

Scopus

Document details

< Back to results | < Previous 4 of 21 Next >

↗ Export ↴ Download 🖨 Print ✉ E-mail Save to PDF ☆ Add to List More... >

[Full Text](#)

[View at Publisher](#)

2014 the 5th International Conference on Information and Communication Technology for the Muslim World, ICT4M 2014

23 January 2014, Article number 7020589

2014 5th International Conference on Information and Communication Technology for the Muslim World, ICT4M 2014; Kuching; Malaysia; 17 November 2014 through 18 November 2014; Category numberCFP1454K-ART; Code 110287

Investigating the factors that influence the quality of open source systems

(Conference Paper)

Awang Abu Bakar, N.S. ✉, Arsat, N. ✉

Department of Computer Science, International Islamic University Malaysia, P.O. Box 10, Kuala Lumpur, Malaysia

Abstract

∨ View references (24)

Open Source Software (OSS) has impacted software industry and recently became extremely popular. Many agencies, especially the Malaysian government agencies are capitalizing on open source projects due to the merit it offers.

Due to the vast usage in the industry and government administrations, there is a colossal need to investigate on the quality of applications. Therefore, this research will study the quality factors of OSS used by Malaysian government, namely MyMeeting, and MyTaskManager. In this research, McCall's Quality Factor Model is used as a quality model and it emphasizes on quality factors such as maintainability, correctness, reliability, efficiency and usability. This research utilizes six object-oriented metrics by Chidamber and Kemerer (CK) to measure the quality factors of OSS. The metrics were analyzed using Statistical Package for Social Sciences (SPSS). Results from the data analysis show that coupling and complexity influence the class size. © 2014 IEEE.

Author keywords

Object-Oriented Software Open Source Software Quality Factors Software Metrics

Indexed keywords

Engineering controlled terms: Computer software Computer software selection and evaluation Open source software Open systems Power inductors Software engineering

Metrics

0 Citations in Scopus

0 Field-Weighted Citation Impact



PlumX Metrics

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)

[Set citation feed >](#)

Related documents

Applying evolution programming Search Based Software

Engineering (SBSE) in selecting the best open source software maintainability metrics

Bakar, A.D. , Sultan, A.B. , Zulzalil, H. (2012) *ISCAIE 2012 - 2012 IEEE Symposium on Computer Applications and Industrial Electronics*

Quality measuring model for KADS-based expert systems

Nabil, D. , El-Korany, A. , Eldin, A.S. (2005) *Proceedings of the IASTED International Conference on Computational Intelligence*

A measurement tool for object oriented software and measurement experiments with it

Li, X. , Liu, Z. , Pan, B. (2001) *Lecture Notes in Computer Science (including subseries Lecture Notes in*

Government administration
 Malaysian governments
 Object oriented metrics
 Object oriented software
 Open source projects
 Quality factors
 Software metrics
 Statistical packages

Artificial Intelligence and Lecture Notes in Bioinformatics)

View all related documents based on references

Find more related documents in Scopus based on:

Authors > Keywords >

Engineering main heading: Object oriented programming

ISBN: 978-147996242-6

Source Type: Conference Proceeding

Original language: English

DOI: 10.1109/ICT4M.2014.7020589

Document Type: Conference Paper

Sponsors:

Publisher: Institute of Electrical and Electronics Engineers Inc.

References (24)

[View in search results format >](#)

All [Export](#) [Print](#) [E-mail](#) [Save to PDF](#) [Create bibliography](#)

- 1 *The Open Source Definition*. Cited 149 times.
 Open Source Initiative [Online] Available [Accessed: 25-Feb-2014]
<http://opensource.org/osd>
-
- 2 Sukhoo, A., Soobron, M., Soodin, R., Hawabhay, R., Beerbul, S.
 Open source software adoption in Mauritius
 (2013) *2013 IST-Africa Conference and Exhibition, IST-Africa 2013*, art. no. 6701719.
 ISBN: 978-190582439-7
-
- 3 Zhussupova, A., Rahman, A.A.
 Open source software adoption in public organizations of Kazakhstan
 (2011) *2011 IEEE Conference on Open Systems, ICOS 2011*, art. no. 6079306, pp. 423-428. Cited 4 times.
 ISBN: 978-161284931-7
 doi: 10.1109/ICOS.2011.6079306
[View at Publisher](#)
-
- 4 *Training*
 Open Source Competency Centre 11-May-2009. [Online]. Available [Accessed: 25-Feb-2014]
<http://www.oscc.org.my/index.php/en/services/training>

-
- 5 Gokhale, S.S., Smith, T., McCartney, R.
Integrating Open Source Software into software engineering curriculum: Challenges in selecting projects

(2012) *2012 1st International Workshop on Software Engineering Education Based on Real-World Experiences, EduRex 2012 - Proceedings*, art. no. 6225697, pp. 9-12. Cited 9 times.
ISBN: 978-146731805-1
doi: 10.1109/EduRex.2012.6225697

View at Publisher
-
- 6 Li, X., Zhu, Y., Yin, G., Wang, T., Wang, H.
Exploiting attribute redundancy in extracting open source forge websites

(2012) *Proceedings of the 2012 International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery, CyberC 2012*, art. no. 6384938, pp. 13-20.
ISBN: 978-076954810-4
doi: 10.1109/CyberC.2012.12

View at Publisher
-
- 7 Yu, L., Schach, S.R., Chen, K.
Measuring the maintainability of open-source software

