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Assignment #4

The Free and Open Source Software (FOSS) Movement

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1.0   The free and open source software movement

Both the free and open software movements fight to keep software "free" and open. These movements have some differences, but more or less follow the same philosophy, namely "free software". The common term for both is Free and Open Source Software or FOSS. As most free software is open source, and most open source software is free software.

The good thing about free and open sourced software is that everyone benefits every time a project is developed. Nothing is closed off and unavailable to a many people and groups.

Since the late 1990's the open source movement has grown in popularity. You can even say exploded in popularity. While the free software movement has died down a bit to a smaller following.

2.0   How does free and open source software work?

Both free and open source software utilizes licenses to legally protect software and the user's right to use, edit, share, and modify said software. These licenses contain information on what you can and cannot do with the software. With an open or free software license, you will find information about being able to use the software feely. The key difference between "normal" software and free/open software being that you have access to and can change the source code, which you can't do with "normal" software legally, without specific permission from the author/owner.

Open source also is a software development model, one in which a group develops a software in plenary. This meaning that software can be created over the internet, with random people who wants to contribute, instead of normal smaller teams of people working on the code. Everyone who want and have some interest in the project can contribute. Or start their own "fork" of it. Forking basically mean that you take the base platform and develop it in another direction that the main project. An example on this would-be Firefox

with waterfox, Pale moon, or ESR. Another example would-be Linux and all the different distributions.

3.0   The History of Free and Open Source Software

Before the late 80's there were no official definition or movement behind free or open source software. People where sharing software and code over the early internet. And Universities and Research institutions published their work under public domain. But with new times, comes new ideas. One of these new ideas was to free the software from the chains of large companies, with restrictive usage. And with the help of some key figures and organizations, the rise open and free software had begun.

3.1   Free Software

Free software is a different philosophy from open source depending on who you ask. The two terms basically mean the same thing, with some minor differences. The differences mostly being political. This often means that it's hard to separate them from each other. Most free software, can be categorized as open source software, and vice versa.

You could also argue that open source is more of a development method, while free software is more of a social movement.

The free software, social movement was advocating for freedom in software use. The people behind the movement was often seen as the "hacker" type of people. And didn't really appeal to the wider public because of this.

3.1.1   The GNU Project and the Start of Free Software

The first related project was created in 1985, by Richard Matthew Stallman. The project was named the GNU Project. The project also published a manifesto stating, that the project was

created to utilize only "free" software. A completely free software experience, from everything from the operative system, to the individual programs like paint, and text editors. The project, was to be void of legal obligations and closed source code. With the project, every aspect of the home computer user experience would be free from restrictions to usage.

With the GNU Project and the GNU Manifesto, Stallman created the Free Software Foundation (FSF) in 1985. The FSF created and published licenses, and helped support the movement. The foundation also created an official definition of free software. That states: "The user has the freedom to use, share, study, and modify the software, as they see fit". This didn't necessarily mean that the software was free, as in price.

The GNU Project development had many delays especially to the operative system kernel. Many other programs where created to work with the GUN project, some had even been quite successful on their own. At one point, most of the GNU programs were done, but they were missing the kernel. Which is the most vital part of any operative system, because it communicated with both software, and hardware in a computer. When Linus Torvalds released the Linux kernel in 1991, they had the missing piece of the system.

3.1.2   Linux as free software

In 1991 Linus Torvalds released the first version of the Linux kernel. At first it wasn't being released under any free software license. But in 1992 he released it again under the GNU General Public License as free software.

After years of development on the Linux project the kernel couldn't be called a free software anymore. This was because it contained parts that had other licenses. Other Linux distributions like Debian were developed entirely under GNU licenses as free software. Today the base Linux core, would come under the category of both free and open software. Some distributions go under the free software category, while other are open source.

3.1.3   The Early Internet and Free Software

In the 1990s there were a rush for a lot of companies to get online. Everyone wanted a webpage for their company to help advertise, and stay up to date with the changing times.

