DevOrSysAdminScripts

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Abstract

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

Current version: 2026-02-16
Current number of commits: 327
Current git SHA1: c275318d9133fbc4c46e8be23ea901612f71d312
Code lines: 6641 total lines, 6000 not empty lines, 641 empty lines.

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│   ├── check_URLs.libr.sh
│   ├── common_build_and_checks.exec.sh
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│   ├── repository_data.txt
```

```
        │   ├── ruff.toml
        │   └── shellcheck_notes.txt
        ├── COPYING
        ├── COPYING.LESSER
        ├── DevOrSysAdminScripts.html
        ├── DevOrSysAdminScripts.pdf
        ├── git_helpers
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        ├── unicode.libr.php
        ├── upgrade_build_and_checks.exec.sh
        └── wget_sha512.libr.sh

5 directories, 58 files

[ 12K Feb 16 18:46]  ./
├── [4.0K Feb 16 18:46]  build_and_checks_dependencies/
│   ├── [3.4K Feb 14 17:57]  build_and_checks.exec.sh.tpl*
│   ├── [3.0K Feb 16 18:12]  build_md_from_printable_md.exec.sh*
│   ├── [2.1K Feb 15 11:34]  check_shell_scripts_beginnings.libr.sh
│   ├── [2.7K Jan  3 19:40]  check_URLs.libr.sh
│   ├── [ 23K Feb 16 18:40]  common_build_and_checks.exec.sh*
│   ├── [ 19K Feb 16 17:08]  common_build_and_checks.exec.sh.tpl
│   ├── [3.1K Feb 14 22:55]  comparisons.libr.sh
│   ├── [ 14K Feb 15 19:16]  create_PDF.exec.sh*
│   ├── [3.2K Feb 14 22:39]  generate_from_template.libr.sh
│   ├── [2.0K Feb 15 11:48]  get_common_text_glob_patterns.libr.sh
│   ├── [1.9K Jan  3 18:57]  grammar_and_spell_check.libr.sh
│   ├── [4.0K Feb 16 18:36]  licenses_templates/
│   │   ├── [ 12K Feb 16 18:36]  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
│   ├── [2.2K Jan  3 18:57]  lines_counts.libr.sh
│   ├── [6.7K Feb 14 16:16]  lines_filters.libr.sh
│   ├── [2.8K Jan  3 18:57]  lines_maps.libr.sh
│   ├── [1.7K Feb 14 22:16]  overwrite_if_not_equal.libr.sh
│   ├── [1.4K Jan 24 18:32]  python_black_complement.libr.sh
│   ├── [1.7K Feb 14 17:13]  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 15 15:29]  strings_functions.libr.sh
│   ├── [2.5K Feb 15 11:07]  too_long_code_lines.libr.sh
│   ├── [4.0K Feb  8 11:56]  update_common_build_and_checks.exec.sh*
│   └── [3.8K Feb 15 19:18]  *
│   │ update_or_check_files_names_listing.exec.sh**
├── [3.6K Feb 16 18:40]  build_and_checks.exec.sh*
├── [4.0K Feb 16 18:46]  build_and_checks_variables/
│   ├── [  15 Jan  5 20:00]  bandit_baseline.json
│   ├── [  25 Jan  5 18:49]  bandit.ini
│   ├── [5.2K Feb 14 15:05]  DevOrSysAdminScripts.html.tpl
│   ├── [ 22K Feb 16 18:46]  DevOrSysAdminScripts.tex
│   ├── [3.8K Feb 14 15:04]  DevOrSysAdminScripts.tex.tpl
│   ├── [ 12K Feb 15 19:29]  files_listing.tex.tpl
│   ├── [3.8K Feb 16 18:43]  files_names_listing.txt
│   ├── [  24 Jan 15 22:26]  .gitignore
│   ├── [1.2K Feb 14 15:04]  licenses_notes.txt
│   ├── [ 926 Feb 13 20:48]  phpmd_baseline.xml
│   ├── [ 173 Jan 30 19:40]  pylintrc.toml
│   ├── [3.5K Feb 16 15:47]  repository_data.txt
│   ├── [ 159 Feb 14 15:02]  ruff.toml
│   └── [1.4K Feb 15 17:45]  shellcheck_notes.txt
├── [ 34K May  6  2024]  COPYING
├── [7.5K Dec 27 21:48]  COPYING.LESSER
├── [271K Feb 16 18:46]  DevOrSysAdminScripts.html
├── [266K Feb 16 18:46]  DevOrSysAdminScripts.pdf
├── [4.0K Feb 15 16:16]  git_helpers/
│   ├── [3.4K Feb 14 18:48]  git_checks.libr.sh
│   ├── [1.2K Feb 14 17:57]  post-commit
│   ├── [ 13K Feb 15 16:16]  post_commit_renaming_comment.libr.sh
│   └── [1.4K Feb  8 16:41]  pre-commit
├── [  13 Feb 15 17:49]  .gitignore
├── [ 830 Dec 29 19:10]  LiensUtiles.txt
├── [3.6K Feb 16 17:08]  README.html
├── [3.5K Feb 16 17:08]  README.md
├── [3.6K Feb 16 16:59]  README.md.tpl
├── [9.1K Feb 12 19:57]  unicode.libr.php
├── [1.4K Feb  3 14:19]  upgrade_build_and_checks.exec.sh*
└── [1.5K Jan  3 18:57]  wget_sha512.libr.sh

5 directories, 58 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, pdftex, 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
```

```
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 $*"
41      LFBFL_verbose="--verbose"
42    fi
43    readonly LFBFL_verbose
44
45    # shellcheck disable=SC1091
46    source ./wget_sha512.libr.sh
47
48    LFBFL_subdir="build_and_checks_dependencies"
49    mkdir -p "${LFBFL_subdir}/licenses_templates"
50    mkdir -p "build_and_checks_variables/temp"
51    if ! [[ -f "build_and_checks_variables/.gitignore" ]]; then
52      echo "temp/" > "build_and_checks_variables/.gitignore"
```

```
53      echo "" >> "build_and_checks_variables/.gitignore"
54    fi
55
56    # LFBFL_dependencies_raw_content_download_URL
57    local LFBFL_dependencies_URL
58    LFBFL_dependencies_URL="https://raw.githubusercontent.com/LLyaudet/"
59    LFBFL_dependencies_URL+="DevOrSysAdminScripts/main/${LFBFL_subdir}"
60    readonly LFBFL_dependencies_URL
61
62    declare -r LFBFL_common_file_name="common_build_and_checks.exec.sh"
63    # LFBFL_script_download_URL
64    declare -r\
65      LFBFL_script="${LFBFL_dependencies_URL}/${LFBFL_common_file_name}"
66    declare -r\
67      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_common_file_name}"
68    @sha512_common_build_and_checks.exec.sh@
69    wget_sha512 "${LFBFL_file_path}" "${LFBFL_script}"\
70      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
71    chmod +x "./${LFBFL_file_path}"
72
73    "${LFBFL_file_path}" "${LFBFL_working_directory}"\
74      "${LFBFL_dependencies_URL}" "${LFBFL_verbose}"
75  }
76
77  if [[ "$*" == *--fixed_point_build* ]]; then
78    echo "--fixed_point_build"
79    source "./build_and_checks_dependencies/lines_filters.libr.sh"
80    LFBFL_data_file_name="./build_and_checks_variables/"
81    LFBFL_data_file_name+="repository_data.txt"
82    grep_variable "${LFBFL_data_file_name}" repository_name
83    # Touching the 3 following files first let us iterate
84    # upgrade_build_and_checks 2 times instead of 3 to reach
85    # a fixed point.
86    touch "./build_and_checks_variables/${repository_name}.tex"
87    touch "./${repository_name}.pdf"
88    touch "./${repository_name}.html"
89    # The two iterations of build_and_checks needs to complete
90    # during the same minute to have a fixed point.
91    build_and_checks "$@"
92    # build_and_checks "$@" second iteration below
93    # Then calling this script without --fixed_point_build should not
94    # yield any new superficial modifications.
95  fi
96
97  build_and_checks "$@"
```

2.2 build_and_checks_dependencies/build_md_from_printable_md.exec.sh

```bash
#!/usr/bin/env bash
# This file is part of DevOrSysAdminScripts library.
#
# DevOrSysAdminScripts is free software:
# you can redistribute it and/or modify it under the terms
# of the GNU General Public License
# as published by the Free Software Foundation,
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# or (at your option) any later version.
#
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# that it will be useful,
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# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
# See the GNU General Public License for more details.
#
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# the GNU General Public License
# along with DevOrSysAdminScripts.
# If not, see <https://www.gnu.org/licenses/>.
#
# ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
# This file was renamed from "build_md_from_printable_md.sh"
# to "build_md_from_printable_md.exec.sh".

LFBFL_subdir="build_and_checks_dependencies"
# shellcheck disable=SC1090
source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"

build_md_from_printable_md(){
  declare -i LFBFL_verbose=0
  if [[ "$*" == *--verbose* ]]; then
    echo "$0 $*"
    LFBFL_verbose=1
  fi
  # shellcheck disable=SC2034
  readonly LFBFL_verbose

  # Remove line returns here to keep lines short.
  local LFBFL_sed_expression
  LFBFL_sed_expression='s/(\[[a-zA-Z0-9:-]*\]: [^\n\\]*)\\\n/\1/Mg'
  LFBFL_sed_expression+=';s/(<http[^\n\\]*)\\\n/\1/Mg'
  LFBFL_sed_expression+=';s/(- <http[^\n\\]*)\\\n/\1/Mg'
```

```
45  readonly LFBFL_sed_expression
46  # Since Markdown can contain code, it is limited to Markdown URLs.
47  # Hence it is way more complicated than 's/\\\n//Mg' expression
48  # in other files.
49  # Another downside is that more than one pass is needed.
50
51  declare -i LFBFL_cd_result
52  pushd .
53  if [[ -n "$1" ]];
54  then
55    if [[ LFBFL_verbose -eq 1 ]]; then
56      echo "Moving to directory: $1"
57    fi
58    cd "$1" || {
59      LFBFL_cd_result=$?
60      echo "build_md_from_printable_md no such directory"
61      # shellcheck disable=SC2248
62      return ${LFBFL_cd_result}
63    }
64  fi
65
66  local LFBFL_base_name="README"
67  if [[ -n "$2" ]];
68  then
69    if [[ LFBFL_verbose -eq 1 ]]; then
70      echo "Searching md file: $2"
71    fi
72    LFBFL_base_name="$2"
73  fi
74  readonly LFBFL_base_name
75
76  if [[ -f "${LFBFL_base_name}.md.tpl" ]];
77  then
78    sed -Ez -e "${LFBFL_sed_expression}" -e "${LFBFL_sed_expression}"\
79      -e "${LFBFL_sed_expression}" -e "${LFBFL_sed_expression}"\
80      "${LFBFL_base_name}.md.tpl" > "${LFBFL_base_name}.md.temp"
81    overwrite_if_not_equal "${LFBFL_base_name}.md"\
82      "${LFBFL_base_name}.md.temp"
83  else
84    echo "No file ${LFBFL_base_name}.md.tpl"
85  fi
86
87  pandoc -f markdown "${LFBFL_base_name}.md"\
88    > "${LFBFL_base_name}.html.temp"
89  overwrite_if_not_equal "${LFBFL_base_name}.html"\
90    "${LFBFL_base_name}.html.temp"
```

```
91
92   declare -i LFBFL_popd_result
93   popd || {
94     LFBFL_popd_result=$?
95     echo "build_md_from_printable_md no popd"
96     # shellcheck disable=SC2248
97     return ${LFBFL_popd_result}
98   }
99 }
100
101 build_md_from_printable_md "$@"
```

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_SHELL_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}" == "${LFBFL_SHELL_SCRIPT_BEGINNING}" ]] ||\
54        echo "${LFBFL_file_name}:File has wrong shell script beginning."
55    done
56  }
```

2.4 build_and_checks_dependencies/check_URLs.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_URLs.sh" to "check_URLs.libr.sh".
25
26  LFBFL_subdir="build_and_checks_dependencies"
27  # shellcheck disable=SC1090
28  source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
29  # shellcheck disable=SC1090
30  source "./${LFBFL_subdir}/lines_filters.libr.sh"
31
32  check_URLs(){
33    get_COMMON_TEXT_FILES_GLOB_PATTERNS
34
35    declare -A LFBFL_substitutions
36    LFBFL_substitutions=(\
37      ["http://www.gnu.org/licenses/"]="https://www.gnu.org/licenses/"\
38    )
39
40    local LFBFL_pattern
41    local LFBFL_file_name
42    local LFBFL_base_file_name
43    local LFBFL_substitution
44    local LFBFL_substitution2
45    # shellcheck disable=SC2154
46    for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
47      [[ "$1" != "-v" ]]\
48        || echo "Iterating on pattern: ${LFBFL_pattern}"
49      # shellcheck disable=SC2312
50      find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
51        | xargs grep -H 'http:'\
52        | grep -v "| xargs grep -H 'htt"\
53        | grep -vP "['\"]http(:[^'\"]*)['\"].*['\"]https\\1['\"]"
54      # Last grep just above will remove false positives from
55      # substitutions that fit on one line.
56      # shellcheck disable=SC2312
57      find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
58        | relevant_find | not_main_html_find\
59        | while read -r LFBFL_file_name;
60      do
61        [[ -f "${LFBFL_file_name}" ]] || continue
62        LFBFL_base_file_name=$(basename "${LFBFL_file_name}")
63        [[ "${LFBFL_base_file_name}" != "check_URLs.libr.sh" ]]\
64          || continue
65        [[ "$1" != "-v" ]]\
```

