

a) Describe Open Source Softwares with Example

⇒ Open source software is released through a specific kind of license that makes its source code legally available to end-users. There are many such licenses, but typically software is considered open source, if it is available in source code form without additional cost, meaning users can view the code that comprises the software and make any kind of changes to it they want. The source code can be repurposed into other new software, meaning anyone can take the source code and distribute their own program from it. Different licenses allow programmers to modify softwares with various conditions attached. Most popular licenses are: 1) MIT Licenses 2) GNU General Public Licenses (GPL) 2.0 3) Apache Licenses 2.0 4) GNU (GPL) 3.0 5) BSD Licenses 2.0 (3-clause, New or revised)

Few examples of Open Source Software are:-

- 1) Firefox - web browser
- 2) OpenOffice - Competitor to MS-office
- 3) Gimp - Graphic tool
- 4) Marmeteera - trading platform
- 5) Zimbra - email software competes with outlook



## b) Describe Free Software with Example

⇒ Free software is software that can be freely used, modified and redistributed with only one restriction: any redistributed version of the software must be distributed with the original terms of free use, modification and distribution (known as copyleft).

The definition of free software is stipulated as part of the GNU project by FSF. Concept of free

software is the brainchild of Richard Stallman, head of GNU Project. Best example of

free software is Linux, and Debian is an example of a distributor of a linux package.

Free software is easily confused with freeware, a term describing software that can

be freely downloaded and used but which may restriction for modification and use.

Freedom in free softwares are as follows:

1) Freedom 0: The freedom to run the program for any purpose.

2) Freedom 1: The freedom to study how the program works, and change it to make it do what you wish.

3) Freedom 2: The freedom to redistribute and make copies so you can help your neighbour.

4) Freedom 3: The freedom to improve the program and release your improvements to the public so that whole community benefits.



## c) Differentiate between Open Source and Free Software

### Free Software

### Open Source Software

- 1) Software is an important part of people's lives
- 2) Software freedom translates to social freedom
- 3) Freedom is a value that is more important than any economical advantage
- 4) Example: The Free Software Directory maintains a large database of free-software packages. Some of the best known examples include Linux kernel, full office suite LibreOffice, the BSD and Linux OS, GNU C library, MySQL, RDBMS
- 1) Software is just software. There are no ethics associated directly to it.
- 2) Ethics are to be associated to the people and not the software
- 3) Freedom is not an absolute concept. Freedom should be allowed, not imposed.
- 4) Example: Apache HTTP Server, e-commerce platform, OS Commerce, Internet browsers Mozilla Firefox and Chromium and LibreOffice.