-commit

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.

```

```

3  #
4  # DevOrSysAdminScripts is free software:
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11 # DevOrSysAdminScripts is distributed in the hope
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13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023-2024 Laurent Frédéric Bernard François Lyaudet
24 # 2024-05-31T01:49+02:00: This file was renamed from
25 # "post-commit"
26 # to
27 # "post-commit".
28 # 2024-05-31T01:49+02:00: This file was moved from
29 # "."
30 # to
31 # "./git_helpers".
32
33 LFBFL_library="..../DevOrSysAdminScripts/git_helpers/"
34 LFBFL_library+="post_commit_renaming_comment.libr.sh"
35 # shellcheck source=post_commit_renaming_comment.libr.sh
36 source "${LFBFL_library}"
37 LFBFL_library="..../DevOrSysAdminScripts/build_and_checks_dependencies/"
38 LFBFL_library+="lines_filters.libr.sh"
39 # shellcheck source=lines_filters.libr.sh
40 source "${LFBFL_library}"
41
42 LFBFL_data_file_name="build_and_checks_variables/repository_data.txt"
43 LFBFL_max_comment_line_length=""
44 if [ -f "${LFBFL_data_file_name}" ]; then
45     LFBFL_max_line_length=""
46     grep_variable "${LFBFL_data_file_name}" "max_line_length" \
47         --result-variable-prefix="LFBFL_"
48     LFBFL_max_comment_line_length="--max-comment-line-length="

```

```

49     LFBFL_max_comment_line_length+="${LFBFL_max_line_length}"
50 fi
51
52 commit_a_file_renamed_comment --verbose --log-directory-change\
53   "${LFBFL_max_comment_line_length}"
54 exit 0

```

## 2.49 git\_helpers/post\_commit\_renaming\_comment.libr.sh

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
4 # DevOrSysAdminScripts is free software:
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6 # of the GNU General Public License
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9 # or (at your option) any later version.
10 #
11 # DevOrSysAdminScripts is distributed in the hope
12 # that it will be useful,
13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # 2024-05-31T01:49+02:00: This file was renamed from
25 # "post_commit_renaming_comment.libr.sh"
26 # to
27 # "post_commit_renaming_comment.libr.sh".
28 # 2024-05-31T01:49+02:00: This file was moved from
29 # "."
30 # to
31 # "./git_helpers".
32 # This file was renamed from "post_commit_renaming_comment"
33 # to "post_commit_renaming_comment.libr.sh".
34 # (Before first commit it seems. But I had the old name in listing.)
35
36 LFBFL_this_file_path=$(realpath "${BASH_SOURCE[0]}")
37 LFBFL_this_file_directory=$(dirname "${LFBFL_this_file_path}")

```

```

38 LFBFL_some_directory="${LFBFL_this_file_directory}/../"
39 declare -i LFBFL_cd_result2
40 pushd .
41 cd "${LFBFL_some_directory}" || {
42     LFBFL_cd_result2=$?
43     echo "post_commit_renaming_comment.libr.sh no such directory"
44     # shellcheck disable=SC2248
45     exit ${LFBFL_cd_result2}
46 }
47 # shellcheck source=strings_functions.libr.sh
48 source "build_and_checks_dependencies/strings_functions.libr.sh"
49 declare -i LFBFL_popd_result2
50 popd || {
51     LFBFL_popd_result2=$?
52     echo "post_commit_renaming_comment.libr.sh no popd"
53     # shellcheck disable=SC2248
54     exit ${LFBFL_popd_result2}
55 }
56
57 # Never forget that the worse security is the illusion of security
58 # (Kevin Mitnick). So, do not expect to have an accurate trackability
59 # of code history just because you use this post-commit hook or
60 # something else more evolved. This is useful but not a guarantee.
61 # For this reason, this function will only handle when all files
62 # impacted in the preceding commit are only renamed.
63 # It assumes that 'diff' is the current default difference utility
64 # parametered with 'git'. This point could be enhanced.
65 commit_a_file_renamed_comment(){
66     local LFBFL_arg
67     declare -i LFBFL_verbose=0
68     if [[ "$*" == *--verbose* ]]; then
69         echo "$0 commit_a_file_renamed_comment $*"
70         LFBFL_verbose=1
71     fi
72     readonly LFBFL_verbose
73
74     if [[ ! -o pipefail ]]; then
75         [[ LFBFL_verbose -eq 1 ]] && echo "pipefail option activated"
76         set -o pipefail
77         trap 'set +o pipefail' RETURN
78     fi
79
80     declare -i LFBFL_log_directory_change=0
81     if [[ "$*" == *--log-directory-change* ]]; then
82         LFBFL_log_directory_change=1
83     fi

```

```

84 readonly LFBFL_log_directory_change
85
86 declare -i LFBFL_max_comment_line_length=70
87 for LFBFL_arg in "$@"; do
88     if [[ "${LFBFL_arg}" == --max-comment-line-length=* ]]; then
89         LFBFL_arg=${LFBFL_arg#--max-comment-line-length=}
90         LFBFL_max_comment_line_length=$((LFBFL_arg))
91         break
92     fi
93 done
94 readonly LFBFL_max_comment_line_length
95
96 if [[ LFBFL_verbose -eq 1 ]]; then
97     echo "LFBFL_log_directory_change: ${LFBFL_log_directory_change}"
98     echo "LFBFL_max_comment_line_length:" \
99         "$LFBFL_max_comment_line_length"
100 fi
101 #-----
102
103 declare -r LFBFL_renaming_lines=$(\
104     git log -p -1\  

105     | grep '^diff --git' -A 1
106 )
107 if [[ LFBFL_verbose -eq 1 ]]; then
108     echo "LFBFL_renaming_lines: ${LFBFL_renaming_lines}"
109 fi
110
111 declare -a LFBFL_renaming_lines_array
112 mapfile -t LFBFL_renaming_lines_array <<< "${LFBFL_renaming_lines}"
113 readonly LFBFL_renaming_lines_array
114
115 declare -r LFBFL_timestamp=$(date --iso-8601="minute")
116 if [[ LFBFL_verbose -eq 1 ]]; then
117     echo "LFBFL_timestamp: ${LFBFL_timestamp}"
118 fi
119 get_split_score_simple 1 "${LFBFL_max_comment_line_length}" \
120 LFBFL_split_score_command1="${get_split_score_result}"
121 LFBFL_split_score_command_properties1="${get_split_score_result2}"
122 get_split_score_simple 1 "${LFBFL_max_comment_line_length}" /
123 LFBFL_split_score_command2="${get_split_score_result}"
124 LFBFL_split_score_command_properties2="${get_split_score_result2}"
125 declare -i LFBFL_renaming_happened=0
126 declare -i LFBFL_i
127 declare -i LFBFL_j
128 # declare -r LFBFL_special_file_name="files_names_listing.txt"
129 declare -r LFBFL_sfn="files_names_listing.txt"

