



Study and Analyze the Factors Related to the Awareness of Open Source Software

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Abstract - Open source software is the emerging concept towards the less cost and cheapest software. The concept of free and open source software was come from Richard Stallman's Free Software Foundation. Open Source Software is comes with its full source code and free legally license that provides the ability to modify and redistribute it. But still most of the people use proprietary or pirated software rather than open source software. This is all because of less awareness of the usages and awareness of open source software. This paper analyzes the factors related to open source software to check the awareness of open source software among people. It also includes a survey questionnaire which takes all the factors into count and before starting actual survey a pilot study for this questionnaire was done which conforms its acceptance.

Keywords - awareness, enforceable, development, movement, institutions

I. Introduction

Open Source Software refers to a software in which the source code is available to the general public. Open source software is licensed under free software licenses which provide the ability to modify and redistribute it. Open Source Software is typically created as a collaborative effort in which programmers improve the code and share the changed code within the community. There are so many advantages of open source software so it could be easily adopted over proprietary software. But still we use proprietary software and waste a lot of money. The main reason behind it is less awareness about open source software, its uses and benefits. This research paper helps to check the awareness of open source software among people and also aware them about the usage and benefits of open source software. If more and more people are aware about open source software, it will be beneficial to both for common man and also for developing software community.

II. Factor Categories

This questionnaire considers all the factors related to term open source software, its usages and benefits and most probably all these factors are taken according to their suitable priority. It includes major factors and all these factors are taken as questions which can be answered in yes, no or don't know according to which we can easily consider the awareness of open source software among common man so can they can use better software with lesser cost then proprietary software.

III. Classifiers

According to the factors in the questionnaire the respondents can be classified in broad four classifiers, those are following.

- A. Students
- B. Employees
- C. Employers
- D. Common man

IV. Category Factor Variables

General Terms

- V1 (Do you know about term software?)
- V2 (Do you know about proprietary software?)
- V3 (Do you know about open source software?)
- V4 (Do you know about pirated software?)
- V5 (Do you ever use any open source software?)
- V6 (Do you differentiate free software and open source software?)
- V7 (Are you are familiar with usages and benefits of open source software?)

Software Movements

- V8 (Do you know about free software movement?)
- V9 (Do you know about FSF (Free Software Foundation)?)
- V10 (Do you know about GNU (GNU's Not Unix) project?)
- V11 (Do you know about open source software movement?)

Source Code and Licensing

- V12 (Do you know about the source code of software?)
- V13 (Are you familiar with any software which also provides the executable file with its full source code?)
- V14 (Do you know the term license of software?)
- V15 (Do you know about any license which provides the ability to modify and redistribute software?)
- V16 (Can you differentiate the licenses of open source software and proprietary software?)
- V17 (Do you ever use any software which can be modified and redistribute legally?)

Use in Education

- V18 (Are you familiar with any educational organization which uses open source software?)
- V19 (Does a person need to learn about open source software in his student life?)
- V20 (Do you know about any university who use open source software as a part of their curriculum?)
- V21 (Do you know about FOSS program?)

Advantages

- V22 (Open source software cheaper than proprietary software)
- V23 (Open Source Software is superior in quality to proprietary software (like less errors, more features etc))
- V24 (Open source software better choice than proprietary software)
- V25 (Open source software more reliable than proprietary software)
- V26 (Is Open source license legally enforceable?)
- V27 (Open Source development is most efficient way to develop software)
- V28 (Can open source software be upgrade without the support of its developer or organization?)
- V29 (There are a lot of open source applications with every field and these can be easily downloaded from internet)

Awareness

- V30 (FOSS programs are useful)
- V31 (Open source software is developed by a team of developers)
- V32 (Is there any piracy in open source software)
- V33 (Open source software can be use as a security function)
- V34 (Is there any risk of malicious code becoming embedded in open source software?)
- V35 (Open source operating system is more secure than other operating system)
- V36 (Open source software is useful for lower budget business)
- V37 (Is there any piracy risk in the use of open source software?)
- V38 (Is Open source software vendor specific?)

Goal and Objectives

- V39 (Is it not necessary that open source software become a part of our education?)
- V40 (Is it not necessary that every common man should be aware about open source software?)
- V41 (FOSS program should be conducted in universities and colleges)
- V42 (Seminars should be conducted about the use and benefits of open source software)
- V43 (Should open source software be used as commercial software?)
- V44 (Educational institutions need not to spend huge money on proprietary software)
- V45 (Will you prefer open source software for better services in universities?)
- V46 (Study of open source software should be compulsory for every course in university)
- V47 (Universities should replace the proprietary software by open source software for future benefits like license renew file, up gradation etc)
- V48 (Should government strict for the promotion of open source software through the bodies like UGC, DEC, AICTE etc)

V. Conclusion

Today awareness about the use and benefits of open source software is must to enhance its use among common people. Open source is an emerging concept that reduces the cost of software and also provides legal software rather than pirated software. This questionnaire helps to check the awareness of open source software among common people and also find the factors responsible for less awareness. These factors must be considered to enhance the awareness and the use of open source software so that every common man uses legally licensed software with less cost. According to the survey results the priority of factor variables can be set and actions must be taken accordingly.

