

3. In consistency can be avoided: When the same data is duplicated and changes are made at one site, which is not propagated to the other site, it gives rise to inconsistency and the two entries regarding the same data will not agree. At such times the data is said to be inconsistent. So, if the redundancy is removed chances of having inconsistent details are also removed.

Let us again, consider the college system and suppose that in case of General_Office file it is indicated that Roll_Number 5 lives in Amritsar but in library file it is indicated that Roll_Number 5 lives in Jalandhar. Then, this is a state at which the two entries of the same object don't agree with each other (that is one is updated and other is not). At such time the database is said to be inconsistent.

An inconsistent database is capable of supplying incorrect or conflicting information. So there should be no inconsistency in database. It can be clearly shown that inconsistency can be avoided in a centralized system very well as compared to a file system.

Let us consider again, the example of college system and suppose that RollNo 5 is shifted from Amritsar to Jalandhar, then address information of Roll Number 5 must be updated, whenever Roll number and address occur in the system. In case of a file system, the information must be updated separately in each application, but if we make updating only at three places and forget to make updating at a fourth application, then the whole system shows inconsistent results about Roll Number 5.

In case of DBMS, Roll number and address occur together only a single time in General_Office table. So, it needs a single update and then another application retrieves the address information from General_Office which is updated so, all applications will get the current and latest information by providing a single update operation and this single update operation is propagated to the whole database or all other applications automatically, this property is called as Propagation of Update.

We can say the redundancy of data greatly affect the consistency of data. If redundancy is less, it is easy to implement consistency of data. Thus, DBMS system can avoid inconsistency to great extent.

4. Data can be shared: As explained earlier, the data about Name, Class, Father Name etc. of General_Office is shared by multiple applications in centralized DBMS as compared to file system so now applications can be developed to operate against the same stored data. The applications may be developed without having to create any new stored files.

5. Standards can be enforced: Since DBMS is a central system, so standard can be forced easily may be at Company level, Department level, National level or International level. The standardized data is very helpful during migration or inter changing of data. The file system is an independent system so standard cannot be easily enforced on multiple independent applications.

6. Restricting authorized access: When multiple users share a database, it is likely that some users will not be authorized to access all information in the database. For example, account office data is often considered confidential, and hence only authorized persons are allowed to access such data. In addition, some users may be permitted only to retrieve data, where as other are allowed both to retrieve and to update. Hence, the type of access operation retrieval or update must also be controlled. Typically, users or user groups are given account numbers protected by passwords, which they can use to gain access to the database. A DBMS should provide a security and authorization sub system, which the DBA uses to create accounts and to specify account restrictions. The DBMS should then enforce these restrictions automatically.

7. Solving Enterprise Requirement than Individual Requirement: Since many types of users with varying level of technical knowledge use a database, a DBMS should provide a variety of user interface. The overall requirements of the enterprise are more important than the individual user requirements. So, the DBA can structure the database system to provide an overall service that is "best for the enterprise".

For example: A representation can be chosen for the data in storage that gives fast access for the most important application at the cost of poor performance in some other application. But, the file system favors the individual requirements than the enterprise requirements.

8. Providing Backup and Recovery: A DBMS must provide facilities for recovering from hardware or software failures. The backup and recovery sub system of the DBMS is responsible for recovery. For example, if the computer system fails in the middle of a complex update program, the recovery sub system is responsible for making sure that the database is restored to the state it was in before the program started executing.

9. Cost of developing and maintaining system is lower: It is much easier to respond to unanticipated requests when data is centralized in a database than when it is stored in a conventional file system. Although the initial cost of setting up of a database can be large, but the cost of developing and maintaining application programs to be far lower than for similar service using conventional systems. The productivity of programmers can be higher in using non-procedural languages that have been developed with DBMS than using procedural languages.

10. Data Model can be developed: The centralized system is able to represent the complex data and inter file relationships, which results better data modeling properties. The data madding properties of relational model is based on Entity and their Relationship.

11. Concurrency Control: DBMS systems provide mechanisms to provide concurrent access of data to multiple users.