INTRODUCTION TO DATABASE MANAGEMENT : ADVANTAGES OF DBMS

MIMI MARISSA BINTI SOFFIAN

NABILAH BINTI MOHAMMAD KAZMIN

     Database Management System (DBMS) is a software that allows users to define, create and maintain a database and provides controlled access to the data. it is basically a collection of programs that enables users to store, modify and extract information from a database. DBMS serves as a medium between the user and the database.

     DBMS offers some important advantages.  One of the advantages is that it can reduce data redundancy. All programs have the have their own files, it can cause duplicate data in many places in the File System. This may create data redundancy but in DBMS, all files are stored in a single database. The whole data is stored only once at a single place so there is no chance of duplicate data. By controlling data redundancy, the data consistency is obtained. If a data appears only once, any update to its value only has to be performed once and the updated value will be available immediately to all users. Contrast with the File System, a same data has to be updated multiple times in different places which can cause incorrect data input or mistake that will result to a data inconsistency. DBMS enable to overcome the situation by reducing the probability of data redundancy and inconsistency.

      Next, DBMS allowed data sharing between the authorized user of database. All user have their own right to access the database up to a level. Database administration has the complete access to the database, he or she can assign users to access the database. The same piece of data within the database can be shared by more than one user at the same time. It gives users the ability to generate more information from a given amount of data. In addition, data within the database also can be shared with other user application.

       Data security means protecting your precious data from unauthorized access. Data in a database should be kept secure and safe. Only authorized users should have the grant to access the database. Some of the users may be allowed to access only a part of database that is related to them or their department. DBMS provide a security system, which the Database Administration users to create accounts of users and to specify account restriction.  This will always protect the data from corruption and keep it secure.

       Besides, most of the DBMSs provide the ‘backup and recovery’ systems that automatically create the backup of the data and restore data if required. In a computer file-based system, the user has to create the backup of data regularly to protect the valuable data from damaging due to failures of the computer system or application program. It is a time-consuming method if the volume of the data is large. With the existence of the DBMS, the backup and recovery process has been easier.

      In a conclusion, we can conclude that as the technology is getting advanced day by day, new program and systems are being developed in order to improve the current systems so that it will be able to meet the current expectation. DBMS is one of the examples of the upgraded system that has been created in order to impove the previous system.