```
66        || echo "Handling the file: ${LFBFL_file_name}"
67      for LFBFL_substitution in "${!LFBFL_substitutions[@]}"; do
68        LFBFL_substitution2=\
69 ${LFBFL_substitutions[${LFBFL_substitution}]}
70        if grep -q "${LFBFL_substitution}" "${LFBFL_file_name}"; then
71          sed -i "s|${LFBFL_substitution}|${LFBFL_substitution2}|g"\
72            "${LFBFL_file_name}"
73        fi
74      done
75    done
76  done
77 }
```

2.5 build_and_checks_dependencies/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 # 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 $*"
43       LFBFL_verbose="--verbose"
44     fi
45     readonly LFBFL_verbose
46
47     # shellcheck disable=SC1091
48     source ./wget_sha512.libr.sh
49
50     LFBFL_subdir="build_and_checks_dependencies"
51     local LFBFL_file_name
52     local LFBFL_URL
53     local LFBFL_file_path
54
55     LFBFL_file_name="build_md_from_printable_md.exec.sh"
56     # LFBFL_script_download_URL
57     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
58     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
59     local LFBFL_correct_sha512
60     LFBFL_correct_sha512='d69376037fadf5a0462dfe7c0402472f74da261f3100a'
61     LFBFL_correct_sha512+='f67eb64dfc3fdf11d2d5c72bb482c785623095c500b9'
62     LFBFL_correct_sha512+='ca954d940dffe4750f5952c093991408266b310'
63     wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
64       "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
65     chmod +x "./${LFBFL_file_path}"
66
67     LFBFL_file_name="check_shell_scripts_beginnings.libr.sh"
68     LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
69     LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
70     local LFBFL_correct_sha512
71     LFBFL_correct_sha512='e0cdfc2d653daf9f15a3447f40e41fe03a332ac4054c4'
72     LFBFL_correct_sha512+='0950efc0b9f58912791068c081babf7a7a9e72bacd57'
73     LFBFL_correct_sha512+='8e600bbb5e0c51466e60e91e5b6dda6173b088b'
74     wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
75       "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
76
77     LFBFL_file_name="check_URLs.libr.sh"
```

```
 78   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
 79   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
 80   local LFBFL_correct_sha512
 81   LFBFL_correct_sha512='d966792d05fd23375f5006b5446b9b747a28f1ef1fe9d'
 82   LFBFL_correct_sha512+='b6f8ff45caa36564bb18ddc38ba91e076bb3abceced2'
 83   LFBFL_correct_sha512+='b899c7e5987a231c5165d6dacc9ec52cbe665f5'
 84   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
 85     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
 86
 87   LFBFL_file_name="comparisons.libr.sh"
 88   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
 89   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
 90   local LFBFL_correct_sha512
 91   LFBFL_correct_sha512='f8b6956234b7d8c18278c262091627fe79d0c28e1978c'
 92   LFBFL_correct_sha512+='356baeb8d5a29cd32103ef23c71fd4fb59af1249edfb'
 93   LFBFL_correct_sha512+='dbc10c498e3fdb2cacb9af784916ac2276e8412'
 94   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
 95     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
 96
 97   LFBFL_file_name="create_PDF.exec.sh"
 98   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
 99   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
100   local LFBFL_correct_sha512
101   LFBFL_correct_sha512='5c04072087c56a4579e0d60c2bab85632d65db3181f62'
102   LFBFL_correct_sha512+='3c881839a94f9f9994a7deafd216a30836293191d2a8'
103   LFBFL_correct_sha512+='c3809ffaa887c0888df33c7e7ed3c8c570c6e51'
104   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
105     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
106   chmod +x "./${LFBFL_file_path}"
107
108   LFBFL_file_name="generate_from_template.libr.sh"
109   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
110   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
111   local LFBFL_correct_sha512
112   LFBFL_correct_sha512='61dcd1140cb49211829553c92514eb2b28248b68bf502'
113   LFBFL_correct_sha512+='38caed30f85975c67d2f8dc680161c5f2d981fcd39b8'
114   LFBFL_correct_sha512+='87f4f081ef391ec9d0bb8e6fcd9e56ef9f10e06'
115   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
116     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
117
118   LFBFL_file_name="get_common_text_glob_patterns.libr.sh"
119   LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
120   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
121   local LFBFL_correct_sha512
122   LFBFL_correct_sha512='c9683a335ad75758d6793970d6aae87aaa8209c7b336e'
123   LFBFL_correct_sha512+='43514b8cd409e543629214012125f56c73ecb9c35585'
```

```
124    LFBFL_correct_sha512+='d815ad674ca078aca5f8d3e2b48c725585f6988'
125    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
126      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
127
128    LFBFL_file_name="grammar_and_spell_check.libr.sh"
129    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
130    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
131    local LFBFL_correct_sha512
132    LFBFL_correct_sha512='a76c188a7769a1d170d415034331b1ca8574482bc1484'
133    LFBFL_correct_sha512+='eccbbb4cadea825c0668caccaca7433fa1c476137fe9'
134    LFBFL_correct_sha512+='f2a71ad6e0ee5bfbfd180bee5a775c997d79865'
135    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
136      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
137
138    # /licenses_templates/ --------------------------------------------
139    declare -r LFBFL_subdir2="${LFBFL_subdir}/licenses_templates"
140    declare -r LFBFL_start_URL2="${LFBFL_start_URL}/licenses_templates"
141    LFBFL_file_name="build_licenses_templates.exec.sh"
142    LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
143    LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
144    local LFBFL_correct_sha512
145    LFBFL_correct_sha512='a201a42c1dc00d4b28da5a6c7d68f0a960901cb3d49ad'
146    LFBFL_correct_sha512+='6454be346ab083dcf43be8b62cb04baf8d3d93acec58'
147    LFBFL_correct_sha512+='bcdcbb139da07d3881562f2fb44389ed12f3225'
148    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
149      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
150    chmod +x "./${LFBFL_file_path}"
151
152    LFBFL_file_name="license_file_header_AGPLv3+.tpl"
153    LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
154    LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
155    local LFBFL_correct_sha512
156    LFBFL_correct_sha512='9f9aa56d9b90d5003a12c5ec3370ac31aab74fc4a2524'
157    LFBFL_correct_sha512+='2c5fbcb0197b0abbb8242f62dafc76eaf60faa5da173'
158    LFBFL_correct_sha512+='05924b31b64b037083532fced9f98445000e2d0'
159    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
160      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
161
162    LFBFL_file_name="license_file_header_GPLv3+.tpl"
163    LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
164    LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
165    local LFBFL_correct_sha512
166    LFBFL_correct_sha512='2bdef9a729a5a9ca5ed87ef8a518877c5ee6b31b45336'
167    LFBFL_correct_sha512+='08660316a4e595fb31465a4847f4d53a2f7264118bd4'
168    LFBFL_correct_sha512+='eab7c1d1892e00bc1861455ed02898f194db067'
169    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
```

```
170       "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

171
172    LFBFL_file_name="license_file_header_LGPLv3+.tpl"
173    LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
174    LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
175    local LFBFL_correct_sha512
176    LFBFL_correct_sha512='265fd0d086b48ab798f35a072335a4976e4eda8c256fe'
177    LFBFL_correct_sha512+='bba6c77c98ca86cdd844c6ac150c3445c80debbb3fc2'
178    LFBFL_correct_sha512+='574b5fceeeaf79ec734a759bdef5fe798067c62'
179    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
180       "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
181    # -----------------------------------------------------------------

182
183    LFBFL_file_name="lines_counts.libr.sh"
184    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
185    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
186    local LFBFL_correct_sha512
187    LFBFL_correct_sha512='3e34b8768b4356adf397f3ca1f47ef8f44da42808ca8b'
188    LFBFL_correct_sha512+='b95b830fa8bd9be46bb3cb1f012736b7a6d53549f8a9'
189    LFBFL_correct_sha512+='f60274d6db5d9699bc28270a7d42deaaa6d6d6f'
190    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
191       "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

192
193    LFBFL_file_name="lines_filters.libr.sh"
194    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
195    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
196    local LFBFL_correct_sha512
197    LFBFL_correct_sha512='76d2dccb649501d1e458e2a07535cc9df63e1558d55eb'
198    LFBFL_correct_sha512+='42c352844fc4338d0a438cd541cb2eb4d37c00e8ca02'
199    LFBFL_correct_sha512+='885d15150762cb3d2a56c4997e29d6a73eefca1'
200    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
201       "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

202
203    LFBFL_file_name="lines_maps.libr.sh"
204    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
205    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
206    local LFBFL_correct_sha512
207    LFBFL_correct_sha512='ca4fbc93c407de6aa742b0d5e4ee767d341777d60b3e8'
208    LFBFL_correct_sha512+='e08e8582babb5ee6b305d47e385c1701810691c46ec6'
209    LFBFL_correct_sha512+='a34b5f740b8304114f96ee7052da095ee09c789'
210    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
211       "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

212
213    LFBFL_file_name="overwrite_if_not_equal.libr.sh"
214    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
215    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
```

```
216    local LFBFL_correct_sha512
217    LFBFL_correct_sha512='2b95072a4b123ec7db186e33a2bac47809721272ca22a'
218    LFBFL_correct_sha512+='289d0d528b70bfa3d02d752fed46e6b091247c586ee2'
219    LFBFL_correct_sha512+='229081c66cf9e2de98fc41563b570ef2fc67ff9'
220    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
221      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

223    LFBFL_file_name="python_black_complement.libr.sh"
224    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
225    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
226    local LFBFL_correct_sha512
227    LFBFL_correct_sha512='e28c6e0cfffe6b8eebef26bddfbb440f0303d0dcc3987'
228    LFBFL_correct_sha512+='6d498d95b9d589e0800b8381124936e5103b372f509c'
229    LFBFL_correct_sha512+='aeb6213e909710a2ec1e345e076a44f0006fdbb'
230    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
231      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

233    LFBFL_file_name="python_isort_complement.libr.sh"
234    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
235    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
236    local LFBFL_correct_sha512
237    LFBFL_correct_sha512='637cddfb803fd8866fa2ab1c72bbcd5b55e2c0068a14d'
238    LFBFL_correct_sha512+='b6140ee00435a69990a6c5e08b6f0bf13ac9574a9ead'
239    LFBFL_correct_sha512+='c59d9b5adcc8f6d99d4d56ca1cc5785c7b22835'
240    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
241      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

243    LFBFL_file_name="split_score.exec.php"
244    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
245    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
246    local LFBFL_correct_sha512
247    LFBFL_correct_sha512='2f7ff107a43716109b1acbd7d89870d05577af00a981a'
248    LFBFL_correct_sha512+='05f162a054c96387fb99544f8225c333b1212f74326c'
249    LFBFL_correct_sha512+='f9ec6196e796f6257dfbba9347ac8c57b4f09db'
250    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
251      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"

253    LFBFL_file_name="split_score.libr.php"
254    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
255    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
256    local LFBFL_correct_sha512
257    LFBFL_correct_sha512='1413898a4fb4f31ca17993fd6110f7e1f32adf31c22c4'
258    LFBFL_correct_sha512+='7fa46a31d3c1511a3112a611e04fac19bb838d4476d9'
259    LFBFL_correct_sha512+='ecf77a28dd48d3d2732df7392c50e38262852d7'
260    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
261      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
```

```
262
263    LFBFL_file_name="strings_functions.libr.sh"
264    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
265    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
266    local LFBFL_correct_sha512
267    LFBFL_correct_sha512='ef5a942ed4f938d66ffba9292ff998564cbbe37a111b7'
268    LFBFL_correct_sha512+='eb83a6340c87a95b65d325103eb4dbc371dde6d31f72'
269    LFBFL_correct_sha512+='339674c4b6550c7a30801156b273f74fb97a165'
270    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
271      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
272
273    LFBFL_file_name="too_long_code_lines.libr.sh"
274    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
275    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
276    local LFBFL_correct_sha512
277    LFBFL_correct_sha512='be622620998f73fceabe75d4cb0d665fbba38ae987e2f'
278    LFBFL_correct_sha512+='e1aa8dc9e0009234979c0f9e5a8d18e7a8a4653ab4da'
279    LFBFL_correct_sha512+='a2d8249f696f5237fa4e026b9b1ce6346b2fd15'
280    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
281      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
282
283    LFBFL_file_name="update_or_check_files_names_listing.exec.sh"
284    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
285    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
286    local LFBFL_correct_sha512
287    LFBFL_correct_sha512='e85815f6e0bac316f35cbd20ecef1333d4e2aceae581c'
288    LFBFL_correct_sha512+='c579d62b9f756994bb2137eb1ce9a3c44cc0e5348c30'
289    LFBFL_correct_sha512+='27a0cfa434baa410b35e82d3a82c261e0a0fec2'
290    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
291      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
292    chmod +x "./${LFBFL_file_path}"
293
294    shopt -s globstar
295    # shellcheck disable=SC1090
296    source "./${LFBFL_subdir}/check_shell_scripts_beginnings.libr.sh"
297    # shellcheck disable=SC1090
298    source "./${LFBFL_subdir}/check_URLs.libr.sh"
299    # shellcheck disable=SC1090
300    source "./${LFBFL_subdir}/comparisons.libr.sh"
301    # shellcheck disable=SC1090
302    source "./${LFBFL_subdir}/generate_from_template.libr.sh"
303    # shellcheck disable=SC1090
304    source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
305    # shellcheck disable=SC1090
306    source "./${LFBFL_subdir}/grammar_and_spell_check.libr.sh"
307    # shellcheck disable=SC1090
```

```
308    source "./${LFBFL_subdir}/lines_counts.libr.sh"
309    # shellcheck disable=SC1090
310    source "./${LFBFL_subdir}/lines_filters.libr.sh"
311    # shellcheck disable=SC1090
312    source "./${LFBFL_subdir}/lines_maps.libr.sh"
313    # shellcheck disable=SC1090
314    source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
315    # shellcheck disable=SC1090
316    source "./${LFBFL_subdir}/python_black_complement.libr.sh"
317    # shellcheck disable=SC1090
318    source "./${LFBFL_subdir}/python_isort_complement.libr.sh"
319    # shellcheck disable=SC1090
320    source "./${LFBFL_subdir}/strings_functions.libr.sh"
321    # shellcheck disable=SC1090
322    source "./${LFBFL_subdir}/too_long_code_lines.libr.sh"
323
324    local LFBFL_data_file_name=\
325  "build_and_checks_variables/repository_data.txt"
326
327    declare -i LFBFL_upgrade_venvs=0
328    declare -r LFBFL_upgrade_venvs_ts_file=\
329  "build_and_checks_variables/upgrade_venvs_ts"
330    declare -i LFBFL_upgrade_venvs_ts
331    declare -i LFBFL_current_ts
332    local LFBFL_upgrade_venvs_answer
333
334    upgrade_venvs_time_interval_in_seconds=""
335    grep_variable "${LFBFL_data_file_name}"\
336      upgrade_venvs_time_interval_in_seconds
337    if [[ "${upgrade_venvs_time_interval_in_seconds}" == "wat" ]]; then
338      upgrade_venvs_time_interval_in_seconds=${RANDOM}
339    fi
340    if
341    [[ "${upgrade_venvs_time_interval_in_seconds}" == "watyouwant?" ]];
342    then
343      upgrade_venvs_time_interval_in_seconds=${SRANDOM}
344    fi
345
346    if [[ -f "${LFBFL_upgrade_venvs_ts_file}" ]]; then
347      LFBFL_upgrade_venvs_ts=\
348  $(stat -c %Y "${LFBFL_upgrade_venvs_ts_file}")
349      LFBFL_current_ts=$(date +%s)
350      ((LFBFL_current_ts-=LFBFL_upgrade_venvs_ts))
351      ((LFBFL_current_ts-=upgrade_venvs_time_interval_in_seconds))
352      if [[ LFBFL_current_ts -gt 0 ]]; then
353        LFBFL_upgrade_venvs=1
```

```
354       fi
355    else
356       LFBFL_upgrade_venvs=1
357    fi
358    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
359       upgrade_venvs=""
360       grep_variable "${LFBFL_data_file_name}" upgrade_venvs
361       if [[ "${upgrade_venvs}" != "auto" ]]; then
362          read -r -n 1 -t 10\
363             -p "Upgrade venvs and composer global? [Y/n]"\
364             LFBFL_upgrade_venvs_answer
365          if [[ "${LFBFL_upgrade_venvs_answer}" == "n" ]]; then
366             LFBFL_upgrade_venvs=0
367          fi
368       fi
369    fi
370
371    echo "Building license headers"
372    "./${LFBFL_subdir2}/build_licenses_templates.exec.sh"\
373       "${LFBFL_working_directory}" "${LFBFL_verbose}"
374
375    echo "Building README.md"
376    "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh"\
377       "${LFBFL_working_directory}" "README" "${LFBFL_verbose}"
378
379    echo "Building other MarkDown files"
380    local LFBFL_some_directory
381    declare -r LFBFL_readme="${LFBFL_working_directory}/README.md.tpl"
382    # shellcheck disable=SC2312
383    find "${LFBFL_working_directory}" -name "*.md.tpl" | relevant_find\
384       | while read -r LFBFL_file_path;
385    do
386       [[ "${LFBFL_file_path}" == "${LFBFL_readme}" ]] && continue
387       echo "Found template ${LFBFL_file_path}"
388       LFBFL_some_directory=$(dirname "${LFBFL_file_path}")
389       LFBFL_file_name=$(basename "${LFBFL_file_path}")
390       LFBFL_file_name=${LFBFL_file_name%.md.tpl}
391       "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh"\
392          "${LFBFL_some_directory}" "${LFBFL_file_name}"\
393          "${LFBFL_verbose}"
394    done
395
396    pushd .
397    # shellcheck disable=SC2164
398    cd "${LFBFL_working_directory}"
399
```

```
400  echo "Running shellcheck"
401  declare -i LFBFL_file_path_length
402  declare -i LFBFL_to_skip_number
403  local LFBFL_file_path_end
404  # shellcheck disable=SC2312
405  find . -name "*.sh" | relevant_find | while read -r LFBFL_file_path;
406  do
407    LFBFL_file_path_length=${#LFBFL_file_path}
408    LFBFL_to_skip_number=$((LFBFL_file_path_length - 9))
409    LFBFL_file_path_end="${LFBFL_file_path:${LFBFL_to_skip_number}}"
410    if [[ "${LFBFL_file_path_end}" == "GPLv3+.sh" ]]; then
411      continue
412    fi
413    shellcheck --check-sourced --enable=all --external-sources\
414      "${LFBFL_file_path}"
415  done
416
417  echo "---Python---"
418  echo "Running isort"
419  isort_venv=""
420  grep_variable "${LFBFL_data_file_name}" isort_venv
421  if [[ -n "${isort_venv}" ]]; then
422    if command -v deactivate
423    then
424      deactivate
425    fi
426    # shellcheck disable=SC1090,SC1091
427    source "${isort_venv}/bin/activate"
428  fi
429  if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
430    pip install --upgrade isort
431  fi
432  isort .
433  if [[ -n "${isort_venv}" ]]; then
434    deactivate
435  fi
436  python_isort_complement
437
438  echo "Running black"
439  black_venv=""
440  grep_variable "${LFBFL_data_file_name}" black_venv
441  if [[ -n "${black_venv}" ]]; then
442    if command -v deactivate
443    then
444      deactivate
445    fi
```

```
446    # shellcheck disable=SC1090,SC1091
447    source "${black_venv}/bin/activate"
448  fi
449  if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
450    pip install --upgrade black
451  fi
452  black .
453  if [[ -n "${black_venv}" ]]; then
454    deactivate
455  fi
456  python_black_complement
457
458  mypy_venv=""
459  grep_variable "${LFBFL_data_file_name}" mypy_venv
460  if [[ -n "${mypy_venv}" ]]; then
461    if command -v deactivate
462    then
463      deactivate
464    fi
465    # shellcheck disable=SC1090,SC1091
466    source "${mypy_venv}/bin/activate"
467  fi
468  if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
469    pip install --upgrade mypy
470  fi
471  shopt -s lastpipe
472  local LFBFL_directory_path
473  declare -i LFBFL_no_toml=1
474  # shellcheck disable=SC2312
475  find . -name "pyproject.toml" | relevant_find\
476    | while read -r LFBFL_file_path;
477  do
478    if grep -q "Typing :: Typed" "${LFBFL_file_path}"; then
479      echo "Running mypy"
480      LFBFL_directory_path=$(dirname "${LFBFL_file_path}")
481      mypy "${LFBFL_directory_path}"
482    fi
483    LFBFL_no_toml=0
484  done
485  if [[ LFBFL_no_toml -eq 1 ]]; then
486    echo "Running mypy"
487    mypy .
488  fi
489  if [[ -n "${mypy_venv}" ]]; then
490    deactivate
491  fi
```

```
492
493    echo "Running bandit"
494    bandit_venv=""
495    grep_variable "${LFBFL_data_file_name}" bandit_venv
496    if [[ -n "${bandit_venv}" ]]; then
497      if command -v deactivate
498      then
499        deactivate
500      fi
501      # shellcheck disable=SC1090,SC1091
502      source "${bandit_venv}/bin/activate"
503    fi
504    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
505      pip install --upgrade bandit
506    fi
507    bandit --ini build_and_checks_variables/bandit.ini\
508      -b build_and_checks_variables/bandit_baseline.json\
509      -r .
510    # Saving new baseline in temp if necessary.
511    bandit --ini build_and_checks_variables/bandit.ini\
512      -f json -o build_and_checks_variables/temp/bandit_baseline.json\
513      -r .
514    if [[ -n "${bandit_venv}" ]]; then
515      deactivate
516    fi
517
518    echo "Running pylint"
519    pylint_venv=""
520    grep_variable "${LFBFL_data_file_name}" pylint_venv
521    if [[ -n "${pylint_venv}" ]]; then
522      if command -v deactivate
523      then
524        deactivate
525      fi
526      # shellcheck disable=SC1090,SC1091
527      source "${pylint_venv}/bin/activate"
528    fi
529    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
530      pip install --upgrade pylint
531    fi
532    pylint --rcfile build_and_checks_variables/pylintrc.toml\
533      --recursive=y .
534    if [[ -n "${pylint_venv}" ]]; then
535      deactivate
536    fi
537
```

```
538    echo "Running ruff"
539    ruff_venv=""
540    grep_variable "${LFBFL_data_file_name}" ruff_venv
541    if [[ -n "${ruff_venv}" ]]; then
542      if command -v deactivate
543      then
544        deactivate
545      fi
546      # shellcheck disable=SC1090,SC1091
547      source "${ruff_venv}/bin/activate"
548    fi
549    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
550      pip install --upgrade ruff
551    fi
552    ruff check --config build_and_checks_variables/ruff.toml
553    if [[ -n "${ruff_venv}" ]]; then
554      deactivate
555    fi
556    echo "---Python end---"
557
558    echo "---PHP---"
559    echo "Running PHPMD"
560    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
561      composer global require phpmd/phpmd
562    fi
563    phpmd --color\
564      --baseline-file build_and_checks_variables/phpmd_baseline.xml\
565      . text cleancode,codesize,controversial,design,naming,unusedcode
566    # Saving new baseline in temp if necessary.
567    rm build_and_checks_variables/temp/phpmd_baseline.xml
568    phpmd --color --generate-baseline\
569     --baseline-file build_and_checks_variables/temp/phpmd_baseline.xml\
570     . text cleancode,codesize,controversial,design,naming,unusedcode
571    echo "---PHP end---"
572
573    echo "---JS---"
574    npm_lint_directories=""
575    grep_variable "${LFBFL_data_file_name}" npm_lint_directories
576    if [[ -n "${npm_lint_directories}" ]]; then
577      echo "Running ESLint"
578      local LFBFL_JS_directory
579      # shellcheck disable=SC2312
580      echo "${npm_lint_directories}" | sed -e 's/\\n/\n/g'\
581        | while read -r LFBFL_JS_directory;
582      do
583        (cd "${LFBFL_JS_directory}" && npm run lint)
```

```
584    done
585   fi
586   echo "---JS end---"
587
588   if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
589     touch "${LFBFL_upgrade_venvs_ts_file}"
590   fi
591
592   echo "Analyzing too long lines"
593   too_long_code_lines
594
595   echo "Analyzing shell scripts beginnings"
596   # shellcheck disable=SC2312
597   check_shell_scripts_beginnings | relevant_grep
598
599   echo "Analyzing URLs"
600   # shellcheck disable=SC2312
601   check_URLs | relevant_grep
602
603   echo "Analyzing strange characters: hover over in doubt"
604   # shellcheck disable=SC1111
605   LFBFL_usual_characters="\x00-\x7Fàâéèêëîïôû硩""└┤│«»"
606   # shellcheck disable=SC2312
607   grep --exclude-dir .git --color=always\
608     -nPr "[^${LFBFL_usual_characters}]" .
609
610   echo "Checking listed files"
611   "./${LFBFL_subdir}/update_or_check_files_names_listing.exec.sh"
612
613   echo "Creating the PDF file of the listing of the source code"
614   "./${LFBFL_subdir}/create_PDF.exec.sh" "${LFBFL_verbose}"
615
616   if [[ -f "build_and_checks_variables/post_build.sh" ]]; then
617     ./build_and_checks_variables/post_build.sh
618   fi
619
620   # shellcheck disable=SC2164
621   popd
622 }
623
624 common_build_and_checks "$@"
```

2.6 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    # shellcheck disable=SC1091
48    source ./wget_sha512.libr.sh
```

28

```
49
50    LFBFL_subdir="build_and_checks_dependencies"
51    local LFBFL_file_name
52    local LFBFL_URL
53    local LFBFL_file_path
54
55    LFBFL_file_name="build_md_from_printable_md.exec.sh"
56    # LFBFL_script_download_URL
57    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
58    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
59    @sha512_build_md_from_printable_md.exec.sh@
60    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
61      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
62    chmod +x "./${LFBFL_file_path}"
63
64    LFBFL_file_name="check_shell_scripts_beginnings.libr.sh"
65    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
66    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
67    @sha512_check_shell_scripts_beginnings.libr.sh@
68    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
69      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
70
71    LFBFL_file_name="check_URLs.libr.sh"
72    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
73    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
74    @sha512_check_URLs.libr.sh@
75    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
76      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
77
78    LFBFL_file_name="comparisons.libr.sh"
79    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
80    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
81    @sha512_comparisons.libr.sh@
82    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
83      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
84
85    LFBFL_file_name="create_PDF.exec.sh"
86    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
87    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
88    @sha512_create_PDF.exec.sh@
89    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
90      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
91    chmod +x "./${LFBFL_file_path}"
92
93    LFBFL_file_name="generate_from_template.libr.sh"
94    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
```

```
95   LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
96   @sha512_generate_from_template.libr.sh@
97   wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
98     "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
99
100  LFBFL_file_name="get_common_text_glob_patterns.libr.sh"
101  LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
102  LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
103  @sha512_get_common_text_glob_patterns.libr.sh@
104  wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
105    "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
106
107  LFBFL_file_name="grammar_and_spell_check.libr.sh"
108  LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
109  LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
110  @sha512_grammar_and_spell_check.libr.sh@
111  wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
112    "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
113
114  # /licenses_templates/ ---------------------------------------
115  declare -r LFBFL_subdir2="${LFBFL_subdir}/licenses_templates"
116  declare -r LFBFL_start_URL2="${LFBFL_start_URL}/licenses_templates"
117  LFBFL_file_name="build_licenses_templates.exec.sh"
118  LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
119  LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
120  @sha512_build_licenses_templates.exec.sh@
121  wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
122    "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
123  chmod +x "./${LFBFL_file_path}"
124
125  LFBFL_file_name="license_file_header_AGPLv3+.tpl"
126  LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
127  LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
128  @sha512_license_file_header_AGPLv3+.tpl@
129  wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
130    "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
131
132  LFBFL_file_name="license_file_header_GPLv3+.tpl"
133  LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
134  LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
135  @sha512_license_file_header_GPLv3+.tpl@
136  wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
137    "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
138
139  LFBFL_file_name="license_file_header_LGPLv3+.tpl"
140  LFBFL_URL="${LFBFL_start_URL2}/${LFBFL_file_name}"
```

```
141    LFBFL_file_path="./${LFBFL_subdir2}/${LFBFL_file_name}"
142    @sha512_license_file_header_LGPLv3+.tpl@
143    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
144      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
145    # -----------------------------------------------------------------
146
147    LFBFL_file_name="lines_counts.libr.sh"
148    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
149    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
150    @sha512_lines_counts.libr.sh@
151    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
152      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
153
154    LFBFL_file_name="lines_filters.libr.sh"
155    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
156    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
157    @sha512_lines_filters.libr.sh@
158    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
159      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
160
161    LFBFL_file_name="lines_maps.libr.sh"
162    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
163    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
164    @sha512_lines_maps.libr.sh@
165    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
166      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
167
168    LFBFL_file_name="overwrite_if_not_equal.libr.sh"
169    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
170    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
171    @sha512_overwrite_if_not_equal.libr.sh@
172    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
173      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
174
175    LFBFL_file_name="python_black_complement.libr.sh"
176    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
177    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
178    @sha512_python_black_complement.libr.sh@
179    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
180      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
181
182    LFBFL_file_name="python_isort_complement.libr.sh"
183    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
184    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
185    @sha512_python_isort_complement.libr.sh@
186    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
```

```
187      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
188
189    LFBFL_file_name="split_score.exec.php"
190    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
191    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
192    @sha512_split_score.exec.php@
193    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
194      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
195
196    LFBFL_file_name="split_score.libr.php"
197    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
198    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
199    @sha512_split_score.libr.php@
200    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
201      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
202
203    LFBFL_file_name="strings_functions.libr.sh"
204    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
205    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
206    @sha512_strings_functions.libr.sh@
207    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
208      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
209
210    LFBFL_file_name="too_long_code_lines.libr.sh"
211    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
212    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
213    @sha512_too_long_code_lines.libr.sh@
214    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
215      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
216
217    LFBFL_file_name="update_or_check_files_names_listing.exec.sh"
218    LFBFL_URL="${LFBFL_start_URL}/${LFBFL_file_name}"
219    LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_file_name}"
220    @sha512_update_or_check_files_names_listing.exec.sh@
221    wget_sha512 "${LFBFL_file_path}" "${LFBFL_URL}"\
222      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
223    chmod +x "./${LFBFL_file_path}"
224
225    shopt -s globstar
226    # shellcheck disable=SC1090
227    source "./${LFBFL_subdir}/check_shell_scripts_beginnings.libr.sh"
228    # shellcheck disable=SC1090
229    source "./${LFBFL_subdir}/check_URLs.libr.sh"
230    # shellcheck disable=SC1090
231    source "./${LFBFL_subdir}/comparisons.libr.sh"
232    # shellcheck disable=SC1090
```

```
233    source "./${LFBFL_subdir}/generate_from_template.libr.sh"
234    # shellcheck disable=SC1090
235    source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
236    # shellcheck disable=SC1090
237    source "./${LFBFL_subdir}/grammar_and_spell_check.libr.sh"
238    # shellcheck disable=SC1090
239    source "./${LFBFL_subdir}/lines_counts.libr.sh"
240    # shellcheck disable=SC1090
241    source "./${LFBFL_subdir}/lines_filters.libr.sh"
242    # shellcheck disable=SC1090
243    source "./${LFBFL_subdir}/lines_maps.libr.sh"
244    # shellcheck disable=SC1090
245    source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
246    # shellcheck disable=SC1090
247    source "./${LFBFL_subdir}/python_black_complement.libr.sh"
248    # shellcheck disable=SC1090
249    source "./${LFBFL_subdir}/python_isort_complement.libr.sh"
250    # shellcheck disable=SC1090
251    source "./${LFBFL_subdir}/strings_functions.libr.sh"
252    # shellcheck disable=SC1090
253    source "./${LFBFL_subdir}/too_long_code_lines.libr.sh"
254
255    local LFBFL_data_file_name=\
256  "build_and_checks_variables/repository_data.txt"
257
258    declare -i LFBFL_upgrade_venvs=0
259    declare -r LFBFL_upgrade_venvs_ts_file=\
260  "build_and_checks_variables/upgrade_venvs_ts"
261    declare -i LFBFL_upgrade_venvs_ts
262    declare -i LFBFL_current_ts
263    local LFBFL_upgrade_venvs_answer
264
265    upgrade_venvs_time_interval_in_seconds=""
266    grep_variable "${LFBFL_data_file_name}"\
267        upgrade_venvs_time_interval_in_seconds
268    if [[ "${upgrade_venvs_time_interval_in_seconds}" == "wat" ]]; then
269      upgrade_venvs_time_interval_in_seconds=${RANDOM}
270    fi
271    if
272     [[ "${upgrade_venvs_time_interval_in_seconds}" == "watyouwant?" ]];
273    then
274      upgrade_venvs_time_interval_in_seconds=${SRANDOM}
275    fi
276
277    if [[ -f "${LFBFL_upgrade_venvs_ts_file}" ]]; then
278      LFBFL_upgrade_venvs_ts=\
```

```
279  $(stat -c %Y "${LFBFL_upgrade_venvs_ts_file}")
280      LFBFL_current_ts=$(date +%s)
281      ((LFBFL_current_ts-=LFBFL_upgrade_venvs_ts))
282      ((LFBFL_current_ts-=upgrade_venvs_time_interval_in_seconds))
283      if [[ LFBFL_current_ts -gt 0 ]]; then
284        LFBFL_upgrade_venvs=1
285      fi
286    else
287      LFBFL_upgrade_venvs=1
288    fi
289    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
290      upgrade_venvs=""
291      grep_variable "${LFBFL_data_file_name}" upgrade_venvs
292      if [[ "${upgrade_venvs}" != "auto" ]]; then
293        read -r -n 1 -t 10\
294          -p "Upgrade venvs and composer global? [Y/n]"\
295          LFBFL_upgrade_venvs_answer
296        if [[ "${LFBFL_upgrade_venvs_answer}" == "n" ]]; then
297          LFBFL_upgrade_venvs=0
298        fi
299      fi
300    fi
301
302    echo "Building license headers"
303    "./${LFBFL_subdir2}/build_licenses_templates.exec.sh"\
304      "${LFBFL_working_directory}" "${LFBFL_verbose}"
305
306    echo "Building README.md"
307    "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh"\
308      "${LFBFL_working_directory}" "README" "${LFBFL_verbose}"
309
310    echo "Building other MarkDown files"
311    local LFBFL_some_directory
312    declare -r LFBFL_readme="${LFBFL_working_directory}/README.md.tpl"
313    # shellcheck disable=SC2312
314    find "${LFBFL_working_directory}" -name "*.md.tpl" | relevant_find\
315      | while read -r LFBFL_file_path;
316    do
317      [[ "${LFBFL_file_path}" == "${LFBFL_readme}" ]] && continue
318      echo "Found template ${LFBFL_file_path}"
319      LFBFL_some_directory=$(dirname "${LFBFL_file_path}")
320      LFBFL_file_name=$(basename "${LFBFL_file_path}")
321      LFBFL_file_name=${LFBFL_file_name%.md.tpl}
322      "./${LFBFL_subdir}/build_md_from_printable_md.exec.sh"\
323        "${LFBFL_some_directory}" "${LFBFL_file_name}"\
324        "${LFBFL_verbose}"
```

