

# Example of essay on object oriented database

[Experience](#), [Failure](#)



Object oriented databases are developing at high rates. There is high acceptance of object oriented databases. With the advancement of object oriented programming and the enhancement of database management systems, the use of object oriented databases systems for developing databases is gaining popularity with many database programmers. The features that database management systems have allow them to be developed to solve simple business solutions.

One product of object oriented database systems is Oracle Berkeley Database. This is a database that is produce and developed by Oracle Company. It is an object oriented database that was developed to optimize the performance of Java Programming language. There The Berkeley database has features which enable it to perform high database performance features like transaction method of data storage. There is also the availability of high concurrent access of the database system. With the use of the database system, there is the containment of fault tolerance. There is a small footprint library that is used to manage the different programming needs of the database.

One feature that the Berkeley Database has is the ability to embed data. This is one of the requirements that are needed for mobile edge applications. There are specific needs that are needed for the development of embedded and mobile applications. Most of these applications run unattended in mobile phones, in network routers, and in databases systems which are embedded. For this to be possible, there is a need to ensure that the database is secure, robust, and should be able to support multiple APIs so that it is able to stand many challenges that come with these kinds of database systems.

One use of object oriented database is the use in mobile applications which is increasing with popularity of smart phones. The features which make them suitable for developing mobile applications include the capability to undertake transactions, failure recovery, high concurrency, the high ability of being scalable and the possibility to be embedded. These are the features that are required in enterprise client/server database systems. It is important to understand that enterprise database systems require that they have these features in order to manage the requirements of these database systems. It has been designed so that it is able to be deployed with little oversight in most cases. There is also the feature of automating all administrative tasks with APIs which are programmable. This makes the administration of this object oriented database simple and easier to manage. This is the favorite of most of the database programmers and is gaining popularity because of this feature. It is important to understand the fact that database management systems should be managed in an easy manner because data is an important resource which is gaining popularity (Long, Fleming, & Brackney, 2011).

Berkeley database is an object oriented database that is able to manage key/value in different formats and with any encoding schema that is provided. It is compatible with all formats and encoding schema. With the use of this object oriented database, it is possible to optimize own data storage in the system. With the use of Berkeley database, it is possible to manage mobile applications and the requirement to embed the database system. This is a requirement that is possible and achievable with the use of the database system (Dittrich, Dayal, & Buchmann, 2011).

Another feature of Berkeley database is that there is relational data storage and also the possibility to access the SQL data system and process. There is the support of SQL and is able to manage the database system. This is one of the features of database systems. There is optimized management of relational data which is integrated with the fact that there is a possibility to have access to this data using standardized APIs like ODBC, JDBC, ADO. NET, and SQLite3 APIs. There is the availability to replicate data in the use of this object oriented database. The feature which has been integrated with this database system is that of single-master, multi replica configurations for the database. This enables the transactional data to be delivered to all nodes in an effective and consistent manner as per the policies of the transactions. There is the minimization of downtime in case there is failure of the master replica node. This achieved with the use of PAXOS-based automated fail-over which is designed to minimize the database failure in the overall. With this feature, it is possible to have high availability and scalability of data. There is also the development of failover and stand over features which have been configured in the design of the database systems. This is an important feature which has been designed to enhance the development and optimization of the object oriented database. This feature is possible with the use of Berkeley database (Liu, Dobbie, & Ling, 2011).

The performance of the Berkeley database is optimized with the use of data management features that make it simple to manage high transaction data. There is the use of in-architecture which has been integrated and enables the achievement of speed and complexity of the database system. It also has synchronization features which are bi-directional.

## References

Dittrich, K. R., Dayal, U., & Buchmann, A. P. (2011). On object-oriented database systems. Springer Publishing Company, Incorporated.

Long, N., Fleming, K., & Brackney, L. (2011). An object-oriented database for managing building modeling components and metadata. Sydney, Australia: Building Simulation.

Liu, M., Dobbie, G., & Ling, T. W. (2011, January). What have we learnt from deductive object-oriented database research? In Database Systems for Advanced Applications (pp. 16-21). Springer Berlin Heidelberg.