

PRACTICAL NO:-3

BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE

a) Describe Open Source Software with Example?

1)Open-source software (OSS) is a program that has publicly available code which anyone with technical expertise can use, modify and distribute.

2)It is any computer software that's distributed with its source code available for modification. That means it usually includes a license for programmers to change the software in any way they choose.

3)They can fix bugs, improve functions, or adapt the software to suit their own needs.

4)It is the part of the 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 an 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.

5)It was released through a specific kind of license that makes its source code legally available to end-users. The source code can be repurposed into other new software, meaning anyone can take source code and distribute their own program from it.

6) It includes ten-criteria, relating to matters such as:-

1. Software redistribution
2. Source code availability and integrity
3. Distribution and properties of licenses
4. Derived works
5. Anti-discrimination

7)Some examples of Open source software are as follow:-

- Linux,
- Open office,
- Chromium,
- Android,
- Python ,etc.

b) Describe Free Software with Example?

1)Free software (or libre software) is computer software distributed under terms that allow users to run the software for any purpose as well as to study, change, and distribute it and any adapted versions.

2)It is a matter of liberty, not price, all users are legally free to do what they want with their copies of a free software (including profiting from them) regardless of how much is paid to obtain the program.

3)Computer programs are deemed "free" if they give end-users (not just the developer) ultimate control over the software and, subsequently, over their devices.

4)It is computer software distributed under terms that allow users to run the software for any purpose as well as to study, change, and distribute it and any adapted versions.

5)Roughly, it means that the users have the freedom to run, copy, distribute, study, change, and improve the software. Thus, free software is a matter of liberty, not price.

6)Today, free software covers just about every field of computer applications. Because of their high quality and openness, several free software programs have become leaders in their field or comprise the core of an entire industry.

7) A program is free software if the program's users have the four essential freedoms are as follow:-

1. The freedom to distribute copies of your modified versions to other. By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition to this.
2. The freedom to study how the program works, and change it so it does your computing as you wish. Access to the source is a precondition for this.
3. The freedom to run the program as you wish , for any purpose.
4. The freedom to redistribute copies so you can help others.

8)Some examples of Free software are as follow:-

- Mozilla firefox
- Libre office
- Shotcut (video editor)
- GIMP
- Inkscape

c) Difference between Free Software and Open Source Software are as follow:-

Free Software	Open Source Software
<ul style="list-style-type: none">➤ 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.➤ Software freedom translates to social freedom.➤ Software is an important part of people's lives.➤ Freedom is a value that is more important than any economical advantage.➤ 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 Send-mail mail transport agent.	<ul style="list-style-type: none">➤ 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.➤ Freedom is not an absolute concept. Freedom should be allowed, not imposed.➤ Ethics are to be associated to the people not to the software.➤ Software is just software. There are no ethics associated directly to it.➤ Examples:- Prime examples of open-source products are the Apache HTTP Server, the e-commerce platform OS-Commerce, internet browsers Mozilla Firefox and Chromium (the project where the vast majority of development of the freeware Google Chrome is done)