```
325    done
326
327    pushd .
328    # shellcheck disable=SC2164
329    cd "${LFBFL_working_directory}"
330
331    echo "Running shellcheck"
332    declare -i LFBFL_file_path_length
333    declare -i LFBFL_to_skip_number
334    local LFBFL_file_path_end
335    # shellcheck disable=SC2312
336    find . -name "*.sh" | relevant_find | while read -r LFBFL_file_path;
337    do
338      LFBFL_file_path_length=${#LFBFL_file_path}
339      LFBFL_to_skip_number=$((LFBFL_file_path_length - 9))
340      LFBFL_file_path_end="${LFBFL_file_path:${LFBFL_to_skip_number}}"
341      if [[ "${LFBFL_file_path_end}" == "GPLv3+.sh" ]]; then
342        continue
343      fi
344      shellcheck --check-sourced --enable=all --external-sources\
345        "${LFBFL_file_path}"
346    done
347
348    echo "---Python---"
349    echo "Running isort"
350    isort_venv=""
351    grep_variable "${LFBFL_data_file_name}" isort_venv
352    if [[ -n "${isort_venv}" ]]; then
353      if command -v deactivate
354      then
355        deactivate
356      fi
357      # shellcheck disable=SC1090,SC1091
358      source "${isort_venv}/bin/activate"
359    fi
360    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
361      pip install --upgrade isort
362    fi
363    isort .
364    if [[ -n "${isort_venv}" ]]; then
365      deactivate
366    fi
367    python_isort_complement
368
369    echo "Running black"
370    black_venv=""
```

```
371    grep_variable "${LFBFL_data_file_name}" black_venv
372    if [[ -n "${black_venv}" ]]; then
373      if command -v deactivate
374      then
375        deactivate
376      fi
377      # shellcheck disable=SC1090,SC1091
378      source "${black_venv}/bin/activate"
379    fi
380    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
381      pip install --upgrade black
382    fi
383    black .
384    if [[ -n "${black_venv}" ]]; then
385      deactivate
386    fi
387    python_black_complement
388
389    mypy_venv=""
390    grep_variable "${LFBFL_data_file_name}" mypy_venv
391    if [[ -n "${mypy_venv}" ]]; then
392      if command -v deactivate
393      then
394        deactivate
395      fi
396      # shellcheck disable=SC1090,SC1091
397      source "${mypy_venv}/bin/activate"
398    fi
399    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
400      pip install --upgrade mypy
401    fi
402    shopt -s lastpipe
403    local LFBFL_directory_path
404    declare -i LFBFL_no_toml=1
405    # shellcheck disable=SC2312
406    find . -name "pyproject.toml" | relevant_find\
407      | while read -r LFBFL_file_path;
408    do
409      if grep -q "Typing :: Typed" "${LFBFL_file_path}"; then
410        echo "Running mypy"
411        LFBFL_directory_path=$(dirname "${LFBFL_file_path}")
412        mypy "${LFBFL_directory_path}"
413      fi
414      LFBFL_no_toml=0
415    done
416    if [[ LFBFL_no_toml -eq 1 ]]; then
```

```
417    echo "Running mypy"
418    mypy .
419  fi
420  if [[ -n "${mypy_venv}" ]]; then
421    deactivate
422  fi
423
424  echo "Running bandit"
425  bandit_venv=""
426  grep_variable "${LFBFL_data_file_name}" bandit_venv
427  if [[ -n "${bandit_venv}" ]]; then
428    if command -v deactivate
429    then
430      deactivate
431    fi
432    # shellcheck disable=SC1090,SC1091
433    source "${bandit_venv}/bin/activate"
434  fi
435  if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
436    pip install --upgrade bandit
437  fi
438  bandit --ini build_and_checks_variables/bandit.ini\
439    -b build_and_checks_variables/bandit_baseline.json\
440    -r .
441  # Saving new baseline in temp if necessary.
442  bandit --ini build_and_checks_variables/bandit.ini\
443    -f json -o build_and_checks_variables/temp/bandit_baseline.json\
444    -r .
445  if [[ -n "${bandit_venv}" ]]; then
446    deactivate
447  fi
448
449  echo "Running pylint"
450  pylint_venv=""
451  grep_variable "${LFBFL_data_file_name}" pylint_venv
452  if [[ -n "${pylint_venv}" ]]; then
453    if command -v deactivate
454    then
455      deactivate
456    fi
457    # shellcheck disable=SC1090,SC1091
458    source "${pylint_venv}/bin/activate"
459  fi
460  if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
461    pip install --upgrade pylint
462  fi
```

```
463    pylint --rcfile build_and_checks_variables/pylintrc.toml\
464      --recursive=y .
465    if [[ -n "${pylint_venv}" ]]; then
466      deactivate
467    fi
468
469    echo "Running ruff"
470    ruff_venv=""
471    grep_variable "${LFBFL_data_file_name}" ruff_venv
472    if [[ -n "${ruff_venv}" ]]; then
473      if command -v deactivate
474      then
475        deactivate
476      fi
477      # shellcheck disable=SC1090,SC1091
478      source "${ruff_venv}/bin/activate"
479    fi
480    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
481      pip install --upgrade ruff
482    fi
483    ruff check --config build_and_checks_variables/ruff.toml
484    if [[ -n "${ruff_venv}" ]]; then
485      deactivate
486    fi
487    echo "---Python end---"
488
489    echo "---PHP---"
490    echo "Running PHPMD"
491    if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
492      composer global require phpmd/phpmd
493    fi
494    phpmd --color\
495      --baseline-file build_and_checks_variables/phpmd_baseline.xml\
496      . text cleancode,codesize,controversial,design,naming,unusedcode
497    # Saving new baseline in temp if necessary.
498    rm build_and_checks_variables/temp/phpmd_baseline.xml
499    phpmd --color --generate-baseline\
500     --baseline-file build_and_checks_variables/temp/phpmd_baseline.xml\
501     . text cleancode,codesize,controversial,design,naming,unusedcode
502    echo "---PHP end---"
503
504    echo "---JS---"
505    npm_lint_directories=""
506    grep_variable "${LFBFL_data_file_name}" npm_lint_directories
507    if [[ -n "${npm_lint_directories}" ]]; then
508      echo "Running ESLint"
```

```
509    local LFBFL_JS_directory
510    # shellcheck disable=SC2312
511    echo "${npm_lint_directories}" | sed -e 's/\\n/\n/g'\
512      | while read -r LFBFL_JS_directory;
513    do
514      (cd "${LFBFL_JS_directory}" && npm run lint)
515    done
516  fi
517  echo "---JS end---"
518
519  if [[ LFBFL_upgrade_venvs -eq 1 ]]; then
520    touch "${LFBFL_upgrade_venvs_ts_file}"
521  fi
522
523  echo "Analyzing too long lines"
524  too_long_code_lines
525
526  echo "Analyzing shell scripts beginnings"
527  # shellcheck disable=SC2312
528  check_shell_scripts_beginnings | relevant_grep
529
530  echo "Analyzing URLs"
531  # shellcheck disable=SC2312
532  check_URLs | relevant_grep
533
534  echo "Analyzing strange characters: hover over in doubt"
535  # shellcheck disable=SC1111
536  LFBFL_usual_characters="\x00-\x7Fàâéèêëîïôûç©""└┤│«»"
537  # shellcheck disable=SC2312
538  grep --exclude-dir .git --color=always\
539    -nPr "[^${LFBFL_usual_characters}]" .
540
541  echo "Checking listed files"
542  "./${LFBFL_subdir}/update_or_check_files_names_listing.exec.sh"
543
544  echo "Creating the PDF file of the listing of the source code"
545  "./${LFBFL_subdir}/create_PDF.exec.sh" "${LFBFL_verbose}"
546
547  if [[ -f "build_and_checks_variables/post_build.sh" ]]; then
548    ./build_and_checks_variables/post_build.sh
549  fi
550
551  # shellcheck disable=SC2164
552  popd
553 }
554
```

```
555  common_build_and_checks "$@"
```

2.7 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
```

40

```
43        return 0
44      fi
45    done
46    return 1
47  }
48
49  max(){
50    # Returns the maximum string among the arguments.
51    # Renvoie la chaîne la plus grande parmi celles proposées.
52    # $1=$sort command with the flags you want to be applied.
53    # $ max sort a b c
54    # c
55    if [[ "$#" == 0 ]]; then
56      return 1
57    fi
58    # shellcheck disable=SC2312
59    printf "%s\n" "${@:2}" | eval "$1 -r" | head -1
60  }
61
62  min(){
63    # Returns the minimum string among the arguments.
64    # Renvoie la chaîne la plus petite parmi celles proposées.
65    # $1=$sort command with the flags you want to be applied.
66    # $ min sort a b c
67    # a
68    if [[ "$#" == 0 ]]; then
69      return 1
70    fi
71    # shellcheck disable=SC2312
72    printf "%s\n" "${@:2}" | eval "$1" | head -1
73  }
74
75  is_substring(){
76    # $1=$string
77    # $2=$substring
78    declare -r LFBFL_var_1=$(\
79      echo "$1" | sed -e 's/\\/\\&/g' -e "s/'/\\\\&/g"\
80    )
81    declare -r LFBFL_var_2=$(\
82      echo "$2" | sed -e 's/\\/\\&/g' -e "s/'/\\\\&/g"\
83    )
84    local LFBFL_var_3="\$a = '${LFBFL_var_1}';"
85    LFBFL_var_3+=" \$b = preg_quote('${LFBFL_var_2}');"
86    LFBFL_var_3+=" \$c = '/'.addcslashes(\$b, '/').'/';"
87    LFBFL_var_3+=" die(1 - preg_match(\$c, \$a));"
88    readonly LFBFL_var_3
```

```
89    php -r "${LFBFL_var_3}"
90    return $?
91  }
92
93  is_subfile(){
94    # $1=$file_name
95    # $2=$sub_file_name
96    local LFBFL_var_1="\$a = file_get_contents('$1');"
97    LFBFL_var_1+=" \$b = preg_quote(file_get_contents('$2'));"
98    LFBFL_var_1+=" \$c = '/'.addcslashes(\$b, '/')./'/';"
99    LFBFL_var_1+=" die(1 - preg_match(\$c, \$a));"
100   readonly LFBFL_var_1
101   php -r "${LFBFL_var_1}"
102   return $?
103 }
104
105 alias min_from_int_sort="min 'sort --numeric-sort'"
106 alias max_from_int_sort="max 'sort --numeric-sort'"
```

2.8 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 disable=SC1090
28  source "./${LFBFL_subdir}/generate_from_template.libr.sh"
29  # shellcheck disable=SC1090
30  source "./${LFBFL_subdir}/lines_counts.libr.sh"
31  # shellcheck disable=SC1090
32  source "./${LFBFL_subdir}/lines_filters.libr.sh"
33  # shellcheck disable=SC1090
34  source "./${LFBFL_subdir}/lines_maps.libr.sh"
35  # shellcheck disable=SC1090
36  source "./${LFBFL_subdir}/overwrite_if_not_equal.libr.sh"
37  # shellcheck disable=SC1090
38  source "./${LFBFL_subdir}/strings_functions.libr.sh"
39
40  create_PDF(){
41    declare -i LFBFL_verbose=0
42    if [[ "$*" == *--verbose* ]]; then
43      echo "$0 $*"
44      LFBFL_verbose=1
45    fi
46    readonly LFBFL_verbose
47
48    LFBFL_subdir2="build_and_checks_variables"
49    LFBFL_data_file_name="${LFBFL_subdir2}/repository_data.txt"
50    repository_name=""
51    grep_variable "${LFBFL_data_file_name}" repository_name
52
53    abstract=""
54    grep_variable "${LFBFL_data_file_name}" abstract
55
56    acknowledgments=""
57    grep_variable "${LFBFL_data_file_name}" acknowledgments
58
59    author_email=""
60    grep_variable "${LFBFL_data_file_name}" author_email
61
62    author_full_name=""
63    grep_variable "${LFBFL_data_file_name}" author_full_name
64
65    author_website=""
66    grep_variable "${LFBFL_data_file_name}" author_website
67
68    # shellcheck disable=SC2155
69    declare -r LFBFL_current_date=$(date -I"date")
70
71    # shellcheck disable=SC2155
```

43

```
 72    declare -r LFBFL_current_git_SHA1=$(git rev-parse HEAD)
 73
 74    # shellcheck disable=SC2155
 75    declare -r LFBFL_number_of_commits=$(
 76      git shortlog | space_starting_lines | wc -l
 77    )
 78
 79    LFBFL_number_of_lines="$(code_lines_count_all) total lines,"
 80    LFBFL_number_of_lines+=" $(code_lines_count_not_empty)"
 81    LFBFL_number_of_lines+=" not empty lines,"
 82    LFBFL_number_of_lines+=" $(code_lines_count_empty) empty lines."
 83
 84    # shellcheck disable=SC2312
 85    tree -a --gitignore\
 86      -I "node_modules/"\
 87      -I "__pycache__/"\
 88      -I ".mypy_cache/"\
 89      -I ".git/"\
 90      | replace_non_ascii_spaces\
 91      > "${LFBFL_subdir2}/temp/current_tree_light.txt"
 92
 93    # shellcheck disable=SC2312
 94    tree -a -DFh --gitignore\
 95      -I "node_modules/"\
 96      -I "__pycache__/"\
 97      -I ".mypy_cache/"\
 98      -I ".git/"\
 99      | replace_non_ascii_spaces\
100      > "${LFBFL_subdir2}/temp/current_tree.txt.temp"
101
102    LFBFL_temp_files_listing="./${LFBFL_subdir2}/temp/"
103    LFBFL_temp_files_listing+="files_listing.tex.tpl.temp"
104    : > "${LFBFL_temp_files_listing}"
105    LFBFL_temp_files_listing2="./${LFBFL_subdir2}/temp/"
106    LFBFL_temp_files_listing2+="files_listing.html.tpl.temp"
107    : > "${LFBFL_temp_files_listing2}"
108    # HTML <li> elements, hence "lis".
109    LFBFL_temp_files_lis="./${LFBFL_subdir2}/temp/files_lis.html.tpl"
110    : > "${LFBFL_temp_files_lis}"
111    get_split_score_simple 1 70 /
112    # shellcheck disable=SC2154
113    declare LFBFL_score_command="${get_split_score_result}"
114    # shellcheck disable=SC2154
115    declare LFBFL_score_command_properties="${get_split_score_result2}"
116    get_split_score_simple 1 70 ':'
117    # shellcheck disable=SC2154
```

```
118  declare LFBFL_score_command2="${get_split_score_result}"
119  declare LFBFL_score_command_properties2="${get_split_score_result2}"
120  declare LFBFL_suffix='%'
121  declare -i LFBFL_i=0
122  # Remove line returns here to keep lines short.
123  # shellcheck disable=SC2312
124  sed -Ez 's/\\\n//Mg' "./${LFBFL_subdir2}/files_names_listing.txt"\
125    | grep -v '^//'\
126    | while read -r LFBFL_file_name;
127  do
128    echo "Listing file for tex/HTML : ${LFBFL_file_name}"
129    # echo "Listing file for tex : ${LFBFL_file_name}"
130    # LFBFL_base_file_name=$(basename "${LFBFL_file_name}")
131    LFBFL_cleaned_path1="${LFBFL_file_name//_/\\_}"
132    LFBFL_cleaned_path2=$(
133      sed -e 's/\///:/g' -e 's/\.//g' <(echo "${LFBFL_file_name}")
134    )
135    LFBFL_new_lines="  ${LFBFL_cleaned_path1}"
136    if [[ ${#LFBFL_new_lines} -gt 70 ]]; then
137      repeated_split_last_line "${LFBFL_new_lines}" "" 70\
138        "${LFBFL_suffix}" "${LFBFL_score_command}"\
139        "${LFBFL_score_command_properties}" "\\"
140      # shellcheck disable=SC2154
141      LFBFL_new_lines=${repeated_split_last_line_result}
142    fi
143    LFBFL_new_lines2="  ${LFBFL_cleaned_path2}"
144    if [[ ${#LFBFL_new_lines2} -gt 70 ]]; then
145      repeated_split_last_line "${LFBFL_new_lines2}" "" 70\
146        "${LFBFL_suffix}" "${LFBFL_score_command2}"\
147        "${LFBFL_score_command_properties2}"
148      # shellcheck disable=SC2154
149      LFBFL_new_lines2=${repeated_split_last_line_result}
150    fi
151    LFBFL_new_lines3="${LFBFL_file_name}"
152    if [[ ${#LFBFL_new_lines3} -gt 70 ]]; then
153      repeated_split_last_line "${LFBFL_new_lines3}" "" 70\
154        "${LFBFL_suffix}" "${LFBFL_score_command}"\
155        "${LFBFL_score_command_properties}"
156      # shellcheck disable=SC2154
157      LFBFL_new_lines3=${repeated_split_last_line_result}
158    fi
159    {
160      echo "\subsection{"
161      # shellcheck disable=SC2312
162      echo "  ${LFBFL_file_name}"\
163        | sed -e "s|  ${LFBFL_file_name}|${LFBFL_new_lines}|g"\
```

```
164          -e 's/_/\\_/g'
165     echo "}"
166     echo "\label{"
167     # shellcheck disable=SC2312
168     echo "  ${LFBFL_cleaned_path2}"\
169       | sed -e "s|  ${LFBFL_cleaned_path2}|${LFBFL_new_lines2}|g"
170     echo "}"
171     echo ""
172     echo "\VerbatimInput[numbers=left,xleftmargin=-5mm]{"
173     # shellcheck disable=SC2312
174     echo "  ${LFBFL_file_name}"\
175       | sed -e "s|  ${LFBFL_file_name}|${LFBFL_new_lines3}|g"
176     echo "}"
177     echo ""
178     echo ""
179   } >> "${LFBFL_temp_files_listing}"

181     # echo "Listing file for HTML : ${LFBFL_file_name}"
182     ((++LFBFL_i))
183     LFBFL_new_lines="${LFBFL_file_name}"
184     if [[ ${#LFBFL_file_name} -gt 70 ]]; then
185       repeated_split_last_line "${LFBFL_new_lines}" "-->"\
186         70 "<!--" "${LFBFL_score_command}"\
187         "${LFBFL_score_command_properties}"
188       # shellcheck disable=SC2154
189       LFBFL_new_lines=${repeated_split_last_line_result}
190     fi
191     {
192       echo "<h3 id=\"subsection2.${LFBFL_i}\">2.${LFBFL_i}"
193       # shellcheck disable=SC2001,SC2312
194       echo "${LFBFL_file_name}"\
195         | sed -e "s|${LFBFL_file_name}|${LFBFL_new_lines}|g"
196       echo "</h3>"
197       echo "<pre class=\"numbered_lines\">"
198       sed -e 's/&/\&amp;/g' -e 's/</\&lt;/g' < "${LFBFL_file_name}"
199       echo "</pre>"
200       echo ""
201       echo ""
202     } >> "${LFBFL_temp_files_listing2}"
203     {
204       echo "        <li><a href=\"#subsection2.${LFBFL_i}\">"
205       # shellcheck disable=SC2001
206       echo "${LFBFL_file_name}"\
207         | sed -e "s|${LFBFL_file_name}|${LFBFL_new_lines}|g"
208       echo "        </a></li>"
209     } >> "${LFBFL_temp_files_lis}"
```

```
210    done
211    overwrite_if_not_equal "./${LFBFL_subdir2}/files_listing.tex.tpl"\
212      "${LFBFL_temp_files_listing}"
213    sed -i -e "s|\\n</pre>|</pre>|g" "${LFBFL_temp_files_listing2}"
214    overwrite_if_not_equal\
215      "./${LFBFL_subdir2}/temp/files_listing.html.tpl"\
216      "${LFBFL_temp_files_listing2}"
217
218    # We verify if some lines are beyond 70 characters
219    # in current_tree_light.txt and current_tree.txt.
220    LFBFL_trees=("current_tree_light.txt" "current_tree.txt.temp")
221    declare LFBFL_tree_path
222    for LFBFL_tree in "${LFBFL_trees[@]}"; do
223      LFBFL_tree_path="${LFBFL_subdir2}/temp/${LFBFL_tree}"
224      # shellcheck disable=SC2312
225      grep '.\{71\}' "${LFBFL_tree_path}" | while read -r LFBFL_line; do
226        # echo "LFBFL_line: ${LFBFL_line}"
227        # shellcheck disable=SC2312
228        LFBFL_prefix=$(\
229          echo "${LFBFL_line}"\
230            | sed -E -e 's/(.*)─[^─]+$/\1/g' -e 's/[^ ]+$//g'\
231        )
232        LFBFL_prefix+="│ "
233        # echo "LFBFL_prefix: ${LFBFL_prefix}"
234        # shellcheck disable=SC2312
235        LFBFL_file_name=$(\
236          echo "${LFBFL_line}"\
237            | sed -E 's|.* (([a-zA-Z0-9\._/-]+).)$|\1|g'\
238        )
239        # echo "LFBFL_file_name: ${LFBFL_file_name}"
240        # shellcheck disable=SC2312
241        LFBFL_line_start=$(\
242          echo "${LFBFL_line}"\
243            | sed -E -e "s/(.*)[ ]*${LFBFL_file_name}/\1/g"\
244                     -e 's/ *$//g'\
245        )
246        # echo "LFBFL_line_start: ${LFBFL_line_start}"
247        LFBFL_line=$(\
248          echo "${LFBFL_line}"\
249            | sed -E -e 's/\[/\\\[/g' -e 's/\]/\\\]/g'\
250        )
251        LFBFL_new_lines="${LFBFL_prefix}${LFBFL_file_name}"
252        if [[ ${#LFBFL_new_lines} -gt 70 ]]; then
253          repeated_split_last_line "${LFBFL_new_lines}"\
254            "${LFBFL_prefix}" 70 "" "" 3
255          # shellcheck disable=SC2154
```

47

```
256        LFBFL_new_lines=${repeated_split_last_line_result}
257      fi
258      sed -i -e\
259        "s/${LFBFL_line}/${LFBFL_line_start}\n${LFBFL_new_lines}/g"\
260        "${LFBFL_tree_path}"
261    done
262  done
263
264  overwrite_if_not_equal "${LFBFL_subdir2}/temp/current_tree.txt"\
265    "${LFBFL_subdir2}/temp/current_tree.txt.temp" 1 1
266
267  if [[ -f "./${LFBFL_subdir2}/${repository_name}.tex.tpl" ]]; then
268    # If there is a template, we init the process from it.
269    cp "./${LFBFL_subdir2}/${repository_name}.tex.tpl"\
270      "./${LFBFL_subdir2}/temp/${repository_name}.tex.1"
271  elif [[ -f "./${LFBFL_subdir2}/${repository_name}.tex" ]]; then
272    # Otherwise if there is a tex file, we init the process from it.
273    cp "./${LFBFL_subdir2}/${repository_name}.tex"\
274      "./${LFBFL_subdir2}/temp/${repository_name}.tex.1"
275  else
276    echo "Neither .tex.tpl, nor .tex in ./${LFBFL_subdir2}/"
277  fi
278
279  # Same logic with repository HTML file.
280  if [[ -f "./${LFBFL_subdir2}/${repository_name}.html.tpl" ]]; then
281    cp "./${LFBFL_subdir2}/${repository_name}.html.tpl"\
282      "./${LFBFL_subdir2}/temp/${repository_name}.html.1"
283  elif [[ -f "./${repository_name}.html" ]]; then
284    cp "./${repository_name}.html"\
285      "./${LFBFL_subdir2}/temp/${repository_name}.html.1"
286  else
287    echo "Neither .html.tpl in ./${LFBFL_subdir2}/, nor .html in ./"
288  fi
289
290  declare -r LFBFL_tex_path_start=\
291 "./${LFBFL_subdir2}/temp/${repository_name}.tex"
292  declare -r LFBFL_html_path_start=\
293 "./${LFBFL_subdir2}/temp/${repository_name}.html"
294
295  # shellcheck disable=SC2001,SC2312
296  echo "${abstract}" | sed -e 's/\\n/\n/g'\
297    > "./${LFBFL_subdir2}/temp/abstract_temp"
298
299  # shellcheck disable=SC2001,SC2312
300  echo "${acknowledgments}" | sed -e 's/\\n/\n/g'\
301    > "./${LFBFL_subdir2}/temp/acknowledgments_temp"
```