```

```

130 local LFBFL_diff_line
131 local LFBFL_similarity_line
132 local LFBFL_old_file_path
133 local LFBFL_old_file_name
134 local LFBFL_old_file_directory
135 local LFBFL_new_file_path
136 local LFBFL_new_file_name
137 local LFBFL_new_file_directory
138 local LFBFL_useful_file_name
139 local LFBFL_extension
140 local LFBFL_comment_prefix
141 local LFBFL_comment_prefix2
142 local LFBFL_old_file_name2
143 local LFBFL_old_file_directory2
144 local LFBFL_new_file_name2
145 local LFBFL_new_file_directory2
146 local LFBFL_new_comment
147 declare -i LFBFL_copyright_line_number
148 declare -r LFBFL_send_summary_2="ATTENTION: No line with copyright"
149 declare -i LFBFL_line_count
150 declare -i LFBFL_lines_after
151 local LFBFL_temp_file_path
152 for ((LFBFL_i=0; LFBFL_i<#${LFBFL_renaming_lines_array[@]};)); do
153     LFBFL_diff_line="${LFBFL_renaming_lines_array[$LFBFL_i]}"
154     LFBFL_i=$((LFBFL_i + 1))
155     LFBFL_similarity_line="${LFBFL_renaming_lines_array[$LFBFL_i]}"
156     LFBFL_i=$((LFBFL_i + 1))
157     # We need to increment 3 times since grep adds "--" lines between.
158     LFBFL_i=$((LFBFL_i + 1))
159     if [[ LFBFL_verbose -eq 1 ]]; then
160         echo "LFBFL_diff_line: ${LFBFL_diff_line}"
161         echo "LFBFL_similarity_line: ${LFBFL_similarity_line}"
162     fi
163     if [[ "${LFBFL_similarity_line:17:4}" != "100%" ]]; then
164         continue
165     fi
166
167     # Extract old file name from diff line. -----
168     LFBFL_old_file_path=$((
169         echo "${LFBFL_diff_line}" \
170         | cut -d ' ' -f 3
171     ))
172     # It starts by "a/".
173     LFBFL_old_file_path=".${LFBFL_old_file_path:1}"
174     LFBFL_old_file_name=$(basename "${LFBFL_old_file_path}")
175     LFBFL_old_file_directory=$(dirname "${LFBFL_old_file_path}")

```

```

176 # Extract new file name from diff line. -----
177 LFBFL_new_file_path=$(
178     echo "${LFBFL_diff_line}" \
179     | cut -d ' ' -f 4
180 )
181 # It starts by "b/".
182 LFBFL_new_file_path=".${LFBFL_new_file_path:1}"
183 LFBFL_new_file_name=$(basename "${LFBFL_new_file_path}")
184 LFBFL_new_file_directory=$(dirname "${LFBFL_new_file_path}")
185 if [[ LFBFL_verbose -eq 1 ]]; then
186     echo "LFBFL_old_file_path: ${LFBFL_old_file_path}"
187     echo "LFBFL_old_file_name: ${LFBFL_old_file_name}"
188     echo "LFBFL_old_file_directory: ${LFBFL_old_file_directory}"
189     echo "LFBFL_new_file_path: ${LFBFL_new_file_path}"
190     echo "LFBFL_new_file_name: ${LFBFL_new_file_name}"
191     echo "LFBFL_new_file_directory: ${LFBFL_new_file_directory}"
192 fi
193 # Extract "LFBFL_extension" with smart guessing for .tpl -----
194 # and set prefix for line with ©Copyright. -----
195 LFBFL_useful_file_name="${LFBFL_new_file_name}"
196 LFBFL_extension="${LFBFL_useful_file_name##*.}"
197 if [[ LFBFL_verbose -eq 1 ]]; then
198     echo "LFBFL_useful_file_name: ${LFBFL_useful_file_name}"
199     echo "LFBFL_extension: ${LFBFL_extension}"
200 fi
201 for ((LFBFL_j=0; LFBFL_j<3; ++LFBFL_j)); do
202     if [[ "${LFBFL_extension}" != "tpl" ]]; then
203         break
204     fi
205     LFBFL_useful_file_name="${LFBFL_useful_file_name:0:-4}"
206     LFBFL_extension="${LFBFL_useful_file_name##*.}"
207     if [[ LFBFL_verbose -eq 1 ]]; then
208         echo "LFBFL_useful_file_name: ${LFBFL_useful_file_name}"
209         echo "LFBFL_extension: ${LFBFL_extension}"
210     fi
211 done
212 LFBFL_comment_prefix=""
213 if [[ "${LFBFL_extension}" == "sh" ]]; then
214     LFBFL_comment_prefix="# "
215 fi
216 if [[ "${LFBFL_extension}" == "sql" ]]; then
217     LFBFL_comment_prefix="-- "
218 fi
219 if [[ "${LFBFL_extension}" == "tex" ]]; then
220     LFBFL_comment_prefix="% "
221 fi

