Employee Payroll Management System

The Employee Payroll Management System is a console-based application developed using C++ and the MySQL C API (mysql.h). The objective of this project is to provide a simple yet functional system that allows an organization to manage basic employee records including their name, position, and salary. It demonstrates how native C++ applications can interact with a MySQL database without the need for external frameworks or connectors like cppconn, using only low-level C functions for database communication.

The system connects to a local MySQL server and uses a database called payroll_db containing a single table named employee. This table stores each employee's unique ID, name, position, and salary. Users can perform four primary operations: adding new employees, viewing all employee records, updating an existing employee's information, and deleting employee records. These operations are implemented using dynamically constructed SQL queries and executed through the mysql_query() function provided by the C API.

The application demonstrates effective use of MySQL C functions such as mysql_init,mysql_real_connect,mysql-query,mysql_store_result, and mysql-fetch_row to interact with the database. Input is taken from the user via standard console input, and results or confirmations are printed back to the console. Proper error checking is implemented after each database interaction to ensure that connection issues or SQL errors are reported clearly to the user.

From a learning perspective, the project reinforces important programming concepts such as database connectivity, SQL query construction, C-style string handling, and resource management. While the system is relatively simple, it lays the groundwork for more complex payroll systems by showcasing how core CRUD (Create, Read, Update, Delete) operations can be implemented in a native application without external libraries.

In conclusion, the Employee Payroll Management System offers a lightweight and straightforward approach to employee data handling using C++ and the MySQL C API. It is especially useful as a foundational project for students or developers who want to understand database-driven application development at a lower level, where direct control over the database interface is maintained through native API calls.