```
302
303    # But the filling still occurs, in case the dev want to refill
304    # part of the tex/html file that he modified with @token@
305    # using some computed results.
306    # Tex filling:
307    if [[ -f "${LFBFL_tex_path_start}.1" ]]; then
308      sed -i "s|@repository_name@|${repository_name}|g"\
309        "${LFBFL_tex_path_start}.1"
310
311      insert_file_at_token "${LFBFL_tex_path_start}.1" @abstract@\
312        "./${LFBFL_subdir2}/temp/abstract_temp"\
313        "${LFBFL_tex_path_start}.2"
314
315      insert_file_at_token "${LFBFL_tex_path_start}.2"\
316        @acknowledgments@\
317        "./${LFBFL_subdir2}/temp/acknowledgments_temp"\
318        "${LFBFL_tex_path_start}.3"
319
320      sed -i -e "s|@author_email@|${author_email}|g"\
321             -e "s|@author_full_name@|${author_full_name}|g"\
322             -e "s|@author_website@|${author_website}|g"\
323             -e "s|@current_date@|${LFBFL_current_date}|g"\
324             -e "s|@current_git_SHA1@|${LFBFL_current_git_SHA1}|g"\
325             -e "s|@number_of_commits@|${LFBFL_number_of_commits}|g"\
326             -e "s|@number_of_lines@|${LFBFL_number_of_lines}|g"\
327        "${LFBFL_tex_path_start}.3"
328
329      pushd "./${LFBFL_subdir2}/temp/" || (echo "pushd failed" && exit)
330      sed -i\
331        -e '/@current_tree_light@/{r current_tree_light.txt' -e 'd}'\
332        -e '/@current_tree@/{r current_tree.txt' -e 'd}'\
333        "${repository_name}.tex.3"
334      popd || (echo "popd failed" && exit)
335
336      insert_file_at_token "${LFBFL_tex_path_start}.3"\
337        @files_listing_VerbatimInput@\
338        "./${LFBFL_subdir2}/files_listing.tex.tpl"\
339        "${LFBFL_tex_path_start}.4"
340
341      overwrite_if_not_equal\
342        "./${LFBFL_subdir2}/${repository_name}.tex"\
343        "${LFBFL_tex_path_start}.4" 1
344    fi
345
346    # HTML filling:
347    if [[ -f "${LFBFL_html_path_start}.1" ]]; then
```

```
348      sed -i "s|@repository_name@|${repository_name}|g"\
349        "${LFBFL_html_path_start}.1"

350
351      insert_file_at_token "${LFBFL_html_path_start}.1" @abstract@\
352        "./${LFBFL_subdir2}/temp/abstract_temp"\
353        "${LFBFL_html_path_start}.2"

354
355      insert_file_at_token "${LFBFL_html_path_start}.2"\
356        @acknowledgments@\
357        "./${LFBFL_subdir2}/temp/acknowledgments_temp"\
358        "${LFBFL_html_path_start}.3"

359
360      sed -i -e "s|@author_email@|${author_email}|g"\
361            -e "s|@author_full_name@|${author_full_name}|g"\
362            -e "s|@author_website@|${author_website}|g"\
363            -e "s|@current_date@|${LFBFL_current_date}|g"\
364            -e "s|@current_git_SHA1@|${LFBFL_current_git_SHA1}|g"\
365            -e "s|@number_of_commits@|${LFBFL_number_of_commits}|g"\
366            -e "s|@number_of_lines@|${LFBFL_number_of_lines}|g"\
367        "${LFBFL_html_path_start}.3"

368
369      insert_file_at_token "${LFBFL_html_path_start}.3"\
370        @files_lis@ "${LFBFL_temp_files_lis}"\
371        "${LFBFL_html_path_start}.4"

372
373      pushd "./${LFBFL_subdir2}/temp/" || (echo "pushd failed" && exit)
374      sed -i\
375        -e '/@current_tree_light@/{r current_tree_light.txt' -e 'd}'\
376        -e '/@current_tree@/{r current_tree.txt' -e 'd}'\
377        "${repository_name}.html.4"
378      popd || (echo "popd failed" && exit)

379
380      insert_file_at_token "${LFBFL_html_path_start}.4"\
381        @files_listing_HTMLPreInput@\
382        "./${LFBFL_subdir2}/temp/files_listing.html.tpl"\
383        "${LFBFL_html_path_start}.5"

384
385      overwrite_if_not_equal "./${repository_name}.html"\
386        "${LFBFL_html_path_start}.5" 1
387    fi

388
389    if [[ LFBFL_verbose -eq 1 ]]; then
390      for ((i=0; i<3; i++)); do
391        pdflatex "./${LFBFL_subdir2}/${repository_name}.tex"
392      done
393    else
```

```
394    for ((i=0; i<3; i++)); do
395      pdflatex "./${LFBFL_subdir2}/${repository_name}.tex" > /dev/null
396    done
397  fi
398
399  LFBFL_files_to_temp=(\
400    "${repository_name}.aux"\
401    "${repository_name}.log"\
402    "${repository_name}.out"\
403    "${repository_name}.toc"
404  )
405  for LFBFL_file_name in "${LFBFL_files_to_temp[@]}"; do
406    mv "${LFBFL_file_name}" "${LFBFL_subdir2}/temp/"
407  done
408 }
409
410 create_PDF "$@"
```

2.9 build_and_checks_dependencies/generate_from_template.libr.sh

```
1  #!/usr/bin/env bash
2  # This file is part of DevOrSysAdminScripts library.
3  #
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11 # DevOrSysAdminScripts is distributed in the hope
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15 # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
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17 #
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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 disable=SC1090
29  source "./${LFBFL_subdir}/lines_filters.libr.sh"
30  # shellcheck disable=SC1090
31  source "./${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    echo "$3" > "${LFBFL_temp}"
42    cat "$1" >> "${LFBFL_temp}"
43    echo "$4" >> "${LFBFL_temp}"
44    overwrite_if_not_equal "$2" "${LFBFL_temp}"
45  }
46
47  generate_from_template_with_line_comments(){
48    # $1=base_file_name
49    # $2=target_file_name
50    # $3=line_comment_prefix
51    # $4=optional_post_processing
52    # $5=file_prefix
53    local LFBFL_temp
54    LFBFL_temp="$2.generate_from_template_with_line_comments.temp"
55    readonly LFBFL_temp
56    if [[ -n "$5" ]]; then
57      echo "$5" > "${LFBFL_temp}"
58    fi
59    sed -e "s/^/$3/g" "$1" >> "${LFBFL_temp}"
60    if [[ -n "$4" ]]; then
61      eval "$4"
62    fi
63    overwrite_if_not_equal "$2" "${LFBFL_temp}"
64  }
65
66  split_file_in_two(){
67    # $1=$file_name
68    # $2=$token assume that token is the only thing on his line.
69    # $3=$file_name_part1
70    # $4=$file_name_part2
71    declare -ir LFBFL_line_number=$(
72      grep -n "$2" "$1" | head --lines=1 | cut -f 1 -d ':'
```

52

```
73    )
74    declare -ir LFBFL_line_count=$(ll_wc -l -n "$1")
75    declare -ir LFBFL_lines_after=$((
76      LFBFL_line_count - LFBFL_line_number
77    ))
78    head --lines="$((LFBFL_line_number - 1))" "$1" > "$3"
79    tail --lines="${LFBFL_lines_after}" "$1" > "$4"
80  }
81
82  insert_file_at_token(){
83    # $1=$file_name
84    # $2=$token assume that token is the only thing on his line.
85    # $3=$file_name_to_insert
86    # $4=$file_name_result
87    declare -r LFBFL_start_file_name="$1.insert_file_at_token1.temp"
88    declare -r LFBFL_end_file_name="$1.insert_file_at_token2.temp"
89    local LFBFL_result_file_name
90    if [[ -n "$4" ]]; then
91      LFBFL_result_file_name="$4"
92    else
93      LFBFL_result_file_name="$1.insert_file_at_token3.temp"
94    fi
95    readonly LFBFL_result_file_name
96    split_file_in_two "$1" "$2" "${LFBFL_start_file_name}"\
97      "${LFBFL_end_file_name}"
98    cat "${LFBFL_start_file_name}" "$3" "${LFBFL_end_file_name}"\
99      > "${LFBFL_result_file_name}"
100   rm "${LFBFL_start_file_name}" "${LFBFL_end_file_name}"
101   if [[ -z "$4" ]]; then
102     overwrite_if_not_equal "$1" "${LFBFL_result_file_name}"
103   fi
104 }
```

2.10   build_and_checks_dependencies/get_common_text_glob_patterns.libr.sh

```
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11  # DevOrSysAdminScripts is distributed in the hope
```

```
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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 "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    # shellcheck disable=SC2034
33    declare -gr COMMON_TEXT_PATHS_GLOB_PATTERNS=(\
34      '**/*.c'\
35      '**/*.css'\
36      '**/*.h'\
37      '**/*.htm'\
38      '**/*.html'\
39      '**/*.js'\
40      '**/*.json'\
41      '**/*.md'\
42      '**/*.php'\
43      '**/*.py'\
44      '**/*.sh'\
45      '**/*.sql'\
46      '**/*.tex'\
47      '**/*.toml'\
48      '**/*.tpl'\
49      '**/*.ts'\
50      '**/*.txt'\
51      '**/*.yml'\
52      '**/COPYING'\
53      '**/COPYING.LESSER'\
54      '**/pre-commit'\
55      '**/post-commit'\
56      '**/.gitignore'\
57      '**/py.typed'\
```

```
58    )
59  }



62  get_COMMON_TEXT_FILES_GLOB_PATTERNS(){
63    if [[ -n "${COMMON_TEXT_FILES_GLOB_PATTERNS}" ]]; then
64      return
65    fi

67    # shellcheck disable=SC2034
68    declare -gr COMMON_TEXT_FILES_GLOB_PATTERNS=(\
69      '*.c'\
70      '*.css'\
71      '*.h'\
72      '*.htm'\
73      '*.html'\
74      '*.js'\
75      '*.json'\
76      '*.md'\
77      '*.php'\
78      '*.py'\
79      '*.sh'\
80      '*.sql'\
81      '*.tex'\
82      '*.toml'\
83      '*.tpl'\
84      '*.ts'\
85      '*.txt'\
86      '*.yml'\
87      'COPYING'\
88      'COPYING.LESSER'\
89      'pre-commit'\
90      'post-commit'\
91      '.gitignore'\
92      'py.typed'\
93    )
94  }
```

2.11   build_and_checks_dependencies/grammar_and_spell_check.libr.sh

```
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```

```
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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 disable=SC1090
29   source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
30   # shellcheck disable=SC1090
31   source "./${LFBFL_subdir}/lines_filters.libr.sh"
32
33   grammar_and_spell_check(){
34     get_COMMON_TEXT_FILES_GLOB_PATTERNS
35     grammar_or_spell_checker_command=""
36     grep_variable "$1" grammar_or_spell_checker_command
37     # shellcheck disable=SC2312
38     declare -r LFBFL_command=$(\
39       echo "${grammar_or_spell_checker_command}"\
40       | sed -Ez -e "s/\n//Mg"\
41     )
42     local LFBFL_file_path
43     local LFBFL_pattern
44     local LFBFL_eval_string
45     # shellcheck disable=SC2154
46     for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
47       [[ "$2" != "-v" ]]\
48         || echo "Iterating on pattern: ${LFBFL_pattern}"
49       # shellcheck disable=SC2312
50       find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
51         | while read -r LFBFL_file_path;
52       do
```

```
53    LFBFL_eval_string="${LFBFL_command} ${LFBFL_file_path}"
54    eval "${LFBFL_eval_string}"
55   done
56  done
57 }
```

2.12 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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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 disable=SC1090
29 source "./${LFBFL_subdir}/comparisons.libr.sh"
30 # shellcheck disable=SC1090
31 source "./${LFBFL_subdir}/generate_from_template.libr.sh"
32 # shellcheck disable=SC1090
33 source "./${LFBFL_subdir}/lines_filters.libr.sh"
34 # shellcheck disable=SC1090
35 source "./${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 $*"
46     LFBFL_verbose=1
47   fi
48   readonly LFBFL_verbose
49
50   # Source
51   local LFBFL_license_source_subdir
52   LFBFL_license_source_subdir="./${LFBFL_subdir}/licenses_templates/"
53   readonly LFBFL_license_source_subdir
54   local LFBFL_source_license_prefix="${LFBFL_license_source_subdir}"
55   LFBFL_source_license_prefix+="license_file_header_"
56   readonly LFBFL_source_license_prefix
57   # Target
58   local LFBFL_license_target_subdir
59   LFBFL_license_target_subdir="${LFBFL_working_directory}/"
60   LFBFL_license_target_subdir="build_and_checks_variables/temp/"
61   readonly LFBFL_license_target_subdir
62   local LFBFL_target_license_prefix="${LFBFL_license_target_subdir}"
63   LFBFL_target_license_prefix+="license_file_header_"
64   readonly LFBFL_target_license_prefix
65
66   declare -ar LFBFL_licenses=(\
67     "AGPLv3+"\
68     "GPLv3+"\
69     "LGPLv3+"
70   )
71
72   # --------------------------------------------------------------------
73   # Various language definitions for text file formats
74   declare -ar LFBFL_block_comment_languages=(\
75     "c"\
76     "py"\
77   )
78   declare -ar LFBFL_block_comment_enters=(\
79     '/*'\
80     '"""'\
81   )
82   declare -ar LFBFL_block_comment_exits=(\
83     '*/'\
84     '"""'\
```

58

```
85    )
86    equal "${#LFBFL_block_comment_languages[@]}"\
87          "${#LFBFL_block_comment_enters[@]}"\
88          "${#LFBFL_block_comment_exits[@]}"
89    declare -i LFBFL_equal_result=$?
90    if [[ LFBFL_equal_result -eq 0 ]]; then
91      echo $'/!\\Problem with the definitions of languages arrays 1/!\\'
92    fi
93
94    declare -ar LFBFL_line_comment_languages=(\
95      "sh"\
96      "tex"\
97    )
98    declare -ar LFBFL_line_comment_prefixes=(\
99      '# '\
100     '% '\
101   )
102   equal "${#LFBFL_line_comment_languages[@]}"\
103         "${#LFBFL_line_comment_prefixes[@]}"
104   LFBFL_equal_result=$?
105   if [[ LFBFL_equal_result -eq 0 ]]; then
106     echo $'/!\\Problem with the definitions of languages arrays 2/!\\'
107   fi
108   # ------------------------------------------------------------------
109
110   # ------------------------------------------------------------------
111   # We generate the license header templates adapted to various text
112   # files formats.
113   # Kamoulox do endfor, Jacques Beauregard XD
114   # (C'est toujours mieux que l'inverse :) !)
115   # for do endfor -> for do done (Fort Doux Donne).
116   local LFBFL_license
117   local LFBFL_license_prefix
118   local LFBFL_license_prefix2
119   local LFBFL_extension
120   local LFBFL_license_file_name
121   local LFBFL_enter_string
122   local LFBFL_exit_string
123   local LFBFL_temp2
124   local LFBFL_prefix_string
125   local LFBFL_intermediate_file_name
126   local LFBFL_file_prefix
127   declare -i LFBFL_generate_from_template_result
128   for LFBFL_license in "${LFBFL_licenses[@]}"; do
129     LFBFL_license_prefix="${LFBFL_source_license_prefix}"
130     LFBFL_license_prefix+="${LFBFL_license}"
```

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

```
177        elif [[ LFBFL_generate_from_template_result -eq 2 ]]; then
178          echo\
179            "License template ${LFBFL_license_file_name}.tpl created"
180        fi
181      fi
182    done
183  done
184  # -----------------------------------------------------------------
185
186  # Now that base license templates generated languages license
187  # templates in working directory, we can go there.
188  declare -i LFBFL_cd_result
189  pushd .
190  cd "${LFBFL_working_directory}" || {
191    LFBFL_cd_result=$?
192    echo "build_licenses_templates no such directory"
193    # shellcheck disable=SC2248
194    return ${LFBFL_cd_result}
195  }
196
197  local LFBFL_data_file_name="build_and_checks_variables/"
198  LFBFL_data_file_name+="repository_data.txt"
199  readonly LFBFL_data_file_name
200  repository_name=""
201  license=""
202  license2=""
203  author_full_name=""
204  grep_variable "${LFBFL_data_file_name}" repository_name
205  grep_variable "${LFBFL_data_file_name}" license
206  grep_variable "${LFBFL_data_file_name}" license2
207  grep_variable "${LFBFL_data_file_name}" author_full_name
208
209  LFBFL_license_prefix="build_and_checks_variables/temp/"
210  LFBFL_license_prefix+="license_file_header_"
211  readonly LFBFL_license_prefix
212  LFBFL_license_prefix2="${LFBFL_license_prefix}${license}"
213  readonly LFBFL_license_prefix2
214  declare -r\
215    LFBFL_license_prefix3="${LFBFL_license_prefix}${license2}"
216
217  # First year according to current state of git repository.
218  # shellcheck disable=SC2155,SC2312
219  declare -r LFBFL_first_year=\
220 "$(git log | grep 'Date:' | cut -f 8 -d ' ' | tail -1)"
221  # Last year according to current state of git repository.
222  # shellcheck disable=SC2155,SC2312
```

```
223   declare -r LFBFL_last_year=\
224 "$(git log | grep 'Date:' | cut -f 8 -d ' ' | head -1)"
225   local LFBFL_copyright_string
226   LFBFL_copyright_string="${LFBFL_first_year}-${LFBFL_last_year}"
227   LFBFL_copyright_string+=" ${author_full_name}"
228   readonly LFBFL_copyright_string
229
230   prepare_filled_license_file_block(){
231     # $1=license_file_name
232     sed -e "s/@repository_name@/${repository_name}/g"\
233         -e "s/@copyright_string@/${LFBFL_copyright_string}/g"\
234         "$1.tpl" > "$1.temp"
235     overwrite_if_not_equal "$1" "$1.temp"
236     declare -r LFBFL_result=$?
237     if [[ LFBFL_verbose -eq 1 ]]; then
238       if [[ LFBFL_result -eq 1 ]]; then
239         echo "License template $1 updated"
240       elif [[ LFBFL_result -eq 2 ]]; then
241         echo "License template $1 created"
242       fi
243     fi
244     # shellcheck disable=SC2312
245     head --lines=-1 "$1" | tail --lines=+2 > "$1.temp"
246     # Strange world: tail --lines=-1 was working
247     # to exclude first line.
248     # I tested it months ago, and saw with my eyes the start and end
249     # block comments removed with:
250     # head --lines=-1 "$1" | tail --lines=-1.
251     # Now, man page says to use --lines=+2 instead.
252     # Welcome in the world where AI change your environment and your
253     # documentation on the fly...
254   }
255
256   declare -A LFBFL_all_block_comment_languages
257   LFBFL_all_block_comment_languages["c"]="c"
258   LFBFL_all_block_comment_languages["php"]="c"
259   LFBFL_all_block_comment_languages["py"]="py"
260
261   local LFBFL_key
262   local LFBFL_dest
263   local LFBFL_license_file_name2
264   declare -i LFBFL_not_subfile
265   declare -i LFBFL_not_subfile2
266
267   for LFBFL_key in "${!LFBFL_all_block_comment_languages[@]}"; do
268     LFBFL_dest=${LFBFL_all_block_comment_languages[${LFBFL_key}]}
```

```
269    LFBFL_license_file_name="${LFBFL_license_prefix2}.${LFBFL_dest}"
270    prepare_filled_license_file_block "${LFBFL_license_file_name}"
271    if [[ -n "${license2}" ]]; then
272      LFBFL_license_file_name2="${LFBFL_license_prefix3}"
273      LFBFL_license_file_name2+=".${LFBFL_dest}"
274      prepare_filled_license_file_block "${LFBFL_license_file_name2}"
275    fi
276    # shellcheck disable=SC2312
277    find . -type f -name "*.${LFBFL_key}" -printf '%P\n'\
278      | relevant_find | while read -r LFBFL_file_name;
279    do
280      is_subfile "${LFBFL_file_name}"\
281        "${LFBFL_license_file_name}.temp"
282      LFBFL_not_subfile=$?
283      LFBFL_not_subfile2=1
284      if [[ -n "${license2}" ]]; then
285        is_subfile "${LFBFL_file_name}"\
286          "${LFBFL_license_file_name2}.temp"
287        LFBFL_not_subfile2=$?
288      fi
289      if [[ LFBFL_not_subfile -ge 1 && LFBFL_not_subfile2 -ge 1 ]];
290      then
291        echo "File ${LFBFL_file_name} has no/wrong license header?"
292      fi
293    done
294    rm "${LFBFL_license_file_name}.temp"
295    if [[ -n "${license2}" ]]; then
296      rm "${LFBFL_license_file_name2}.temp"
297    fi
298  done
299
300  prepare_filled_license_file_line(){
301    # $1=LFBFL_license_file_name
302    sed -e "s/@repository_name@/${repository_name}/g"\
303        -e "s/@copyright_string@/${LFBFL_copyright_string}/g"\
304        "$1.tpl" > "$1.temp"
305    overwrite_if_not_equal "$1" "$1.temp"
306    declare -r LFBFL_result=$?
307    if [[ LFBFL_verbose -eq 1 ]]; then
308      if [[ LFBFL_result -eq 1 ]]; then
309        echo "License template $1 updated"
310      elif [[ LFBFL_result -eq 2 ]]; then
311        echo "License template $1 created"
312      fi
313    fi
314  }
```

```
315
316    declare -A LFBFL_all_line_comment_languages
317    LFBFL_all_line_comment_languages["sh"]="sh"
318    LFBFL_all_line_comment_languages["tex"]="tex"
319
320    for LFBFL_key in "${!LFBFL_all_line_comment_languages[@]}"; do
321      LFBFL_dest=${LFBFL_all_line_comment_languages[${LFBFL_key}]}
322      LFBFL_license_file_name="${LFBFL_license_prefix2}.${LFBFL_dest}"
323      prepare_filled_license_file_line "${LFBFL_license_file_name}"
324      if [[ -n "${license2}" ]]; then
325        LFBFL_license_file_name2="${LFBFL_license_prefix3}"
326        LFBFL_license_file_name2+=".${LFBFL_dest}"
327        prepare_filled_license_file_line "${LFBFL_license_file_name2}"
328      fi
329      # shellcheck disable=SC2312
330      find . -type f -name "*.${LFBFL_key}" -printf '%P\n'\
331        | relevant_find | while read -r LFBFL_file_name;
332      do
333        is_subfile "${LFBFL_file_name}" "${LFBFL_license_file_name}"
334        LFBFL_not_subfile=$?
335        LFBFL_not_subfile2=1
336        if [[ -n "${license2}" ]]; then
337          is_subfile "${LFBFL_file_name}" "${LFBFL_license_file_name2}"
338          LFBFL_not_subfile2=$?
339        fi
340        if [[ LFBFL_not_subfile -ge 1 && LFBFL_not_subfile2 -ge 1 ]];
341        then
342          echo "File ${LFBFL_file_name} has no/wrong license header?"
343        fi
344      done
345    done
346
347    declare -i LFBFL_popd_result
348    popd || {
349      LFBFL_popd_result=$?
350      echo "build_licenses_templates no popd"
351      # shellcheck disable=SC2248
352      return ${LFBFL_popd_result}
353    }
354  }
355
356  build_licenses_templates "$@"
```

2.13 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@
```

2.14 build_and_checks_dependencies/licenses_templates/license_file_header_GPLv3+.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 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@
```

2.15   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@
```

2.16   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 disable=SC1090
29  source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
30  # shellcheck disable=SC1090
31  source "./${LFBFL_subdir}/lines_filters.libr.sh"
32
33  all_code_lines(){
34    get_COMMON_TEXT_FILES_GLOB_PATTERNS
35    local LFBFL_pattern
36    # shellcheck disable=SC2154
37    for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
38      [[ "$1" != "-v" ]]\
39        || echo "Iterating on pattern: ${LFBFL_pattern}"
40      # shellcheck disable=SC2312
41      find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
42        | xargs grep -H -v 'a(?!a)a'
43    done
44  }
45
46  all_self_code_lines(){
47    # shellcheck disable=SC2312
48    all_code_lines "$@" | relevant_grep\
49      | not_license_grep | not_main_tex_grep | not_main_html_grep
50  }
51
52  all_self_empty_code_lines(){
53    # shellcheck disable=SC2312
54    all_self_code_lines "$@" | empty_lines_after_file_name
55  }
56
57  all_self_not_empty_code_lines(){
58    # shellcheck disable=SC2312
59    all_self_code_lines "$@" | not_empty_lines_after_file_name
60  }
61
```

