**OPEN SOURCE SOFTWARE NOTICE**

The open source software notice for the open source software used in this Cangjie project (“the Project”) is provided in this document. The open source software licenses are granted by the respective right holders. With regard to the respective open source software contained in the Project, the applicable open source software license will prevail all other license agreement, including but not limited to the Apache-2.0 with Runtime Library Exceptions License, in case of any conflicts.

**Warranty Disclaimer**

**THE OPEN SOURCE SOFTWARE IN THIS CANGJIE DISTRIBUTION IS PROVIDED ON AN "AS IS" BASIS, WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**See the applicable licenses for more details.**

**Copyright Notice and License Texts**

**Software:** flatbuffers 24.3.25

**Copyright notice:**

Copyright 2021 Google Inc. All rights reservedCopyright 2019 Google LLCCopyright 2018 Google Inc. All rights reservedCopyright 2022 Google LLCCopyright 2020 Google LLCCopyright 2014 Google Inc. All rights reservedCopyright 2014 Google Inc.Copyright 2015 Google Inc.Copyright 2015 gRPC authorsCopyright 2017 Google Inc. All rights reservedCopyright 2023 Google Inc. All rights reservedCopyright 2016 Google Inc. All rights reservedCopyright 2018 Dan Field. All rights reservedCopyright 2014 Stefan.Eilemann@epfl.chCopyright 2021 Google LLCCopyright 2019 Google Inc. All rights reservedCopyright 2022 Google Inc. All rights reservedCopyright 2018 Dan FieldCopyright 2020 Google Inc. All rights reservedCopyright 2015 Google Inc. All rights reservedCopyright year Google Inc. All rights reservedCopyright 2015 The Chromium Authors. All rights reserved

**License:** Apache License V2.0

Apache LicenseVersion 2.0, January 2004http://www.apache.org/licenses/TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION1. Definitions."License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document."Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License."Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity."You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License."Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files."Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types."Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below)."Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof."Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution.""Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:You must give any other recipients of the Work or Derivative Works a copy of this License; andYou must cause any modified files to carry prominent notices stating that You changed the files; andYou must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; andIf the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.END OF TERMS AND CONDITIONS

**Software:** Editline Library - libedit 3.1-20250104

**Copyright notice:**

Copyright (c) 1997 The NetBSD Foundation, Inc. All rights reservedCopyright (c) 1989, 1993 The RegentsCopyright (c) 2006 Aleksey CheusovCopyright (c) 2004-2005, 2007-2009, 2011-2019, 2021-2024 Free Software Foundation, Inc.Copyright (c) 2010-2019, 2021, 2023-2024 BootstrapCopyright (c) 1994 X ConsortiumCopyright (c) 2009-2024 Free Software Foundation, Inc.Copyright (c) 2002-2024 Free Software Foundation, Inc.Copyright (c) 1997-2024 Free Software Foundation, Inc.Copyright (c) 1996-2019, 2021-2024 Free Software Foundation, Inc.Copyright (c) 2017 The NetBSD Foundation, Inc. All rights reservedCopyright (c) 1996-2001, 2003-2019, 2021-2024 Free Software Foundation, Inc.Copyright (c) 1990, 1993 The RegentsCopyright (c) 2024 Free Software Foundation, Inc.Copyright (c) 2001 The NetBSD Foundation, Inc. All rights reservedCopyright (c) 1996-2024 Free Software Foundation, Inc.Copyright (c) 2004-2005, 2007-2008, 2011-2019, 2021-2024 Free Software Foundation, Inc.Copyright 1992-2024 Free Software Foundation, Inc.Copyright (c) 2004-2005, 2007, 2009, 2011-2019, 2021-2024 Free Software Foundation, Inc.Copyright (c) 1999-2024 Free Software Foundation, Inc.Copyright (c) 1992, 1993 The RegentsCopyright (c) 2022-2024 Free Software Foundation, Inc.Copyright (c) 2023 Free Software Foundation, Inc.Copyright (c) 1994, 1995, 1996, 1999, 2000, 2001, 2002 Free Software Foundation, Inc.Copyright (c) 2003-2024 Free Software Foundation, Inc.Copyright (c) 1994-2024 Free Software Foundation, Inc.Copyright (c) 2006-2024 Free Software Foundation, Inc.Copyright (c) 2011 The NetBSD Foundation, Inc. All rights reservedCopyright (c) 2009 The NetBSD Foundation, Inc. All rights reservedCopyright (c) 2004-2019, 2021, 2023-2024 BootstrapCopyright (c) 1998 Todd C. Miller <Todd.Miller@courtesan.com>Copyright (c) 2001-2024 Free Software Foundation, Inc.Copyright (c) 2004-2024 Free Software Foundation, Inc.Copyright (c) 2004, 2011-2019, 2021-2024 Free Software Foundation, Inc.Copyright (c) 2015 Joerg Sonnenberger <joerg@NetBSD.org> . All rights reservedCopyright (c) 1992-1996, 1998-2017, 2020-2023 Free Software Foundation, Inc.

**License:** BSD 3-Clause License

Copyright (c) <YEAR>, <OWNER>All rights reserved.Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

**Software:** JSON for Modern C++ 3.11.3

**Copyright notice:**

Copyright 2013-2023 Niels Lohmann <https://nlohmann.me>Copyright 2018 The Abseil AuthorsCopyright 2020 Hannes Domani <https://github.com/ssbssa>Copyright 2017 Georg Sauthoff <mail@gms.tf>(c) 2013-2022 NielsCopyright (c) 2013-2022 Niels Lohmann <http://nlohmann.me>Copyright 2018 Vitaliy Manushkin <agri@akamo.info>Copyright 2016-2021 Evan Nemerson <evan@nemerson.com>Copyright 2009 Florian Loitsch <https://florian.loitsch.com/>Copyright (c) 2013-2022 Niels Lohmann (https://nlohmann.me)Copyright (c) 2015-2017 Niels LohmannCopyright 2003-2022, LLVM ProjectCopyright (c) 2008-2009 Bjoern Hoehrmann <bjoern@hoehrmann.de> sa http://bjoern.hoehrmann.de/utf-8/decoder/dfaCopyright 2012 Erik Edlund <erik.edlund@32767.se>Copyright 2016-2021 Viktor KirilovCopyright (c) 2012, Erik Edlund <erik.edlund@32767.se>Copyright (c) 2009 Florian LoitschCopyright (c) 2009 Florian Loitsch (https://florian.loitsch.com/)Copyright (c) 2020 Hannes Domani (https://github.com/ssbssa)Copyright 2013-2022 Niels Lohmann <https://nlohmann.me>Copyright (c) 2016-2023 Viktor KirilovCopyright 2008-2009 Bjorn Hoehrmann <bjoern@hoehrmann.de>Copyright (c) 2007 Free Software Foundation, Inc. <http://fsf.org/>Copyright (c) 2013-2022 Niels LohmannCopyright (c) 2008-2009 Bjorn Hoehrmann (https://bjoern.hoehrmann.de/) <bjoern@hoehrmann.de>Copyright (c) 2008-2009 Bjorn Hoehrmann (http://bjoern.hoehrmann.de/) <bjoern@hoehrmann.de>Copyright (c) 2013-2019 Niels Lohmann <http://nlohmann.me>Copyright 2015-2017 Niels Lohmanncopyright Niels Lohmann <https://nlohmann.me> year 2013-2022

**License:** MIT License

The MIT LicenseCopyright (c) <year> <copyright holders>Permission is hereby granted, free of charge, to any person obtaining a copyof this software and associated documentation files (the "Software"), to dealin the Software without restriction, including without limitation the rightsto use, copy, modify, merge, publish, distribute, sublicense, and/or sellcopies of the Software, and to permit persons to whom the Software isfurnished to do so, subject to the following conditions:The above copyright notice and this permission notice shall be included inall copies or substantial portions of the Software.THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS ORIMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THEAUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHERLIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS INTHE SOFTWARE.

