

PRACTICAL 3. BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE.**A. Describe Open-Source Software with Example.**

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. Some software has source code that only the person, team, or organization who created it—and maintains exclusive control over it—can modify. People call this kind of software "proprietary" or "closed source" software. Only the original authors of proprietary software can legally copy, inspect, and alter that software. And in order to use proprietary software, computer users must agree (usually by signing a license displayed the first time they run this software) that they will not do anything with the software that the software's authors have not expressly permitted. Microsoft Office and Adobe Photoshop are examples of proprietary software. Open source software is different. Its authors make its source code available to others who would like to view that code, copy it, learn from it, alter it, or share it. LibreOffice and the GNU Image Manipulation Program are examples of open source software. As they do with proprietary software, users must accept the terms of a license when they use open source software—but the legal terms of open source licenses differ dramatically from those of proprietary licenses. Open source licenses affect the way people can use, study, modify, and distribute software. In general, open source licenses grant computer users permission to use open source software for any purpose they wish. Some open source licenses—what some people call "copyleft" licenses—stipulate that anyone who releases a modified open source program must also release the source code for that program alongside it. Moreover, some open source licenses stipulate that anyone who alters and shares a program with others must also share that program's source code without charging a licensing fee for it. By design, open source software licenses promote collaboration and sharing because they permit other people to make modifications to source code and incorporate those changes into their own projects. They encourage computer programmers to access, view, and modify open source software whenever they like, as long as they let others do the same when they share their work.

B. Describe Free Software with Example

A program is free software if the program's users have the four essential freedoms: The freedom to run the program as you wish, for any purpose (freedom 0). The freedom to study how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this. The freedom to redistribute copies so you can help others (freedom 2). The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this. A program is free software if it gives users adequately all of these freedoms. Otherwise, it is nonfree. While we can distinguish various nonfree distribution schemes in terms of how far they fall short of being free, we consider them all equally unethical. Some of the best-known examples include the Linux kernel. The concept of free software is the brainchild of Richard Stallman, head of the GNU Project, the BSD and The best Linux operating systems, the GNU Compiler Collection and C library; the MySQL relational database; the Apache web server; and the Sendmail mail transport agent. known example of free software is **Linux, an operating system that is proposed as an alternative to Windows or other proprietary operating systems.** Debian is an example of a distributor of a Linux package.\

C. Difference between Free and Open-Source Software.

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.
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	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