

PRACTICAL 03

AIM : BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE

- a) Describe Open Source Software with Example.**
- b) Describe Free Software with Example**
- c) Difference between Free and Open Source Software.**

A) Describe Open Source Software with Example.

- **Open-source software (OSS)** is a type of computer software in which source code is released under a license in which the **copyright** holder grants users the rights to use, study, change, and **distribute the software** to anyone and for any purpose.
- Open-source software may be developed in a **collaborative public manner**. Open-source software is a prominent example of open collaboration.
- **Open source software development** can bring in diverse perspectives beyond those of a single company.
- A 2008 report by the **standish group** stated that adoption of open-source software models has resulted in savings of about \$60 billion (£48 billion) per year for consumers.
- The open source initiative's (OSI) definition is recognized by several governments internationally as the standard or *de facto* definition.
- The definition was based on the Debian free software guidelines written and adapted primarily by Perens. Perens did not base his writing on the "four freedoms" from the free software foundation (FSF), which were only widely available later.
- Under Perens' definition, *open source* is a broad software license that makes source code available to the general public with relaxed or non-existent restrictions on the use and modification of the code.
- It is an explicit "feature" of open source that it puts very few restrictions on the use or distribution by any organization or user, in order to enable the rapid evolution of the software.

EXAMPLE OF OPEN SOURCE SOFTWARE

- Firefox—a Web browser that competes with Internet Explorer
- OpenOffice—a competitor to Microsoft Office
- Gimp—a graphic tool with features found in Photoshop
- Alfresco—collaboration software that competes with Microsoft Sharepoint and EMC's Documentum
- Marketcetera—an enterprise trading platform for hedge fund managers that competes with FlexTrade and Portware
- Zimbra—open source e-mail software that competes with Outlook server
- MySQL, Ingres, and EnterpriseDB—open source database software packages that each go head-to-head with commercial products from Oracle, Microsoft, Sybase, and IBM
- SugarCRM—customer relationship management software that competes with Salesforce.com and Siebel
- Asterix—an open source implementation for running a PBX corporate telephony system that competes with offerings from Nortel and Cisco, among others
- Free BSD and Sun's OpenSolaris—open source versions of the Unix operating system

B) Describe Free Software with Example

- **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.
- Free software 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.
- Computer programs are deemed "free" if they give end-users (not just the developer) ultimate control over the software and, subsequently, over their devices.
- The right to study and modify a computer program entails that source code — the preferred format for making changes—be made available to users of that program.
- While this is often called "access to source code" or "public availability", the free software foundation recommends against thinking in those terms, because it might give the impression that users have an obligation (as opposed to a right) to give non-users a copy of the program

- Although the term "free software" had already been used loosely in the past Richard Stallman is credited with tying it to the sense under discussion and starting the free software movement in 1983.
- when he launched the GNU project: a collaborative effort to create a freedom-respecting operating system, and to revive the spirit of cooperation once prevalent among hackers during the early days of computing.

EXAMPLE OF FREE SOURCE SOFTWARE

- KDE PLASMA desktop on Debian.
- openssl's manual page.
- Creating a 3D car racing game using the Blender game engine.
- Replicant smartphone, an Android-based system that is 100% free software.

C) Difference between Free and Open Source Software.

| Free Software | Open Source Software |
|---|--|
| Development methodology | Social movement |
| Free redistribution of the software. | The freedom to run the program as you wish, for any purpose. |
| 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: linux kernel, BSD and linux operating systems, the GNU compiler collection and C library. | Examples: Apache HTTP Server, the e-commerce platform, internet browser, full office suite LibreOffice |