**Software:** ncurses 6.5

**Copyright notice:**

Copyright 2001-2015,2017 Free Software Foundation, Inc.Copyright 1998-2005,2012 Free Software Foundation, Inc.Copyright 2006-2017,2018 Free Software Foundation, Inc.Copyright 2010,2012 Free Software Foundation, Inc.Copyright 1998-2013,2017 Free Software Foundation, Inc.Copyright 1998-2015,2016 Free Software Foundation, Inc.Copyright 1998-2010,2012 Free Software Foundation, Inc.Copyright 2013,2017 Free Software Foundation, Inc.Copyright 2008-2015,2017 Free Software Foundation, Inc.Copyright 1999-2008,2010 Free Software Foundation, Inc.Copyright 2002-2011,2012 Free Software Foundation, Inc.Copyright 2015,2016 Free Software Foundation, Inc.Copyright 1998-2006,2007 Free Software Foundation, Inc.Copyright 2004-2011,2016 Free Software Foundation, Inc.Copyright 1999-2011,2017 Free Software Foundation, Inc.Copyright 2002-2014,2017 Free Software Foundation, Inc.Copyright 1998-2009,2016 Free Software Foundation, Inc.Copyright 1998-2008,2011 Free Software Foundation, Inc.Copyright 1998,2000 Free Software Foundation, Inc.Copyright 1998-2014,2017 Free Software Foundation, Inc.Copyright 2002-2012,2017 Free Software Foundation, Inc.Copyright 2009-2010,2012 Free Software Foundation, Inc.Copyright 2020-2021,2024 Thomas E. DickeyCopyright 1998-2014,2016 Free Software Foundation, Inc.Copyright 1998-2009,2017 Free Software Foundation, Inc.Copyright 2020,2024 Thomas E. DickeyCopyright 1998-2006,2018 Free Software Foundation, Inc.Copyright 1998-2009,2010 Free Software Foundation, Inc.Copyright 2010-2015,2017 Free Software Foundation, Inc.Copyright 2018-2019-2020,2021 Thomas E. DickeyCopyright 2002-2015,2016 Free Software Foundation, Inc.Copyright 2008-2014,2017 Free Software Foundation, Inc.Copyright 2000,2014 Free Software Foundation, Inc.Copyright 2000-2006,2009 Free Software Foundation, Inc.Copyright 2018-2021,2023 Thomas E. DickeyCopyright 2003-2013,2017 Free Software Foundation, Inc.Copyright 2021,2023 by Thomas E. DickeyCopyright 2000-2009,2011 Free Software Foundation, Inc.Copyright 2004-2010,2016 Free Software Foundation, Inc.Copyright 1998 Free Software Foundation, Inc.Copyright 1998-2009,2011 Free Software Foundation, Inc.Copyright 2008-2011,2012 Free Software Foundation, Inc.Copyright 1998-2006,2008 Free Software Foundation, Inc.Copyright 2002-2015,2017 Free Software Foundation, Inc.Copyright 2008-2010,2014 Free Software Foundation, Inc.Copyright 2007-2008,2009 Free Software Foundation, Inc.Copyright 1998-2001,2009 Free Software Foundation, Inc.Copyright 2001 by Pradeep PadalaCopyright 2008-2012,2013 Free Software Foundation, Inc.Copyright 1998-2011,2017 Free Software Foundation, Inc.Copyright 1998-2004,2012 Free Software Foundation, Inc.Copyright 2002-2009,2011 Free Software Foundation, Inc.Copyright 1998-1999,2006 Free Software Foundation, Inc.Copyright 1998,2010 Free Software Foundation, Inc.Copyright 2003-2006,2010 Free Software Foundation, Inc.Copyright 2011-2014,2017 Free Software Foundation, Inc.Copyright 1998-2013,2016 Free Software Foundation, Inc.Copyright 2007-2009,2018 Free Software Foundation, Inc.Copyright 2020-2023,2024 Thomas E. DickeyCopyright 2000-2016,2017 Free Software Foundation, Inc.Copyright 1999-2011,2012 Free Software Foundation, Inc.Copyright 2009-2013,2017 Free Software Foundation, Inc.Copyright 1998-2007,2008 Free Software Foundation, Inc.Copyright 1998-2000,2009 Free Software Foundation, Inc.Copyright 1998-2012,2018 Free Software Foundation, Inc.Copyright 2000-2011,2014 Free Software Foundation, Inc.Copyright 2008-2016,2017 Free Software Foundation, Inc.Copyright 2000-2008,2011 Free Software Foundation, Inc.Copyright 2020-2022,2023 Thomas E. DickeyCopyright 2010,2011 Free Software Foundation, Inc.Copyright 2002-2016,2017 Free Software Foundation, Inc.Copyright 1998-2012,2017 Free Software Foundation, Inc.Copyright 2001-2013,2017 Free Software Foundation, Inc.Copyright 2018-2021,2023 Thomas E. Dickey printCopyright 1999-2003,2009 Free Software Foundation, Inc.Copyright 2006-2016,2017 Free Software Foundation, Inc.Copyright 2002-2006,2017 Free Software Foundation, Inc.Copyright 2014,2017 Free Software Foundation, Inc.Copyright 2002-2010,2017 Free Software Foundation, Inc.Copyright 1998-2002,2003 Free Software Foundation, Inc.Copyright 2019-2023,2024 Thomas E. DickeyCopyright 2000-2008,2012 Free Software Foundation, Inc.Copyright 1998-2006,2010 Free Software Foundation, Inc.Copyright 1998-2014,2015 Free Software Foundation, Inc.Copyright 1999-2009,2014 Free Software Foundation, Inc.Copyright 1999-2010,2016 Free Software Foundation, Inc.Copyright 2009-2015,2018 Free Software Foundation, Inc.Copyright 2007-2014,2017 Free Software Foundation, Inc.Copyright 1992-2023 Free Software Foundation, Inc.Copyright 1998-2004,2011 Free Software Foundation, Inc.(c) CMD Coding Method Delimiter E CNL Cursor NextCopyright 1999-2009,2011 Free Software Foundation, Inc.Copyright 2002-2010,2014 Free Software Foundation, Inc.Copyright 2014,2015 Free Software Foundation, Inc.Copyright 2013-2014,2016 Free Software Foundation, Inc.Copyright 1998-2016,2017 Free Software Foundation, Inc.Copyright 2018-2020,2021 Thomas E. DickeyCopyright 2019-2022,2023 Thomas E. DickeyCopyright 2006-2015,2017 Free Software Foundation, Inc.Copyright 2003-2014,2017 Free Software Foundation, Inc.Copyright 2018-2023,2024 Thomas E. DickeyCopyright 2009,2014 Free Software Foundation, Inc.Copyright 2015,2018 Free Software Foundation, Inc.Copyright 1998-2008,2012 Free Software Foundation, Inc.Copyright 2000-2009,2014 Free Software Foundation, Inc.Copyright 2023 Thomas E. DickeyCopyright 2001-2015,2016 Free Software Foundation, Inc.Copyright 2005-2017,2018 Free Software Foundation, Inc.Copyright 2009-2010,2011 Free Software Foundation, Inc.Copyright 2000-2002,2003 Free Software Foundation, Inc.Copyright 2011-2012,2016 Free Software Foundation, Inc.Copyright 2000,2006 Free Software Foundation, Inc.Copyright 2010-2014,2016 Free Software Foundation, Inc.Copyright 1998-2006,2017 Free Software Foundation, Inc.Copyright 2019-2021,2022 Thomas E. DickeyCopyright 2000-2012,2017 Free Software Foundation, Inc.Copyright 2018-2020,2024 Thomas E. DickeyCopyright 1998-2016,2018 Free Software Foundation, Inc.Copyright (c) 1994 X ConsortiumCopyright 1998-2011,2014 Free Software Foundation, Inc.Copyright 1998-2004,2009 Free Software Foundation, Inc.Copyright 2021,2022 Thomas E. DickeyCopyright 1988 by Evans & Sutherland Computer Corporation, Salt Lake City, UtahCopyright 1999-2004,2011 Free Software Foundation, Inc.Copyright 2000-2007,2008 Free Software Foundation, Inc.Copyright 1998-2008,2010 Free Software Foundation, Inc.Copyright 2018-2022,2023 Thomas E. DickeyCopyright 1998-2006,2011 Free Software Foundation, Inc.Copyright 2000,2003 Free Software Foundation, Inc.Copyright 2008-2012,2016 Free Software Foundation, Inc.Copyright 2000-2006,2011 Free Software Foundation, Inc.Copyright 2017-2023,2024 Thomas E. DickeyCopyright 2003-2011,2016 Free Software Foundation, Inc.Copyright 2012,2013 Free Software Foundation, Inc.Copyright 2012-2013,2016 Free Software Foundation, Inc.Copyright 2004-2009,2016 Free Software Foundation, Inc.Copyright 2019-2020,2021 Thomas E. DickeyCopyright 2022,2023 Thomas E. DickeyCopyright 2007-2011,2014 Free Software Foundation, Inc.Copyright 1998-2011,2012 Free Software Foundation, Inc.Copyright 2006-2013,2017 Free Software Foundation, Inc.Copyright 2000-2014,2015 Free Software Foundation, Inc.Copyright 2018-2021,2022 Thomas E. DickeyCopyright 2013-2016,2017 Free Software Foundation, Inc.Copyright 1980,1991,1992,1993 The RegentsCopyright 2003-2016,2017 Free Software Foundation, Inc.Copyright 1998-2006,2013 Free Software Foundation, Inc.Copyright 1999-2002,2003 Free Software Foundation, Inc.Copyright 2005,2009 Free Software