```
62  code_lines_count_all(){
63    # shellcheck disable=SC2312
64    all_self_code_lines "$@" | wc -l
65  }
66
67  code_lines_count_empty(){
68    # shellcheck disable=SC2312
69    all_self_empty_code_lines "$@" | wc -l
70  }
71
72  code_lines_count_not_empty(){
73    # shellcheck disable=SC2312
74    all_self_not_empty_code_lines "$@" | wc -l
75  }
```

2.17   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:
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_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     declare -a ll_wc_var_args=()
50     declare -i ll_wc_var_number_only=0
51     declare -i ll_wc_var_i=0
52     for ll_wc_var_arg in "$@"; do
53       # echo "$ll_wc_var_arg"
54       if [[ "${ll_wc_var_arg}" == "-n" ]]; then
55         ll_wc_var_number_only=1
56       elif [[ "${ll_wc_var_arg}" == "--no-filenames" ]]; then
57         ll_wc_var_number_only=1
58       elif [[ ll_wc_var_number_only -eq 0 ]]; then
59         ll_wc_var_args[ll_wc_var_i]="${ll_wc_var_arg}"
60         ll_wc_var_i=$((ll_wc_var_i + 1))
61       elif [[ "${ll_wc_var_arg}" =~ -.* ]]; then
62         ll_wc_var_args[ll_wc_var_i]="${ll_wc_var_arg}"
63         ll_wc_var_i=$((ll_wc_var_i + 1))
64       fi
65     done
66     # typeset -p ll_wc_var_args
67     # echo "$ll_wc_var_number_only"
68     if [[ ll_wc_var_number_only -gt 0 ]]; then
69       # Too simple code, only the base use case is handled now.
70       # Convenient but incomplete.
71       # With more time,
72       # the simpler would be to submit a patch to GNU coreutils,
73       # unless blockade from assholes.
74       # Otherwise, it may be more simply handled in PHP or Python
75       # (argparse, etc.).
```

69

```
76    # You'll need to start by improving cat first,
77    # with --files0-from handling.
78    # wc does not display file_name when stream...
79    # hence cat of last arg "${!#}"
80    # shellcheck disable=SC2312
81    cat "${!#}" | wc "${ll_wc_var_args[@]}"
82  else
83    # echo "normal"
84    wc "${ll_wc_var_args[@]}"
85  fi
86 }
87
88 # I submitted a patch for wc :).
89 # echo "https://domain/list-path/2024-05/msg00013.html" | \
90 #   sed -e 's|domain|lists.gnu.org|' \
91 #       -e 's|list-path|archive/html/bug-coreutils|'
92 # I found another way to have a long URL fit on 70 characters.
93 # If it is merged, the following would be better:
94 # If --no-filenames option available,
95 # we redefine ll_wc command as an alias.
96 wc_help_text=$(wc --help)
97 if [[ "${wc_help_text}" == *" --no-filenames "* ]]; then
98   alias ll_wc='wc'
99 fi
100
101 # Trace avant le (2e ?) renommage
102 # de wget_sha512.sh à wget_sha512.libr.sh.
103 # $ ll_wc wget_sha512.sh
104 #  41  189 1224 wget_sha512.sh
105 # $ ll_wc -n wget_sha512.sh
106 #    41     189    1224
107 # $ ll_wc -l wget_sha512.sh
108 # 41 wget_sha512.sh
109 # $ ll_wc -l -n wget_sha512.sh
110 # 41
111
112 in_place_grep(){
113   declare -r LFBFL_temp="${!#}.in_place_grep.temp"
114   grep "$@" > "${LFBFL_temp}"
115   declare -r LFBFL_lines_before=$(ll_wc -l -n "${!#}")
116   declare -r LFBFL_lines_after=$(ll_wc -l -n "${LFBFL_temp}")
117   # echo "$LFBFL_lines_before"
118   # echo "$LFBFL_lines_after"
119   if [[ "${LFBFL_lines_before}" ==  "${LFBFL_lines_after}" ]]; then
120     rm "${LFBFL_temp}"
121     return
```

```
122     fi
123     mv "${LFBFL_temp}" "${!#}"
124   }
125
126   grep_variable(){
127     # $1=$file
128     # $2=$variable_name
129     declare -r LFBFL_regexp="(?<=^$2=).*$"
130     # echo $LFBFL_regexp
131     declare -r LFBFL_variable_value="$(grep -oP "${LFBFL_regexp}" "$1")"
132     # echo $LFBFL_variable_value
133     declare -g "$2"="${LFBFL_variable_value}"
134   }
135
136   repository_name=""
137   grep_variable build_and_checks_variables/repository_data.txt\
138     repository_name
139
140   empty_lines(){
141     grep '^$'
142   }
143
144   not_empty_lines(){
145     grep -v '^$'
146   }
147
148   space_starting_lines(){
149     grep '^[ ]'
150   }
151
152   not_space_starting_lines(){
153     grep '^[^ ]'
154   }
155
156   empty_lines_after_file_name(){
157     grep '^[^:]\+:$'
158   }
159
160   not_empty_lines_after_file_name(){
161     grep -v '^[^:]\+:$'
162   }
163
164   space_starting_lines_after_file_name(){
165     grep '^[^:]\+: '
166   }
167
```

```
168  not_space_starting_lines_after_file_name(){
169    grep '^[^:]\+:[^ ]'
170  }
171
172  not_JS_dependencies_find(){
173    # shellcheck disable=SC2312
174    grep -vE -e "(^|/)node_modules/" -e "(^|/)package-lock\.json$"
175  }
176
177  not_JS_dependencies_grep(){
178    # shellcheck disable=SC2312
179    grep -vE -e "^([^:]+/)?node_modules/"\
180      -e "^([^:]+/)?package-lock\.json:"
181  }
182
183  not_dependencies_find(){
184    not_JS_dependencies_find
185  }
186
187  not_dependencies_grep(){
188    not_JS_dependencies_grep
189  }
190
191  not_python_cache_find(){
192    # shellcheck disable=SC2312
193    grep -vE -e "(^|/)__pycache__/" -e "(^|/)\.mypy_cache/"\
194      -e "(^|/)\.ruff_cache/"
195  }
196
197  not_python_cache_grep(){
198    # shellcheck disable=SC2312
199    grep -vE -e "^([^:]+/)?__pycache__/" -e "^([^:]+/)?\.mypy_cache/"\
200      -e "^([^:]+/)?\.ruff_cache/"
201  }
202
203  not_cache_find(){
204    not_python_cache_find
205  }
206
207  not_cache_grep(){
208    not_python_cache_grep
209  }
210
211  not_git_find(){
212    grep -vE "(^|/)\.git/"
213  }
```

```
214
215  not_git_grep(){
216    grep -vE "^([^:]+/)?\.git/"
217  }
218
219  not_archive_find(){
220    grep -vE "(\.gz|\.rar|\.tar|\.tgz|\.whl)$"
221  }
222
223  not_archive_grep(){
224    grep -vE "^[^:]*(\.gz|\.rar|\.tar|\.tgz|\.whl):"
225  }
226
227  not_license_find(){
228    # shellcheck disable=SC2312
229    grep -vE -e "(^|/)COPYING$" -e "(^|/)COPYING\.LESSER$"
230  }
231
232  not_license_grep(){
233    # shellcheck disable=SC2312
234    grep -vE -e "^([^:]+/)?COPYING:" -e "^([^:]+/)?COPYING\.LESSER:"
235  }
236
237  not_main_tex_find(){
238    grep -vE "(^|/)${repository_name}\.tex$"
239  }
240
241  not_main_tex_grep(){
242    grep -vE "^([^:]+/)?${repository_name}\.tex:"
243  }
244
245  not_main_html_find(){
246    grep -vE "(^|/)${repository_name}\.html$"
247  }
248
249  not_main_html_grep(){
250    grep -vE "^([^:]+/)?${repository_name}\.html:"
251  }
252
253  not_temp_file_find(){
254    grep -vE "(^|/)build_and_checks_variables/temp/.*$"
255  }
256
257  not_temp_file_grep(){
258    grep -vE "^([^:]+/)?build_and_checks_variables/temp/[^:]*:"
259  }
```

73

```
260
261  relevant_find(){
262    # shellcheck disable=SC2312
263    not_dependencies_find | not_cache_find | not_git_find\
264    | not_archive_find | not_temp_file_find
265  }
266
267  relevant_grep(){
268    # shellcheck disable=SC2312
269    not_dependencies_grep | not_cache_grep | not_git_grep\
270    | not_archive_grep | not_temp_file_grep
271  }
```

2.18   build_and_checks_dependencies/lines_maps.libr.sh

```
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10  #
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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 "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    # shellcheck disable=SC2312
39    sed -e 's/\xc2\xa0/ /g'\
40    | sed -e 's/\xe2\x80\x80/ /g'\
41    | sed -e 's/\xe2\x80\x81/ /g'\
42    | sed -e 's/\xe2\x80\x82/ /g'\
43    | sed -e 's/\xe2\x80\x83/ /g'\
44    | sed -e 's/\xe2\x80\x84/ /g'\
45    | sed -e 's/\xe2\x80\x85/ /g'\
46    | sed -e 's/\xe2\x80\x86/ /g'\
47    | sed -e 's/\xe2\x80\x87/ /g'\
48    | sed -e 's/\xe2\x80\x88/ /g'\
49    | sed -e 's/\xe2\x80\x89/ /g'\
50    | sed -e 's/\xe2\x80\x8a/ /g'\
51    | sed -e 's/\xe2\x80\x8b/ /g'\
52    | sed -e 's/\xe2\x80\x8c/ /g'\
53    | sed -e 's/\xe2\x80\x8d/ /g'\
54    | sed -e 's/\xe2\x80\x8e/ /g'\
55    | sed -e 's/\xe2\x80\x8f/ /g'\
56    | sed -e 's/\xe2\x80\xa8/ /g'\
57    | sed -e 's/\xe2\x80\xa9/ /g'\
58    | sed -e 's/\xe2\x80\xaa/ /g'\
59    | sed -e 's/\xe2\x80\xab/ /g'\
60    | sed -e 's/\xe2\x80\xac/ /g'\
61    | sed -e 's/\xe2\x80\xad/ /g'\
62    | sed -e 's/\xe2\x80\xae/ /g'\
63    | sed -e 's/\xe2\x80\xaf/ /g'\
64    | sed -e 's/\xe2\x81\x9f/ /g'\
65    | sed -e 's/\xe2\x81\xa0/ /g'\
66    | sed -e 's/\xe2\x81\xa1/ /g'\
67    | sed -e 's/\xe2\x81\xa2/ /g'\
68    | sed -e 's/\xe2\x81\xa3/ /g'\
69    | sed -e 's/\xe2\x81\xa4/ /g'\
70    | sed -e 's/\xe2\x81\xa5/ /g'\
71    | sed -e 's/\xe2\x81\xa6/ /g'\
72    | sed -e 's/\xe2\x81\xa7/ /g'\
73    | sed -e 's/\xe2\x81\xa8/ /g'\
74    | sed -e 's/\xe2\x81\xa9/ /g'\
75    | sed -e 's/\xe2\x81\xaa/ /g'\
76    | sed -e 's/\xe2\x81\xab/ /g'\
77    | sed -e 's/\xe2\x81\xac/ /g'\
```

```
78    | sed -e 's/\xe2\x81\xad/ /g'\
79    | sed -e 's/\xe2\x81\xae/ /g'\
80    | sed -e 's/\xe2\x81\xaf/ /g'
81  }
```

2.19 build_and_checks_dependencies/overwrite_if_not_equal.libr.sh

```
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10  #
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22  #
23  # ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
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
```

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```
40      mv "$2" "$1"
41    fi
42    return 2
43  fi
44  declare -i LFBFL_is_equal
45  if [[ -n "$4" ]]; then
46    # shellcheck disable=SC2312
47    diff "$1" "$2" | grep -E "^(>|<)" | grep -v "/$"
48    LFBFL_is_equal=$?
49  else
50    diff -q "$1" "$2"
51    LFBFL_is_equal=1-$?
52  fi
53  if [[ LFBFL_is_equal -eq 1 ]]; then
54    if [[ -z "$3" ]]; then
55      rm "$2"
56    fi
57    return 0
58  fi
59  if [[ -n "$3" ]]; then
60    cp -p "$2" "$1"
61  else
62    mv "$2" "$1"
63  fi
64  return 1
65 }
```

2.20   build_and_checks_dependencies/python_black_complement.libr.sh

```
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17 #
```

```
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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  }
```

2.21 build_and_checks_dependencies/python_isort_complement.libr.sh

```
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```

```
20  # along with DevOrSysAdminScripts.
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22  #
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 disable=SC1090
29  source "./${LFBFL_subdir}/lines_filters.libr.sh"
30  # shellcheck disable=SC1090
31  source "./${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    declare -r LFBFL_temp=".check_collections_abc_place.temp"
36    # shellcheck disable=SC2312
37    find . -name "*.py" | relevant_find\
38      | while read -r LFBFL_file_name; do
39      [[ -f "${LFBFL_file_name}" ]] || continue
40      sed -Ez 's/\n(\nfrom _collections_abc[^\n]*)/\1\n/Mg'\
41        "${LFBFL_file_name}" > "${LFBFL_file_name}${LFBFL_temp}"
42      overwrite_if_not_equal "${LFBFL_file_name}"\
43        "${LFBFL_file_name}${LFBFL_temp}"
44    done
45  }
46
47  python_isort_complement(){
48    check_collections_abc_place
49  }
```

2.22   build_and_checks_dependencies/split_score.exec.php

```
1   #!/usr/bin/php
2   <?php
3   /*
4   This file is part of DevOrSysAdminScripts library.
5
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12
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```

79

```
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22  along with DevOrSysAdminScripts.
23  If not, see <https://www.gnu.org/licenses/>.
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  );
```

2.23   build_and_checks_dependencies/split_score.libr.php

```
1  <?php
2  /*
```

80

```
2026-01-04T13:38+01:00: This file was renamed from
"split_line_at_most.libr.php"
to
"split_score.libr.php".
This file was renamed from "split_line_at_most.php" to
"split_line_at_most.libr.php".
*/

function generate_split_score(
  $b_after_before,
  $i_max_length,
  $a_delimiter_strings_domain,
){
  return function(
    $s_delimiter_string,
    $i_cut_position,
    $b_is_cut_after,
  ) use ($b_after_before, $i_max_length, $a_delimiter_strings_domain){
    if(
      !in_array(
        $s_delimiter_string, $a_delimiter_strings_domain, true
      )
    ){
      // 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  }
```

2.24 build_and_checks_dependencies/strings_functions.libr.sh

```
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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
```

```bash
29  # "strings_functions.libr.sh".

30

31  LFBFL_subdir="build_and_checks_dependencies"
32  # shellcheck disable=SC1090
33  source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
34  # shellcheck disable=SC1090
35  source "./${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    # shellcheck disable=SC2034,SC2125
70    get_split_score_result2=7+$1*4
71    # if [[ $1 -eq 1 ]]; then
72    #   get_split_score_result2=7
73    # else
74    #   get_split_score_result2=11
```

```
75    # fi
76  }
77
78  get_split_score_exec(){
79    declare -g SPLIT_SCORE_EXEC="./build_and_checks_dependencies"
80    SPLIT_SCORE_EXEC+="/split_score.exec.php"
81  }
82
83  split_score(){
84    # $1=$after_before
85    # $2=$max_length
86    # $3=$delimiters_strings_domain concatenated characters/delimiters
87    # $4=$delimiter_string a single character
88    # $5=$cut_position
89    # $6=$is_cut_after
90    get_split_score_exec
91    declare -r LFBFL_command="${SPLIT_SCORE_EXEC} $1 $2 '$3' '$4' $5 $6"
92    declare -gi split_score_result
93    split_score_result=$(eval "${LFBFL_command}")
94  }
95
96  get_split_score(){
97    # $1=$after_before
98    # $1=$max_length
99    # $2=$delimiters_strings_domain
100   # shellcheck disable=SC2034
101   declare -g get_split_score_result="split_score $1 $2 '$3'"
102   declare -gi get_split_score_result2
103   # shellcheck disable=SC2034,SC2125
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=$1
153    split_line_at_most_result_end=""
154    return
155  fi
156  declare -r LFBFL_sort_command="sort --numeric-sort"
157  declare -r LFBFL_length_minus_1=$((${#1} - 1))
158  declare -r LFBFL_i_max=$(
159    min "${LFBFL_sort_command}" "${LFBFL_length_minus_1}" "$2"
160  )
161  local LFBFL_i
162  local LFBFL_j
163  local LFBFL_previous_char
164  local LFBFL_current_char
165
166  # At the beginning, each position has score 0.
```

85

```
167    for ((LFBFL_i=0; LFBFL_i<=LFBFL_i_max; ++LFBFL_i)) do
168      LFBFL_positions["${LFBFL_i}"]="0"
169    done
170    LFBFL_j=$((LFBFL_i+1))
171    LFBFL_positions["${LFBFL_j}"]="0"
172
173    # If we have a forbidden previous character,
174    # we mark the forbidden positions with -1.
175    if [[ -n "$5" ]]; then
176      LFBFL_previous_char=""
177      for ((LFBFL_i=0; LFBFL_i<LFBFL_i_max; ++LFBFL_i)) do
178        LFBFL_j=$((LFBFL_i+1))
179        if [[ LFBFL_i -ge 1 ]]; then
180          LFBFL_previous_char="${LFBFL_current_char}"
181        fi
182        LFBFL_current_char="${1:${LFBFL_i}:1}"
183        if [[ "${LFBFL_previous_char}" == "$5" ]]; then
184          LFBFL_positions["${LFBFL_i}"]="-1"
185        fi
186        if [[ "${LFBFL_current_char}" == "$5" ]]; then
187          LFBFL_positions["${LFBFL_j}"]="-1"
188        fi
189      done
190    fi
191
192    if [[ "$4" == "7" ]]; then
193      for ((LFBFL_j=LFBFL_i_max; LFBFL_j>0; --LFBFL_j)) do
194        LFBFL_i=$((LFBFL_j-1))
195        LFBFL_current_char="${1:${LFBFL_i}:1}"
196        eval "$3 '${LFBFL_current_char}' 0"
197        # echo "${split_score_result}|${LFBFL_i}"
198        if [[ split_score_result -ge 1 ]]; then
199          # echo "${split_score_result}|${LFBFL_i}"
200          if [[ ${LFBFL_positions["${LFBFL_i}"]} != "-1" ]]; then
201            LFBFL_positions["${LFBFL_i}"]=$(
202              max "${LFBFL_sort_command}"\
203                "${LFBFL_positions["${LFBFL_i}"]}"\
204                "${split_score_result}"
205            )
206          fi
207        fi
208        eval "$3 '${LFBFL_current_char}' 1"
209        # echo "${split_score_result}|${LFBFL_j}"
210        if [[ split_score_result -ge 1 ]]; then
211          # echo "${split_score_result}|${LFBFL_j}"
212          if [[ ${LFBFL_positions["${LFBFL_j}"]} != "-1" ]]; then
```

```
213        LFBFL_positions["${LFBFL_j}"]=$(
214          max "${LFBFL_sort_command}"\
215            "${LFBFL_positions["${LFBFL_j}"]}"\
216            "${split_score_result}"
217        )
218        break
219      fi
220    fi
221  done
222  else
223    for ((LFBFL_i=0; LFBFL_i<LFBFL_i_max; ++LFBFL_i)) do
224      LFBFL_j=$((LFBFL_i+1))
225      LFBFL_current_char="${1:${LFBFL_i}:1}"
226      eval "$3 '${LFBFL_current_char}' ${LFBFL_i} 0"
227      # echo "${split_score_result}|${LFBFL_i}"
228      if [[ split_score_result -ge 1 ]]; then
229        # echo "${split_score_result}|${LFBFL_i}"
230        if [[ ${LFBFL_positions["${LFBFL_i}"]} != "-1" ]]; then
231          LFBFL_positions["${LFBFL_i}"]=$(
232            max "${LFBFL_sort_command}"\
233              "${LFBFL_positions["${LFBFL_i}"]}"\
234              "${split_score_result}"
235          )
236        fi
237      fi
238      eval "$3 '${LFBFL_current_char}' ${LFBFL_j} 1"
239      # echo "${split_score_result}|${LFBFL_j}"
240      if [[ split_score_result -ge 1 ]]; then
241        # echo "${split_score_result}|${LFBFL_j}"
242        if [[ ${LFBFL_positions["${LFBFL_j}"]} != "-1" ]]; then
243          LFBFL_positions["${LFBFL_j}"]=$(
244            max "${LFBFL_sort_command}"\
245              "${LFBFL_positions["${LFBFL_j}"]}"\
246              "${split_score_result}"
247          )
248        fi
249      fi
250    done
251  fi
252  declare -r LFBFL_max_score=\
253 $(max 'sort --numeric-sort' "${LFBFL_positions[@]}")
254  local LFBFL_best_position
255  for ((LFBFL_i=0; LFBFL_i<=LFBFL_i_max; ++LFBFL_i)) do
256    local LFBFL_value=${LFBFL_positions[${LFBFL_i}]}
257    # echo "${LFBFL_i} ${LFBFL_value}"
258    if [[ "${LFBFL_value}" == "${LFBFL_max_score}" ]]; then
```

```
259        LFBFL_best_position="${LFBFL_i}"
260      fi
261    done
262    split_line_at "$1" "${LFBFL_best_position}"
263    split_line_at_most_result_start="${split_line_at_result_beginning}"
264    split_line_at_most_result_end="${split_line_at_result_end}"
265    # echo "$split_line_at_most_result_start"
266    # echo "$split_line_at_most_result_end"
267  }
268
269  split_last_line(){
270    # $1=$new_lines
271    # $2=$prefix
272    # $3=$max_length
273    # $4=$suffix
274    # $5=$split_score_command
275    # $6=$split_score_command_properties
276    # $7=$forbidden_previous_character ('\' usually)
277    # In general, a prefix/suffix can be a required line prefix/suffix
278    # for all final lines like a comment prefix,
279    # or it can be a continuation line prefix/suffix applied only
280    # when splitting a line in 2 lines,
281    # or it can be a prefix/suffix for the string made of all the lines.
282    # Clearly, there is no gain to couple handling a prefix/suffix for
283    # the string made of all the lines in this function.
284    # Since we add a prefix/suffix when splitting,
285    # it is easy to see that we do not need to distinguish between
286    # required line prefix/suffix and continuation line prefix/suffix.
287    # The $2 and $4 arguments are given as concatenation of the
288    # required and continuation line prefixes/suffixes as needed by the
289    # user.
290    # Thus lines arguments should be given already prefixed
291    # and suffixed.
292    # This is logic, since it would be cumbersome to handle prefixing
293    # or not already splitted lines in this function
294    # (see repeated_split_last_line).
295    # The given max_length is the goal.
296    # This function adapts the effective max position for the split by
297    # taking into account the length of the suffix.
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    # shellcheck disable=SC2312
303    if echo "$1" | sed -e 's/\\n/\n/g' | grep -q "${LFBFL_regexp}"; then
304      # shellcheck disable=SC2312
```

```
305    declare -r LFBFL_start=$(\
306      echo "$1" | sed -e 's/\\n/\n/g' | head --lines=-1\
307      | sed -z 's/\n/\\n/g'\
308    )
309    # echo "start: $LFBFL_start"
310    declare -r LFBFL_last_line=$(\
311      echo "$1" | sed -e 's/\\n/\n/g' | tail --lines=1\
312    )
313    # echo "last_line: ${LFBFL_last_line}"
314    split_last_line_result=""
315    if [[ -n "${LFBFL_start}" ]]; then
316      split_last_line_result="${LFBFL_start}\n"
317    fi
318    if [[ -n "$5" ]]; then
319      split_line_at_most "${LFBFL_last_line}" "${LFBFL_length2}"\
320        "$5" "$6" "$7"
321      split_last_line_result+="${split_line_at_most_result_start}$4"
322      split_last_line_result+="\n"
323      split_last_line_result+="$2${split_line_at_most_result_end}"
324    else
325      split_last_line_result+="${LFBFL_last_line:0:${LFBFL_length2}}"
326      split_last_line_result+="$4\n"
327      split_last_line_result+="$2${LFBFL_last_line:${LFBFL_length2}}"
328    fi
329    fi
330  }
331
332  repeated_split_last_line(){
333    declare -g repeated_split_last_line_result="$1"
334    local LFBFL_i
335    for ((LFBFL_i=0; LFBFL_i<$6; ++LFBFL_i)) do
336      split_last_line "${repeated_split_last_line_result}" "$2" "$3"\
337        "$4" "$5" "$6" "$7"
338      repeated_split_last_line_result="${split_last_line_result}"
339      # echo "${split_last_line_result}"
340    done
341  }
```

2.25   build_and_checks_dependencies/too_long_code_lines.libr.sh

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

