**Practical no.=2**

**Aim=**write a report on open source license

1. **APACHE:**

**1)HISTORY:-**

Beginning in 1995, the Apache Group (later the Apache Software Foundation) released successive versions of their well-known httpd server. Their initial license was essentially the same as the old BSD license, with only the names of the organisations changed. When Berkeley accepted the argument put to it by the Free Software Foundation and retired their *advertising clause* from the BSD license.

**VERSION 1.1:-**

The 1.1 version of the Apache License was approved by the ASF in 2000. The primary change from the 1.0 license is in the 'advertising clause' (section 3 of the 1.0 license); derived products are no longer required to include attribution in their advertising materials, only in their documentation.

* **VERSION 2.0:-**

The ASF adopted the **Apache License 2.0** in January 2004. The stated goals of the license included making the license easier for non-ASF projects to use, improving [compatibility](https://en.wikipedia.org/wiki/License_compatibility) with [GPL](https://en.wikipedia.org/wiki/GNU_General_Public_License)-based software, allowing the license to be included by reference instead of listed in every file, clarifying the license on contributions, and requiring a patent license on contributions that necessarily infringe a contributor's own patents

**2)IDEA: -**

\* Software may be freely used, reproduced, modified, distributed or sold.  
 \*Software can be combined with other products and distributed or sold as packages.

\*Products derived or modified from licensed software can be distributed under other licenses.

\*Apache software cannot be redistributed without attribution.

\*A copy of the license must be redistributed along with any Apache software.

\*External contributions to the software are released under the ASF terms unless explicitly specified otherwise.

**3) popularity:-**

In October 2012, 8,708 projects located at [SourceForge.net](https://en.wikipedia.org/wiki/SourceForge.net) were available under the terms of the Apache License.[[11]](https://en.wikipedia.org/wiki/Apache_License#cite_note-11) In a blog post from May 2008, [Google](https://en.wikipedia.org/wiki/Google) mentioned that over 25% of the nearly 100,000 projects then hosted on [Google Code](https://en.wikipedia.org/wiki/Google_Code) were using the Apache License,[[12]](https://en.wikipedia.org/wiki/Apache_License#cite_note-12) including the [Android operating system](https://en.wikipedia.org/wiki/Android_(operating_system)).[[13]](https://en.wikipedia.org/wiki/Apache_License#cite_note-13)

As of 2015, according to Black Duck Software[[14]](https://en.wikipedia.org/wiki/Apache_License#cite_note-blackduck2015-14) and [GitHub](https://en.wikipedia.org/wiki/GitHub),[[15]](https://en.wikipedia.org/wiki/Apache_License#cite_note-github-15) the Apache license is the third most popular license in the [FOSS](https://en.wikipedia.org/wiki/FOSS) domain after [MIT license](https://en.wikipedia.org/wiki/MIT_license) and [GPLv2](https://en.wikipedia.org/wiki/GPLv2)

**4)IMPACT:-**

Apache is still leading web server across the globe. As per Wikipedia Apache web server is being used by 32.80% server and it is in the top list. There are more than [350 open source initiatives](https://projects.apache.org/?source=post_page---------------------------) housed at the ASF, the oldest is the Apache [HTTP Server](https://httpd.apache.org/?source=post_page---------------------------) project, the most popular web server on the planet

**5)** **DETAILED LICENSING MODEL:-**

The **Apache License** is an open source software **license** released by the **Apache** Software Foundation (ASF). ... The **Apache License** allows you to freely use, modify, and distribute any **Apache** licensed product.

The Apache License is [permissive](https://en.wikipedia.org/wiki/Permissive_free_software_licence) in that it does not require a [derivative work](https://en.wikipedia.org/wiki/Derivative_work) of the software, or modifications to the original, to be distributed using the same license (unlike [copyleft](https://en.wikipedia.org/wiki/Copyleft) licenses – see [comparison](https://en.wikipedia.org/wiki/Comparison_of_free_software_licenses)). It still requires application of the same license to all unmodified parts and, in every licensed file, any original copyright, patent, trademark, and attribution notices in redistributed code must be preserved (excluding notices that do not pertain to any part of the derivative works); and, in every licensed file changed, a notification must be added stating that changes have been made to that file.

