

# Employee & Payroll Management System

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## Contents

<b>1</b>	<b><u>About Database Management</u></b>	<b>1</b>
1.1	Allows users the following tasks: . . . . .	2
1.2	Characteristics of DBMS . . . . .	2

## **1 About Database Management**

A database management system (or DBMS) is essentially nothing more than a computerized data-keeping system. Users of the system are given facilities to perform several kinds of operations on such a system for either manipulation of the data in the database or the management of the database structure itself. Database Management Systems (DBMSs) are categorized according to their data structures or types. Database management system is a software which is used to manage the database. For example: MySQL, Oracle, etc are a very popular commercial database which is used in different applications. DBMS provides an interface to perform various operations like database creation, storing data in it, updating data, creating a table in the database and a lot more. It provides protection and security to the database. In the case of

multiple users, it also maintains data consistency. Data is managed in various methods like JSON, tree, and array, etc.

## **1.1 Allows users the following tasks:**

**Data Definition:** It is used for creation, modification, and removal of definition that defines the organization of data in the database.

**Data Update:** It is used for the insertion, modification, and deletion of the actual data in the database.

**Data Retrieval:** It is used to retrieve the data from the database which can be used by applications for various purposes.

**User Administration:** It is used for registering and monitoring users, maintaining data integrity, enforcing data security, dealing with concurrency control, monitoring performance and recovering information corrupted by unexpected failure.

## **1.2 Characteristics of DBMS**

- It uses a digital repository established on a server to store and manage the information.
- It can provide a clear and logical view of the process that manipulates data.
- DBMS contains automatic backup and recovery procedures.
- It contains ACID properties which maintain data in a healthy state in case of failure.
- It can reduce the complex relationship between data.
- It is used to support manipulation and processing of data.
- It is used to provide security of data.

- It can view the database from different viewpoints according to the requirements of the user.