References

- [1] E. S. Raymond, The Cathedral and the Bazaar: Musings on Linux and Open Source by an Accidental Revolutionary, O'Reilly & Associates, 1999.
- [2] G. Moody, Rebel Code: Linux and the Open Source Revolution, The Penguin Press, 2001.
- [3] McConnell, S. (1999). Open source methodology: Ready for prime time. IEEE Software.
- [4] "mozilla.org", <http://www.mozilla.org/>.
- [5] "The Apache Software Foundation", <http://www.apache.org>.
- [6] "The Open Source Initiative: Open Source Definition", <http://www.opensource.org/docs/definition.html>.
- [7] "The Linux Home Page at Linux Online", <http://www.linux.org/>.
- [8] Stallman, R (2007). Why "Free Software" is better than "Open Source".
- [9] Sommerville, I. (1995). Software Engineering. 5th ed. Harlow: Addison-Wesley Longman Limited.

- [10] Wikipedia, Available at <http://fedoraproject.org/wiki/Overview>
 [11] <http://www.dspace.org>
 [12] <http://www.gnu.org>
 [13] <http://www.greenstone.org>
 [14] <http://www.sourceforge.net>

Author's Bio-Data



Dr. Pardeep Mittal is Ph.D. in Computer Science & Engineering, M.Tech in Information Technology and an alumnus of NIT-Jalandhar where he has done his B.Tech in computer science & engineering. He has also finished his PGDBM. He is a life member of Indian Society of Technical Education (ISTE) & Punjab Academy of Sciences (PAS). He has 14 years of teaching experience. He has started his teaching career as a lecturer from a renewed Engineering College of Punjab. Then he was promoted to Assistant Professor, Associate Professor and now he has been working as Professor and Dean in Guru Kashi University, Talwandi Sabo, Punjab, India. He has served as Director (Academia) for a reputed college in Bathinda, Punjab, India. He is the guide of Ph.D. and M.Phil research scholars. His 15 research papers are already published.



Jatinderpal Singh was awarded BCA degree from Punjabi University Patiala, Punjab, India in 2010, M.Sc. (IT) from the same university in 2012 and is presently perusing his M. Phil. in Computer Applications from Guru Kashi University Talwandi Sabo, Punjab, India. Due to his interest in Open Source Software, he is doing research in "Adoption of Open Source Software Instead of Proprietary Software in University Curriculum" and he has already published 4 research papers in International journals of high repute.

Annexure

A questionnaire on survey of open source software

Please take few minutes to fill out the survey. We welcome your feedback and your answer will be kept confidential.

Two option variables		
Statement	Yes	No
V1 (Do you know about term software?)		
V2 (Do you know about proprietary software?)		
V3 (Do you know about open source software?)		
V4 (Do you know about pirated software?)		
V5 (Do you ever use any open source software?)		
V6 (Do you differentiate free software and open source software?)		
V7 (Are you are familiar with usages and benefits of open source software?)		
V8 (Do you know about free software movement?)		
V9 (Do you know about FSF (Free Software Foundation)?)		
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V12 (Do you know about the source code of software?)		
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V15 (Do you know about any license which provides the ability to modify and redistribute software?)		
V16 (Can you differentiate the licenses of open source software and proprietary software?)		
V17 (Do you ever use any software which can be modified and redistribute legally?)		
V18 (Are you familiar with any educational organization which uses open source software?)		
V19 (Does a person need to learn about open source software in his student life?)		
V20 (Do you know about any university who use open source software as a part of their curriculum?)		
V21 (Do you know about FOSS program?)		
Three option variables		

Statement	Yes	No	Don't Know
V22 (Open source software cheaper than proprietary software.)			
V23 (Open Source Software is superior in quality to proprietary software (like less errors, more features etc))			
V24 (Open source software better choice than proprietary software)			
V25 (Open source software more reliable than proprietary software)			
V26 (Is Open source license legally enforceable)			
V27 (Open Source development is most efficient way to develop software)			
V28 (Can open source software be upgrade without the support of its developer or organization)			
V29 (There are a lot of open source applications with every field and these can be easily downloaded from internet)			
V30 (FOSS programs are useful)			
V31 (Open source software is developed by a team of developers)			
V32 (Is there any piracy in open source software)			
V33 (Open source software can be use as a security function)			
V34 (Is there any risk of malicious code becoming embedded in open source software?)			
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V36 (Open source software is useful for lower budget business)			
V37 (Is there any piracy risk in the use of open source software?)			
V38 (Is Open source software vendor specific?)			
V39 (Is it not necessary that open source software become a part of our education?)			
V40 (Is it not necessary that every common man should be aware about open source software?)			
V41 (FOSS program should be conducted in universities and colleges)			
V42 (Seminars should be conducted about the use and benefits of open source software)			
V43 (Should open source software be used as commercial software?)			
V44 (Educational institutions need not to spend huge money on proprietary software)			
V45 (Will you prefer open source software for better services in universities?)			
V46 (Study of open source software should be compulsory for every course in university)			
V47 (Universities should replace the proprietary software by open source software for future benefits like license renew file, up gradation etc)			
V48 (Should government strict for the promotion of open source software through the bodies like UGC, DEC, AICTE etc)			

PERSONAL INFORMATION

By Students

Regular Student	Distance Education Student
Gender.....	Age..... <input type="checkbox"/>
Name (optional).....	City.....
Stream.....	Name of Study C <input type="checkbox"/> e/University.....
Course.....	Contact Number(optional).....
UG/PG	

By Employees

Name of Organization.....
Name of Employee (optional).....

Designation.....	Contact No. (optional).....
Work Area.....	

By Employers

Name of Organization.....	
Employer Strength.....	Name of Employer.....
Designation.....	Contact Number(Optional).....

By Common Man

Name (optional).....	Age.....	Gender.....
Qualification.....	Contact No. (optional).....	
Occupation		