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Group 4 Topic # 26 Payroll Management DBMS		
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A1 Report: Payroll Management DBMS Application

Description of Payroll Management DBMS Application:

The Payroll Management DBMS is a software application designed to streamline and automate payroll processing within an organization. It helps HR departments manage employee compensation efficiently and accurately. The system will allow for the calculation of salaries, taxes, and deductions, ensuring compliance with labor laws and regulations.

Results Expected from the Payroll Management DBMS Application:

To achieve its objectives, the Payroll Management DBMS should accomplish the following functions:

1. **Employee Data Management:** The system should maintain a database of employee information, including personal details, salary details, tax information, and employment history.
2. **Salary Calculation:** Calculate employee salaries based on predefined rules, taking into account factors like hours worked, overtime, bonuses, and deductions.
3. **Tax Calculation and Reporting:** Automatically calculate and withhold taxes, generate tax forms (e.g., W-2), and maintain records for tax reporting.
4. **Deduction Management:** Manage and calculate deductions such as insurance premiums, retirement contributions, and other withholdings.
5. **Payment Processing:** Generate payroll reports and process payments to employees via various payment methods (e.g., direct deposit or checks).
6. **Compliance and Reporting:** Ensure compliance with labor laws and regulations, generate reports for audits, and keep records of payroll history.
7. **User Access Control:** Implement user roles and access control to protect sensitive payroll data.

Entities and Their Attributes for the Payroll Management DBMS:

Entities in the Payroll Management DBMS include:

Employee Entity:

Employee ID	Name	Social Security Number	Date of Birth	Contact Information

Salary Entity:

Salary ID	Base Salary	Net Salary	Over Time	Bonuses	Deductions

Payment Entity:

Payment ID	Payment Date	Payment Method	Amount Paid

Tax:

Tax ID	Tax Year	Tax Type	Tax Amount

Designation:

Designation Name	Department Name

Deduction:

Deduction ID	Deduction Type	Deduction Amount

Data Types for Attributes of the Payroll Management DBMS:

- Employee ID: Integer
- First Name and Last Name: String (varchar)
- Date of Birth: Date
- Social Security Number: String (varchar)
- Contact Information: String (varchar)
- Salary, Base Salary, Overtime, Bonuses, Deductions, Net Salary, Tax Amount, Deduction Amount: Decimal or Float
- Employment Start Date, Tax Year: Date
- Tax Type: String (varchar)

Relationships Between Entities of Payroll Management DBMS:

- Employee and Salary: One-to-One or One-to-Many (depending on business requirements)
- Employee and Tax: One-to-Many (an employee can have multiple tax records)
- Employee and Deduction: One-to-Many (an employee can have multiple deductions)

A2 Diagram

https://lucid.app/lucidchart/1a2050a7-a56c-4152-a01e-87ea6bfec8fd/edit?viewport_loc=-11%2C-11%2C2219%2C1057%2C0_0&invitationId=inv_46fc3ea6-4321-4d43-a7cb-a6a9f08c065a