1. **BSD:**
2. **HISTORY:-**

BSD was initially called **Berkeley Unix** because it was based on the [source code](https://en.wikipedia.org/wiki/Source_code) of the original [Unix](https://en.wikipedia.org/wiki/Unix) developed at [Bell Labs](https://en.wikipedia.org/wiki/Bell_Labs). In the 1980s, BSD was widely adopted by [workstation](https://en.wikipedia.org/wiki/Computer_workstation) vendors in the form of proprietary Unix variants such as [DEC](https://en.wikipedia.org/wiki/Digital_Equipment_Corporation) [Ultrix](https://en.wikipedia.org/wiki/Ultrix) and [Sun Microsystems](https://en.wikipedia.org/wiki/Sun_Microsystems) [SunOS](https://en.wikipedia.org/wiki/SunOS) due to its [permissive licensing](https://en.wikipedia.org/wiki/Permissive_software_license) and familiarity to many technology company founders and engineers. Although these proprietary BSD derivatives were largely superseded in the 1990s by UNIX [SVR4](https://en.wikipedia.org/wiki/SVR4) and [OSF/1](https://en.wikipedia.org/wiki/OSF/1), later releases provided the basis for several [open-source](https://en.wikipedia.org/wiki/Open-source_software) operating systems including [FreeBSD](https://en.wikipedia.org/wiki/FreeBSD), [OpenBSD](https://en.wikipedia.org/wiki/OpenBSD), [NetBSD](https://en.wikipedia.org/wiki/NetBSD), [DragonFly BSD](https://en.wikipedia.org/wiki/DragonFly_BSD), [Darwin](https://en.wikipedia.org/wiki/Darwin_(operating_system)), and [TrueOS](https://en.wikipedia.org/wiki/TrueOS).

1. **IDEA:-**

In 1975, [Ken Thompson](https://en.wikipedia.org/wiki/Ken_Thompson) took a [sabbatical](https://en.wikipedia.org/wiki/Sabbatical) from Bell Labs and came to Berkeley as a visiting professor. He helped to install [Version 6 Unix](https://en.wikipedia.org/wiki/Version_6_Unix) and started working on a [Pascal](https://en.wikipedia.org/wiki/Pascal_(programming_language)) implementation for the system. Graduate students Chuck Haley and [Bill Joy](https://en.wikipedia.org/wiki/Bill_Joy) improved Thompson's Pascal and implemented an improved text editor, [ex](https://en.wikipedia.org/wiki/Ex_(text_editor)).[[3]](https://en.wikipedia.org/wiki/Berkeley_Software_Distribution#cite_note-penguin7-3) Other universities became interested in the software at Berkeley, and so in 1977 Joy started compiling the first Berkeley Software Distribution (1BSD), which was released on March 9, 1978.[[4]](https://en.wikipedia.org/wiki/Berkeley_Software_Distribution#cite_note-4) 1BSD was an add-on to Version 6 Unix rather than a complete operating system in its own right. Some thirty copies were sent out.[[3]](https://en.wikipedia.org/wiki/Berkeley_Software_Distribution#cite_note-penguin7-3)

1. **POPULARITY:-**

the Linux community and often used as a rough guide to free operating system popularity, publishes page hits for each of the Linux distributions and other operating systems it covers. As of 4 September 2016, using a data span of the last six months it placed FreeBSD in 21st place with 479 hits per day; TrueOS in 46th place with 244 hits per day; GhostBSD in 47th place with 242 hits, OpenBSD in 75th place with 163 hits per day; MidnightBSD in 118th place with 89 hits per day; and NetBSD in 142nd place with 66 hits per day.

1. **IMPACT:-**

The 3-clause BSD license, like most [permissive licenses](https://en.wikipedia.org/wiki/Permissive_licenses), is compatible with almost all FOSS licenses (and as well proprietary licenses).[[17]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-17)[[18]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-18)

Two variants of the license, the New BSD License/Modified BSD License (3-clause),[[6]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-FSF-ModifiedBSD-6) and the Simplified BSD License/FreeBSD License (2-clause)[[8]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-FSF-FreeBSD-8) have been verified as [GPL](https://en.wikipedia.org/wiki/GNU_General_Public_License)-[compatible](https://en.wikipedia.org/wiki/License_compatibility) [free software licenses](https://en.wikipedia.org/wiki/Free_software_license) by the [Free Software Foundation](https://en.wikipedia.org/wiki/Free_Software_Foundation), and have been [vetted](https://en.wikipedia.org/wiki/Vetting) as [open source licenses](https://en.wikipedia.org/wiki/Open_source_license) by the [Open Source Initiative](https://en.wikipedia.org/wiki/Open_Source_Initiative).[[3]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-osi-3) The [original, 4-clause BSD license](https://en.wikipedia.org/wiki/BSD_licenses#4-clause) has not been accepted as an open source license and, although the original is considered to be a free software license by the FSF, the FSF does not consider it to be compatible with the GPL due to the advertising clause.[[](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-FSF-OriginalBSD-2)

1. **DETAILED LICENSING MODEL:-**

The 3-clause BSD license, like most [permissive licenses](https://en.wikipedia.org/wiki/Permissive_licenses), is compatible with almost all FOSS licenses (and as well proprietary licenses).[[17]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-17)[[18]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-18) .Two variants of the license, the New BSD License/Modified BSD License (3-clause),[[6]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-FSF-ModifiedBSD-6) and the Simplified BSD License/FreeBSD License (2-clause)[[8]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-FSF-FreeBSD-8) have been verified as [GPL](https://en.wikipedia.org/wiki/GNU_General_Public_License)-[compatible](https://en.wikipedia.org/wiki/License_compatibility) [free software licenses](https://en.wikipedia.org/wiki/Free_software_license) by the [Free Software Foundation](https://en.wikipedia.org/wiki/Free_Software_Foundation), and have been [vetted](https://en.wikipedia.org/wiki/Vetting) as [open source licenses](https://en.wikipedia.org/wiki/Open_source_license) by the [Open Source Initiative](https://en.wikipedia.org/wiki/Open_Source_Initiative).[[3]](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-osi-3) The [original, 4-clause BSD license](https://en.wikipedia.org/wiki/BSD_licenses#4-clause) has not been accepted as an open source license and, although the original is considered to be a free software license by the FSF, the FSF does not consider it to be compatible with the GPL due to the advertising clause.[[](https://en.wikipedia.org/wiki/BSD_licenses#cite_note-FSF-OriginalBSD-2)