```

```

222 if [ [ "${LFBFL_useful_file_name}" == "${LFBFL_sfn}" ] ]; then
223     LFBFL_comment_prefix="// "
224 fi
225 if [[ LFBFL_verbose -eq 1 ]]; then
226     echo "LFBFL_comment_prefix: ${LFBFL_comment_prefix}"
227 fi
228 -----
229 # Split if necessary old_file_name, new_file_name, etc. to have
230 # comment lines below max_comment_line_length.
231 LFBFL_comment_prefix2="${LFBFL_comment_prefix}'''
232 # ----
233 LFBFL_old_file_name2="${LFBFL_comment_prefix2}"
234 LFBFL_old_file_name2+="${LFBFL_old_file_name}"
235 repeated_split_last_line "${LFBFL_old_file_name2}" \
236     "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}" \
237     ' "' "${LFBFL_split_score_command1}" \
238     "${LFBFL_split_score_command_properties1}"
239 LFBFL_old_file_name2="${repeated_split_last_line_result}"
240 # ----
241 LFBFL_old_file_directory2="${LFBFL_comment_prefix2}"
242 LFBFL_old_file_directory2+="${LFBFL_old_file_directory}"
243 repeated_split_last_line "${LFBFL_old_file_directory2}" \
244     "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}" \
245     ' "' "${LFBFL_split_score_command2}" \
246     "${LFBFL_split_score_command_properties2}"
247 LFBFL_old_file_directory2="${repeated_split_last_line_result}"
248 # ----
249 LFBFL_new_file_name2="${LFBFL_comment_prefix2}"
250 LFBFL_new_file_name2+="${LFBFL_new_file_name}"
251 repeated_split_last_line "${LFBFL_new_file_name2}" \
252     "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}" \
253     ' "' "${LFBFL_split_score_command1}" \
254     "${LFBFL_split_score_command_properties1}"
255 LFBFL_new_file_name2="${repeated_split_last_line_result}"
256 # ----
257 LFBFL_new_file_directory2="${LFBFL_comment_prefix2}"
258 LFBFL_new_file_directory2+="${LFBFL_new_file_directory}"
259 repeated_split_last_line "${LFBFL_new_file_directory2}" \
260     "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}" \
261     ' "' "${LFBFL_split_score_command2}" \
262     "${LFBFL_split_score_command_properties2}"
263 LFBFL_new_file_directory2="${repeated_split_last_line_result}"
264 # Create new comments strings. -----
265 LFBFL_new_comment=""
266 if [ [ "${LFBFL_new_file_name2}" != "${LFBFL_old_file_name2}" ] ];
267 then

```

```

268     LFBFL_new_comment+="${LFBFL_comment_prefix}"
269     LFBFL_new_comment+="${LFBFL_timestamp}"
270     LFBFL_new_comment+=": This file was renamed from\n"
271     LFBFL_new_comment+="${LFBFL_old_file_name2}"'\n'
272     LFBFL_new_comment+="${LFBFL_comment_prefix}to\n"
273     LFBFL_new_comment+="${LFBFL_new_file_name2}"'.'"
274 fi
275 if [[ LFBFL_log_directory_change -eq 1 ]] && [[ \
276     "${LFBFL_new_file_directory}" \
277     != "${LFBFL_old_file_directory}" \
278 ]]; then
279     if [[ "${LFBFL_new_file_name2}" != "${LFBFL_old_file_name2}" ]];
280     then
281         LFBFL_new_comment+="\n"
282     fi
283     LFBFL_new_comment+="${LFBFL_comment_prefix}"
284     LFBFL_new_comment+="${LFBFL_timestamp}"
285     LFBFL_new_comment+=": This file was moved from\n"
286     LFBFL_new_comment+="${LFBFL_old_file_directory2}"'\n'
287     LFBFL_new_comment+="${LFBFL_comment_prefix}to\n"
288     LFBFL_new_comment+="${LFBFL_new_file_directory2}"'.'"
289 fi
290 if [[ LFBFL_verbose -eq 1 ]]; then
291     echo "LFBFL_new_comment: ${LFBFL_new_comment}"
292 fi
293 # Find line with ©Copyright. -----
294 LFBFL_copyright_line_number=$(((
295     grep -n '©Copyright' "${LFBFL_new_file_path}" \
296     | head --lines=1 \
297     | cut -d ':' -f 1
298 ))
299 if [[ LFBFL_verbose -eq 1 ]]; then
300     echo "LFBFL_copyright_line_number:" \
301     "${LFBFL_copyright_line_number}"
302 fi
303 if [[ LFBFL_copyright_line_number -eq 0 ]]; then
304     notify-send "${LFBFL_send_summary_2}" \
305     "${LFBFL_send_summary_2} for: ${LFBFL_new_comment}"
306     if [[ LFBFL_verbose -eq 1 ]]; then
307         echo "No copyright line. Skipping file."
308     fi
309     continue
310 fi
311 # Get total number of lines. -----
312 LFBFL_line_count=$((
313     wc -l\

```

```

314     < "${LFBFL_new_file_path}"
315 )
316 if [[ LFBFL_verbose -eq 1 ]]; then
317     echo "LFBFL_line_count: ${LFBFL_line_count}"
318 fi
319 # Compute number of lines after. -----
320 LFBFL_lines_after=$(
321     LFBFL_line_count - LFBFL_copyright_line_number
322 )
323 if [[ LFBFL_verbose -eq 1 ]]; then
324     echo "LFBFL_lines_after: ${LFBFL_lines_after}"
325 fi
326 # Update file. -----
327 LFBFL_temp_file_path="${LFBFL_new_file_path}.LFBFL.temp"
328 {
329     head --lines="${LFBFL_copyright_line_number}" \
330         "${LFBFL_new_file_path}"
331     echo -e "${LFBFL_new_comment}"
332     tail --lines="${LFBFL_lines_after}" "${LFBFL_new_file_path}"
333 } >> "${LFBFL_temp_file_path}"
334 mv "${LFBFL_temp_file_path}" "${LFBFL_new_file_path}"
335 # Add file to stage. -----
336 git add "${LFBFL_new_file_path}"
337 LFBFL_renaming_happened=1
338 done
339 readonly LFBFL_renaming_happened
340 if [[ LFBFL_renaming_happened -eq 1 ]]; then
341     # Commit -----
342     local LFBFL_message="commit_a_file_renamed_comment()"
343     LFBFL_message+=" post-commit hook, ${LFBFL_timestamp}."
344     readonly LFBFL_message
345     git commit --message="${LFBFL_message}"
346 fi
347 }

