

Assignment - General database techniques for storing and managing very large databases where the data consists of relational database tables.

### **Introduction**

Relational databases store large sets of data within a tabular structure having tables. A relational database has everything related and is thus prone to less redundancy. Relational databases firstly store the data, and devise a way for creating and retrieving the data, and a way for ensuring that the data is logically consistent. Relational databases store interrelated information containing hundreds of tables with thousands of rows per table. The data stored by them usually consist of economic data, inventory data and census data, which is usually required by users for searching specific pieces of data quickly. They need to browse the related information stored in different tables present in the database. The core challenge involved in storing and managing large databases involves catering the users in such a way, so that they can access the relevant information relevant to their query in a short of time (Keogh et. al 2001). Several techniques like partitioning, clustering, compression, optimized indexing etc. have been developed in catering effective storage of large databases. This report explains in detail the challenges encountered in storing and managing large databases and the various effective methodologies developed for storage of large relational databases.

### **Challenges Faced in Storing and Managing Large Relational Databases**

The increase in the size of relational databases introduces several issues pertaining to their management and storage. As the rows and entries within a database increase, it gets quite difficult to support several connections and provide effective backup facility. Moreover, the mounting dataset within relational databases also suffers from issues relating to replication and the ingesting of data while maintaining indexes. The alteration to be incurred within schemas without affecting downtime also stresses the need for appropriate mechanisms