

IT TOOLS

PRATICAL 3

BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE

a) Describe Open Source Software with Example

The term open source refers to something people can modify and share because its design is publicly accessible.

The term originated in the context of software development to designate a specific approach to creating computer programs. Today, however, "open source" designates a broader set of values—what we call "the open source way." Open source projects, products, or initiatives embrace and celebrate principles of open exchange, collaborative participation, rapid prototyping, transparency, meritocracy, and community-oriented development.

What is open source software?

Open source software is software with source code that anyone can inspect, modify, and enhance.

"Source code" is the part of software that most computer users don't ever see; it's the code computer programmers can manipulate to change how a piece of software—a "program" or "application"—works. Programmers who have access to a computer program's source code can improve that program by adding features to it or fixing parts that don't always work correctly.

Why do people prefer using open source software?

People prefer open source software to proprietary software for a number of reasons, including:

Control. Many people prefer open source software because they have more control over that kind of software. They can examine the code to make sure it's not doing anything they don't want it to do, and they can change parts of it they don't like.

Training. Other people like open source software because it helps them become better programmers. Because open source code is publicly accessible, students can easily study it as they learn to make better software.

Security. Some people prefer open source software because they consider it more secure and stable than proprietary software. Because anyone can view and modify open source

software, someone might spot and correct errors or omissions that a program's original authors might have missed.

Stability. Many users prefer open source software to proprietary software for important, long-term projects. Because programmers publicly distribute the source code for open source software, users relying on that software for critical tasks can be sure their tools won't disappear or fall into disrepair if their original creators stop working on them.

Community. Open source software often inspires a community of users and developers to form around it. That's not unique to open source; many popular applications are the subject of meetups and user groups.

Examples:

Open-source technologies helped establish much of the internet. Furthermore, many of the programs in use every day are based on open-source technologies. Cases in point: Android OS and Apple's OS X are based on the kernel and Unix/BSD open-source technologies, respectively.

Other popular open-source software are:

Mozilla's Firefox web browser

Thunderbird email client

PHP scripting language

Python programming language

Apache HTTP web server

b) Describe Free Software with Example

Free software is a term coined and promoted by the GNU project and Free Software Foundation. It is used for open source software which allows users to freely look at the source of the software, modify it, distribute it, and use it without any restriction. Software available without any payment is not necessarily free software. According to the definition as presented by the Free Software Foundation, the word Free in "free software" implies the idea of freedom rather than not having a cost. If software is available to be downloaded without being paid for, but the user is not able to modify the source then it is not free software. It is important to note the distinction here. Freeware is software that you don't have to pay for. Free software is software you are free to modify and use for your own purposes. Freeware does not necessarily have to be free software as the source code can still be protected.

Free Software can be released under different licenses for example GPL, Apache, BSD, etc., and WordPress is an example of open source software released under the GPL or General Public License. This allows developers and designers to create plugins and themes that extend the functionality of WordPress and make it the versatile platform that it is. According to the GPL the only restriction is that all modifications of WordPress are required to have the same license.

Examples:

The Linux kernel, of course! The Linux kernel is protected by the GPL, and is used daily by millions of people throughout the world. As the kernel, it is one of the most important components of the GNU system ;

Apache, the most widely used web server in the world. More than 56% of the web servers on this planet use Apache; far more than its fierce competitors, Microsoft and Netscape ;

The Gimp is a powerful bitmap mode digital creation program. In spite of being relatively new, The Gimp has rapidly become serious competition for Photoshop ;

PostgreSQL is an object-relational database. It is currently the most sophisticated free software database available.

c) Difference between Free and Open Source Software.

Free Software:

“Free software” means software that respects users’ freedom and community. Roughly, it means that the users have the freedom to run, copy, distribute, study, change and improve the software.

The term “free software” is sometimes misunderstood—it has nothing to do with price. It is about freedom.

Open Source Software :

Open Source Software is something which you can modify as per your needs, share with others without any licensing violation burden. When we say Open Source, source code of software is available publicly with Open Source licenses like GNU (GPL) which allows you to edit source code and distribute it.

Free software	Open source software
Software is an important part of people's lives.	Software is just software. There are no ethics associated directly to it.
Software freedom translates to social freedom.	Ethics are to be associated to the people not to the software.
Freedom is a value that is more important than any economical advantage.	Freedom is not an absolute concept. Freedom should be allowed, not imposed.
Examples: The Free Software Directory maintains a large database of free-software packages. Some of the best-known examples include the Linux kernel, the BSD and Linux operating systems, the GNU Compiler Collection and C library; the MySQL relational database; the Apache web server; and the Sendmail mail transport agent.	Examples: Prime examples of open-source products are the Apache HTTP Server, the e-commerce platform osCommerce, internet browsers Mozilla Firefox and Chromium (the project where the vast majority of development of the freeware Google Chrome is done) and the full office suite LibreOffice.