```
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 9   # or (at your option) any later version.
10   #
11   # DevOrSysAdminScripts is distributed in the hope
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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 "too_long_code_lines.sh"
25   # to "too_long_code_lines.libr.sh".
26
27   LFBFL_subdir="build_and_checks_dependencies"
28   # shellcheck disable=SC1090
29   source "./${LFBFL_subdir}/get_common_text_glob_patterns.libr.sh"
30   # shellcheck disable=SC1090
31   source "./${LFBFL_subdir}/lines_filters.libr.sh"
32
33   too_long_code_lines(){
34     get_COMMON_TEXT_FILES_GLOB_PATTERNS
35     local LFBFL_pattern
36     local LFBFL_file_name
37     local LFBFL_line
38     local LFBFL_extension
39     local LFBFL_base_name
40     # shellcheck disable=SC2154
41     for LFBFL_pattern in "${COMMON_TEXT_FILES_GLOB_PATTERNS[@]}"; do
42       [[ "$1" != "-v" ]]\
43         || echo "Iterating on pattern: ${LFBFL_pattern}"
44       # shellcheck disable=SC2312
45       find . -type f -name "${LFBFL_pattern}" -printf '%P\n'\
46         | relevant_find | not_license_find\
47         | xargs grep -H '.\{71\}' | while read -r LFBFL_long_line
48       do
49         LFBFL_file_name=${LFBFL_long_line%%:*} # Drop long ':*' suffix
50         LFBFL_line=${LFBFL_long_line#*:} # Drop short '*:' prefix
51         LFBFL_line="${LFBFL_line/%\\/}" # Drop/Replace '\' suffix by ''
52         LFBFL_extension=${LFBFL_file_name##*.} # Drop long '*.' prefix
```

```
53      LFBFL_base_name=${LFBFL_file_name%.*} # Drop short '.*' suffix
54      if [[ "${LFBFL_extension}" == "html" ]]; then
55        if [[ -f "${LFBFL_base_name}.md" ]]; then
56          continue
57        fi
58        if grep --quiet --fixed-strings "${LFBFL_line}"\
59          "./build_and_checks_variables/temp/files_listing.html.tpl"
60        then
61          continue
62        fi
63        echo "${LFBFL_long_line}"
64      elif [[ "${LFBFL_extension}" == "md" ]]; then
65        if ! [[ -f "${LFBFL_base_name}.md.tpl" ]]; then
66          echo "${LFBFL_long_line}"
67        fi
68      else
69        echo "${LFBFL_long_line}"
70      fi
71    done
72  done
73 }
```

2.26   build_and_checks_dependencies/update_common_build_and_checks.exec.sh

```
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21 # If not, see <https://www.gnu.org/licenses/>.
22 #
```

91

```
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  # shellcheck disable=SC1091
28  source "overwrite_if_not_equal.libr.sh"
29
30  update_common_build_and_checks(){
31    declare -i LFBFL_verbose=0
32    if [[ "$1" == "--verbose" ]]; then
33      echo "$0 $*"
34      LFBFL_verbose=1
35    fi
36    # shellcheck disable=SC2034
37    readonly LFBFL_verbose
38
39    declare -r LFBFL_common_file_name="common_build_and_checks.exec.sh"
40    cp "./${LFBFL_common_file_name}.tpl"\
41      "./${LFBFL_common_file_name}.temp"
42
43    declare -r LFBFL_file_names=(\
44      "build_md_from_printable_md.exec.sh"\
45      "check_shell_scripts_beginnings.libr.sh"\
46      "check_URLs.libr.sh"\
47      "comparisons.libr.sh"\
48      "create_PDF.exec.sh"\
49      "generate_from_template.libr.sh"\
50      "get_common_text_glob_patterns.libr.sh"\
51      "grammar_and_spell_check.libr.sh"\
52      "licenses_templates/build_licenses_templates.exec.sh"\
53      "licenses_templates/license_file_header_AGPLv3+.tpl"\
54      "licenses_templates/license_file_header_GPLv3+.tpl"\
55      "licenses_templates/license_file_header_LGPLv3+.tpl"\
56      "lines_counts.libr.sh"\
57      "lines_filters.libr.sh"\
58      "lines_maps.libr.sh"\
59      "update_or_check_files_names_listing.exec.sh"\
60      "overwrite_if_not_equal.libr.sh"\
61      "python_black_complement.libr.sh"\
62      "python_isort_complement.libr.sh"\
63      "split_score.exec.php"\
64      "split_score.libr.php"\
65      "strings_functions.libr.sh"\
66      "too_long_code_lines.libr.sh"\
67    )
68
```

```
69    local LFBFL_file_name
70    local LFBFL_file_sha512
71    local LFBFL_file_sha512_all
72    local LFBFL_base_file_name
73    for LFBFL_file_name in "${LFBFL_file_names[@]}"; do
74      # shellcheck disable=SC2312
75      LFBFL_file_sha512=$(
76        sha512sum "./${LFBFL_file_name}" | cut -f1 -d' '
77      )
78      LFBFL_file_sha512_all="local LFBFL_correct_sha512\n"
79      LFBFL_file_sha512_all+="  LFBFL_correct_sha512="
80      LFBFL_file_sha512_all+="'${LFBFL_file_sha512:0:45}'\n"
81      LFBFL_file_sha512_all+="  LFBFL_correct_sha512\+="
82      LFBFL_file_sha512_all+="'${LFBFL_file_sha512:45:44}'\n"
83      LFBFL_file_sha512_all+="  LFBFL_correct_sha512\+="
84      LFBFL_file_sha512_all+="'${LFBFL_file_sha512:89}'"
85      LFBFL_base_file_name=$(basename "${LFBFL_file_name}")
86      sed -i\
87        "s|@sha512_${LFBFL_base_file_name}@|${LFBFL_file_sha512_all}|g"\
88        "./${LFBFL_common_file_name}.temp"
89    done
90
91    overwrite_if_not_equal "./${LFBFL_common_file_name}"\
92      "./${LFBFL_common_file_name}.temp"
93
94    declare -r LFBFL_main_file_name="build_and_checks.exec.sh"
95    cp "./${LFBFL_main_file_name}.tpl" "../${LFBFL_main_file_name}.temp"
96
97    # shellcheck disable=SC2312
98    LFBFL_file_sha512=$(
99      sha512sum "./${LFBFL_common_file_name}" | cut -f1 -d' '
100   )
101   LFBFL_file_sha512_all="local LFBFL_correct_sha512\n"
102   LFBFL_file_sha512_all+="  LFBFL_correct_sha512="
103   LFBFL_file_sha512_all+="'${LFBFL_file_sha512:0:45}'\n"
104   LFBFL_file_sha512_all+="  LFBFL_correct_sha512\+="
105   LFBFL_file_sha512_all+="'${LFBFL_file_sha512:45:44}'\n"
106   LFBFL_file_sha512_all+="  LFBFL_correct_sha512\+="
107   LFBFL_file_sha512_all+="'${LFBFL_file_sha512:89}'"
108   sed -i\
109     "s|@sha512_${LFBFL_common_file_name}@|${LFBFL_file_sha512_all}|g"\
110     "../${LFBFL_main_file_name}.temp"
111
112   overwrite_if_not_equal "../${LFBFL_main_file_name}"\
113     "../${LFBFL_main_file_name}.temp"
114 }
```

```
115
116   update_common_build_and_checks "$@"
```

2.27   build_and_checks_dependencies/update_or_check_files_names_listing.exec.sh

```
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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 disable=SC1090
36   source "./${LFBFL_subdir}/lines_filters.libr.sh"
37   # shellcheck disable=SC1090
38   source "./${LFBFL_subdir}/strings_functions.libr.sh"
39
40   update_or_check_files_names_listing(){
41     declare -i LFBFL_verbose=0
```

94

```
42   if [[ "$*" == *--verbose* ]]; then
43     echo "$0 $*"
44     LFBFL_verbose=1
45   fi
46   readonly LFBFL_verbose
47
48   LFBFL_subdir2="build_and_checks_variables"
49   files_names_listing="./${LFBFL_subdir2}/files_names_listing.txt"
50
51   if [[ "$*" == *--write* ]]; then
52     : > "${files_names_listing}"
53   fi
54   # Remove line returns here to keep lines short.
55   sed -Ez 's/\\\n//Mg' "${files_names_listing}"\
56     > "${files_names_listing}.temp"
57   shopt -s dotglob
58   get_split_score_simple 1 70 /
59   # shellcheck disable=SC2154
60   split_score_command="${get_split_score_result}"
61   # shellcheck disable=SC2154
62   split_score_command_properties="${get_split_score_result2}"
63   suffix=\\\\ # instead of '\\' to avoid shellcheck SC1003
64   # shellcheck disable=SC2312
65   find . -type f -printf '%P\n' | relevant_find | sort\
66     | while read -r file_name;
67   do
68     git check-ignore -q "${file_name}" && continue
69     base_file_name=$(basename "${file_name}")
70     [[ "${base_file_name}" != files_names_listing.txt* ]]\
71       || continue
72     if [[ "${base_file_name}" == *.md ]]; then
73       if [[ -f "${file_name}.tpl" ]]; then
74         continue
75       fi
76     fi
77     repeated_split_last_line "${file_name}" "" 70 "${suffix}"\
78       "${split_score_command}" "${split_score_command_properties}"
79     # shellcheck disable=SC2154
80     split_file_name="${repeated_split_last_line_result}"
81     if [[ "$1" == "--write" ]]; then
82       # shellcheck disable=SC2001
83       echo "${file_name}"\
84         | sed -e "s|${file_name}|${split_file_name}|g"\
85         >> "${files_names_listing}"
86       continue
87     fi
```

```
88    if grep -q "${file_name}\$" "${files_names_listing}.temp"; then
89      :
90    else
91      echo\
92      "The file ${file_name} is not listed in ${files_names_listing}."
93      if [[ "$1" == "--append" ]]; then
94        # shellcheck disable=SC2001
95        echo "${file_name}"\
96          | sed -e\
97          "s|${file_name}|${split_file_name}|g"\
98          >> "${files_names_listing}"
99      fi
100    fi
101  done
102
103  while read -r file_name;
104  do
105    [[ "${file_name}" != '//'* ]] || continue
106    base_file_name=$(basename "${file_name}")
107    if ! [[ -f "${file_name}" ]]; then
108      echo\
109      "The non-file ${file_name} is listed in ${files_names_listing}."
110    fi
111  done < "${files_names_listing}.temp"
112
113  rm "${files_names_listing}.temp"
114  shopt -u dotglob
115  shopt -s globstar
116
117  if [[ LFBFL_verbose -eq 1 ]]; then
118    cat "${files_names_listing}"
119  fi
120 }
121
122 update_or_check_files_names_listing "$@"
```

2.28 build_and_checks_variables/.gitignore

```
1  temp/
2  upgrade_venvs_ts
3
```

2.29 build_and_checks_variables/bandit.ini

```
1  # FILE: .bandit
2  [bandit]
```

2.30 build_and_checks_variables/bandit_baseline.json

```
1  {"results":[]}
```

2.31 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
```

100

```
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>
```

2.32 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}
```

```latex
43  \usepackage{times}
44  \usepackage{ifpdf}
45  \usepackage{latexsym}
46  \usepackage{graphicx}
47  \usepackage{enumerate}
48  \usepackage{pmboxdraw}
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  phpmd
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}
```

2.33 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/check\_URLs.libr.sh
41   }
42   \label{
43      build_and_checks_dependencies:check_URLslibrsh
44   }
45
46   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
47   build_and_checks_dependencies/check_URLs.libr.sh
48   }
49
50
51   \subsection{
52      build\_and\_checks\_dependencies/common\_build\_and\_checks.exec.sh
53   }
54   \label{
55      build_and_checks_dependencies:common_build_and_checksexecsh
56   }
57
58   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
59   build_and_checks_dependencies/common_build_and_checks.exec.sh
60   }
61
62
63   \subsection{
64      build\_and\_checks\_dependencies/%
65   common\_build\_and\_checks.exec.sh.tpl
66   }
67   \label{
68      build_and_checks_dependencies:common_build_and_checksexecshtpl
69   }
70
71   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
72   build_and_checks_dependencies/common_build_and_checks.exec.sh.tpl
73   }
74
75
76   \subsection{
77      build\_and\_checks\_dependencies/comparisons.libr.sh
78   }
79   \label{
80      build_and_checks_dependencies:comparisonslibrsh
81   }
```

106

```
82
83   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
84   build_and_checks_dependencies/comparisons.libr.sh
85   }
86

87
88   \subsection{
89     build\_and\_checks\_dependencies/create\_PDF.exec.sh
90   }
91   \label{
92     build_and_checks_dependencies:create_PDFexecsh
93   }

94
95   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
96   build_and_checks_dependencies/create_PDF.exec.sh
97   }
98

99
100  \subsection{
101    build\_and\_checks\_dependencies/generate\_from\_template.libr.sh
102  }
103  \label{
104    build_and_checks_dependencies:generate_from_templatelibrsh
105  }
106
107  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
108  build_and_checks_dependencies/generate_from_template.libr.sh
109  }
110

111
112  \subsection{
113    build\_and\_checks\_dependencies/%
114  get\_common\_text\_glob\_patterns.libr.sh
115  }
116  \label{
117    build_and_checks_dependencies:get_common_text_glob_patternslibrsh
118  }
119
120  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
121  build_and_checks_dependencies/get_common_text_glob_patterns.libr.sh
122  }
123

124
125  \subsection{
126    build\_and\_checks\_dependencies/grammar\_and\_spell\_check.libr.sh
127  }
```

```
128  \label{
129    build_and_checks_dependencies:grammar_and_spell_checklibrsh
130  }

131
132  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
133  build_and_checks_dependencies/grammar_and_spell_check.libr.sh
134  }

135

136
137  \subsection{
138    build\_and\_checks\_dependencies/licenses\_templates/%
139  build\_licenses\_templates.exec.sh
140  }
141  \label{
142    build_and_checks_dependencies:licenses_templates:%
143  build_licenses_templatesexecsh
144  }

145
146  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
147  build_and_checks_dependencies/licenses_templates/%
148  build_licenses_templates.exec.sh
149  }

150

151
152  \subsection{
153    build\_and\_checks\_dependencies/licenses\_templates/%
154  license\_file\_header\_AGPLv3+.tpl
155  }
156  \label{
157    build_and_checks_dependencies:licenses_templates:%
158  license_file_header_AGPLv3+tpl
159  }

160
161  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
162  build_and_checks_dependencies/licenses_templates/%
163  license_file_header_AGPLv3+.tpl
164  }

165

166
167  \subsection{
168    build\_and\_checks\_dependencies/licenses\_templates/%
169  license\_file\_header\_GPLv3+.tpl
170  }
171  \label{
172    build_and_checks_dependencies:licenses_templates:%
173  license_file_header_GPLv3+tpl
```

```
174   }
175
176   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
177   build_and_checks_dependencies/licenses_templates/%
178   license_file_header_GPLv3+.tpl
179   }
180
181
182   \subsection{
183     build\_and\_checks\_dependencies/licenses\_templates/%
184   license\_file\_header\_LGPLv3+.tpl
185   }
186   \label{
187     build_and_checks_dependencies:licenses_templates:%
188   license_file_header_LGPLv3+tpl
189   }
190
191   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
192   build_and_checks_dependencies/licenses_templates/%
193   license_file_header_LGPLv3+.tpl
194   }
195
196
197   \subsection{
198     build\_and\_checks\_dependencies/lines\_counts.libr.sh
199   }
200   \label{
201     build_and_checks_dependencies:lines_countslibrsh
202   }
203
204   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
205   build_and_checks_dependencies/lines_counts.libr.sh
206   }
207
208
209   \subsection{
210     build\_and\_checks\_dependencies/lines\_filters.libr.sh
211   }
212   \label{
213     build_and_checks_dependencies:lines_filterslibrsh
214   }
215
216   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
217   build_and_checks_dependencies/lines_filters.libr.sh
218   }
219
```

```
220
221  \subsection{
222    build\_and\_checks\_dependencies/lines\_maps.libr.sh
223  }
224  \label{
225    build_and_checks_dependencies:lines_mapslibrsh
226  }
227
228  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
229  build_and_checks_dependencies/lines_maps.libr.sh
230  }
231

232
233  \subsection{
234    build\_and\_checks\_dependencies/overwrite\_if\_not\_equal.libr.sh
235  }
236  \label{
237    build_and_checks_dependencies:overwrite_if_not_equallibrsh
238  }
239
240  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
241  build_and_checks_dependencies/overwrite_if_not_equal.libr.sh
242  }
243

244
245  \subsection{
246    build\_and\_checks\_dependencies/python\_black\_complement.libr.sh
247  }
248  \label{
249    build_and_checks_dependencies:python_black_complementlibrsh
250  }
251
252  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
253  build_and_checks_dependencies/python_black_complement.libr.sh
254  }
255

256
257  \subsection{
258    build\_and\_checks\_dependencies/python\_isort\_complement.libr.sh
259  }
260  \label{
261    build_and_checks_dependencies:python_isort_complementlibrsh
262  }
263
264  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
265  build_and_checks_dependencies/python_isort_complement.libr.sh
```

```
266   }
267
268
269   \subsection{
270     build\_and\_checks\_dependencies/split\_score.exec.php
271   }
272   \label{
273     build_and_checks_dependencies:split_scoreexecphp
274   }
275
276   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
277   build_and_checks_dependencies/split_score.exec.php
278   }
279
280
281   \subsection{
282     build\_and\_checks\_dependencies/split\_score.libr.php
283   }
284   \label{
285     build_and_checks_dependencies:split_scorelibrphp
286   }
287
288   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
289   build_and_checks_dependencies/split_score.libr.php
290   }
291
292
293   \subsection{
294     build\_and\_checks\_dependencies/strings\_functions.libr.sh
295   }
296   \label{
297     build_and_checks_dependencies:strings_functionslibrsh
298   }
299
300   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
301   build_and_checks_dependencies/strings_functions.libr.sh
302   }
303
304
305   \subsection{
306     build\_and\_checks\_dependencies/too\_long\_code\_lines.libr.sh
307   }
308   \label{
309     build_and_checks_dependencies:too_long_code_lineslibrsh
310   }
311
```

111

```
312  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
313  build_and_checks_dependencies/too_long_code_lines.libr.sh
314  }
315
316
317  \subsection{
318    build\_and\_checks\_dependencies/%
319  update\_common\_build\_and\_checks.exec.sh
320  }
321  \label{
322    build_and_checks_dependencies:update_common_build_and_checksexecsh
323  }
324
325  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
326  build_and_checks_dependencies/update_common_build_and_checks.exec.sh
327  }
328
329
330  \subsection{
331    build\_and\_checks\_dependencies/%
332  update\_or\_check\_files\_names\_listing.exec.sh
333  }
334  \label{
335    build_and_checks_dependencies:%
336  update_or_check_files_names_listingexecsh
337  }
338
339  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
340  build_and_checks_dependencies/%
341  update_or_check_files_names_listing.exec.sh
342  }
343
344
345  \subsection{
346    build\_and\_checks\_variables/.gitignore
347  }
348  \label{
349    build_and_checks_variables:gitignore
350  }
351
352  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
353  build_and_checks_variables/.gitignore
354  }
355
356
357  \subsection{
```

112

```
358    build\_and\_checks\_variables/bandit.ini
359  }
360  \label{
361    build_and_checks_variables:banditini
362  }

363
364  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
365  build_and_checks_variables/bandit.ini
366  }

367

368
369  \subsection{
370    build\_and\_checks\_variables/bandit\_baseline.json
371  }
372  \label{
373    build_and_checks_variables:bandit_baselinejson
374  }

375
376  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
377  build_and_checks_variables/bandit_baseline.json
378  }

379

380
381  \subsection{
382    build\_and\_checks\_variables/DevOrSysAdminScripts.html.tpl
383  }
384  \label{
385    build_and_checks_variables:DevOrSysAdminScriptshtmltpl
386  }

387
388  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
389  build_and_checks_variables/DevOrSysAdminScripts.html.tpl
390  }

391

392
393  \subsection{
394    build\_and\_checks\_variables/DevOrSysAdminScripts.tex.tpl
395  }
396  \label{
397    build_and_checks_variables:DevOrSysAdminScriptstextpl
398  }

399
400  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
401  build_and_checks_variables/DevOrSysAdminScripts.tex.tpl
402  }

403
```

```
404
405  \subsection{
406     build\_and\_checks\_variables/files\_listing.tex.tpl
407  }
408  \label{
409     build_and_checks_variables:files_listingtextpl
410  }
411
412  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
413  build_and_checks_variables/files_listing.tex.tpl
414  }
415
416
417  \subsection{
418     build\_and\_checks\_variables/files\_names\_listing.txt
419  }
420  \label{
421     build_and_checks_variables:files_names_listingtxt
422  }
423
424  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
425  build_and_checks_variables/files_names_listing.txt
426  }
427
428
429  \subsection{
430     build\_and\_checks\_variables/licenses\_notes.txt
431  }
432  \label{
433     build_and_checks_variables:licenses_notestxt
434  }
435
436  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
437  build_and_checks_variables/licenses_notes.txt
438  }
439
440
441  \subsection{
442     build\_and\_checks\_variables/phpmd\_baseline.xml
443  }
444  \label{
445     build_and_checks_variables:phpmd_baselinexml
446  }
447
448  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
449  build_and_checks_variables/phpmd_baseline.xml
```

114

```
450    }
451

452

453    \subsection{
454       build\_and\_checks\_variables/pylintrc.toml
455    }
456    \label{
457       build_and_checks_variables:pylintrctoml
458    }
459
460    \VerbatimInput[numbers=left,xleftmargin=-5mm]{
461    build_and_checks_variables/pylintrc.toml
462    }
463

464
465    \subsection{
466       build\_and\_checks\_variables/repository\_data.txt
467    }
468    \label{
469       build_and_checks_variables:repository_datatxt
470    }
471
472    \VerbatimInput[numbers=left,xleftmargin=-5mm]{
473    build_and_checks_variables/repository_data.txt
474    }
475

476
477    \subsection{
478       build\_and\_checks\_variables/ruff.toml
479    }
480    \label{
481       build_and_checks_variables:rufftoml
482    }
483
484    \VerbatimInput[numbers=left,xleftmargin=-5mm]{
485    build_and_checks_variables/ruff.toml
486    }
487

488
489    \subsection{
490       build\_and\_checks\_variables/shellcheck\_notes.txt
491    }
492    \label{
493       build_and_checks_variables:shellcheck_notestxt
494    }
495
```

```
496 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
497 build_and_checks_variables/shellcheck_notes.txt
498 }
499
500
501 \subsection{
502   build\_and\_checks.exec.sh
503 }
504 \label{
505   build_and_checksexecsh
506 }
507
508 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
509 build_and_checks.exec.sh
510 }
511
512
513 \subsection{
514   COPYING
515 }
516 \label{
517   COPYING
518 }
519
520 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
521 COPYING
522 }
523
524
525 \subsection{
526   COPYING.LESSER
527 }
528 \label{
529   COPYINGLESSER
530 }
531
532 \VerbatimInput[numbers=left,xleftmargin=-5mm]{
533 COPYING.LESSER
534 }
535
536
537 \subsection{
538   git\_helpers/git\_checks.libr.sh
539 }
540 \label{
541   git_helpers:git_checkslibrsh
```

```
542   }

543

544   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
545   git_helpers/git_checks.libr.sh
546   }

547

548

549   \subsection{
550     git\_helpers/post-commit
551   }
552   \label{
553     git_helpers:post-commit
554   }

555

556   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
557   git_helpers/post-commit
558   }

559

560

561   \subsection{
562     git\_helpers/post\_commit\_renaming\_comment.libr.sh
563   }
564   \label{
565     git_helpers:post_commit_renaming_commentlibrsh
566   }

567

568   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
569   git_helpers/post_commit_renaming_comment.libr.sh
570   }

571

572

573   \subsection{
574     git\_helpers/pre-commit
575   }
576   \label{
577     git_helpers:pre-commit
578   }

579

580   \VerbatimInput[numbers=left,xleftmargin=-5mm]{
581   git_helpers/pre-commit
582   }

583

584

585   \subsection{
586     LiensUtiles.txt
587   }
```

```
588  \label{
589    LiensUtilestxt
590  }

591
592  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
593  LiensUtiles.txt
594  }

595

596
597  \subsection{
598    README.md.tpl
599  }
600  \label{
601    READMEmdtpl
602  }

603
604  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
605  README.md.tpl
606  }

607

608
609  \subsection{
610    unicode.libr.php
611  }
612  \label{
613    unicodelibrphp
614  }

615
616  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
617  unicode.libr.php
618  }

619

620
621  \subsection{
622    upgrade\_build\_and\_checks.exec.sh
623  }
624  \label{
625    upgrade_build_and_checksexecsh
626  }

627
628  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
629  upgrade_build_and_checks.exec.sh
630  }

631

632
633  \subsection{
```

```
634    wget\_sha512.libr.sh
635  }
636  \label{
637    wget_sha512librsh
638  }
639
640  \VerbatimInput[numbers=left,xleftmargin=-5mm]{
641  wget_sha512.libr.sh
642  }
643
644
```