```

## 2.50 git\_helpers/pre-commit

```

1 #!/usr/bin/env bash
2 # This file is part of DevOrSysAdminScripts library.
3 #
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```

```

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13 # but WITHOUT ANY WARRANTY;
14 # without even the implied warranty of
15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
16 # See the GNU General Public License for more details.
17 #
18 # You should have received a copy of
19 # the GNU General Public License
20 # along with DevOrSysAdminScripts.
21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2024 Laurent Frédéric Bernard François Lyaudet
24 # 2024-05-31T01:57+02:00: This file was renamed from
25 # "pre-commit"
26 # to
27 # "pre-commit".
28 # 2024-05-31T01:57+02:00: This file was moved from
29 # "."
30 # to
31 # "./git_helpers".
32
33 LFBFL_library="../DevOrSysAdminScripts/git_helpers/"
34 LFBFL_library+="git_checks.libr.sh"
35 # shellcheck source=git_checks.libr.sh
36 source "${LFBFL_library}"
37
38 declare -ig LFBFL_git_hook_error=0
39 if ! check_files; then
40     LFBFL_git_hook_error=1
41 fi
42 if ! check_no_abusive_trailing_comma; then
43     LFBFL_git_hook_error=1
44 fi
45 if ! check_black_code_formatting; then
46     LFBFL_git_hook_error=1
47 fi
48 readonly LFBFL_git_hook_error
49 if [[ LFBFL_git_hook_error -eq 1 ]]; then
50     exit 1
51 fi
52 exit 0

```

## 2.51 IMAP\_transfert.py

```
1 """  
2 This file is part of DevOrSysAdminScripts library.  
3  
4 DevOrSysAdminScripts is free software:  
5 you can redistribute it and/or modify it under the terms  
6 of the GNU Lesser General Public License  
7 as published by the Free Software Foundation,  
8 either version 3 of the License,  
9 or (at your option) any later version.  
10  
11 DevOrSysAdminScripts is distributed in the hope  
12 that it will be useful,  
13 but WITHOUT ANY WARRANTY;  
14 without even the implied warranty of  
15 MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  
16 See the GNU Lesser General Public License for more details.  
17  
18 You should have received a copy of  
19 the GNU Lesser General Public License  
20 along with DevOrSysAdminScripts.  
21 If not, see <https://www.gnu.org/licenses/>.  
22  
23 ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet  
24  
25 Pour transférer d'un compte IMAP à un autre  
26 Penser à autoriser les apps moins sûres sur Gmail si nécessaire  
27 """  
28  
29 import argparse  
30 import email  
31 import imaplib  
32  
33  
34 class IMAPTransfertBadArgumentError(Exception):  
35     """  
36         A class to avoid a linter warning,  
37         that needs an Error suffix to avoid another linter warning,  
38         that needs a docstring to avoid another linter warning.  
39         If you don't see its intent, try badminton.  
40     """  
41  
42  
43 class SurpriseError(Exception):  
44     """
```

```

45     A class to avoid a linter warning,
46     that needs an Error suffix to avoid another linter warning,
47     that needs a docstring to avoid another linter warning.
48     If you don't see its intent after seeing its use, try volleyball.
49     But "Cheer up!", now you don't need "pass" XD.
50     """
51
52     def IMAP_transfert(
53         from_login: str,
54         from_password: str,
55         from_host: str,
56         from_port: int,
57         to_login: str,
58         to_password: str,
59         to_host: str,
60         to_port: int,
61         *,
62         to_new_folder: str = "",
63         verbose: bool = False,
64     ) -> None:
65         """
66         Transfert all emails from some IMAP account"
67         to another IMAP account.
68         """
69         empty = ""
70         if from_login == "":
71             raise IMAPTransfertBadArgumentError("From login is empty.")
72         # if from_password == "":
73         if from_password == empty:
74             # https://github.com/PyCQA/bandit/issues/714
75             # Dumb
76             raise IMAPTransfertBadArgumentError("From password is empty.")
77         if from_host == "":
78             raise IMAPTransfertBadArgumentError("From host is empty.")
79         if from_port <= 0:
80             raise IMAPTransfertBadArgumentError(
81                 "From port is not positive.",
82             )
83         if to_login == "":
84             raise IMAPTransfertBadArgumentError("To login is empty.")
85         if to_password == empty:
86             # And Dumber The infinite collection XD
87             raise IMAPTransfertBadArgumentError("To password is empty.")
88         if to_host == "":
89             raise IMAPTransfertBadArgumentError("To host is empty.")

```

```

91     if to_port <= 0:
92         raise IMAPTransfertBadArgumentError(
93             "To port is not positive.",
94         )
95     # pylint: disable=pointless-string-statement
96     """
97     Maybe one day Python will ship something like that in its standard
98     library:
99     https://www.php.net/manual/fr/function.filter-var.php
100    But now urlparse doesn't do any validation.
101    You may want to check that the hosts or other fields are not
102    "anything".
103    """
104
105    # pylint: disable=unreachable
106    raise SurpriseError(
107        "I haven't tested this version of my script... Oooooh!\n"
108        "But I linted it without this exception ;). Aaaaaaaaah!\n"
109        "XD XD XD\n"
110        "Untested Scream Horror Show (Soon on BrainfuckedFlix)",
111    )
112    """
113    # I haven't tested any version with an empty to_new_folder...
114
115    if verbose:
116        print("Connecting to from account.")
117    from_account = imaplib.IMAP4_SSL(host=from_host, port=from_port)
118    from_account.login(from_login, from_password)
119
120    if verbose:
121        print('Connecting to "to account".')
122    to_account = imaplib.IMAP4_SSL(host=to_host, port=to_port)
123    to_account.login(to_login, to_password)
124
125    if to_new_folder != "":
126        if verbose:
127            print("Creating new folder in to account.")
128        to_account.create(to_new_folder)
129
130    if verbose:
131        print("Fetching all emails ids in from account.")
132    from_account.select()
133    result, ids = from_account.uid("search", "all")
134    if verbose:
135        print(f'from_account.uid("search") result:{result} ids:{ids}')
136    ids = ids[0].decode().split()

```

