Multi-user database

MULTI-USER DATABASE: CONSIDERATION IN TRANSACTION MANAGEMENT AND CONCURRENCY CONTROL Multi-user Database Consideration in Transaction Management andConcurrency Control Author Author Affiliation Date Multi-User Database This mini report is about the analysis and investigation of the multi-user database and related considerations for the transaction management and concurrency control. Concurrency control refers to the coordination of parallel execution of multi-user database operations or transactions. However, the basic principle of concurrency control is to make sure the distinctiveness of user transactions in multi-user database architecture. In addition, the concurrency control is significant for the reason that the concurrent execution of multi-user database transactions those are performed in a collective database arrangement can provide basis for some of the reliability and integrity issues. In this regard, for the proper establishment of the concurrency control the method of the locking is used that involves the assurance regarding private utilization of a data item to a database operation. Normally, let if database transaction A1 holds a lock on a database data item, after that another operation A2 does not have right to use that data item (WordPress, 2010), (Wikia, 201) and (Hoffer, Prescott, & McFadden, 2007). In case of the transaction management we need to ensure that multi-user database transactions or operations are clear, means that every transaction should have preserved database integrity all through multiple users’s operations trying to access the databases. In addition, transactions have to be as well divided into subordinate-transactions; since every subordinate-transaction can affect the single database system. On the other hand, to ensure the transaction management we put into practice the atomicity that validates that a transaction is a particular component that

may be carried out as an entire and not through its components, or not carried out in any way. Additionally, it is the exclusive task of recovery management to verify that this happens. Moreover, transaction management is as well ensured through the consistency about the database transaction those have to modify the database from one steady status to another regular status. In this regard, isolation technique can also be employed, which ensures that each transaction is carried out independently from one another (Wikia, 2010), (Wikipedia, 2011), (WordPress, 2010) and (Hoffer, Prescott, & McFadden, 2007). References Hoffer, J. A., Prescott, M. B., & McFadden, F. R. (2007). Modern Database Management, Eighth Edition. Pearson Education, Inc. Wikia. (201). Database Management . Retrieved February 09, 2011, from http://databasemanagement. wikia. com/wiki/Concurrency_Control Wikia. (2010). Database Management . Retrieved February 10, 2011, from http://databasemanagement. wikia. com/wiki/DBMS_Functions Wikipedia. (2011, February 04). Distributed database. Retrieved February 11, 2011, from http://en. wikipedia. org/wiki/Distributed_database WordPress. (2010). Transcation Management Concurrency Control. Retrieved February 11, 2011, from http://biibpune. files. wordpress. com/2009/08/transaction-management-concurrency-control-word-file. doc