Andrew Baluyot

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Dr. Chappell

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<div align="center">Comparing Two Software Licenses</div>

The GNU General Public License (GPL) and the GNU Lesser General Public License (LGPL) are both licenses created by the Free Software Foundation (FSF) to ensure freedom for software and other kinds of works. The two licenses are similar in that the LGPL is built upon the requirements of the GPL with a few differences in its terms related to permissions, restrictions, and use cases that a developer needs to consider when choosing between the two.

When choosing between the two licenses, there is a difference in the intended use cases that these licenses are designed for. The GNU GPL emphasizes protecting user freedoms and ensuring that all derived works remain free. It's terms work to create a strong barrier against the use of GPL code in proprietary software. The GNU LGPL, on the other hand, strives to create a balance in the goal of software freedom with the practical need for libraries to be used in both free and proprietary projects. It's terms work to prioritize adoption rather than a strict copyleft enforcement. Therefore, the GPL is better designed for standalone applications or software where the author wants to ensure that all derivative works remain free and open-source, while the LGPL is better for libraries and components that are intended to be used by a wide variety of software, including proprietary applications.

Apart from their use cases, the two GNU licenses also differ in their enforcement of copyleft. The GPL has a stronger copyleft in that any derivative work or software with GPL-licensed code must also be licensed under the GPL with the source code made available. This term includes software combining GPL code and non-GPL code and redistributions of GPL-licensed software. The LGPL is weaker in that it allows non-GPL or proprietary software to link to LGPL-licensed libraries without needing to release the proprietary software's source code or use the same license. Only modifications and redistributions of the LGPL library itself must be released under LGPL.

This difference extends to how linking works under the two licenses. Under the GPL, static and dynamic linking is considered a form of derivative work, therefore, the linked software must comply with GPL, including linked proprietary software. Conversely, the LGPL allows dynamic

linking without imposing LGPL on the linking application and static linking with the following required conditions:

1) Allowing the replacement of the LGPL library with a different version by the end-user.
2) Providing the object files of the proprietary application so that it can be relinked with a modified LGPL library.

From these comparisons, there are several pros and cons to the use of either the GNU GPL or GNU LGPL, and the choice depends on the developer's goals and priorities when releasing their work. The GPL is more restrictive and ensures that all derived works remain free and open-source, whereas the LGPL enables broader adoption allowing proprietary software to use open-source libraries while maintaining the library's freedom.