```

137     if verbose:
138         print("Fetching and transfering each email in from account.")
139     for my_id in ids:
140         result, raw_message = from_account.uid(
141             "fetch",
142             my_id,
143             "(RFC822)",
144         )
145         if verbose:
146             print(
147                 f'from_account.uid("fetch", {my_id})'
148                 f" result:{result}",
149             )
150         message = raw_message[0][1]
151         my_email = email.message_from_string(message.decode("utf-8"))
152         flags = imaplib.ParseFlags(raw_message[0][0])
153         # flags = " ".join(flags) mypy is unhappy but IMAP flags are
154         # ASCII strings, we give mypy what it wants.
155         flags_as_strs = [flag.decode("ascii") for flag in flags]
156         flags_str = " ".join(flags_as_strs)
157         # date = imaplib.Internaldate2tuple(raw_message[0][0])
158         date = ' "' + my_email["date"] + ' '
159         if verbose:
160             print(
161                 f'from_account.uid("fetch", {my_id})'
162                 f" flags:{flags} date:{date}",
163             )
164         to_account.append(to_new_folder, flags_str, date, message)
165
166
167     def main() -> None:
168         """
169         Parse command-line arguments and
170         transfert all emails from some IMAP account
171         to another IMAP account.
172         """
173     parser = argparse.ArgumentParser(
174         description=(
175             "Transfert all emails from some IMAP account"
176             " to another IMAP account"
177         ),
178     )
179     parser.add_argument(
180         "from_login",
181         type=str,
182         help="Email account login of user one.",

```

```

183     )
184     parser.add_argument(
185         "from_password",
186         type=str,
187         help="Email account password of user one.",
188     )
189     parser.add_argument(
190         "to_login",
191         type=str,
192         help="Email account login of user two.",
193     )
194     parser.add_argument(
195         "to_password",
196         type=str,
197         help="Email account password of user two.",
198     )
199     parser.add_argument(
200         "--to_new_folder",
201         type=str,
202         default="",
203         help="Transfert emails into a new folder of this name.",
204     )
205     parser.add_argument(
206         "--from_host",
207         type=str,
208         default="imap.gmail.com",
209         help="Host of first email account",
210     )
211     parser.add_argument(
212         "--from_port",
213         type=int,
214         default=993,
215         help="Port on host of first email account",
216     )
217     parser.add_argument(
218         "--to_host",
219         type=str,
220         default="imap.gmail.com",
221         help="Host of second email account",
222     )
223     parser.add_argument(
224         "--to_port",
225         type=int,
226         default=993,
227         help="Port on host of second email account",
228     )

```

```

229     parser.add_argument (
230         "-v",
231         "--verbose",
232         action="store_true",
233         help="Print details of operations",
234     )
235
236     args = parser.parse_args()
237
238     if args.verbose:
239         print(
240             "-----\n"
241             "IMAP transfert:\n"
242             "-----\n"
243             "From account:\n"
244             f" - Login: {args.from_login}\n"
245             f" - Password: {args.from_password}\n"
246             f" - Host: {args.from_host}\n"
247             f" - Port: {args.from_port}\n"
248             "To account:\n"
249             f" - Login: {args.to_login}\n"
250             f" - Password: {args.to_password}\n"
251             f" - Host: {args.to_host}\n"
252             f" - Port: {args.to_port}\n"
253             "-----\n",
254         )
255     if args.to_new_folder is not None:
256         print(
257             f"Emails will go in folder {args.to_new_folder}"
258             " after it is created.",
259         )
260     try:
261         IMAP_transfert(
262             args.from_login,
263             args.from_password,
264             args.from_host,
265             args.from_port,
266             args.to_login,
267             args.to_password,
268             args.to_host,
269             args.to_port,
270             to_new_folder=args.to_new_folder,
271             verbose=args.verbose,
272         )
273     except (IMAPTransfertBadArgumentError, SurpriseError) as e:
274         print(e)

```

```

275
276
277 if __name__ == "__main__":
278     main()

```

## 2.52 LiensUtiles.txt

```

1 https://support.google.com/a/answer/9476255?hl=fr#zippy=%2C%C3%A9tape\
2 -configurez-le-service-de-migration-de-donn%C3%A9es
3 -----
4 https://stackoverflow.com/a/78413334/5796086
5 https://stackoverflow.com/questions/21612980/\
6 why-is/usr-bin-env-bash-superior-to-bin-bash/78413334
7 https://web.archive.org/web/20240501105801/https://stackoverflow.com\
8 /questions/21612980/why-is/usr-bin-env-bash-superior-to-bin-bash/\
9 78413334#78413334
10 -----
11 https://news.ycombinator.com/item?id=22214690
12 https://github.com/koalaman/shellcheck/issues/2005
13 https://opensource.stackexchange.com/questions/6271/\
14 calling-gpld-programs-from-a-shell-script
15 -----

```

## 2.53 README.md.tpl

```

1 # DevOrSysAdminScripts
2
3 [ ! [CodeFactor-badge] ] [CodeFactor-package-page]
4 [ ! [Codacy-badge] ] [Codacy-package-page]
5 ! [GitHub-top-language-badge]
6 ! [GitHub-code-size-in-bytes-badge]
7 [ ! [Security:bandit:badge] ] [Bandit-GitHub.com]
8 [ ! [Code-style:black:badge] ] [Black-GitHub.com]
9 [ ! [Imports:isort:badge] ] [Isort-GitHub.io]
10 [ ! [Typecheck:mypy:badge] ] [Typecheck-mypy-lang.org]
11 [ ! [Linting:pylint:badge] ] [Pylint-GitHub.com]
12 [ ! [Linting:ruff:badge] ] [Ruff-GitHub.com]
13
14 |           **Some "small" useful scripts**           |
15 | :-----:|:-----:|
16 | **for enhancing development or system-administrators tasks** |
17
18 Currently, the biggest part of this repository is in
19 a suite of shell scripts about build and checks that
20 I use in some of my other repositories.
21

```