Foundation, Inc.Copyright 1999-2011,2014 Free Software Foundation, Inc.Copyright 2001-2003,2017 Free Software Foundation, Inc.Copyright 2007-2010,2011 Free Software Foundation, Inc.Copyright 1998-2002,2006 Free Software Foundation, Inc.Copyright 1998-2001,2017 Free Software Foundation, Inc.Copyright 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001 Free Software Foundation, Inc.Copyright 2017,2018 Free Software Foundation, Inc.Copyright 1998-2004,2005 Free Software Foundation, Inc.Copyright 1996-2023,2024 by Thomas E. DickeyCopyright 2020-2021,2022 Thomas E. DickeyCopyright 2002,2006 Free Software Foundation, Inc.Copyright 2006-2012,2017 Free Software Foundation, Inc.Copyright 2002-2010,2015 Free Software Foundation, Inc.Copyright 1998-2017,2018 Free Software Foundation, Inc.Copyright 1998-2012,2014 Free Software Foundation, Inc.Copyright 1998-2003,2006 Free Software Foundation, Inc.Copyright 2003-2012,2014 Free Software Foundation, Inc.Copyright 2013-2014,2017 Free Software Foundation, Inc.Copyright 1999-2012,2013 Free Software Foundation, Inc.Copyright 2003-2017,2018 Free Software Foundation, Inc.Copyright 1998-2008,2009 Free Software Foundation, Inc.Copyright 1998-2003,2005 Free Software Foundation, Inc.Copyright 2012 Free Software Foundation, Inc.Copyright 2000-2003,2008 Free Software Foundation, Inc.Copyright 2010,2015 Free Software Foundation, Inc.Copyright 2007-2011,2017 Free Software Foundation, Inc.Copyright 1999-2016,2018 Free Software Foundation, Inc.Copyright 1998-2011,2015 Free Software Foundation, Inc.Copyright 2009-2012,2014 Free Software Foundation, Inc.Copyright 2019-2020,2023 Thomas E. DickeyCopyright 2018,2020 Thomas E. DickeyCopyright 1999-2016,2017 Free Software Foundation, Inc.Copyright 2003-2006,2009 Free Software Foundation, Inc.Copyright 1999-2004,2005 Free Software Foundation, Inc.Copyright 2003-2023,2024 by Thomas E. DickeyCopyright 2000-2011,2016 Free Software Foundation, Inc.Copyright 2002-2010,2016 Free Software Foundation, Inc.Copyright 2007-2012,2017 Free Software Foundation, Inc.Copyright 2018-2021,2024 Thomas E. DickeyCopyright 1998-2007,2009 Free Software Foundation, Inc.Copyright 1998-2000,2006 Free Software Foundation, Inc.Copyright 2020,2021 Thomas E. DickeyCopyright 1998-2012,2015 Free Software Foundation, Inc.Copyright 2008-2010,2017 Free Software Foundation, Inc.Copyright 2007-2014,2016 Free Software Foundation, Inc.Copyright 2020,2022 Thomas E. DickeyCopyright 2018-2019,2020 Thomas E. DickeyCopyright 2010-2017,2018 Free Software Foundation, Inc.Copyright 2000-2006,2007 Free Software Foundation, Inc.Copyright 2020 Thomas E. DickeyCopyright 1998-2005,2010 Free Software Foundation, Inc.Copyright 2005-2012,2017 Free Software Foundation, Inc.Copyright 2004-2011,2012 Free Software Foundation, Inc.Copyright 2007-2014,2015 Free Software Foundation, Inc.Copyright 2018-2020,2022 Thomas E. DickeyCopyright 2002-2011,2016 Free Software Foundation, Inc.Copyright 2007-2008,2017 Free Software Foundation, Inc.Copyright 1998-2013,2015 Free Software Foundation, Inc.Copyright 2007-2013,2017 Free Software Foundation, Inc.Copyright 2003-2022,2023 Thomas E. DickeyCopyright 1998-2009,2013 Free Software Foundation, Inc.Copyright 2021,2023 Thomas E. DickeyCopyright 1998-2004,2010 Free Software Foundation, Inc.Copyright 2012-2016,2017 Free Software Foundation, Inc.Copyright 1998-2000,2008 Free Software Foundation, Inc.Copyright 1998-2006,2009 Free Software Foundation, Inc.Copyright 1998-2009,2014 Free Software Foundation, Inc.Copyright 2007-2009,2016 Free Software Foundation, Inc.Copyright 2010-2016,2018 Free Software Foundation, Inc.Copyright 1998-2013,2014 Free Software Foundation, Inc.Copyright 1999-2004,2009 Free Software Foundation, Inc.Copyright 2006-2011,2013 Free Software Foundation, Inc.Copyright 2016,2017 Free Software Foundation, Inc.Copyright 2020-2021,2023 Thomas E. DickeyCopyright 1998-2012,2016 Free Software Foundation, Inc.Copyright 1998-2010,2017 Free Software Foundation, Inc.Copyright 2020,2020,2022 Thomas E. DickeyCopyright 1998-2019,2020 Free Software Foundation, Inc.Copyright 2010 Free Software Foundation, Inc.Copyright 2010-2015,2018 Free Software Foundation, Inc.Copyright 2000-2008,2014 Free Software Foundation, Inc.Copyright 1998-2009,2012 Free Software Foundation, Inc.Copyright 1998-2007,2013 Free Software Foundation, Inc.Copyright 2018-2022,2024 Thomas E. DickeyCopyright 1998-2005,2009 Free Software Foundation, Inc.copyright which I'mCopyright 2007-2010,2013 Free Software Foundation, Inc.Copyright 2017-2023,2024 by Thomas E. DickeyCopyright 1998-2010,2011 Free Software Foundation, Inc.Copyright 1999-2003,2006 Free Software Foundation, Inc.Copyright 2000-2006,2008 Free Software Foundation, Inc.Copyright 1999-2008,2011 Free Software Foundation, Inc.Copyright 1998-2005,2011 Free Software Foundation, Inc.Copyright 2019-2020,2022 Thomas E. DickeyCopyright 2018-2020,2023 Thomas E. DickeyCopyright 1998-2002,2012 Free Software Foundation, Inc.Copyright 1998-2012,2013 Free Software Foundation, Inc.Copyright 2000 Free Software Foundation, Inc.Copyright 1998-2003,2017 Free Software Foundation, Inc.Copyright 2008 Free Software Foundation, Inc.Copyright 2005-2016,2017 Free Software Foundation, Inc.Copyright 2015-2016,2017 Free Software Foundation, Inc.Copyright 1998-2010,2013 Free Software Foundation, Inc.Copyright 1999-2013,2017 Free Software Foundation, Inc.Copyright 1998-2005,2007 Free Software Foundation, Inc.Copyright 2020-2021 Thomas E. DickeyCopyright 2020,2023 Thomas E. DickeyCopyright 2022 Thomas E. DickeyCopyright 2006-2014,2017 Free Software Foundation, Inc.Copyright 2000-2008,2009 Free Software Foundation, Inc.Copyright 2021-2023,2024 Thomas E. DickeyCopyright 2006,2017 Free Software Foundation, Inc.Copyright 2019-2021,2023 Thomas E. DickeyCopyright 2011,2014 Free Software Foundation, Inc.Copyright 2007-2009,2010 Free Software Foundation, Inc.Copyright 2003-2005,2008 Free Software Foundation, Inc.Copyright 2014 Free Software Foundation, Inc.Copyright 2004,2009 Free Software Foundation, Inc.Copyright 2001-2011,2012 Free Software Foundation, Inc.Copyright 2022 Leonid S. UsovCopyright 2019,2020 Thomas E. DickeyCopyright 2016,2018 Free Software Foundation, Inc.Copyright 1998-2010,2016 Free Software Foundation, Inc.Copyright 2002 Free Software Foundation, Inc.Copyright 1998,2006 Free Software Foundation, Inc.Copyright 2007-2015,2017 Free Software Foundation, Inc.Copyright 2011,2015 Free Software Foundation, Inc.Copyright 2007-2010,2017 Free Software Foundation, Inc.Copyright 1998-2010,2015 Free Software Foundation, Inc.Copyright (c) 1989 BULL SACopyright 2009-2016,2017 Free Software Foundation, Inc.Copyright 1998-2007,2010 Free Software Foundation, Inc.Copyright 2019-2022,2024 Thomas E. DickeyCopyright 1994 X ConsortiumCopyright 2002-2007,2009 Free Software Foundation, Inc.Copyright 2000-2013,2017 Free Software Foundation, Inc.Copyright 2003 Free Software Foundation, Inc.Copyright 1998-2000,2001 Free Software Foundation, Inc.Copyright 1998-2005,2017 Free Software Foundation, Inc.Copyright 2002-2009,2016 Free Software Foundation, Inc.Copyright 1998-2015,2018 Free Software Foundation, Inc.Copyright 2001-2016,2017 Free Software Foundation, Inc.Copyright 2001-2011,2014 Free Software Foundation, Inc.Copyright 2010-2013,2017 Free Software Foundation, Inc.copyright Howard Jones, September 1994 (ha.jones@ic.ac.uk)Copyright 2016 Free Software Foundation, Inc.copyright 1997 by Joey HessCopyright 2017 Free Software Foundation, Inc.Copyright 2001-2008,2012 Free Software Foundation, Inc.Copyright 2010-2023,2024 by Thomas E. DickeyCopyright 1998-2003,2009 Free Software Foundation, Inc.Copyright 1999-2006,2009 Free Software Foundation, Inc.Copyright 2022-2023,2024 Thomas E. DickeyCopyright 1998-2015,2017 Free Software Foundation, Inc.

