

# Database Management System

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Assignment # 1

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## Question 1:-

(a) How database management systems can be advantageous in the following manness:

### • Control of Data Redundancy:-

If the data is stored in a database and we set a condition that the data in a particular table cannot be repeated. So if the data is repeated, our database will inform us that the data is being duplicated.

### • Data Consistency:-

It means the requirement of a particular given database. For a data to be consistent, data written in the database must be valid according to all defined rules including constraints, cascades or any other set of rules.

- More information from the same:-

It can only be ensured in database because there is no data redundancy. All data appears to be consistent across the database and the data is same for all users viewing the database.

- Amount of data:-

DB helps to create an environment in which end users have better access to more and better-managed data.

- Sharing of Data:-

Database also allows to share data among other users and it helps the user to interact under an environment.

- Improved Data Integrity:-

It helps when it has proper validation system. And the database is being backed-up and cleaned regularly.

- Improved Security:-

DB allows only its authorized person the database, like some one who is the admin of an organization called DBA.

## • Enforcement of standards:-

This means the SOP's to follow in Database. Like you can constrain or restrict the data values that users can insert, delete or update in the database.

## • Economy of scales:-

Database delivers economy at scale for processing large amounts of data because it is optimised for such operations.

## SI. Balance of Conflicting Requirements:-

A database increases productivity because programmers are freed up for other tasks.

## • Improved Data accessibility and responsiveness:-

It can be done by having an integration in the database approach, data accessing can be crossed. This will provide more functionality and better services to the users.

## I. Increased Productivity:-

Implementing database in any organization will always result in increased productivity for the users.



• Improved data independence and maintenance :-  
It can be explained by 3-schema architecture.

- 1) External Level.
- 2) Logical Level.
- 3) Physical Level.

• Increased Concurrency:-

It is the ability of database to allow multiple users to affect multiple transaction.

• Improved backup and recovery services:-

It refers to the various strategies and operations involved in protecting your database against data loss and retrieval.