**DATABASE MANAGEMENT SYSTEM**

**ASSIGNMENT – 5**

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**Assignment: Employee Management System - ER Diagram Practice**

Instructions: Read the following requirements carefully and design an ER diagram. Clearly identify entities, attributes, relationships, keys, cardinalities, and participation constraints. Create an ER diagram to represent DB requirement using PowerPoint or ERDPlus

**Example Database**

A company wants to design an Employee Management Database. Consider the following requirements and draw an ER diagram with appropriate entities, relationships, attributes, and constraints.  
  
1. The system should store details of Employees, including employee ID, name, date of birth, gender, address, and phone number. Each employee has a unique employee ID.  
  
2. Each employee works in exactly one Department. A department can have many employees, but every department must have at least one employee.  
  
3. A Department has a unique department ID, name, and location.  
  
4. Each department is headed by one Manager (who is also an employee). A manager can head only one department at a time.  
  
5. Employees can be assigned to multiple Projects, and each project can involve multiple employees. For every assignment, the database must record the role of the employee in the project and the number of hours worked.  
  
6. A Project has a unique project ID, name, and budget.  
  
7. Every project is supervised by exactly one Department, but a department can supervise multiple projects.  
  
8. Some employees may not be assigned to any project at a given time (optional participation), but every project must have at least one employee assigned.

Ans.) 