**License:** MIT License

Please see above

**Software:** LLVM 15.0.4

**Copyright notice:**

Copyright (c) 2003-2019 University of Illinois at Urbana-ChampaignCopyright (c) 2007-2019 University of Illinois at Urbana-ChampaignCopyright 2008-2010 Apple, Inc.Copyright (c) 2017 Google Inc.Copyright (c) 2007-2018 University of Illinois at Urbana-ChampaignCopyright 2006, Dean EdwardsCopyright (c) 2009-2019 by the contributorsCopyright (c) 2009-2015 by the contributorsCopyright 2007-2010 by the Sphinx teamCopyright (c) 2011-2019 by the contributorsCopyright (c) 2011-2014 by the contributorsCopyright (c) 2014 Advanced Micro Devices, Inc.Copyright (c) 2015 Advanced Micro Devices, Inc.Copyright (c) 2014,2015 Advanced Micro Devices, Inc.Copyright (c) 2014, 2015 Advanced Micro Devices, Inc.Copyright (c) 2013 Victor Oliveira <victormatheus@gmail.com>Copyright (c) 2013 Jesse Towner <jessetowner@lavabit.com>Copyright (c) 1993 by Sun Microsystems, Inc.Copyright (c) 2016 Aaron WatryCopyright (c) 2016 Aaron Watry <awatry@gmail.com>Copyright (c) 2009-2014 by the contributorsCopyright (c) 1991-2022 Unicode, Inc.Copyright (c) Microsoft CorporationCopyright (c) 2002-2004 Tim J. RobbinsCopyright (c) 2005 Free Standards GroupCopyright (c) 1992, 1993 UNIX International, Inc.Copyright (c) 2011-2019 by the contributors listed in CREDITS.TXTCopyright (c) 2010 Apple Inc.Copyright (c) 2008 Free Software Foundation, Inc.Copyright (c) 2010-2017 Free Software Foundation, Inc.Copyright (c) 2010-2015 Free Software Foundation, Inc.Copyright (c) by P.J. PlaugerCopyright (c) 2018 Jim InghamCopyright (c) 2013-2014, Pexpect development teamCopyright (c) 2012, Noah Spurrier <noah@noah.org>Copyright (c) 2013-2016, Pexpect development teamCopyright (c) 2010-2015 Benjamin PetersonCopyright (c) 1999-2003 Steve PurcellCopyright (c) 2003-2010 Python Software FoundationCopyright (c) 1999-2007 Apple Inc.Copyright (c) 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011 Free Software Foundation, Inc.Copyright The LLVM projectCopyright (c) 1997, PhillipCopyright (c) 1992, 1993, 1994 Henry SpencerCopyright (c) 1992, 1993, 1994 The Regents of the University of CaliforniaCopyright 2000 Free Software Foundation, Inc.Copyright 2001-2004 Unicode, Inc.Copyright (c) 2001 Alexander PeslyakCopyright (c) 2012-2016, Yann ColletCopyright 1992, 1993, 1994 Henry SpencerCopyright (c) 1994 The Regents of the University of CaliforniaCopyright (c) 1992 Henry SpencerCopyright (c) 1992, 1993 The Regents of the University of CaliforniaCopyright (c) 1998 Todd C. Miller <Todd.Miller@courtesan.com>Copyright 2019 Jack O'Connor and Samuel NevesCopyright (c) 2006 Kirill SimonovCopyright 2008, Google Inc.Copyright 2007, Google Inc.Copyright 2013, Google Inc.Copyright 2015, Google Inc.Copyright 2005, Google Inc.Copyright 2008 Google Inc.Copyright 2006, Google Inc.Copyright (c) 2022 The MLIR AuthorsCopyright (c) 2019 The MLIR AuthorsCopyright (c) 1997-2019 Intel CorporationCopyright 2007-2020 by the Sphinx teamCopyright (c) 2015the LLVM ProjectCopyright (c) 2019 Intel CorporationCopyright (c) 2009-2019 Polly TeamCopyright 2008-2009 Katholieke Universiteit LeuvenCopyright 2006-2007 Universiteit LeidenCopyright 2021 Cerebras SystemsCopyright 2012,2014 Ecole Normale SuperieureCopyright 2013 Ecole Normale SuperieureCopyright 2017 Sven VerdoolaegeCopyright 2011 INRIA SaclayCopyright 2011 Sven VerdoolaegeCopyright 2012-2014 Ecole Normale SuperieureCopyright 2014 INRIA RocquencourtCopyright 2016 Sven VerdoolaegeCopyright 2018,2020 Cerebras SystemsCopyright 2021 Sven VerdoolaegeCopyright 2012-2013 Ecole Normale SuperieureCopyright 2010 INRIA SaclayCopyright 2012 Ecole Normale SuperieureCopyright 2019 Cerebras SystemsCopyright 2018 Cerebras SystemsCopyright 2010-2011 INRIA SaclayCopyright 2016 INRIACopyright 2020 Cerebras SystemsCopyright 2005-2007 Universiteit LeidenCopyright 2012 Universiteit LeidenCopyright 2014 Ecole Normale SuperieureCopyright 2015 INRIA Paris-RocquencourtCopyright 2018-2019 Cerebras SystemsCopyright 2014-2015 INRIA RocquencourtCopyright 2015 Sven VerdoolaegeCopyright 2018 Sven VerdoolaegeCopyright 2013-2014 Ecole Normale SuperieureCopyright 2015-2016 Sven VerdoolaegeCopyright 2016-2017 Sven VerdoolaegeCopyright 2016-2017 Tobias GrosserCopyright 2002-2009 Michael J. FrombergerCopyright (c) 2012 Qualcomm Innovation Center, Inc.Copyright (c) 2002-2007 Michael J. FrombergerCopyright (c) 2002-2008 Michael J. FrombergerCopyright (c) 2002-2009 Michael J. Frombergercopyright (c) 2002-2009 Michael J. FrombergerCopyright (c) 2006 Matus HorvathCopyright (c) 2004-2008 Michael J. FrombergerCopyright (c) 2003-2008 Michael J. FrombergerCopyright (c) 2018 Michael J. FrombergerCopyright 2016, 2017 Tobias GrosserCopyright 2011,2015 Sven VerdoolaegeCopyright 2012 INRIA Paris-RocquencourtCopyright (c) 2009-2016 by the contributorsCopyright (c) 2006-2009 Steven J. Bethard <steven.bethard@gmail.com>Copyright 2010 Zencoder, Inc.Copyright (c) 2017-2019 by the contributorsCopyright 2020 Google Inc.Copyright 2015 Google Inc.Copyright 2018 Google Inc.Copyright 2016 Ismael Jimenez MartinezCopyright 2021 Google Inc.Copyright 2017 Roman Lebedev