```

22 I tried to follow some conventions for my bash code:
23
24 - I tried to encapsulate most of the code in functions.
25 - Unless used as return values, variables in functions are defined
26   as local variables ('local' keyword or 'declare')
27   with prefix "LFBFL_".
28 - When used as return values, variables in functions are defined
29   as global variables ('declare -g') with prefix
30   "@function_name@_result_".
31 - Whenever a variable is no more modified after some point,
32   add the keyword 'readonly' or use 'declare -r'.
33 - Whenever a variable will only contain integer values (or boolean
34   values as 0 or 1), use 'declare -i'.
35 - I named bash files with suffixes ".exec.sh" when the script can
36   be runned
37   (executable, abbreviation stops before a vowel).
38 - I named bash files with suffixes ".libr.sh" when the script contains
39   only functions definitions
40   (library, abbreviation stops before a vowel).
41 - When some ".exec.sh" code is encapsulated into functions,
42   either these functions can be reused and go in some ".libr.sh" file,
43   either they are truly specific to this script and they are kept
44   in ".exec.sh" file.
45
46 But the files "pre-commit" and "post-commit" were not renamed,
47 since it is not possible to give them other names to use them as
48 pre-commit/post-commit hooks in 'git'.
49
50 [CodeFactor-badge]: https://www.codefactor.io/repository/github/llyaudet/DevOrSysAdminScripts/badge
51
52 [CodeFactor-package-page]: https://www.codefactor.io/repository/github/llyaudet/DevOrSysAdminScripts
53
54 [Codacy-badge]: https://app.codacy.com/project/badge/Grade/3dd6ef85e8db4460991d1ebc404b68dd
55
56 [Codacy-package-page]: https://app.codacy.com/gh/LLyaudet/DevOrSysAdminScripts/dashboard?utm\_source=gh&utm\_medium=referral&utm\_content=&utm\_campaign=Badge\_grade
57
58 [GitHub-top-language-badge]: https://img.shields.io/github/languages/top/llyaudet/DevOrSysAdminScripts
59
60 [GitHub-code-size-in-bytes-badge]: https://img.shields.io/github/languages/code-size/llyaudet/DevOrSysAdminScripts
61
62
63
64
65
66
67

```

```

68
69 [Security:bandit:badge]: https://img.shields.io/badge/\
70 security-bandit-yellow.svg
71
72 [Bandit-GitHub.com]: https://github.com/PyCQA/bandit
73
74 [Code-style:black:badge]: https://img.shields.io/badge/\
75 code%20style-black-000000.svg
76
77 [Black-GitHub.com]: https://github.com/psf/black
78
79 [Imports:isort:badge]: https://img.shields.io/badge/\
80 %20imports-isort-%231674b1?style=flat&labelColor=ef8336
81
82 [Isort-GitHub.io]: https://pycqa.github.io/isort/
83
84 [Typecheck:mypy:badge]: https://www.mypy-lang.org/static/\
85 mypy_badge.svg
86
87 [Typecheck-mypy-lang.org]: https://mypy-lang.org/
88
89 [Linting:pylint:badge]: https://img.shields.io/badge/\
90 linting-pylint-yellowgreen
91
92 [Pylint-GitHub.com]: https://github.com/pylint-dev/pylint
93
94 [Linting:ruff:badge]: https://img.shields.io/endpoint?url=\
95 https://raw.githubusercontent.com/astral-sh/ruff/main/assets/\
96 badge/v2.json
97
98 [Ruff-GitHub.com]: https://github.com/astral-sh/ruff

```

## 2.54 **unicode.libr.php**

```

1 <?php
2 /*
3 This file is part of DevOrSysAdminScripts library.
4
5 DevOrSysAdminScripts is free software:
6 you can redistribute it and/or modify it under the terms
7 of the GNU Lesser General Public License
8 as published by the Free Software Foundation,
9 either version 3 of the License,
10 or (at your option) any later version.
11
12 DevOrSysAdminScripts is distributed in the hope

```

```

13  that it will be useful,
14  but WITHOUT ANY WARRANTY;
15  without even the implied warranty of
16  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
17  See the GNU Lesser General Public License for more details.
18
19  You should have received a copy of
20  the GNU Lesser General Public License
21  along with DevOrSysAdminScripts.
22  If not, see <https://www.gnu.org/licenses/>.
23
24  ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
25  This file was renamed from "unicode.php" to "unicode.libr.php".
26  */
27
28  function decimal_code_point_to_UTF8(
29      $i_code_point_in_decimal_notation
30  ) {
31      // var_dump($i_code_point_in_decimal_notation);
32      // 0xxxxxxx ASCII
33      if ($i_code_point_in_decimal_notation < 128) {
34          return chr($i_code_point_in_decimal_notation);
35      }
36      $i_continuation_base_value = 128;
37      // 110xxxxx 10xxxxxx
38      if ($i_code_point_in_decimal_notation < 256 * (2**3)) {
39          $i_first_byte_base_value = 192;
40          $i_last_byte_significant_bits = (
41              $i_code_point_in_decimal_notation % (2**6)
42          );
43          $i_first_byte_significant_bits = intdiv(
44              (
45                  $i_code_point_in_decimal_notation
46                  - $i_last_byte_significant_bits
47              ),
48              2**6,
49          );
50          $s_result = chr(
51              $i_first_byte_base_value
52              + $i_first_byte_significant_bits
53          );
54          $s_result .= chr(
55              $i_continuation_base_value
56              + $i_last_byte_significant_bits
57          );
58      }
59      return $s_result;

```