(2005) *2005 International Symposium on Empirical Software Engineering, ISESE 2005*, art. no. 1541838, pp. 297-303. Cited 12 times.
ISBN: 0780395085; 978-078039508-4
doi: 10.1109/ISESE.2005.1541838

View at Publisher
-
- 8 *MyMeeting*
[Online] Available [Accessed: 16-Jun-2014]
<http://products.oscc.org.my/mymeeting>
-
- 9 *MyTaskManager*
[Online] Available [Accessed: 16-Jun-2014]
<http://products.oscc.org.my/mytaskmanager>
-
- 10 McCall, J.A., Richards, P.K., Walters, G.F.
Factors in software quality
(1977) *Concepts and Definitions of Software Quality*, 1. Cited 94 times.
-
- 11 Copigneaux, Federic, Martin, Sylvain
Software security evaluation based on a top-down McCall-like approach

(1988), 4 th., pp. 414-418. Cited 8 times.
ISBN: 0818608951

View at Publisher
-
- 12 Al-Badareen, A.B., Selamat, M.H., A. Jabar, M., Din, J., Turaev, S.
Software quality models: A comparative study

(2011) *Communications in Computer and Information Science*, 179 CCIS (PART 1), pp. 46-55. Cited 8 times.
ISBN: 978-364222169-9
doi: 10.1007/978-3-642-22170-5_4

View at Publisher
-

-
- 13 Awang Abu Bakar, N.S.
Does software design complexity have effects on defects D?
(2013) *Aust. J. Basic Appl. Sci.*, 7 (8), pp. 100-109.
-
- 14 Chidamber, S.R., Kemerer, C.F.
A Metrics Suite for Object Oriented Design
(1994) *IEEE Transactions on Software Engineering*, 20 (6), pp. 476-493. Cited 2601 times.
doi: 10.1109/32.295895
[View at Publisher](#)
-
- 15 Hitz, M., Montazeri, B.
Chidamber and kemerer's metrics suite: A measurement theory perspective
(1996) *IEEE Transactions on Software Engineering*, 22 (4), pp. 267-271. Cited 80 times.
doi: 10.1109/32.491650
[View at Publisher](#)
-
- 16 Olague, H.M., Etkorn, L.H., Gholston, S., Quattlebaum, S.
Empirical validation of three software metrics suites to predict fault-proneness of object-oriented classes developed using highly iterative or agile software development processes
(2007) *IEEE Transactions on Software Engineering*, 33 (6), pp. 402-419. Cited 132 times.
doi: 10.1109/TSE.2007.1015
[View at Publisher](#)
-
- 17 Pichler, M.
(2013) *What Is PHP Depend?*
[Online]. Available [Accessed: 09-May-2014]
<http://pdepend.org/documentation/what-is-php-depend.html>
-
- 18 Malone, P., Wolfarth, L.
Measuring system complexity to support development cost estimates
(2013) *IEEE Aerospace Conference Proceedings*, art. no. 6496853. Cited 8 times.
ISBN: 978-146731811-2
doi: 10.1109/AERO.2013.6496853
[View at Publisher](#)
-
- 19 Walden, J., Doyle, M., Welch, G.A., Whelan, M.
Security of open source web applications
(2009) *2009 3rd International Symposium on Empirical Software Engineering and Measurement, ESEM 2009*, art. no. 5314215, pp. 545-553. Cited 23 times.
ISBN: 978-142444841-8
doi: 10.1109/ESEM.2009.5314215
[View at Publisher](#)
-
- 20 Pichler, M.
(2013) *Overview Pyramid*
[Online]. Available [Accessed: 14-May-2014]
<http://pdepend.org/documentation/handbook/reports/overview-pyramid.html>
-

- 21 Pichler, M.
(2013) *Abstraction Instability Chart*
[Online]. Available [Accessed: 15-May-2014]
<http://pdepend.org/documentation/handbook/reports/abstraction-instability-chart.html>
-
- 22 Lanza, M., Marinescu, R., Ducasse, S.
(2006) *Object-oriented Metrics in Practice*. Cited 348 times.
Heidelberg: Springer
-
- 23 Mago, J., Kaur, P.
Analysis of quality of the design of the object oriented software using fuzzy logic, " in international conference on recent advances and future trends in information technology (iraFit2012
(2012) *Proceedings Published in International Journal of Computer Applications® (IJCA)*, pp. 21-25.
-
- 24 Dubey, S.K., Rana, A.
Assessment of maintainability metrics for object-oriented software system
(2011) *ACM SIGSOFT Softw. Eng. Notes*, 36 (5), pp. 1-7. Cited 13 times.
Sep.

© Copyright 2015 Elsevier B.V., All rights reserved.

[< Back to results](#) | [< Previous](#) 4 of 21 [Next >](#)

[^ Top of page](#)

About Scopus

[What is Scopus](#)
[Content coverage](#)
[Scopus blog](#)
[Scopus API](#)
[Privacy matters](#)

Language

[日本語に切り替える](#)
[切换到简体中文](#)
[切换到繁體中文](#)
[Русский язык](#)

Customer Service

[Help](#)
[Contact us](#)

ELSEVIER

[Terms and conditions](#) [Privacy policy](#)

Copyright © 2017 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

Cookies are set by this site. To decline them or learn more, visit our [Cookies page](#).

 RELX Gr