**License:** Apache 2.0 with LLVM Exception

==============================================================================The LLVM Project is under the Apache License v2.0 with LLVM Exceptions:============================================================================== Apache License Version 2.0, January 2004 http://www.apache.org/licenses/ TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION 1. Definitions. "License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document. "Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License. "Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity. "You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License. "Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files. "Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types. "Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below). "Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof. "Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution." "Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work. 2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form. 3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed. 4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions: (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and (b) You must cause any modified files to carry prominent notices stating that You changed the files; and (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License. You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License. 5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions. 6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file. 7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License. 8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages. 9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability. END OF TERMS AND CONDITIONS APPENDIX: How to apply the Apache License to your work. To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives. Copyright [yyyy] [name of copyright owner] Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at http://www.apache.org/licenses/LICENSE-2.0 Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.---- LLVM Exceptions to the Apache 2.0 License ----As an exception, if, as a result of your compiling your source code, portionsof this Software are embedded into an Object form of such source code, youmay redistribute such embedded portions in such Object form without complyingwith the conditions of Sections 4(a), 4(b) and 4(d) of the License.In addition, if you combine or link compiled forms of this Software withsoftware that is licensed under the GPLv2 ("Combined Software") and if acourt of competent jurisdiction determines that the patent provision (Section3), the indemnity provision (Section 9) or other Section of the Licenseconflicts with the conditions of the GPLv2, you may retroactively andprospectively choose to deem waived or otherwise exclude such Section(s) ofthe License, but only in their entirety and only with respect to the CombinedSoftware.

