BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE

A) Describe Open-Source Software with Example :-

 Open-Source software can be understood and described as

1) Definition of Open-Source

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

2) Understanding Source code

"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

3) Open Sources Software Licences :-

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.

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

1.) The Free Software Definition

"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. Thus, "free software" is a matter of liberty, not price. To understand the concept, you should think of "free" as in "free speech," not as in "free beer". We sometimes call it "libre software," borrowing the French or Spanish word for "free" as in freedom, to show we do not mean the software is gratis.

2.) How to Recognize if it a free Software ?

A program is free software if the program's users have the four essential freedoms:

i.) The freedom to run the program as you wish, for any purpose (freedom 0).

ii.) 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.

iii.) The freedom to redistribute copies so you can help others (freedom 2).

iv) 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.

C.) Difference Between Free and Open-Source Software.

Free Software:

1.)"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.

2.) Software is an important part of people's lives.

3.) Software freedom translates to social freedom.

4.) Freedom is a value that is more important than any economical advantage.

Open-Source Software :

1.)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. Read these licenses and you will realize that these licenses are created to help us.

2.) Software is just software. There are no ethics associated directly to it.

3.) Ethics are to be associated to the people not to the software

4.) Freedom is not an absolute concept. Freedom should be allowed, not imposed.

Example of Free source software:-

 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.

Example of Open source software:-

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.