2.34 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_URLs.libr.sh
35  build_and_checks_dependencies/common_build_and_checks.exec.sh
36  build_and_checks_dependencies/common_build_and_checks.exec.sh.tpl
37  build_and_checks_dependencies/comparisons.libr.sh
38  build_and_checks_dependencies/create_PDF.exec.sh
39  build_and_checks_dependencies/generate_from_template.libr.sh
40  build_and_checks_dependencies/get_common_text_glob_patterns.libr.sh
41  build_and_checks_dependencies/grammar_and_spell_check.libr.sh
42  build_and_checks_dependencies/licenses_templates/\
43  build_licenses_templates.exec.sh
44  build_and_checks_dependencies/licenses_templates/\
45  license_file_header_AGPLv3+.tpl
46  build_and_checks_dependencies/licenses_templates/\
47  license_file_header_GPLv3+.tpl
48  build_and_checks_dependencies/licenses_templates/\
49  license_file_header_LGPLv3+.tpl
50  build_and_checks_dependencies/lines_counts.libr.sh
51  build_and_checks_dependencies/lines_filters.libr.sh
52  build_and_checks_dependencies/lines_maps.libr.sh
53  // build_and_checks_dependencies/listings/files_listing.tex.tpl
54  build_and_checks_dependencies/overwrite_if_not_equal.libr.sh
55  build_and_checks_dependencies/python_black_complement.libr.sh
56  build_and_checks_dependencies/python_isort_complement.libr.sh
57  build_and_checks_dependencies/split_score.exec.php
58  build_and_checks_dependencies/split_score.libr.php
59  build_and_checks_dependencies/strings_functions.libr.sh
60  build_and_checks_dependencies/too_long_code_lines.libr.sh
61  build_and_checks_dependencies/update_common_build_and_checks.exec.sh
62  build_and_checks_dependencies/\
63  update_or_check_files_names_listing.exec.sh
64  build_and_checks_variables/.gitignore
65  build_and_checks_variables/bandit.ini
66  build_and_checks_variables/bandit_baseline.json
67  build_and_checks_variables/DevOrSysAdminScripts.html.tpl
68  // build_and_checks_variables/DevOrSysAdminScripts.tex
69  build_and_checks_variables/DevOrSysAdminScripts.tex.tpl
70  build_and_checks_variables/files_listing.tex.tpl
71  build_and_checks_variables/files_names_listing.txt
72  build_and_checks_variables/licenses_notes.txt
73  build_and_checks_variables/phpmd_baseline.xml
74  build_and_checks_variables/pylintrc.toml
75  build_and_checks_variables/repository_data.txt
76  build_and_checks_variables/ruff.toml
77  build_and_checks_variables/shellcheck_notes.txt
78  // build_and_checks_variables/upgrade_venvs_ts
```

```
79  build_and_checks.exec.sh
80  COPYING
81  COPYING.LESSER
82  // DevOrSysAdminScripts.html
83  // DevOrSysAdminScripts.pdf
84  // EncoreBlasé20240517-20240518.txt
85  git_helpers/git_checks.libr.sh
86  git_helpers/post-commit
87  git_helpers/post_commit_renaming_comment.libr.sh
88  git_helpers/pre-commit
89  LiensUtiles.txt
90  // README.html
91  // README.md
92  README.md.tpl
93  unicode.libr.php
94  upgrade_build_and_checks.exec.sh
95  wget_sha512.libr.sh
```

2.35 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 LGPLv3+.
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 LGPLv2.1+ 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.
```

2.36 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_dependenc
5    <violation rule="PHPMD\Rule\Controversial\CamelCaseVariableName" file="build_and_
6    <violation rule="PHPMD\Rule\Controversial\CamelCaseParameterName" file="unicode.l
7    <violation rule="PHPMD\Rule\Naming\LongVariable" file="unicode.libr.php"/>
8    <violation rule="PHPMD\Rule\Controversial\CamelCaseVariableName" file="unicode.li
9    <violation rule="PHPMD\Rule\CleanCode\MissingImport" file="unicode.libr.php"/>
10    <violation rule="PHPMD\Rule\CyclomaticComplexity" file="unicode.libr.php"/>
11    <violation rule="PHPMD\Rule\Design\NpathComplexity" file="unicode.libr.php"/>
12  </phpmd-baseline>
```

2.37 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  module-rgx = "^[_a-zA-Z0-9+]+$"
7  [tool.pylint.reports]
8  output-format = "colorized"
```

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

```
61            }
62          },
63        "D": {
64          "0.1.0": {
65            "C": {
66                // Dumb, you did not found it by yourself? Failed exam.
67              "4.4.4" : {}
68            }
69          }
70        }
71      },
72      "B": {
73        "2.2.2": {
74          "C": {
75            // Dumb, you did not found it by yourself? Failed exam.
76            "4.4.4" : {}
77          }
78        }
79      }
80  }
81  Wonderful someone rediscovered nested structures XD
82  Seriously so many engineers or computer scientists are dumb to cry.
83
84  bandit_venv=../venv_bandit
85  black_venv=../venv_black
86  isort_venv=../venv_isort
87  mypy_venv=../venv_mypy
88  pylint_venv=../venv_pylint
89  ruff_venv=../venv_ruff
90
91
92  upgrade venvs can be auto or ask, any other value is interpreted
93  as ask.
94
95  upgrade_venvs=ask
96
97
98  time interval can be 0 to always upgrade or ask to upgrade,
99  or a number at most bash max int
100 https://superuser.com/questions/1030122/
101 what-is-the-maximum-value-of-a-numeric-bash-shell-variable
102 it should be enough to simulate never "upgrade or ask for upgrade"
103 unless you claim to live many billions years ;)
104 If it is wat, this is a random int XD (see RANDOM).
105 Note that the probability that it upgrades your dependencies is not
106 1/2, it increases over time, and is 1 after slightly
```

```
107  less than one day.
108  If it is watyouwant?, see SRANDOM XD.
109
110  upgrade_venvs_time_interval_in_seconds=wat
```

2.39   build_and_checks_variables/ruff.toml

```
1  [lint]
2  select = ["ALL", "D211"]
3  ignore = ["D203", "D212", "D404"]
4  [lint.per-file-ignores]
5  "build_and_checks_dependencies/licenses_templates/*.py" = ["INP001"]
```

2.40   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   - SC1091 : Not following (file not found most of the time).
6   - SC1111 : Use of slanted double quotes (valid inside single quotes)
7             False positive, but may catch some problem.
8   - SC2001 : Replace some sed with bash builtin ${a//b/c}
9   - SC2034 : Unused variable
10  - SC2125 : Brace expansions and globs are literal.
11            False positive when assigning a variable declared with -i.
12  - SC2154 : A variable is referenced but not assigned
13  - SC2155 : Declare and assign separately to avoid masking return value
14            Main false positive is on declare -r (1 line instead of 3)
15  - SC2164 : cd || exit/return since cd may fail
16  - SC2248 : Prefer double quoting
17            False positive on returning integer values.
18  - SC2312 : Some command is not invoked separately and thus its return
19            value is masked. Frequent with pipes.
20
21  The command to check if there is anything else:
22  grep -r "shellcheck disable" . | grep -v -e '.git' -e "=SC1090$"\
23    -e "=SC1091$" -e "=SC1090,SC1091$" -e "=SC1111$" -e "=SC2001$"\
24    -e "=SC2034$" -e "=SC2125$" -e "=SC2034,SC2125$" -e "=SC2154$"\
25    -e "=SC2155$" -e "=SC2164$" -e "=SC2248$" -e "=SC2312$"\
26    -e "=SC2001,SC2312$" -e "=SC2155,SC2312$"
27
```

2.41 build_and_checks.exec.sh

```bash
#!/usr/bin/env bash
# This file is part of DevOrSysAdminScripts library.
#
# DevOrSysAdminScripts is free software:
# you can redistribute it and/or modify it under the terms
# of the GNU General Public License
# as published by the Free Software Foundation,
# either version 3 of the License,
# or (at your option) any later version.
#
# DevOrSysAdminScripts is distributed in the hope
# that it will be useful,
# but WITHOUT ANY WARRANTY;
# without even the implied warranty of
# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
# See the GNU General Public License for more details.
#
# You should have received a copy of
# the GNU General Public License
# along with DevOrSysAdminScripts.
# If not, see <https://www.gnu.org/licenses/>.
#
# ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
# The file "build_and_checks.exec.sh.tpl" was renamed from
# "build_and_checks.sh.tpl" to "build_and_checks.exec.sh.tpl".
# The file "build_and_checks.exec.sh" generated from the file
# "build_and_checks.sh.tpl" or "build_and_checks.exec.sh.tpl"
# was renamed from
# "build_and_checks.sh" to "build_and_checks.exec.sh".

build_and_checks(){
  local LFBFL_working_directory="."
  if [[ -n "$1" ]]; then
    LFBFL_working_directory="$1"
  fi
  readonly LFBFL_working_directory

  local LFBFL_verbose=""
  if [[ "$*" == *--verbose* ]]; then
    echo "$0 $*"
    LFBFL_verbose="--verbose"
  fi
  readonly LFBFL_verbose

```

```
45    # shellcheck disable=SC1091
46    source ./wget_sha512.libr.sh
47
48    LFBFL_subdir="build_and_checks_dependencies"
49    mkdir -p "${LFBFL_subdir}/licenses_templates"
50    mkdir -p "build_and_checks_variables/temp"
51    if ! [[ -f "build_and_checks_variables/.gitignore" ]]; then
52      echo "temp/" > "build_and_checks_variables/.gitignore"
53      echo "" >> "build_and_checks_variables/.gitignore"
54    fi
55
56    # LFBFL_dependencies_raw_content_download_URL
57    local LFBFL_dependencies_URL
58    LFBFL_dependencies_URL="https://raw.githubusercontent.com/LLyaudet/"
59    LFBFL_dependencies_URL+="DevOrSysAdminScripts/main/${LFBFL_subdir}"
60    readonly LFBFL_dependencies_URL
61
62    declare -r LFBFL_common_file_name="common_build_and_checks.exec.sh"
63    # LFBFL_script_download_URL
64    declare -r\
65      LFBFL_script="${LFBFL_dependencies_URL}/${LFBFL_common_file_name}"
66    declare -r\
67      LFBFL_file_path="./${LFBFL_subdir}/${LFBFL_common_file_name}"
68    local LFBFL_correct_sha512
69    LFBFL_correct_sha512='7060c063a1f3563c6940f78cc463927a25c87e266a010'
70    LFBFL_correct_sha512+='800faf99ceb204788be2074f6306ad5b031b513ca8ed'
71    LFBFL_correct_sha512+='a19ac4ed188a333205797b7e6f13fd199b367c1'
72    wget_sha512 "${LFBFL_file_path}" "${LFBFL_script}"\
73      "${LFBFL_correct_sha512}" "${LFBFL_verbose}"
74    chmod +x "./${LFBFL_file_path}"
75
76    "${LFBFL_file_path}" "${LFBFL_working_directory}"\
77      "${LFBFL_dependencies_URL}" "${LFBFL_verbose}"
78  }
79
80  if [[ "$*" == *--fixed_point_build* ]]; then
81    echo "--fixed_point_build"
82    source "./build_and_checks_dependencies/lines_filters.libr.sh"
83    LFBFL_data_file_name="./build_and_checks_variables/"
84    LFBFL_data_file_name+="repository_data.txt"
85    grep_variable "${LFBFL_data_file_name}" repository_name
86    # Touching the 3 following files first let us iterate
87    # upgrade_build_and_checks 2 times instead of 3 to reach
88    # a fixed point.
89    touch "./build_and_checks_variables/${repository_name}.tex"
90    touch "./${repository_name}.pdf"
```

```
91   touch "./${repository_name}.html"
92   # The two iterations of build_and_checks needs to complete
93   # during the same minute to have a fixed point.
94   build_and_checks "$@"
95   # build_and_checks "$@" second iteration below
96   # Then calling this script without --fixed_point_build should not
97   # yield any new superficial modifications.
98 fi
99
100 build_and_checks "$@"
```

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```
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    This program comes with ABSOLUTELY NO WARRANTY; for details type 'show w'.
    This is free software, and you are welcome to redistribute it
    under certain conditions; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate
parts of the General Public License. Of course, your program's commands
might be different; for a GUI interface, you would use an "about box".

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Public License instead of this License. But first, please read
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2.43 COPYING.LESSER

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                        Version 3, 29 June 2007

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  As used herein, "this License" refers to version 3 of the GNU Lesser
General Public License, and the "GNU GPL" refers to version 3 of the GNU
General Public License.

  "The Library" refers to a covered work governed by this License,
other than an Application or a Combined Work as defined below.

  An "Application" is any work that makes use of an interface provided
by the Library, but which is not otherwise based on the Library.
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of using an interface provided by the Library.

  A "Combined Work" is a work produced by combining or linking an
Application with the Library. The particular version of the Library
with which the Combined Work was made is also called the "Linked
Version".

  The "Minimal Corresponding Source" for a Combined Work means the
Corresponding Source for the Combined Work, excluding any source code
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object code and/or source code for the Application, including any data
and utility programs needed for reproducing the Combined Work from the
Application, but excluding the System Libraries of the Combined Work.

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  You may convey a covered work under sections 3 and 4 of this License

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without being bound by section 3 of the GNU GPL.

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  If you modify a copy of the Library, and, in your modifications, a
facility refers to a function or data to be supplied by an Application
that uses the facility (other than as an argument passed when the
facility is invoked), then you may convey a copy of the modified
version:

    a) under this License, provided that you make a good faith effort to
    ensure that, in the event an Application does not supply the
    function or data, the facility still operates, and performs
    whatever part of its purpose remains meaningful, or

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    this License applicable to that copy.

  3. Object Code Incorporating Material from Library Header Files.

  The object code form of an Application may incorporate material from
a header file that is part of the Library. You may convey such object
code under terms of your choice, provided that, if the incorporated
material is not limited to numerical parameters, data structure
layouts and accessors, or small macros, inline functions and templates
(ten or fewer lines in length), you do both of the following:

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    Library is used in it and that the Library and its use are
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    document.

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taken together, effectively do not restrict modification of the
portions of the Library contained in the Combined Work and reverse
engineering for debugging such modifications, if you also do each of
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    the Library is used in it and that the Library and its use are
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b) Accompany the Combined Work with a copy of the GNU GPL and this license
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execution, include the copyright notice for the Library among
these notices, as well as a reference directing the user to the
copies of the GNU GPL and this license document.

d) Do one of the following:

    0) Convey the Minimal Corresponding Source under the terms of this
    License, and the Corresponding Application Code in a form
    suitable for, and under terms that permit, the user to
    recombine or relink the Application with a modified version of
    the Linked Version to produce a modified Combined Work, in the
    manner specified by section 6 of the GNU GPL for conveying
    Corresponding Source.

    1) Use a suitable shared library mechanism for linking with the
    Library. A suitable mechanism is one that (a) uses at run time
    a copy of the Library already present on the user's computer
    system, and (b) will operate properly with a modified version
    of the Library that is interface-compatible with the Linked
    Version.

e) Provide Installation Information, but only if you would otherwise
be required to provide such information under section 6 of the
GNU GPL, and only to the extent that such information is
necessary to install and execute a modified version of the
Combined Work produced by recombining or relinking the
Application with a modified version of the Linked Version. (If
you use option 4d0, the Installation Information must accompany
the Minimal Corresponding Source and Corresponding Application
Code. If you use option 4d1, you must provide the Installation
Information in the manner specified by section 6 of the GNU GPL
for conveying Corresponding Source.)

  5. Combined Libraries.

  You may place library facilities that are a work based on the
Library side by side in a single library together with other library
facilities that are not Applications and are not covered by this
License, and convey such a combined library under terms of your
choice, if you do both of the following:

    a) Accompany the combined library with a copy of the same work based

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```
137    on the Library, uncombined with any other library facilities,
138    conveyed under the terms of this License.
139
140    b) Give prominent notice with the combined library that part of it
141    is a work based on the Library, and explaining where to find the
142    accompanying uncombined form of the same work.
143
144    6. Revised Versions of the GNU Lesser General Public License.
145
146    The Free Software Foundation may publish revised and/or new versions
147    of the GNU Lesser General Public License from time to time. Such new
148    versions will be similar in spirit to the present version, but may
149    differ in detail to address new problems or concerns.
150
151    Each version is given a distinguishing version number. If the
152    Library as you received it specifies that a certain numbered version
153    of the GNU Lesser General Public License "or any later version"
154    applies to it, you have the option of following the terms and
155    conditions either of that published version or of any later version
156    published by the Free Software Foundation. If the Library as you
157    received it does not specify a version number of the GNU Lesser
158    General Public License, you may choose any version of the GNU Lesser
159    General Public License ever published by the Free Software Foundation.
160
161    If the Library as you received it specifies that a proxy can decide
162    whether future versions of the GNU Lesser General Public License shall
163    apply, that proxy's public statement of acceptance of any version is
164    permanent authorization for you to choose that version for the
165    Library.
```

2.44   git_helpers/git_checks.libr.sh

```
1   #!/usr/bin/env bash
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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
```

```
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    # shellcheck disable=SC2312
53    if git diff --cached --name-only | grep models;
54    then
55      notify-send "${LFBFL_send_summary_1}" "${LFBFL_send_body_1}"
56      notify-send "${LFBFL_send_summary_1}" "${LFBFL_send_body_2}"
57    fi
58    # shellcheck disable=SC2312
59    if git diff --cached --name-only | grep serializer;
60    then
```

```
61     notify-send "${LFBFL_send_summary_2}" "${LFBFL_send_body_3}"
62   fi
63   return 0
64 }
65
66
67 check_no_abusive_trailing_comma(){
68   # Useful for Python code, although it regularly yields
69   # false positives in Python code
70   # (but it is easy to distinguish by hand).
71   # Use `git commit --no-verify` after check.
72   declare -r LFBFL_send_summary_1="ATTENTION"
73   local LFBFL_send_body_1="Il semblerait que vous affectiez un tuple"
74   LFBFL_send_body_1+=" au lieu d'une autre valeur dans une variable."
75   readonly LFBFL_send_body_1
76   # shellcheck disable=SC2312
77   if git diff --cached -r | grep ' = .*,\s*$';
78   then
79     notify-send "${LFBFL_send_summary_1}" "${LFBFL_send_body_1}"
80     return 1
81   fi
82   return 0
83 }
84
85
86 check_black_code_formatting(){
87   # attention ça ne marche que sur les fichiers "stagés" avec git add
88   declare -r LFBFL_files_string=$(\
89     git diff --cached --name-only | grep '\.py'\
90   )
91   echo "${LFBFL_files_string}"
92   declare -a LFBFL_some_files
93   mapfile -t LFBFL_some_files <<< "${LFBFL_files_string}"
94   readonly LFBFL_some_files
95   declare -i LFBFL_error=0
96   # Not very useful since LFBFL_file should be local to the loop by
97   # default.
98   local LFBFL_file
99   for LFBFL_file in "${LFBFL_some_files[@]}"; do
100    echo "Black will check formatting on file ${LFBFL_file}"
101    if ! black --check --diff "${LFBFL_file}";
102    then
103      LFBFL_error=1
104    fi
105  done
106  # shellcheck disable=SC2248
```

```
107    return ${LFBFL_error}
108  }
```

2.45   git_helpers/post-commit

```
1   #!/usr/bin/env bash
2   # This file is part of DevOrSysAdminScripts library.
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9   # or (at your option) any later version.
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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 disable=SC1090
36  source "${LFBFL_library}"
37
38  commit_a_file_renamed_comment --verbose --log-directory-change
39  exit 0
```