**Software:** mingw-w64 v12.0.0

**Copyright notice:**

Copyright (c) 2003 Alexandre JulliardCopyright (c) Microsoft CorporationCopyright (c) 1994-2014 Free Software Foundation, Inc.(c) 2013 CorrectedCopyright 2023 Hans LeidekkerCopyright (c) 2002 Robert ShearmanCopyright (c) 1989, 1997, 1998, 1999, 2000 Free Software Foundation, Inc.Copyright (c) 2010 Nikolay SivovCopyright 2016-2019 Jozef KuciaCopyright 1984, 1987, 1989 by Stephen L. Moshier DirectCopyright 2016 Nikolay SivovCopyright 2007 Google (Roy Shea)Copyright 2015 Steve LhommeCopyright (c) 2018 mingw-w64 projectCopyright (c) 2007 Francois GougetCopyright (c) 2004 Francois GougetCopyright 2020 Nikolay SivovCopyright (c) 2006 Maarten LankhorstCopyright 2007 Jeff LatimerCopyright 2009 Aric Stewart, CodeWeaversCopyright (c) 2013-2018 The Khronos Group Inc.Copyright (c) 2022 mingw-w64 projectCopyright 2019 Alistair Leslie-HughesCopyright (c) 1997, 1998, 1999, 2000, 2001 by Lucent Technologies All Rights ReservedCopyright (c) 1998, 2000 by Lucent Technologies All Rights ReservedCopyright (c) 2004-2005, 2007, 2009, 2011-2019, 2021-2022 Free Software Foundation, Inc.Copyright (c) 2003-2014 Free Software Foundation, Inc.Copyright 2006 Robert ShearmanCopyright (c) 2004 Christian CostaCopyright (c) 1994, 1995, 1996, 1999, 2000, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009 Free Software Foundation, Inc.Copyright 2020 Paul GofmanCopyright 2021 Paul GofmanCopyright (c) 2021 Mohamad Al-JafCopyright 2002 Ove KaavenCopyright (c) 1992-1996, 1998-2012 Free Software Foundation, Inc.Copyright (c) 2001-2014 Free Software Foundation, Inc.Copyright (c) 2005 Vijay Kiran KamujuCopyright 2022 Bernhard KolblCopyright (c) 2011 Piotr CabanCopyright 2013 Austin EnglishCopyright 2022 Paul GofmanCopyright (c) 2009-2021 Free Software Foundation, Inc.Copyright (c) 2017 Alexandre JulliardCopyright (c) Microsoft Corporation. All rights reservedCopyright (c) 2002-2003 Raphael JunqueiraCopyright (c) 2002-2014 Free Software Foundation, Inc.Copyright 2020 Jacek CabanCopyright (c) 2004 Vincent BeronCopyright 2021 Jacek CabanCopyright (c) 2009 Andrew NguyenCopyright 2005-2006 Robert ShearmanCopyright 2010 Justin ChevrierCopyright (c) 2008 Tony WasserkaCopyright 1992-2014 Free Software Foundation, Inc.Copyright (c) 2016 mingw-w64 projectCopyright (c) 2001 Ove KaavenCopyright 2017 Alistair Leslie-HughesCopyright (c) 2000 Alexandre JulliardCopyright 2008 Google (Dan Hipschman)Copyright (c) 2008 Maarten LankhorstCopyright (c) 2010 Christian CostaCopyright 2019 Hans LeidekkerCopyright (c) 2020 Vijay Kiran KamujuCopyright (c) 2019 Daniel LehmanCopyright (c) 2021 Free Software Foundation, Inc.Copyright (c) 1997, 1998 Lucent Technologies All Rights ReservedCopyright 1998 Bertho A. StultiensCopyright (c) 2022 Mohamad Al-JafCopyright 1992-2023 Free Software Foundation, Inc.Copyright (c) 1997-2014 Free Software Foundation, Inc.Copyright 2017 Ihsan AkmalCopyright (c) 1989, 1991 Free Software Foundation, Inc.Copyright 2009 Henri VerbeetCopyright (c) 2004 Raphael JunqueiraCopyright 2015 Jacek CabanCopyright (c) 2002 Todd C. Miller <Todd.Miller@courtesan.com>Copyright 2004 Mike McCormackCopyright (c) 1992, 1993 The RegentsCopyright (c) 2004-2005, 2007-2009, 2011-2019, 2021-2022 Free Software Foundation, Inc.Copyright (c) 1999-2021 Free Software Foundation, Inc.Copyright (c) 2007 Free Software Foundation, Inc. <http://fsf.org/>Copyright (c) 2011 Free Software Foundation, Inc.Copyright 2021 Alexandre JulliardCopyright 2005 Huw DaviesCopyright (c) 1996-2019, 2021-2022 Free Software Foundation, Inc.Copyright (c) 1998 by Lucent Technologies All Rights Reserved(c) 2010 Lockless Inc. All rights reservedCopyright (c) 2002-2003 Jason EdmeadesCopyright 2010 Alexandre JulliardCopyright (c) 2003 Robert Shearman(c) 2013 ExtendedCopyright (c) 2008 Louis LendersCopyright 2015 Hans LeidekkerCopyright (c) 2004 Jacek CabanCopyright (c) 2009-2016 mingw-w64 projectCopyright 2018 Daniel LehmanCopyright 2014 Kai TietzCopyright 2008 Maarten LankhorstCopyright (c) 2015 Andrew EikumCopyright (c) 1991, 1992, 1996, 1998 Free Software Foundation, Inc.Copyright 2023 Remi BernonCopyright (c) 1994 X ConsortiumCopyright (c) 2002 Peter HunnisettCopyright 2021 Remi BernonCopyright (c) 2006 Hans LeidekkerCopyright 2011 Vincent PovirkCopyright (c) 2010-2021 Free Software Foundation, Inc.Copyright 1996 Alexandre JulliardCopyright (c) 2010 Maarten LankhorstCopyright 2005-2006 Eric KohlCopyright 2013 Dmitry TimoshkovCopyright (c) 1997-2021 Free Software Foundation, Inc.Copyright (c) 2010-2019, 2021 BootstrapCopyright 2002 Alexandre JulliardCopyright (c) 2005 Peter Berg LarsenCopyright 1998 Bertho A. Stultiens (BS)Copyright 2008 Luis BusquetsCopyright (c) 1984-1998 Stephen L. MoshierCopyright (c) 2017 Alistair Leslie-HughesCopyright 2013 Jacek CabanCopyright 2004 Alastair Bridgewater 2004, 2005 Huw DaviesCopyright (c) 2007 Shane KingCopyright 2018 Jozef KuciaCopyright 2016 Jozef KuciaCopyright 1999 Rein KLazesCopyright 2010 Rico SchullerCopyright 2011 Jacek CabanCopyright (c) 1999 Francois GougetCopyright 2008 Andrew FennCopyright (c) 2011, 2014 mingw-w64 projectCopyright (c) 2008-2018 The Khronos Group Inc.Copyright (c) 2014 Free Software Foundation, Inc.Copyright (c) 2008 Alexandre Duret-Lutz <adl@gnu.org>Copyright (c) 2004 by David M. Gay. All Rights ReservedCopyright 2014 Hans LeidekkerCopyright 2002 Ove Kaaven basedCopyright (c) 2003 Robert Shearman 2005 Huw DaviesCopyright (c) 2002 Jason EdmeadesCopyright (c) 2003-2021 Free Software Foundation, Inc.Copyright (c) 1998-2001 by Lucent Technologies All Rights ReservedCopyright 1984, 1987, 1988, 1992 by Stephen L. Moshier DirectCopyright 2015 Michael MullerCopyright 1984, 1987, 1988 by Stephen L. Moshier DirectCopyright 2010 Matteo BruniCopyright (c) 2012 Free Software Foundation, Inc.Copyright 2014 Nikolay SivovCopyright (c) 2023 Free Software Foundation, Inc.Copyright (c) 1998 John E. BossomCopyright 2006 Jacek Cabancopyright (c) 1998, 2000 by Lucent TechnologiesCopyright 2009 Maarten LankhorstCopyright 2008 Henri VerbeetCopyright (c) 2003-2005 Raphael JunqueiraCopyright 2019 Jactry ZengCopyright (c) 2013-2016 mingw-w64 projectCopyright (c) 2005 Oliver StieberCopyright 2021 Zebediah FiguraCopyright 2007 David ADAMCopyright (c) 1996-2021 Free Software Foundation, Inc.Copyright (c) 1996-2001, 2003-2019, 2021-2022 Free Software Foundation, Inc.Copyright (c) 2009-2014 Free Software Foundation, Inc.Copyright (c) 1983, 1992, 1993 The RegentsCopyright (c) 2008 Alistair Leslie-HughesCopyright (c) 2002-2021 Free Software Foundation, Inc.Copyright (c) 1988, 1993 The RegentsCopyright 2023 Vitaly LipatovCopyright (c) 2011 mingw-w64 projectCopyright (c) 2007, 2008 Tony WasserkaCopyright (c) 2002 Alexandre JulliardCopyright (c) 1999-2014 Free Software Foundation, Inc.Copyright 2020 Aaron HillCopyright (c) 2009 mingw-w64 projectCopyright (c) 1997, 1999, 2001 Lucent Technologies All Rights ReservedCopyright (c) 2015 Intel CorporationCopyright (c) 1999 Patrik StridvallCopyright (c) 2005 Mike McCormackCopyright 2016 Alistair Leslie-HughesCopyright (c) 1998 Softweyr LLC. All rights reservedCopyright 2021 Jactry ZengCopyright (c) 2004 by Sun Microsystems, Inc. All rights reservedCopyright 2008 Hans LeidekkerCopyright 2008 James HawkinsCopyright (c) 2007 Tony WasserkaCopyright 2005 Jacek CabanCopyright 2015,2016 Dmitry TimoshkovCopyright 2004 Jacek CabanCopyright 2022 Zhiyi ZhangCopyright 2022 Nikolay SivovCopyright 2021 Gijs VermeulenCopyright 2004 Ove KaavenCopyright (c) 1994-2021 Free Software Foundation, Inc.Copyright (c) 2024 Biswapriyo NathCopyright (c) 2011-2016 mingw-w64 projectCopyright (c) 2000 Ove KaavenCopyright (c) 2004-2021 Free Software Foundation, Inc.Copyright (c) 1982, 1983, 1986, 1992, 1993 The RegentsCopyright 2007 MarcelCopyright 2021 Brendan ShanksCopyright (c) 2023 Mohamad Al-JafCopyright (c) 2007 David AdamCopyright 2001-2003 Jon GriffithsCopyright 2023 Fabian MaurerCopyright (c) 2004 Robert ReifCopyright (c) 1999 Peter HunnisettCopyright (c) 2000 Peter HunnisettCopyright (c) 2001 John R. SheetsCopyright (c) 2006-2014 Free Software Foundation, Inc.Copyright 1999-2000 Bertho A. Stultiens (BS)Copyright (c) 2008 Vijay Kiran KamujuCopyright (c) 2000 by Lucent Technologies All Rights ReservedCopyright (c) 2000 The NetBSD Foundation, Inc. All rights reservedCopyright (c) 2003 Robert ReifCopyright (c) Free Software FoundationCopyright (c) 2005 Dmitry TimoshkovCopyright 2022 Mohamad Al-JafCopyright (c) 2008 Google (Lei Zhang)Copyright (c) 1998-2000 by Lucent Technologies All Rights ReservedCopyright (c) 1984, 1989-1990, 2000-2015, 2018-2022 Free Software Foundation, Inc.Copyright 1999 Corel CorporationCopyright (c) 1987,88,89,90,91,92,93,94,95,96,98,99,2000,2001,2002 Free Software Foundation, Inc.Copyright 2021 Andrew EikumCopyright (c) 2004, 2011-2019, 2021-2022 Free Software Foundation, Inc.Copyright 2008 Aric Stewart, CodeWeaversCopyright 2012 Andre HentschelCopyright (c) 1999,2005 Pthreads-win32 contributorsCopyright (c) 2022 Alvin WongCopyright 2011 Dylan SmithCopyright (c) 2009 David AdamCopyright (c) 2013 mingw-w64 projectCopyright (c) 2008-2021 Free Software Foundation, Inc.Copyright (c) 2005-2020 Rich FelkerCopyright (c) 2004-2019, 2021 BootstrapCopyright (c) 1992-1996, 1998-2017, 2020-2023 Free Software Foundation, Inc.Copyright (c) 2003-2004 Rok MandeljcCopyright 2020 Remi BernonCopyright (c) 1998, 1999 by Lucent Technologies All Rights ReservedCopyright (c) 1998 Ben Elliston and Ross JohnsonCopyright 2014 Michael MullerCopyright (c) 1999,2003 Pthreads-win32 contributorsCopyright (c) 2018 Alistair Leslie-HughesCopyright (c) 2023 Biswapriyo NathCopyright (c) 2005 by David M. Gay All Rights ReservedCopyright 2007,2010 Vijay Kiran KamujuCopyright 2009 Vincent PovirkCopyright 1998, 1999, 2000, 2001, 2002 Red Hat, Inc.Copyright 2022 Remi BernonCopyright 2013 Nikolay SivovCopyright (c) 2002-2003 Jason Edmeades Raphael JunqueiraCopyright (c) 2010 Tony WasserkaCopyright (c) 1982, 1986, 1992, 1993 The RegentsCopyright (c) 2004-2014 Free Software Foundation, Inc.Copyright 2006-2008 Robert ShearmanCopyright (c) 1999,2000,2001 Ross JohnsonCopyright (c) 1992-1996, 1998-2017, 2020-2021 Free Software Foundation, Inc.Copyright (c) 2001-2021 Free Software Foundation, Inc.Copyright (c) 2024 Mohamad Al-JafCopyright 2012 Jacek CabanCopyright 2014 Jacek CabanCopyright (c) 2006-2021 Free Software Foundation, Inc.Copyright (c) 2015 Mark HarmstoneCopyright (c) 2020 Alistair Leslie-HughesCopyright (c) 1993 by Sun Microsystems, Inc. All rights reservedCopyright 2004 Christian CostaCopyright 2010 Jacek CabanCopyright (c) 2020 mingw-w64 projectCopyright (c) 2009 Maarten LankhorstCopyright 2019 Vijay Kiran KamujuCopyright 2010 Christian CostaCopyright 2007 Andras KovacsCopyright (c) 1996-2014 Free Software Foundation, Inc.Copyright (c) 2011-2021 Free Software Foundation, Inc.Copyright 2012 Nikolay SivovCopyright (c) MinGW-W64 ProjectCopyright 2005 Robert ShearmanCopyright (c) 2004-2005, 2007-2008, 2011-2019, 2021-2022 Free Software Foundation, Inc.Copyright 2008 Robert Shearman