**C) GPL (GENERAL PUBLIC LICENSE):**

**1) HISTORY:-**

1. The GPL was written by Richard Stallman in 1989, for use with programs released as part of the GNU project .
2. Historically, the GPL license family has been one of the most popular software licenses in the free and open-source software domain. Prominent free-software programs licensed under the GPL include the Linux kernel and the GNU Compiler Collection.
3. The second version of the license, version 2, was released in 1991. Over the following 15 years, members of the free software community became concerned over problems in the GPLv2 license that could let someone exploit GPL-licensed software in ways contrary to the license's intent. These problems included tivoization compatibility issues and patent deals between Microsoft and distributors of free and open-source software, which some viewed as an attempt to use patents as a weapon against the free software community.
4. In 2007, the third version of the license (GPLv3) was released to address some perceived problems with the second version (GPLv2) that were discovered during its long-time usage.

**2) IDEA :-**

The GNU General Public License (GNU GPL or GPL) is a widely-used free software license, which guarantees end users the freedom to run, study, share and modify the software. The license was originally written by Richard Stallman of the Free Software Foundation (FSF) for the GNU Project, and grants the recipients of a computer program the rights of the Free Software Definition. The GPL is a copyleft license, which means that derivative work can only be distributed under the same license terms. This is in distinction to permissive free software licenses of which the BSD licenses and the MIT License are widely-used examples. GPL was the first copyleft license for general use.

**3) POPULARITY:-**

* As has historically been the case, the free software, copyleft GPLv2 is the most popular license choice according to Black Duck. Besides high profile projects such as Linux or MySQL, the GPL has been the overwhelmingly most selected license for years. The last time we examined the Black Duck data in 2012, in fact, the GPL was more popular than the MIT, Artistic, BSD, Apache, MPL and EPL put together.
* Popular as the GPL remains, however, it no longer enjoys that kind of advantage. If we group both versions (2 and 3) of the GPL together, the GPL is in use within 37% of the Black Duck surveyed projects.

**4) IMPACT :-**

* First, many very common UNIX applications, such as GNU Emacs, have been released under the GPL, and are used by countless numbers of users every day.
* Second, the open source software movement has taken several ideas promoted by the GPL and modified them slightly. The most important is the idea that software licensing should include access to source code.

**5) DETAILED LICENSING MODEL:-**

* The GPL is a copyleft license, which means that derivative work can only be distributed under the same license terms.
* Copyleft is the practice of offering people the right to freely distribute copies and modified versions of a work with the stipulation that the same rights be preserved in derivative works created later.[1] Copyleft software licenses are considered protective or reciprocal, as contrasted with permissive free-software licenses.

**D)LGPL (LESSER/LIBRARY GENERAL PUBLIC LICENSE) :**

**1.HISTORY :-**

* The license was originally called the GNU Library General Public License and was first published in 1991, and adopted the version number 2 for parity with GPL version 2. The LGPL was revised in minor ways in the 2.1 point release, published in 1999, when it was renamed the GNU Lesser General Public License to reflect the FSF's position that not all libraries should use it. Version 3 of the LGPL was published in 2007 as a list of additional permissions applied to GPL version 3.

**2. IDEA :-**

* To encourage the widest possible use of a Free Software library, so it becomes a de-facto standard over similar, although not interface-identical, proprietary alternatives.
* To encourage use of a Free Software library that already has interface-identical proprietary competitors that are more developed.
* To allow a greater number of users to get freedom, by encouraging proprietary companies to pick a Free alternative for its otherwise proprietary products**.**

**3. POPULARITY:-**

* Currently, license preferences seem to be accumulating at either ends of the licensing spectrum (reciprocal or permissive); the middle ground in file-based licenses such as the LGPL/MPL remain a relatively distant third category in popularity.

**4. IMPACT :-**

* You can use and distribute LGPL libraries on your website and use them in combination with commercial code. The only big restriction is that you must keep the library open source, including any modifications you make to it, and allow your users to obtain the source, licence and copyright information for the library.
* You don't have to distribute your commercial code under the LGPL.

**5**.**DETAILED LICENSING MODEL:-**

* The GNU Lesser General Public License (LGPL) is a free-software license published by the FSF. The license allows developers and companies to use and integrate a software component released under the LGPL into their own software without being required by the terms of a strong copyleft license to release the source code of their own components