2.46   git_helpers/post_commit_renaming_comment.libr.sh

```bash
#!/usr/bin/env bash
# This file is part of DevOrSysAdminScripts library.
#
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# of the GNU General Public License
# as published by the Free Software Foundation,
# either version 3 of the License,
# or (at your option) any later version.
#
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# that it will be useful,
# but WITHOUT ANY WARRANTY;
# without even the implied warranty of
# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
# See the GNU General Public License for more details.
#
# You should have received a copy of
# the GNU General Public License
# along with DevOrSysAdminScripts.
# If not, see <https://www.gnu.org/licenses/>.
#
# ©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
# 2024-05-31T01:49+02:00: This file was renamed from
# "post_commit_renaming_comment.libr.sh"
# to
# "post_commit_renaming_comment.libr.sh".
# 2024-05-31T01:49+02:00: This file was moved from
# "."
# to
# "./git_helpers".
# This file was renamed from "post_commit_renaming_comment"
# to "post_commit_renaming_comment.libr.sh".
# (Before first commit it seems. But I had the old name in listing.)

LFBFL_this_file_path=$(realpath "${BASH_SOURCE[0]}")
LFBFL_this_file_directory=$(dirname "${LFBFL_this_file_path}")
LFBFL_some_directory="${LFBFL_this_file_directory}/../"
pushd .
# shellcheck disable=SC2164
cd "${LFBFL_some_directory}"
# shellcheck disable=SC1091
source "build_and_checks_dependencies/strings_functions.libr.sh"
# shellcheck disable=SC2164
```

```
45   popd
46
47   # Never forget that the worse security is the illusion of security
48   # (Kevin Mitnick). So, do not expect to have an accurate trackability
49   # of code history just because you use this post-commit hook or
50   # something else more evolved. This is useful but not a guarantee.
51   # For this reason, this function will only handle when all files
52   # impacted in the preceding commit are only renamed.
53   # It assumes that `diff` is the current default difference utility
54   # parametered with `git`. This point could be enhanced.
55   commit_a_file_renamed_comment(){
56     declare -i LFBFL_verbose=0
57     if [[ "$*" == *--verbose* ]]; then
58       echo "$0 commit_a_file_renamed_comment $*"
59       LFBFL_verbose=1
60     fi
61     readonly LFBFL_verbose
62
63     declare -i LFBFL_log_directory_change=0
64     if [[ "$*" == *--log-directory-change* ]]; then
65       LFBFL_log_directory_change=1
66     fi
67     readonly LFBFL_log_directory_change
68
69     declare -i LFBFL_max_comment_line_length=70
70     if [[ -n "$3" ]]; then
71       LFBFL_max_comment_line_length="$3"
72     fi
73     readonly LFBFL_max_comment_line_length
74     if [[ LFBFL_verbose -eq 1 ]]; then
75       echo "LFBFL_log_directory_change: ${LFBFL_log_directory_change}"
76       echo\
77        "LFBFL_max_comment_line_length: ${LFBFL_max_comment_line_length}"
78     fi
79     #----------------------------------------------------------------
80
81     # shellcheck disable=SC2155
82     declare -r LFBFL_renaming_lines=$(
83       git log -p -1 | grep '^diff --git' -A 1
84     )
85     if [[ LFBFL_verbose -eq 1 ]]; then
86       echo "LFBFL_renaming_lines: ${LFBFL_renaming_lines}"
87     fi
88
89     declare -a LFBFL_renaming_lines_array
90     mapfile -t LFBFL_renaming_lines_array <<< "${LFBFL_renaming_lines}"
```

```
 91    readonly LFBFL_renaming_lines_array
 92
 93    # shellcheck disable=SC2155
 94    declare -r LFBFL_timestamp=$(date --iso-8601="minute")
 95    if [[ LFBFL_verbose -eq 1 ]]; then
 96      echo "LFBFL_timestamp: ${LFBFL_timestamp}"
 97    fi
 98    get_split_score_simple 1 "${LFBFL_max_comment_line_length}" _
 99    # shellcheck disable=SC2154
100    LFBFL_split_score_command1="${get_split_score_result}"
101    # shellcheck disable=SC2154
102    LFBFL_split_score_command_properties1="${get_split_score_result2}"
103    get_split_score_simple 1 "${LFBFL_max_comment_line_length}" /
104    # shellcheck disable=SC2154
105    LFBFL_split_score_command2="${get_split_score_result}"
106    # shellcheck disable=SC2154
107    LFBFL_split_score_command_properties2="${get_split_score_result2}"
108    declare -i LFBFL_renaming_happened=0
109    declare -i LFBFL_i
110    declare -i LFBFL_j
111    # declare -r LFBFL_special_file_name="files_names_listing.txt"
112    declare -r LFBFL_sfn="files_names_listing.txt"
113    local LFBFL_diff_line
114    local LFBFL_similarity_line
115    local LFBFL_old_file_path
116    local LFBFL_old_file_name
117    local LFBFL_old_file_directory
118    local LFBFL_new_file_path
119    local LFBFL_new_file_name
120    local LFBFL_new_file_directory
121    local LFBFL_useful_file_name
122    local LFBFL_extension
123    local LFBFL_comment_prefix
124    local LFBFL_comment_prefix2
125    local LFBFL_old_file_name2
126    local LFBFL_old_file_directory2
127    local LFBFL_new_file_name2
128    local LFBFL_new_file_directory2
129    local LFBFL_new_comment
130    declare -i LFBFL_copyright_line_number
131    declare -r LFBFL_send_summary_2="ATTENTION: No line with copyright"
132    declare -i LFBFL_line_count
133    declare -i LFBFL_lines_after
134    local LFBFL_temp_file_path
135    for ((LFBFL_i=0; LFBFL_i<${#LFBFL_renaming_lines_array[@]};)); do
136      LFBFL_diff_line="${LFBFL_renaming_lines_array[${LFBFL_i}]}"
```

```
137    LFBFL_i=$((LFBFL_i + 1))
138    LFBFL_similarity_line="${LFBFL_renaming_lines_array[${LFBFL_i}]}"
139    LFBFL_i=$((LFBFL_i + 1))
140    # We need to increment 3 times since grep adds "--" lines between.
141    LFBFL_i=$((LFBFL_i + 1))
142    if [[ LFBFL_verbose -eq 1 ]]; then
143      echo "LFBFL_diff_line: ${LFBFL_diff_line}"
144      echo "LFBFL_similarity_line: ${LFBFL_similarity_line}"
145    fi
146    if [[ "${LFBFL_similarity_line:17:4}" == "100%" ]]; then
147      # Extract old file name from diff line. ----------------------
148      LFBFL_old_file_path=$(
149        echo "${LFBFL_diff_line}" | cut -d ' ' -f 3
150      )
151      # It starts by "a/".
152      LFBFL_old_file_path=".${LFBFL_old_file_path:1}"
153      LFBFL_old_file_name=$(basename "${LFBFL_old_file_path}")
154      LFBFL_old_file_directory=$(dirname "${LFBFL_old_file_path}")
155      # Extract new file name from diff line. ----------------------
156      LFBFL_new_file_path=$(
157        echo "${LFBFL_diff_line}" | cut -d ' ' -f 4
158      )
159      # It starts by "b/".
160      LFBFL_new_file_path=".${LFBFL_new_file_path:1}"
161      LFBFL_new_file_name=$(basename "${LFBFL_new_file_path}")
162      LFBFL_new_file_directory=$(dirname "${LFBFL_new_file_path}")
163      if [[ LFBFL_verbose -eq 1 ]]; then
164        echo "LFBFL_old_file_path: ${LFBFL_old_file_path}"
165        echo "LFBFL_old_file_name: ${LFBFL_old_file_name}"
166        echo "LFBFL_old_file_directory: ${LFBFL_old_file_directory}"
167        echo "LFBFL_new_file_path: ${LFBFL_new_file_path}"
168        echo "LFBFL_new_file_name: ${LFBFL_new_file_name}"
169        echo "LFBFL_new_file_directory: ${LFBFL_new_file_directory}"
170      fi
171      # Extract "LFBFL_extension" with smart guessing for .tpl -------
172      # and set prefix for line with ©Copyright. --------------------
173      LFBFL_useful_file_name="${LFBFL_new_file_name}"
174      LFBFL_extension="${LFBFL_useful_file_name##*.}"
175      if [[ LFBFL_verbose -eq 1 ]]; then
176        echo "LFBFL_useful_file_name: ${LFBFL_useful_file_name}"
177        echo "LFBFL_extension: ${LFBFL_extension}"
178      fi
179      for ((LFBFL_j=0; LFBFL_j<3; ++LFBFL_j)); do
180        if [[ "${LFBFL_extension}" != "tpl" ]]; then
181          break
182        fi
```

```
183        LFBFL_useful_file_name="${LFBFL_useful_file_name:0:-4}"
184        LFBFL_extension="${LFBFL_useful_file_name##*.}"
185        if [[ LFBFL_verbose -eq 1 ]]; then
186          echo "LFBFL_useful_file_name: ${LFBFL_useful_file_name}"
187          echo "LFBFL_extension: ${LFBFL_extension}"
188        fi
189      done
190      LFBFL_comment_prefix=""
191      if [[ "${LFBFL_extension}" == "sh" ]]; then
192        LFBFL_comment_prefix="# "
193      fi
194      if [[ "${LFBFL_extension}" == "sql" ]]; then
195        LFBFL_comment_prefix="-- "
196      fi
197      if [[ "${LFBFL_extension}" == "tex" ]]; then
198        LFBFL_comment_prefix="% "
199      fi
200      if [[ "${LFBFL_useful_file_name}" == "${LFBFL_sfn}" ]]; then
201        LFBFL_comment_prefix="// "
202      fi
203      if [[ LFBFL_verbose -eq 1 ]]; then
204        echo "LFBFL_comment_prefix: ${LFBFL_comment_prefix}"
205      fi
206      #-------------------------------------------------------------
207      # Split if necessary old_file_name, new_file_name, etc. to have
208      # comment lines below max_comment_line_length.
209      LFBFL_comment_prefix2="${LFBFL_comment_prefix}"'"'
210      # -----
211      LFBFL_old_file_name2="${LFBFL_comment_prefix2}"
212      LFBFL_old_file_name2+="${LFBFL_old_file_name}"
213      repeated_split_last_line "${LFBFL_old_file_name2}"\
214        "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}"\
215        '"' "${LFBFL_split_score_command1}"\
216        "${LFBFL_split_score_command_properties1}"
217      # shellcheck disable=SC2154
218      LFBFL_old_file_name2="${repeated_split_last_line_result}"
219      # -----
220      LFBFL_old_file_directory2="${LFBFL_comment_prefix2}"
221      LFBFL_old_file_directory2+="${LFBFL_old_file_directory}"
222      repeated_split_last_line "${LFBFL_old_file_directory2}"\
223        "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}"\
224        '"' "${LFBFL_split_score_command2}"\
225        "${LFBFL_split_score_command_properties2}"
226      # shellcheck disable=SC2154
227      LFBFL_old_file_directory2="${repeated_split_last_line_result}"
228      # -----
```

154

```
229    LFBFL_new_file_name2="${LFBFL_comment_prefix2}"
230    LFBFL_new_file_name2+="${LFBFL_new_file_name}"
231    repeated_split_last_line "${LFBFL_new_file_name2}"\
232      "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}"\
233      '"' "${LFBFL_split_score_command1}"\
234      "${LFBFL_split_score_command_properties1}"
235    # shellcheck disable=SC2154
236    LFBFL_new_file_name2="${repeated_split_last_line_result}"
237    # -----
238    LFBFL_new_file_directory2="${LFBFL_comment_prefix2}"
239    LFBFL_new_file_directory2+="${LFBFL_new_file_directory}"
240    repeated_split_last_line "${LFBFL_new_file_directory2}"\
241      "${LFBFL_comment_prefix2}" "${LFBFL_max_comment_line_length}"\
242      '"' "${LFBFL_split_score_command2}"\
243      "${LFBFL_split_score_command_properties2}"
244    # shellcheck disable=SC2154
245    LFBFL_new_file_directory2="${repeated_split_last_line_result}"
246    # Create new comments strings. -------------------------------
247    LFBFL_new_comment=""
248    if [[ "${LFBFL_new_file_name2}" != "${LFBFL_old_file_name2}" ]];
249    then
250      LFBFL_new_comment="${LFBFL_comment_prefix}"
251      LFBFL_new_comment+="${LFBFL_timestamp}"
252      LFBFL_new_comment+=": This file was renamed from\n"
253      LFBFL_new_comment+="${LFBFL_old_file_name2}"'"'"\n'
254      LFBFL_new_comment+="${LFBFL_comment_prefix}to\n"
255      LFBFL_new_comment+="${LFBFL_new_file_name2}"'"'".'
256    fi
257    if [[ LFBFL_log_directory_change -eq 1 ]] && [[\
258      "${LFBFL_new_file_directory}"\
259      != "${LFBFL_old_file_directory}"\
260    ]]; then
261      LFBFL_new_comment+="\n${LFBFL_comment_prefix}"
262      LFBFL_new_comment+="${LFBFL_timestamp}"
263      LFBFL_new_comment+=": This file was moved from\n"
264      LFBFL_new_comment+="${LFBFL_old_file_directory2}"'"'"\n'
265      LFBFL_new_comment+="${LFBFL_comment_prefix}to\n"
266      LFBFL_new_comment+="${LFBFL_new_file_directory2}"'"'".'
267    fi
268    if [[ LFBFL_verbose -eq 1 ]]; then
269      echo "LFBFL_new_comment: ${LFBFL_new_comment}"
270    fi
271    # Find line with ©Copyright. --------------------------------
272    # shellcheck disable=SC2312
273    LFBFL_copyright_line_number=$(
274      grep -n '©Copyright' "${LFBFL_new_file_path}"\
```

```
275        | head --lines=1\
276        | cut -d ':' -f 1
277      )
278    if [[ LFBFL_verbose -eq 1 ]]; then
279      echo "LFBFL_copyright_line_number:"\
280          " ${LFBFL_copyright_line_number}"
281    fi
282    if [[ LFBFL_copyright_line_number -eq 0 ]]; then
283      notify-send "${LFBFL_send_summary_2}"\
284        "${LFBFL_send_summary_2} for: ${LFBFL_new_comment}"
285      if [[ LFBFL_verbose -eq 1 ]]; then
286        echo "No copyright line. Skipping file."
287      fi
288      continue
289    fi
290    # Get total number of lines. ---------------------------------
291    LFBFL_line_count=$(wc -l < "${LFBFL_new_file_path}")
292    if [[ LFBFL_verbose -eq 1 ]]; then
293      echo "LFBFL_line_count: ${LFBFL_line_count}"
294    fi
295    # Compute number of lines after. -----------------------------
296    LFBFL_lines_after=$((
297      LFBFL_line_count - LFBFL_copyright_line_number
298    ))
299    if [[ LFBFL_verbose -eq 1 ]]; then
300      echo "LFBFL_lines_after: ${LFBFL_lines_after}"
301    fi
302    # Update file. -----------------------------------------------
303    LFBFL_temp_file_path="${LFBFL_new_file_path}.LFBFL.temp"
304    head --lines="${LFBFL_copyright_line_number}"\
305      "${LFBFL_new_file_path}" > "${LFBFL_temp_file_path}"
306    echo -e "${LFBFL_new_comment}" >> "${LFBFL_temp_file_path}"
307    tail --lines="${LFBFL_lines_after}"\
308      "${LFBFL_new_file_path}" >> "${LFBFL_temp_file_path}"
309    mv "${LFBFL_temp_file_path}" "${LFBFL_new_file_path}"
310    # Add file to stage. -----------------------------------------
311    git add "${LFBFL_new_file_path}"
312    LFBFL_renaming_happened=1
313  fi
314  done
315  readonly LFBFL_renaming_happened
316  if [[ LFBFL_renaming_happened -eq 1 ]]; then
317    # Commit -------------------------------------------------------
318    local LFBFL_message="commit_a_file_renamed_comment()"
319    LFBFL_message+=" post-commit hook, ${LFBFL_timestamp}."
320    readonly LFBFL_message
```

```
321     git commit --message="${LFBFL_message}"
322   fi
323 }
```

2.47   git_helpers/pre-commit

```
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 2023-2024 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 disable=SC1090
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
```

2.48   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  --------------------------------------------------------------------
```

2.49   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/\
51  llyaudet/DevOrSysAdminScripts/badge
52
53  [CodeFactor-package-page]: https://www.codefactor.io/repository/\
54  github/llyaudet/DevOrSysAdminScripts
55
56  [Codacy-badge]: https://app.codacy.com/project/badge/Grade/\
57  3dd6ef85e8db4460991d1ebc404b68dd
58
59  [Codacy-package-page]: https://app.codacy.com/gh/LLyaudet/\
```

```
60  DevOrSysAdminScripts/dashboard?utm_source=gh&utm_medium=referral\
61  &utm_content=&utm_campaign=Badge_grade
62
63  [GitHub-top-language-badge]: https://img.shields.io/github/\
64  languages/top/llyaudet/DevOrSysAdminScripts
65
66  [GitHub-code-size-in-bytes-badge]: https://img.shields.io/github/\
67  languages/code-size/llyaudet/DevOrSysAdminScripts
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
```

2.50   unicode.libr.php

```
1  <?php
2  /*
3  This file is part of DevOrSysAdminScripts library.
4
```

```
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of the GNU Lesser General Public License
as published by the Free Software Foundation,
either version 3 of the License,
or (at your option) any later version.

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

You should have received a copy of
the GNU Lesser General Public License
along with DevOrSysAdminScripts.
If not, see <https://www.gnu.org/licenses/>.

©Copyright 2023-2026 Laurent Frédéric Bernard François Lyaudet
This file was renamed from "unicode.php" to "unicode.libr.php".
*/

function decimal_code_point_to_UTF8(
  $i_code_point_in_decimal_notation
){
  // var_dump($i_code_point_in_decimal_notation);
  // 0xxxxxxx ASCII
  if($i_code_point_in_decimal_notation < 128){
    return chr($i_code_point_in_decimal_notation);
  }
  $i_continuation_base_value = 128;
  // 110xxxxx 10xxxxxx
  if($i_code_point_in_decimal_notation < 256 * (2**3)){
    $i_first_byte_base_value = 192;
    $i_last_byte_significant_bits = (
      $i_code_point_in_decimal_notation % (2**6)
    );
    $i_first_byte_significant_bits = (int) (
      (
        $i_code_point_in_decimal_notation
        - $i_last_byte_significant_bits
      ) / (2**6)
    );
    $s_result = chr(
      $i_first_byte_base_value
```

161

```php
51        + $i_first_byte_significant_bits
52      );
53      $s_result .= chr(
54        $i_continuation_base_value
55        + $i_last_byte_significant_bits
56      );
57      return $s_result;
58    }
59    // 1110xxxx 10xxxxxx 10xxxxxx
60    if($i_code_point_in_decimal_notation < 256 * 256){
61      $i_first_byte_base_value = 224;
62      $arr_arr_data_per_byte_reverse = [
63        ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
64        ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
65        ["i_bits" => 4, "i_base_value" => $i_first_byte_base_value],
66      ];
67      $i_rest = $i_code_point_in_decimal_notation;
68      $s_result = "";
69      foreach($arr_arr_data_per_byte_reverse as $arr_data){
70        // _Pragma unroll
71        // J'aurais pu "roller" les 4 cas des ifs.
72        // Mais pour les perfs, il faudrait tout unroller vu le nombre
73        // d'itérations. Et j'aimerais bien comparer du code unrollé
74        // aux 2 niveaux à la main avec celui unrollé par le compilateur
75        // sur les 2 niveaux. Je préjuge/présuppose qu'il unroll
76        // l'intérieur d'abord (pour ne pas refaire le même boulot)
77        // puis l'extérieur et qu'il oublie de réoptimiser l'intérieur
78        // en fonction de l'extérieur unrollé. Est-ce que j'ai raison ?
79        $i_significant_bits = $i_rest % (2**$arr_data["i_bits"]);
80        $i_rest = (int) (
81          ($i_rest - $i_significant_bits) / (2**$arr_data["i_bits"])
82        );
83        $s_result = (  // .= or =.
84          chr($i_significant_bits + $arr_data["i_base_value"])
85          .$s_result
86        );
87      }
88      return $s_result;
89    }
90    // 11110xxx 10xxxxxx 10xxxxxx 10xxxxxx
91    if($i_code_point_in_decimal_notation < 256 * 256 * (2**5)){
92      $i_first_byte_base_value = 240;
93      $arr_arr_data_per_byte_reverse = [
94        ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
95        ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
96        ["i_bits" => 6, "i_base_value" => $i_continuation_base_value],
```

```php
97        ["i_bits" => 3, "i_base_value" => $i_first_byte_base_value],
98      ];
99      $i_rest = $i_code_point_in_decimal_notation;
100     $s_result = "";
101     foreach($arr_arr_data_per_byte_reverse as $arr_data){
102       // _Pragma unroll
103       $i_significant_bits = $i_rest % (2**$arr_data["i_bits"]);
104       $i_rest = (int) (
105         ($i_rest - $i_significant_bits) / (2**$arr_data["i_bits"])
106       );
107       $s_result = (   // .= or =.
108         chr($i_significant_bits + $arr_data["i_base_value"])
109         .$s_result
110       );
111     }
112     return $s_result;
113   }
114   throw new Exception(
115     "UTF-8 avec jusqu'à 6 octets a été abandonné il y a longtemps."
116     ." Autre anecdote \"débile\" : MySQL a de base UTF-8 avec jusqu'à"
117     ." 3 octets au lieu de 4 :face-palm:."
118     ." Du coup, ça peut donner quelques \"surprises\"."
119     ." Sinon, y'a aussi ASCII dans MySQL."
120     ." Et comme ça joue sur la mémoire et les performances,"
121     ." pourquoi ils n'ont pas fait ASCII, UTF-8-2, UTF-8-3, UTF-8-4 ?"
122     ." :)"
123   );
124 }
125
126
127
128 function hexa_code_point_to_UTF8(
129   $s_code_point_in_hexadecimal_notation
130 ){
131   $s_code_point_in_hexadecimal_notation = strtoupper(
132     $s_code_point_in_hexadecimal_notation
133   );
134   $i_code_point_in_decimal_notation = 0;
135   $i_ord_0 = ord('0');
136   $i_ord_A = ord('A');
137   $i_digit_offset = -$i_ord_0;
138   $i_letter_offset = 10 - $i_ord_A;
139   for(
140     $i = 0, $i_max = strlen($s_code_point_in_hexadecimal_notation);
141     $i < $i_max;
142     ++$i
```

```php
143    ){
144      $s_hexa_digit = $s_code_point_in_hexadecimal_notation[$i];
145      $i_code_point_in_decimal_notation *= 16;
146      if(ctype_digit($s_hexa_digit)){
147        $i_code_point_in_decimal_notation += (
148          ord($s_hexa_digit) + $i_digit_offset
149        );
150        continue;
151      }
152      if(ctype_xdigit($s_hexa_digit)){
153        $i_code_point_in_decimal_notation += (
154          ord($s_hexa_digit) + $i_letter_offset
155        );
156        continue;
157      }
158      throw new Exception("Not an hexadecimal digit.");
159    }
160    return decimal_code_point_to_UTF8(
161      $i_code_point_in_decimal_notation
162    );
163  }



166
167  function check_string_is_valid_ASCII($s_string){
168    for($i = 0, $i_max = strlen($s_string); $i < $i_max; ++$i){
169      if(ord($s_string[$i]) > 127){
170        throw new Exception(
171          "Non-ASCII character found at octet position "
172          .$i
173          .", value "
174          .ord($s_string[$i])
175          .".."
176        );
177      }
178    }
179    return true;
180  }



183
184  function check_file_is_valid_ASCII($s_file_name){
185    $s_string = file_get_contents($s_file_name);
186    if($s_string === false){
187      throw new Exception("File ".$s_file_name." not found.");
188    }
```

```
189    return check_string_is_valid_ASCII($s_string);
190  }
191
192
193
194  function check_string_is_valid_UTF8($s_string){
195    $i_continuation_octet_needed = 0;
196    $i_character_start_position = 0;
197    for($i = 0, $i_max = strlen($s_string); $i < $i_max; ++$i){
198      $i_current_octet = ord($s_string[$i]);
199      if($i_continuation_octet_needed > 0){
200        if($i_current_octet < 128 || $i_current_octet >= 192){
201          throw new Exception(
202            "Non-UTF8 character found at start position "
203            .$i_character_start_position
204            .", octet at position "
205            .$i
206            ." has value "
207            .$i_current_octet
208            ." which is not a continuation octet."
209          );
210        }
211        --$i_continuation_octet_needed;
212        continue;
213      }
214
215      $i_character_start_position = $i;
216      if($i_current_octet < 128){ // 0xxxxxxx ASCII
217        continue;
218      }
219      if($i_current_octet >= 128 && $i_current_octet < 192){
220        throw new Exception(
221          "Non-UTF8 character found at start position "
222          .$i_character_start_position
223          .", octet at position "
224          .$i
225          ." has value "
226          .$i_current_octet
227          ." which is a continuation octet."
228        );
229      }
230      if($i_current_octet >= 192 && $i_current_octet < 224){
231        // 110xxxxx 10xxxxxx
232        $i_continuation_octet_needed = 1;
233        continue;
234      }
```

```php
235        if($i_current_octet >= 224 && $i_current_octet < 240){
236          // 1110xxxx 10xxxxxx 10xxxxxx
237          $i_continuation_octet_needed = 2;
238          continue;
239        }
240        if($i_current_octet >= 240 && $i_current_octet < 248){
241          // 11110xxx 10xxxxxx 10xxxxxx 10xxxxxx
242          $i_continuation_octet_needed = 3;
243          continue;
244        }
245        throw new Exception(
246          "Non-UTF8 character found at start position "
247          .$i_character_start_position
248          .", octet at position "
249          .$i
250          ." has value "
251          .$i_current_octet
252          ." which is invalid."
253        );
254      }
255      return true;
256    }
257
258
259
260    function check_file_is_valid_UTF8($s_file_name){
261      $s_string = file_get_contents($s_file_name);
262      if($s_string === false){
263        throw new Exception("File ".$s_file_name." not found.");
264      }
265      return check_string_is_valid_UTF8($s_string);
266    }
267
268
269
270    /*
271    ?>
272    <?php
273    require_once("./unicode.libr.php");
274    var_dump(hexa_code_point_to_UTF8("002B"));
275    var_dump(hexa_code_point_to_UTF8("00E6"));
276    var_dump(hexa_code_point_to_UTF8("1400"));
277    var_dump(hexa_code_point_to_UTF8("10111"));
278    // https://en.wikibooks.org/wiki/Unicode/Character_reference/2000-2FFF
279    // Some invisible unicode characters that are a problem:
280    // 2000-200F 2028-202F 205F 2060-206F
```

```
281  $arr = [
282    '2000', '2001', '2002', '2003', '2004', '2005', '2006', '2007',
283    '2008', '2009', '200A', '200B', '200C', '200D', '200E', '200F',
284    '2028', '2029', '202A', '202B', '202C', '202D', '202E', '202F',
285    '205F',
286    '2060', '2061', '2062', '2063', '2064', '2065', '2066', '2067',
287    '2068', '2069', '206A', '206B', '206C', '206D', '206E', '206F',
288  ];
289  $arr_s = [];
290  $arr_s2 = [];
291  $arr_s3 = [];
292  foreach($arr as $s_hexa){
293    $s = hexa_code_point_to_UTF8($s_hexa);
294    $arr_s []= $s;
295    if(strlen($s) === 2){
296      $s2 = '\x'.bin2hex($s[0]).'\x'.bin2hex($s[1]);
297    }
298    if(strlen($s) === 3){
299      $s2 = '\x'.bin2hex($s[0]).'\x'.bin2hex($s[1])
300        .'\x'.bin2hex($s[2]);
301    }
302    $arr_s2 []= $s2;
303    $s3 = "  | sed -e 's/".$s2."/ /g'\\";
304    $arr_s3 []= $s3;
305    echo($s3."\n");
306  }
307  //*/
308
```

2.51 upgrade_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.
```

```
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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 "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      "${LFBFL_fixed_point_build}"
44  }
45
46  upgrade_build_and_checks "$@"
```

2.52   wget_sha512.libr.sh

```
1   #!/usr/bin/env bash
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```
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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 [[ "$4" == "--verbose" ]]; then
34      echo "$0 wget_sha512 $*"
35      LFBFL_verbose="--verbose"
36    fi
37    readonly LFBFL_verbose
38    if [[ ! -f "$1" ]];
39    then
40      wget "${LFBFL_verbose}" -O "$1" "$2"
41    fi
42    # shellcheck disable=SC2312
43    declare -r \
44      LFBFL_present_sha512=$(sha512sum "$1" | cut -f1 -d' ')
45    if [[ "${LFBFL_present_sha512}" != "$3" ]];
46    then
47      echo "$1 does not have correct sha512"
48      echo "wanted $3"
49      echo "found ${LFBFL_present_sha512}"
50      exit
51    fi
52  }
```

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