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**Practical 3: UNDERSTANDING ON FREE AND OPEN- SOURCE SOFTWARE**

**a) Describe open Source software with Example.**

Ans:-

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

***"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. Example:-***

***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.**

### **Ans:-**

*“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.*

*We campaign for these freedoms because everyone deserves them. With these freedoms, the users (both individually and collectively) control the program and what it does for them. When users don't control the program, we call it a “nonfree” or “proprietary” program. The nonfree program controls the users, and the developer controls the program; Example:-*

*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. Here is a short list of free software headline acts :*

*The Linux kernel, of course! The Linux kernel is protected by the GPL, and is used daily by millions of people throughout the world. As the kernel, it is one of the most important components of the GNU system ;*

*Apache, the most widely used web server in the world. More than 56% of the web servers on this planet use Apache; far more than its fierce competitors, Microsoft and Netscape ;*

*The Gimp is a powerful bitmap mode digital creation program. In spite of being relatively new, The Gimp has rapidly become serious competition for Photoshop ;*

*PostgreSQL is an object-relational database. It is currently the most sophisticated free software database available.*

### **c) Difference between free and open source software.**

#### **Ans:-**

*Difference between Free Software and Open Source Software*

*Free Software:*

***“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.***

***Open Source Software :***

***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.***

***Coined by the development environments around software produced by open collaboration of software developers on the internet.***

***Later specified by the Open Source Initiative (OSI).***

***It does not explicitly state ethical values, besides those directly associated to software development.***

***Difference between Free Software and Open Source Software:***

***Free software = Free software usually refers open source under GNU GPL license. At least the original term by Richard Stallman did. He meant free as in freedom . Because the word free in English mean without cost the team open source was created. To hint toward the collaborative development effort ,not the price to acquire something.***

***Open source = your source code is accessible to anyone to read and modify and redistribute depending on license condition.***