Free software also played a central role in the software used to make this happen. Companies like Apache, created free software solutions for database management (MySQL), server-side programming languages (PHP), server hosting applications (Apache HTTP server), and more.

3.1.4   The decline of free software

The free software movement had existed for over 10 years when open source came and stole the spotlight. The downfall of the free software movement is often credited to the image of "hackers" following the movement. In addition to that open source was "marketed" heavily towards larger, more influential companies. These companies could help spread the word more effectively, than free software could with their group of people. These and other reasons lead to the fall of the once mighty, free software movement. Even if it still exists today, but at a much smaller scale and influence.

3.2   Open Source

The term free software had been around a while when open source was launched. Open source, was basically a rebranding. Open source in addition had some other changes to free software. The rebranding was because it was hard to sell a social movement comprised of "hackers" to companies, and the wider public. While the rebranding worked phenomenally, Stallman refused to swap to the new open source term. Spelling the doom of the free software following.

3.2.1   The Launch of Open Source

Netscape, one of the largest internet-browser providers on the market at the time, decided that they wanted to release some of their source code as free software. This decision came after having read Eric Steven Raymond's The Cathedral and the Bazaar of 1997. Which was an analytic comparison between the development methods of the GNU(Cathedral) and Linux(Bazaar) projects. With GNU's being a small team of developers distributed freely. And Linux's being developed over the internet together with the public.

Netscape were interested in the concept, but not the community around it. Netscape were also interested in the Linux development model, that Torvalds used. So, they released their navigator under a free software license.

After having hear about larger companies' interest in free software. Some of the key people of the free software movement, abandoned the term "free software" and coined the open source term instead.

So, in 1998 the term open source was coined to appeal more to companies primarily. After some arguing back and forth on naming, they settled on open source. Which shortly after lead to the foundation of the open source initiative, by Bruce Perens and Eric S. Raymond. Stallman rejected the call to use the term open source instead of free software, because of some differences in ideology and vision. Over the years Stallman continued to support free software, and criticize the open source movement for their methods. All while his own free software movement were dwindling in followers. The term open source became a roaring success in terms of marketing. To the point of over-shadowing Stallman's free software movement.

3.3   Software giants feeling threatened

When open source started to become more popular. Some preexisting software companies that didn't agree with the free and open software philosophies, started to feel threatened by this large, growing movement. Microsoft were one of these companies who felt threatened

by open source. Around the same time, Microsoft came under heavy fire for utilizing their monopoly over operative systems to include internet explorer with every computer.

3.4   Explosive growth into the 21th century

Coming into the 21th century open source has only grown at an explosive rate. The future of software development hangs in a thread between closed vs open software. With more and more companies decided to embrace the open source community for everything it's worth. The new age of open source and collaborative development has begun.

3.6   Timeline of events

1980s	80	Personal computers become available.
	85	Richard Stallman creates the GNU Project, and the GNU Manifesto.
		Stallman founds the Free software foundation.
	89	The first version of the GNU General Public License was published.
1990s	90s	The internet becomes available to everyone.
	91	Linus Torvalds released the first version of Linux kernel.
	92	The GNU project finally has a kernel to run on, with Linux.
	97	Eric S. Raymond publishes the Cathedral and the Bazaar paper.
	98	Netscape publishes the source-code to their web browser "navigator", sparking more interest in free software.
		The term open source is coined and started seen usage.
		The open source initiative is founded.
	99	Microsoft is hostile towards the open source movement.
		GNOME is released by GNU Project.
2000s	06 ->	Microsoft contributes to open source. With its popularity growing at an explosive rate.
	07	Google uses Linux to create a mobile operative system, called Android.

	09 ->	Linux becomes a viable and somewhat popular option for operative systems, both for companies and the general public.

Timeline table

4.0   The Culture behind free and open source

Both the free and open source had and has quite the extinct following. A culture that formed around the phenomena. A culture of sharing and advocating for free and open software.

4.1   Free software

The free software movement largely comprised of the "hacker" type of people. People who stereotypically sit in a dark room in front of a computer, often don't shower for a while. While this might be true or false, the image certainly was there for onlookers. It was one of the main reasons for the open source rebranding.

