Open Source Introduction

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What is Open Source?

Initiative to promote collaboration and sharing of softwares.

Source code of a software can be inspected, modified, and enhanced by anyone.
But it is much more than that!

It guarantees:

- Integrity of the author's source code
- No discrimination against persons or groups or fields or endeavours
- Same license rights to all users
- License are technology-neutral and not specific to product

	Free software	Open-source software	Freeware	Public-domain software
Definition	"FREE" is a matter of liberty, not price	"OPEN" doesn't just mean access to the source code	"FREE" refers to price, while freedom of the use is restricted by creator	"PUBLIC DOMAIN" belongs to the public as a whole
Ground philosophy	Social movement	Development methodology	Marketing goals	Copyright disclamation
Ground rules	Four Freedoms https://www.gnu.org/philosophy/free-sw.html	Open Software initiative https://opensource.org/osd		Creative Common Organization https://creativecommons.org
Free of charge	Not necessary	Not necessary	✓YES	✓YES
Covered by copyright law	✓YES	✓YES	✓YES	✗ NO
Examples	Linux, ubuntu	MySQL, Apache	Skype, Adobe Acrobat	SQLite

Open Source License

How will the Open Source Softwares be shared?
     -> Licenses

Why to have an idea about them?
     -> To prevent yourself from legal issues!

Focus of Open source licenses?
     -> Redistribution of Code, Commercial use, and modifications to which section of source code

	ⓒ Copyright	↺ Copyleft	🔑 Permissive	CC Creative Commons
What is a user allowed to do with the code?	What creator dictates	What user wants under certain rules	What user wants with a few restrictions	What user wants without restrictions
Clause of the use	As creator dictates	Derivative work must be attributed to creator, open-source and copyleft	Derivative work must be attributed to a creator	Derivative work must be attributed to a creator
Source code	As creator dictates	Must be open	Don't have to be open	No specific terms about the distribution of source code
Is creator liable for bugs?	✔YES	✔YES	✘ NO	✘ NO
Re-licensing	As creator dictates	Derivative work cannot be released as proprietary software	Derivative work can be released under another license or as proprietary software	Derivative work can be released under another license or as proprietary software
Commercial restrictions	As creator dictates	Permitted	Permitted	Permitted

	APACHE	BSD	MIT	GPLv3	LGPLv3	AGPLv3
Type	Permissive	Permissive	Permissive	Copyleft	Copyleft	Copyleft
Provides copyright protection	✓TRUE	✓TRUE	✓TRUE	✓TRUE	✓TRUE	✓TRUE
Can be used in commercial applications	✓TRUE	✓TRUE	✓TRUE	✓TRUE	✓TRUE	✓TRUE
Provides an explicit patent license	✓TRUE	✗FALSE	✗FALSE	✗FALSE	✗FALSE	✗FALSE
Can be used in proprietary (closed source) projects	✓TRUE	✓TRUE	✓TRUE	✗FALSE	✗FALSE partially	✗FALSE for web
Popular open-source and free projects	Kubernetes Swift Firebase	Django React Flutter	Angular.js JQuery, .NET Core Laravel	Joomla Notepad++ MySQL	Qt SharpDevelop	SugarCRM Launchpad

How to contribute

General Steps:

- Why contribute
- Decide the domain
- Programming language
- Explore projects
- Finalise the project
- Environment setup
- Explore the code

- To develop skills
- Web Development
- Python
- In backend web development
- Mozilla environment
- Setup Github; Install git, packages, etc.
- Compile, execute, test, debug

Useful Links:

- https://codetribute.mozilla.org/languages/python
- https://github.com/freeCodeCamp/how-to-contribute-to-open-source
- https://github.com/MunGell/awesome-for-beginners
- https://www.hackerearth.com/getstarted-opensource/
- https://medium.com/@kevinjin/contributing-to-open-source-walkthrough-part-0-b3dc43e6b720

Questions?

Small Demo