```

59     }
60 // 1110xxxx 10xxxxxx 10xxxxxx
61 if($i_code_point_in_decimal_notation < 256 * 256) {
62     $i_first_byte_base_value = 224;
63     $arr_arr_data_per_byte_reverse = [
64         ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
65         ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
66         ["i_bits" => 4, "i_base_value" => $i_first_byte_base_value],
67     ];
68     $i_rest = $i_code_point_in_decimal_notation;
69     $s_result = "";
70     foreach($arr_arr_data_per_byte_reverse as $arr_data) {
71         // _Pragma unroll
72         // J'aurais pu "roller" les 4 cas des ifs.
73         // Mais pour les perfs, il faudrait tout unroller vu le nombre
74         // d'itérations. Et j'aimerais bien comparer du code unrollé
75         // aux 2 niveaux à la main avec celui unrollé par le compilateur
76         // sur les 2 niveaux. Je préjuge/présume qu'il unroll
77         // l'intérieur d'abord (pour ne pas refaire le même boulot)
78         // puis l'extérieur et qu'il oublie de réoptimiser l'intérieur
79         // en fonction de l'extérieur unrollé. Est-ce que j'ai raison ?
80         $i_significant_bits = $i_rest % (2**$arr_data["i_bits"]);
81         $i_rest = intdiv(
82             $i_rest - $i_significant_bits,
83             2**$arr_data["i_bits"],
84         );
85         $s_result = ( // .= or =
86             chr($i_significant_bits + $arr_data["i_base_value"])
87             . $s_result
88         );
89     }
90     return $s_result;
91 }
92 // 11110xxx 10xxxxxx 10xxxxxx 10xxxxxx
93 if($i_code_point_in_decimal_notation < 256 * 256 * (2**5)) {
94     $i_first_byte_base_value = 240;
95     $arr_arr_data_per_byte_reverse = [
96         ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
97         ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
98         ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
99         ["i_bits" => 3, "i_base_value" => $i_first_byte_base_value],
100    ];
101    $i_rest = $i_code_point_in_decimal_notation;
102    $s_result = "";
103    foreach($arr_arr_data_per_byte_reverse as $arr_data) {
104        // _Pragma unroll

```

```

105     $i_significant_bits = $i_rest % (2**$arr_data["i_bits"]);
106     $i_rest = intdiv(
107         $i_rest - $i_significant_bits,
108         2**$arr_data["i_bits"],
109     );
110     $s_result = ( // .= or =
111         chr($i_significant_bits + $arr_data["i_base_value"])
112         . $s_result
113     );
114 }
115 return $s_result;
116 }
117 throw new Exception(
118     "UTF-8 avec jusqu'à 6 octets a été abandonné il y a longtemps."
119     ." Autre anecdote \"débile\" : MySQL a de base UTF-8 avec jusqu'à"
120     ." 3 octets au lieu de 4 :face-palm:."
121     ." Du coup, ça peut donner quelques \"surprises\"."
122     ." Sinon, y'a aussi ASCII dans MySQL."
123     ." Et comme ça joue sur la mémoire et les performances,"
124     ." pourquoi ils n'ont pas fait ASCII, UTF-8-2, UTF-8-3, UTF-8-4 ?"
125     ." :)"
126 );
127 }
128
129
130
131 function hexa_code_point_to_UTF8(
132     $s_code_point_in_hexadecimal_notation
133 ) {
134     $s_code_point_in_hexadecimal_notation = strtoupper(
135         $s_code_point_in_hexadecimal_notation
136     );
137     $i_code_point_in_decimal_notation = 0;
138     $i_ord_0 = ord('0');
139     $i_ord_A = ord('A');
140     $i_digit_offset = -$i_ord_0;
141     $i_letter_offset = 10 - $i_ord_A;
142     for(
143         $i = 0, $i_max = strlen($s_code_point_in_hexadecimal_notation);
144         $i < $i_max;
145         ++$i
146     ) {
147         $s_hexa_digit = $s_code_point_in_hexadecimal_notation[$i];
148         $i_code_point_in_decimal_notation *= 16;
149         if(ctype_digit($s_hexa_digit)){
150             $i_code_point_in_decimal_notation += (

```

```

151         ord($s_hexa_digit) + $i_digit_offset
152     );
153     continue;
154 }
155 if(ctype_xdigit($s_hexa_digit)){
156     $i_code_point_in_decimal_notation += (
157         ord($s_hexa_digit) + $i_letter_offset
158     );
159     continue;
160 }
161 throw new Exception("Not an hexadecimal digit.");
162 }
163 return decimal_code_point_to_UTF8(
164     $i_code_point_in_decimal_notation
165 );
166 }
167
168
169
170 function check_string_is_valid_ASCII($s_string){
171     for($i = 0, $i_max = strlen($s_string); $i < $i_max; ++$i){
172         if(ord($s_string[$i]) > 127){
173             throw new Exception(
174                 "Non-ASCII character found at octet position "
175                 . $i
176                 . ", value "
177                 . ord($s_string[$i])
178                 . "."
179             );
180         }
181     }
182     return true;
183 }
184
185
186
187 function check_file_is_valid_ASCII($s_file_name){
188     $s_string = file_get_contents($s_file_name);
189     if($s_string === false){
190         throw new Exception("File ".$s_file_name." not found.");
191     }
192     return check_string_is_valid_ASCII($s_string);
193 }
194
195
196

```

