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Milestone 1 Open Source Research

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**Open Source Research**

**What are three different open-source licenses? How do the licenses differ? How are the licenses the same?**

Three different (OSS) open-source license examples are Apache, GPL, and MIT. Open-source licenses are becoming more and more popular, as it is seen as a free method of using and contributing to software development.

The two main categories of OSS licenses are permissive and copyleft. Permissive licenses promote the use of the original program and have minimal restriction on source code usage. The second is copyleft which requires that the original source code is released alongside the modifications you made, otherwise known as reciprocity obligation. Apache license is an example of a permissive license in which you must include the original and license notice when modifying or resharing the source code. Another example of a permissive license is MIT this license is easier to understand and has the least restrictions making it quite popular.

GPL is a copyleft license. GPL otherwise known as GNU General Public License is a popular copyleft license among programmers because it protects software from becoming proprietary. GPL ensures programmer's work is kept free and acknowledged. Using GPL you must release all of the source code while giving the users all rights you received.

**What happens and who owns the code you contribute to an open-source project?**

What happens to the code you contribute to an open-source project largely depends on the license the project is using. With that said the copyright holder by default retains the rights to their code. As an example, let us talk about GPL, when contributing to the code or if you want to release code you need to also release the full source code. This will give the user the same rights as yourself. When considering who owns the code you contribute to you must consider the license type. Apache license an example is a permissive license, this license type gives you the freedom to modify or release as needed with the exception that you include the original and license notice.

Contributor agreements play a key part in who owns the code you contribute to for an open-source project. There are two kinds of contributor agreements Contributor License Agreement (CLA) and Copyright Assignment Agreement (CAA). Using CLA the original contributor will keep copyright ownership of their contributions. However, it will also provide a broad right to contributors. When using CAA the contributor transfers copyright ownership to who can license it.

**Research an open-source project from the Apache Foundation and provide a detailed write-up for how you can volunteer and contribute to one of their projects.**

The Apache Foundation uses a volunteer process to address Apache Projects. It is quite simple to signup and contributes to the chosen project. Most projects are open to anyone who wants to contribute you would simply join the mailing list, read through the list, and get started. To break it down further, there is a list of projects to select from on the apache site to chose from. Once the project is selected, it is important to catch up on what has been completed already, the language, and the goal of the project. This is completed by signing up for the project mail list and reading through the incoming list. Once you are all caught up on project details from the mail list you should join the community. They can help you through the project issues and assist with any questions you may have. If needed there is a mentoring program that can guide you on how to get going as well.

A project on the list is Apache Kibble. This project is the creation of a suite of tools for collecting, aggregating, and visualizing activity in software projects. The project is in the category big-data and is on the data file DOAP RDF Source JSON. The developing language is Python hosted on GitHub for bug tracking. The mail list is on an apache.org site, this project is open to anyone that knows python or big-data. There are instructions to start with reading through known bugs on the Apache Kibble community board located in GitHub and working through those.

Reference:

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