Abstract

The frequent use of web based application plays a vital role in our everyday life. MVC (Model View Controller) architecture is used as programmed architectural pattern in order to implement user interfaces. Application software developers utilize MVC (Model View Controller) Architecture for developing web based application. The sizes of databases are increasing day by day in relation with time. Therefore, if we take into account the concept of huge centralized database systems, it has become one of the most challenging criterions for accessing data in acceptable time. Basically, in centralized databases, the records can be classified into two categories considering the access frequency of data. Those records that are being accessed frequently are known as Level 1 data, on the contrary, those accessed in lesser frequency is considered as Level 2 Data. In this paper, we will try to enhance and optimize the performance of MVC architecture based on two parameters namely response time and throughput. The response time and throughput is improved based on the proposed database search algorithm using B+ tree. If the database search engine is idle, the database search engine will look
forward to discover whether the intended data is in level 1, otherwise it will search for level 2
data. The level 2 data will be included as level 1 data inside the database or vice versa, for
insertion and update operation. However, whether the data is level 1 or level 2 data will be
depended upon user choice. Thus, the overall response time as well as throughput will be
optimally increased.

References

1. M. U. Khan, Dr. T. V. Rao, “XWADF: Architectural Pattern for Improving Performance of
Web Applications”, IJCSI International Journal of Computer Science Issues, Vol. 11, Issue 2, No
2, March 2014 ISSN (Print): 1694-0814 | ISSN (Online): 1694-0784
2. Diana M. Selfa, Maya Carrillo, Ma. del Rocio Boone, “A Database and Web Application
Based on MVC Architecture”, Proceedings of the 16th IEEE International Conference on
Electronics, Communications and Computers (CONIELECOMP 2006) 0-7695-2505-9/06 $20.00
© 2006
3. Praveen Gupta, Prof. M.C. Govil, “MVC Design Pattern for the multi framework
distributed applications using XML, spring and struts framework “, (IJCSE) International Journal
on Computer Science and Engineering Vol. 02, No. 04, 2010, 1047-1051
Interactive Map Using Object-Oriented Programming Concept”. EIE’s 2nd Intl’ Conf.Comp.,
Energy, Net., Robotics and Telecom. eieCon2012
Framework for Developing Desktop Application”. International Journal of Hybrid Information
6. Patrick L., Mariwaldo G. Caetano, João Y. Ishihara, David Prata, and George Brito,
“Applying MVC to Evolutionary Acquisition IRPM”. 2012 International Conference on Information
Singapore
7. Liu Yong-Jun1, Li Ke-Xi, “Design and Implementation of the New Web Application
architectural patterns”, Proceedings of SARC-ITR International Conference, 2014, Chennai,
India
Database Optimization Techniques”, IJCSNS International Journal of Computer Science and
Network Security, August 2010, vol. 10, No.8
10. Bin Li, Jiping Liu, Yi Zhu and Lihong Shi, “Optimization Of Database Capability In The
E-Governmental Spatial Aided Decision-Making System”, Proceedings of International
Symposium on Spatio-temporal Modeling, Spatial Reasoning, Analysis, Data Mining and Data
11. P. V. Bommel and Th.P. van der Weide, “Towards Database Optimization by Evolution”,
In Proceedings of the International Conference on Information Systems and Management of
12. Rahman, M.H.; Akter, M.N.; Ahmad, R.B.; Nader-uz-zaman, M.; Rahman, M.,
"Development of a framework to reduce overhead on database engine through data
distribution," in Electronic Design (ICED), 2014 2nd International Conference on , vol., no.,
Optimizing and Enhancing Performance of MVC Architecture based on Data Clustering Technique

pp.69-72, 19-21 Aug. 2014


Index Terms

Computer Science

Information Sciences

Keywords

MVC, Large Database, Database Engine, Access Frequency, Level 1 Data, Level 2 Data.