**License:** Zope Public License V2.1

Zope Public License (ZPL) Version 2.1-------------------------------------A copyright notice accompanies this license document that identifies the copyright holders.This license has been certified as open source. It has also been designated as GPL compatible by the Free Software Foundation (FSF).Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:1.Redistributions in source code must retain the accompanying copyright notice, this list of conditions, and the following disclaimer.2.Redistributions in binary form must reproduce the accompanying copyright notice, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution.3.Names of the copyright holders must not be used to endorse or promote products derived from this software without prior written permission from the copyright holders.4.The right to distribute this software or to use it for any purpose does not give you the right to use Servicemarks (sm) or Trademarks (tm) of the copyright holders. Use of them is covered by separate agreement with the copyright holders.5.If any files are modified, you must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.DisclaimerTHIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

**Software:** openEuler:libxml2 2.11.9-1.oe2403sp1

**Copyright notice:**

Copyright (c) 2021 Free Software Foundation, Inc.(c) Copyright Microsoft CorCopyright (c) IPTC, 2000 - 2003 All rights reservedCopyright (c) 2000 Bjorn Reese and Daniel Stenberg(c) phane BidoulCopyright (c) 2004-2015 Free Software Foundation, Inc.Copyright (c) 2004, 2011-2015 Free Software Foundation, Inc.Copyright (c) 1998-2012 Daniel Veillard. All Rights ReservedCopyright (c) 2000-2021 Free Software Foundation, Inc.(c) 1999, 2000 WAP Forum Ltd. All rights reservedCopyright (c) 2000. All Rights ReservedCopyright, UsageRights, PropertyCopyright (c) 2003-2021 Free Software Foundation, Inc.Copyright (c) 1994-1996, 1999-2002, 2004-2017, 2020-2021 Free Software Foundation, Inc.Copyright (c) 2010-2015 Free Software Foundation, Inc.Copyright (c) 1998-1999 W3C (MIT, INRIA, Keio), All Rights ReservedCopyright (c) 2001 Bjorn Reese and Daniel StenbergCopyright (c) 1999-2021 Free Software Foundation, Inc.Copyright (c) 2011 Free Software Foundation, Inc.Copyright (c) 2008 Guido U. Draheim <guidod@gmx.de>Copyright (c) 1996-2021 Free Software Foundation, Inc.Copyright (c) Daniel VeillardCopyright (c) 2002-2021 Free Software Foundation, Inc.Copyright (c) 2020 Sebastian Pipping <sebastian@pipping.org>Copyright 1992-2022 Free Software Foundation, Inc.Copyright (c) 1998-2017 Daniel VeillardCopyright (c) 2003-2012 Daniel VeillardCopyright (c) 2000 Gary Pennington and Daniel VeillardCopyright (c) 2004-2005, 2007-2009, 2011-2015 Free Software Foundation, Inc.Copyright (c) 1994 X ConsortiumCopyright (c) 2004-2005, 2007, 2009, 2011-2015 Free Software Foundation, Inc.(c) phane Bidoul - XInclude various fixesCopyright (c) 2010-2017 Christopher SwensonCopyright (c) 1998 Bjorn Reese and Daniel StenbergPortions (c) International OrganizationCopyright (c) 2012 Google Inc. All Rights ReservedCopyright (c) 1992-1996, 1998-2017, 2020-2021 Free Software Foundation, Inc.Copyright (c) 2004-2005, 2007-2008, 2011-2015 Free Software Foundation, Inc.Copyright (c) 1997-2021 Free Software Foundation, Inc.(c) 2000 GameSquad.net All Rights ReservedCopyright (c) 2009-2021 Free Software Foundation, Inc.Copyright (c) 2001-2021 Free Software Foundation, Inc.Copyright (c) 1996-2015 Free Software Foundation, Inc.Copyright (c) 2014 Mike Frysinger <vapier@gentoo.org>Copyright (c) 2006-2021 Free Software Foundation, Inc.Copyright (c) 2011 Maarten Bosmans <mkbosmans@gmail.com>Copyright (c) 1994-2021 Free Software Foundation, Inc.Copyright (c) 2001 Bjorn Reese <breese@users.sourceforge.net>Copyright 2000 Example.com. All rights reservedCopyright (c) 1996-2001, 2003-2015 Free Software Foundation, Inc.Copyright (c) 2004-2021 Free Software Foundation, Inc.Copyright (c) 2004 Scott James Remnant <scott@netsplit.com>Copyright (c) 2000,2012 Bjorn Reese and Daniel VeillardCopyright (c) 2012-2015 Dan Nicholson <dbn.lists@gmail.com>Copyright (c) 2012 Vojtech FriedCopyright (c) 2014 Free Software Foundation, Inc.