```

197  function check_string_is_valid_UTF8($s_string) {
198      $i_continuation_octet_needed = 0;
199      $i_character_start_position = 0;
200      for($i = 0, $i_max = strlen($s_string); $i < $i_max; ++$i){
201          $i_current_octet = ord($s_string[$i]);
202          if($i_continuation_octet_needed > 0){
203              if($i_current_octet < 128 || $i_current_octet >= 192){
204                  throw new Exception(
205                      "Non-UTF8 character found at start position "
206                      . $i_character_start_position
207                      . ", octet at position "
208                      . $i
209                      . " has value "
210                      . $i_current_octet
211                      . " which is not a continuation octet."
212                  );
213              }
214              --$i_continuation_octet_needed;
215              continue;
216          }
217
218          $i_character_start_position = $i;
219          if($i_current_octet < 128){ // 0xxxxxxx ASCII
220              continue;
221          }
222          if($i_current_octet >= 128 && $i_current_octet < 192){
223              throw new Exception(
224                  "Non-UTF8 character found at start position "
225                  . $i_character_start_position
226                  . ", octet at position "
227                  . $i
228                  . " has value "
229                  . $i_current_octet
230                  . " which is a continuation octet."
231              );
232          }
233          if($i_current_octet >= 192 && $i_current_octet < 224){
234              // 110xxxxx 10xxxxxx
235              $i_continuation_octet_needed = 1;
236              continue;
237          }
238          if($i_current_octet >= 224 && $i_current_octet < 240){
239              // 1110xxxx 10xxxxxx 10xxxxxx
240              $i_continuation_octet_needed = 2;
241              continue;
242      }

```

```

243     if($i_current_octet >= 240 && $i_current_octet < 248) {
244         // 11110xxx 10xxxxxx 10xxxxxx 10xxxxxx
245         $i_continuation_octet_needed = 3;
246         continue;
247     }
248     throw new Exception(
249         "Non-UTF8 character found at start position "
250         . $i_character_start_position
251         . ", octet at position "
252         . $i
253         . " has value "
254         . $i_current_octet
255         . " which is invalid."
256     );
257 }
258 return true;
259 }
260
261
262 function check_file_is_valid_UTF8($s_file_name) {
263     $s_string = file_get_contents($s_file_name);
264     if($s_string === false) {
265         throw new Exception("File ".$s_file_name." not found.");
266     }
267     return check_string_is_valid_UTF8($s_string);
268 }
269
270
271
272 /**
273 ?>
274 <?php
275 require_once("./unicode.libr.php");
276 var_dump(hexa_code_point_to_UTF8("002B"));
277 var_dump(hexa_code_point_to_UTF8("00E6"));
278 var_dump(hexa_code_point_to_UTF8("1400"));
279 var_dump(hexa_code_point_to_UTF8("10111"));
280 // https://en.wikibooks.org/wiki/Unicode/Character_reference/2000-2FFF
281 // Some invisible unicode characters that are a problem:
282 // 2000-200F 2028-202F 205F 2060-206F
283 $arr = [
284     '2000', '2001', '2002', '2003', '2004', '2005', '2006', '2007',
285     '2008', '2009', '200A', '200B', '200C', '200D', '200E', '200F',
286     '2028', '2029', '202A', '202B', '202C', '202D', '202E', '202F',
287     '205F',
288

```

```

289 '2060', '2061', '2062', '2063', '2064', '2065', '2066', '2067',
290 '2068', '2069', '206A', '206B', '206C', '206D', '206E', '206F',
291 ];
292 $arr_s = [];
293 $arr_s2 = [];
294 $arr_s3 = [];
295 foreach($arr as $s_hexa){
296     $s = hexa_code_point_to_UTF8($s_hexa);
297     $arr_s []= $s;
298     if(strlen($s) === 2){
299         $s2 = '\x'.bin2hex($s[0]).'\x'.bin2hex($s[1]);
300     }
301     if(strlen($s) === 3){
302         $s2 = '\x'.bin2hex($s[0]).'\x'.bin2hex($s[1])
303             .'\'\x'.bin2hex($s[2]);
304     }
305     $arr_s2 []= $s2;
306     $s3 = " | sed -e 's/" . $s2 . "/ /g' \\";
307     $arr_s3 []= $s3;
308     echo($s3."\n");
309 }
310 // */
311

```

## 2.55 upgrade\_build\_and\_checks.exec.sh

```

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2 # This file is part of DevOrSysAdminScripts library.
3 #
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```

```

21 # If not, see <https://www.gnu.org/licenses/>.
22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "upgrade_build_and_checks.sh"
25 # to "upgrade_build_and_checks.exec.sh".
26
27 upgrade_build_and_checks() {
28     local LFBFL_verbose=""
29     if [[ "$*" == *--verbose* ]]; then
30         echo "$0 $*"
31         LFBFL_verbose="--verbose"
32     fi
33     local LFBFL_fixed_point_build=""
34     if [[ "$*" == *--fixed_point_build* ]]; then
35         LFBFL_fixed_point_build="--fixed_point_build"
36     fi
37     readonly LFBFL_verbose
38     (
39         cd build_and_checks_dependencies/
40         && ./update_common_build_and_checks.exec.sh "${LFBFL_verbose}" \
41     )
42     ./build_and_checks.exec.sh ." ${LFBFL_verbose}" \
43     "${LFBFL_fixed_point_build}"
44 }
45
46 upgrade_build_and_checks "$@"

```

## 2.56 wget\_sha512.libr.sh

```

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17 #

```

```

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22 #
23 # ©Copyright 2023–2026 Laurent Frédéric Bernard François Lyaudet
24 # This file was renamed from "wget_sha512.sh"
25 # to "wget_sha512.libr.sh".
26
27 wget_sha512() {
28     # $1 file_path
29     # $2 download_URL
30     # $3 correct_sha512
31     # $4 optional --verbose
32     local LFBFL_verbose=""
33     if [[ "$*" == *"--verbose" ]]; then
34         echo "$0 wget_sha512 $*"
35         LFBFL_verbose="--verbose"
36     fi
37     readonly LFBFL_verbose
38     if [[ ! -f "$1" ]]; then
39         wget "${LFBFL_verbose}" -O "$1" "$2"
40     fi
41     declare -r LFBFL_present_sha512=$((
42         sha512sum "$1" \
43         | cut -f1 -d' '
44     ))
45     if [[ "${LFBFL_present_sha512}" != "$3" ]]; then
46         echo "$1 does not have correct sha512"
47         echo "wanted $3"
48         echo "found ${LFBFL_present_sha512}"
49         exit
50     fi
51 }

```

Merci Dieu ! Merci Père ! Merci Seigneur ! Merci Saint Esprit !