4.2   Open Source

Where the free software movement was "scary" and weird for onlookers, the open source movement was easier to join and get into. This was mostly because it didn't carry the "hacker" stigma in as high a degree. It is less of an ideology and more of a concept of sharing and working together. More of the fun parts, like programming and developing platforms in a community, and less about making a statement. Open source is about developing. Like the hobby projects of individuals, that gets developed into larger useful platforms for use around the globe.

5.0   The Movements

Both the free and open source movements fight for mostly the same goal. To share and free software chained by secrecy and limited usage. The free software movement with Stallman

at the front, created an everlasting legacy, and a community of free and open software. This movement spawned the open source community who further developed the idea into what it is considered today.

There aren't only people, at the center of free and open software. Organizations has played a major role in bolstering the following of the movement. The Free software foundation who supported free software. While the newer Open source initiative supports the newer open source movement. With lots of other organizations doing other things like funding, licensing, developing, and supporting open source. Some examples are: The Linux Foundation, Red Hat, The Apache Software Foundation and The Digital Freedom Foundation.

6.0   Free and Open Source today

Both free and open source still exists today. One could say that one (Open source) is very popular and is thriving. Whilst the other (Free software) has been, almost dead for a while most people kind of forgot it exists.

Today, the software industry is one of the largest industries in the world. With multiple companies capable of the same as some governments in terms of resources. While some of these companies has embraced the open source community, some still hold on to their source closed source and patents. The companies who use the open source community, often releases some of their own work under open source licenses. This might be to generate positive opinions or help the software world along with new open, innovative products.

6.1   Free software today

Free software is almost never heard of anymore. While you might have heard of the projects that are free software in a lot of cases, the user believe that free and open source is one and the same thing, and don't realize that they are two separate entities.

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Even if the free software movement is almost dead, the software it created is still very much alive. Software like the GNOME environment is still a staple in the Linux community. Used by some of the major distributions like Ubuntu, and Debian.

Stallman and his compatriots still seems to be somewhat active in trying to get people to join their cause. The movement still contributes to free software projects to this day. They have lists and collections over free software, available on their website.

Stallman and his friends, still seems to not like open source and software companies very much. For example, if you visit their wiki at fsf.org, you are sometimes greeted with messages that Microsoft's software is malware and that you should change to Linux/GNU at once. Or in letters/articles, where Stallman writes about why open source has it wrong. So, there are still some activity at the free software movement.

As open source was made from free software, free software has also adopted parts of the new open source movement. Today the only real difference is the political side.

6.2   Open Source today

Open source is getting more popular today than ever before. Universities, companies, and the public is getting more and more interested in open sourced projects.

Universities has subjects entirely based on the concept of open source. Like the subject we are taking here IS-213, is all about open source software. If a university sees the potential in a subject like this, there clearly is a future for open source.

Almost every large company uses some form of open source software. Either it is a whole platform or smaller 3rd party modules. Since the companies can use them freely often for free. Some companies even base their product on another open source project. Their software could be based on for example Linux.

Everyday people, who are learning or knows how to code, utilizes more and more open source projects in their potentially open source hobby projects. With the help of platforms like GitHub, sharing and collaborating is easier now than ever before. You only need to have

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an idea and some basic knowledge about open source, to create an open source project on your own.

The hardest part about starting an open source project, is to generate support and interest from other developers. For a project to be successful in terms of development, it will need to have developers interested and contributing to it.

7.0   Summary

Both the free and the open source movement stands for mostly the same philosophy. With its rise, it contributed to a more open and freer software industry. Were, before it had been closed doors and secrecy, now it's sharing and open doors of opportunities.

The movements have had a somewhat short and interesting history. It was only 33 years since, where we didn't have any kind of free or open source at all. With Stallman's ideals and ideas, the software sector sprung into a new age of development by free and open source.

The open source movement is constantly at its height. With the movement only growing for every day, with no signs of slowing down yet. It is truly a wonder of modern software development.

8.0   Sources

8.1   Informational sources

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