**License:** MIT License

Please see above

**Software:** PCRE2 pcre2-10.44

**Copyright notice:**

Copyright (c) 1997-2024 University of CambridgeCopyright (c) 2010-2024 Zoltan HerczegCopyright (c) 2009-2024 Zoltan HerczegCopyright (c) 1997-2021 University of CambridgeCopyright (c) 1997-2023 University of CambridgeCopyright (c) 1997-2019 University of CambridgeCopyright (c) 1997-2022 University of CambridgeCopyright (c) 1997-2016 University of CambridgeCopyright (c) 1997-2018 University of CambridgeCopyright (c) 2008 Steven G. Johnson <stevenj@alum.mit.edu>Copyright (c) 2011 Daniel Richard G. <skunk@iSKUNK.ORG>Copyright (c) 2005, 2008, 2010-2011 Free Software Foundation, Inc.Copyright (c) 1997-2012 University of CambridgeCopyright (c) 2016-2022 University of CambridgeCopyright (c) University of Cambridge 2008-2023 Compile(c) 2022 Unicode(r), Inc.(c) MidLetter or MidNumLetCopyright (c) 2016-2024 University of CambridgeCopyright (c) 2023 University of CambridgeCopyright (c) 2016-2020 University of CambridgeCopyright (c) 2016-2023 University of CambridgeCopyright (c) 2016 University of CambridgeCopyright (c) 2016-2019 University of CambridgeCopyright (c) 2015-2024 University of CambridgeCopyright (c) 2016-2018 University of CambridgeCopyright (c) 2016-2021 University of CambridgeCopyright (c) 2018-2021 University of CambridgeCopyright (c) 1997-2012 University of Cambridge RewrittenCopyright Zoltan Herczeg (hzmester@freemail.hu)(c) Alexey Chupahin(c) Alexey Chupahin CHAPG

**License:** BSD 3-Clause License

Copyright (c) <YEAR>, <OWNER>All rights reserved.Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

**Software:** libboundscheck v1.1.16

**Copyright notice:** Copyright (c) Huawei Technologies Co., Ltd. 2014-2021. All rights reserved.

**License:** Mulan PSL v2

Mulan Permissive Software License,Version 2 (Mulan PSL v2)

January 2020 http://license.coscl.org.cn/MulanPSL2

Your reproduction, use, modification and distribution of the Software shall be subject to Mulan PSL v2 (this License) with the following terms and conditions:

0. Definition

Software means the program and related documents which are licensed under this License and comprise all Contribution(s).

Contribution means the copyrightable work licensed by a particular Contributor under this License.

Contributor means the Individual or Legal Entity who licenses its copyrightable work under this License.

Legal Entity means the entity making a Contribution and all its Affiliates.

Affiliates means entities that control, are controlled by, or are under common control with the acting entity under this License, 'control' means direct or indirect ownership of at least fifty percent (50%) of the voting power, capital or other securities of controlled or commonly controlled entity.

1. Grant of Copyright License

Subject to the terms and conditions of this License, each Contributor hereby grants to you a perpetual, worldwide, royalty-free, non-exclusive, irrevocable copyright license to reproduce, use, modify, or distribute its Contribution, with modification or not.

2. Grant of Patent License

Subject to the terms and conditions of this License, each Contributor hereby grants to you a perpetual, worldwide, royalty-free, non-exclusive, irrevocable (except for revocation under this Section) patent license to make, have made, use, offer for sale, sell, import or otherwise transfer its Contribution, where such patent license is only limited to the patent claims owned or controlled by such Contributor now or in future which will be necessarily infringed by its Contribution alone, or by combination of the Contribution with the Software to which the Contribution was contributed. The patent license shall not apply to any modification of the Contribution, and any other combination which includes the Contribution. If you or your Affiliates directly or indirectly institute patent litigation (including a cross claim or counterclaim in a litigation) or other patent enforcement activities against any individual or entity by alleging that the Software or any Contribution in it infringes patents, then any patent license granted to you under this License for the Software shall terminate as of the date such litigation or activity is filed or taken.

3. No Trademark License

No trademark license is granted to use the trade names, trademarks, service marks, or product names of Contributor, except as required to fulfill notice requirements in section 4.

4. Distribution Restriction

You may distribute the Software in any medium with or without modification, whether in source or executable forms, provided that you provide recipients with a copy of this License and retain copyright, patent, trademark and disclaimer statements in the Software.

5. Disclaimer of Warranty and Limitation of Liability

THE SOFTWARE AND CONTRIBUTION IN IT ARE PROVIDED WITHOUT WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED. IN NO EVENT SHALL ANY CONTRIBUTOR OR COPYRIGHT HOLDER BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO ANY DIRECT, OR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM YOUR USE OR INABILITY TO USE THE SOFTWARE OR THE CONTRIBUTION IN IT, NO MATTER HOW IT'S CAUSED OR BASED ON WHICH LEGAL THEORY, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

6. Language

THIS LICENSE IS WRITTEN IN BOTH CHINESE AND ENGLISH, AND THE CHINESE VERSION AND ENGLISH VERSION SHALL HAVE THE SAME LEGAL EFFECT. IN THE CASE OF DIVERGENCE BETWEEN THE CHINESE AND ENGLISH VERSIONS, THE CHINESE VERSION SHALL PREVAIL.

END OF THE TERMS AND CONDITIONS

How to Apply the Mulan Permissive Software License,Version 2 (Mulan PSL v2) to Your Software

To apply the Mulan PSL v2 to your work, for easy identification by recipients, you are suggested to complete following three steps:

Fill in the blanks in following statement, including insert your software name, the year of the first publication of your software, and your name identified as the copyright owner;

Create a file named "LICENSE" which contains the whole context of this License in the first directory of your software package;

Attach the statement to the appropriate annotated syntax at the beginning of each source file.

Copyright (c) [Year] [name of copyright holder]

[Software Name] is licensed under Mulan PSL v2.

You can use this software according to the terms and conditions of the Mulan PSL v2.

You may obtain a copy of Mulan PSL v2 at:

http://license.coscl.org.cn/MulanPSL2

THIS SOFTWARE IS PROVIDED ON AN "AS IS" BASIS, WITHOUT WARRANTIES OF ANY KIND,

EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO NON-INFRINGEMENT,

MERCHANTABILITY OR FIT FOR A PARTICULAR PURPOSE.

See the Mulan PSL v2 for more details.