## PRACTICAL:-3 - <u>Basic Understanding On Free and Open-Source Software</u>

**A)** Describe Open-Source Software With Example.

Ans: Open-source software (OSS) 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: They can fix bugs, improve functions, or adapt the software to suit their own needs.

## <u>Features of Open-Source Software</u>-

- Freedom
- Innovation
- Integration
- Continuity
- Stability

## <u>Advantages of Open-Source Software-</u>

**While its lack of cost is a key advantage, OSS has several additional benefits:**

1. Its quality can be easily and greatly improved when its source code is passed around, tested, and fixed.
2. It offers a valuable learning opportunity for programmers. They can apply skills to the most popular programs available today.
3. It can be more secure than proprietary software because bugs are identified and fixed quickly.

## <u>Examples of Open-Source Software-</u>

- LibreOffice.
- GNU/Linux.
- VLC Media Player.
- Mozilla Firefox.
- GIMP.
- VNC.
- Apache web server.
- JQuery.

**B)** Describe Free Software With Example.

**Ans: -** Free software is a program used and distributed at no charge to the user. However, most free software licenses include terms prohibiting the sale, resale or commercial use. Free software is often released for promotional purposes. The concept of free software originally implied that when released the source code would be provided with permission to reuse the software within the public domain. However, this concept changed with the formulation of free and open source software (FOSS), which delineates the differences between free and free open source software.

## Features of Free Software-

- Available at minimal cost. Free software does not mean zero cost software.
- Provides full freedom.
- No imposed upgrades.
- No spying on users.
- Auditability.
- Provides better security.

## Advantages of Free Software-

- Improvements to software.
- Low-cost availability of software to all.
- Collaborative projects much easier with shared source code.
- Security and Privacy.
- Independent.

## Examples of Open-Source Software-

- ❖ Linux kernel.
- ❖ BSD and Linux operating systems.
- ❖ GNU Compiler Collection and C library.
- ❖ MySQL relational database.
- ❖ Apache web server.
- ❖ The Send mail transport agent.

**C)** Different Between Free and Open-Source Software.

| Sr. no | Free Source Software | Open Source Software |
|--------|---------------------|---------------------|
| 1. | Software is an important part of people's lives | Software is just software. There are no ethics associated directly to it. |
| 2. | Software freedom translates to social freedom. | Ethics are to be associated to the people not to the software. |
| 3. | Freedom is a value that is more important than any economical advantage. | Freedom is not an absolute concept. Freedom should be allowed, not imposed. |
| 4. | 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 transport agent. | Examples: 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. |