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**EMPLOYEE INFO CRUD DOCUMENTATION**

**Overview:**

The Employee Info application is a Java Swing-based graphical user interface (GUI) that manages employee records by executing CRUD (Create, Read, Update, Delete) actions on a MySQL database.

# Project Structure

The project includes:

* Employee\_Info.java - Main class containing the GUI and database interaction logic.
* info.sql - SQL script for setting up the MySQL database and info table.

# Dependencies

* Java Development Kit (JDK)
* MySQL Database
* MySQL Connector/J (JDBC driver for MySQL)

# Database Setup

* Create a MySQL database named employeeinfo.
* Create a table named info with the following structure:
* Id INT, AUTO\_INCREMENT, PRIMARY KEY
* First\_Name VARCHAR(50)
* Last\_Name VARCHAR(50)
* Email VARCHAR(50)
* Address VARCHAR(255)

# Class: Employee\_Info

## Attributes

* Connection con - Manages the database connection.
* PreparedStatement pst - Prepares and executes SQL queries.

## Constructor

* Initializes components and populates the table with existing records by calling show\_table().

## Methods

1. **show\_table()**

* Fetches data from the info table and displays it in jTable1.

1. **jButton1ActionPerformed(java.awt.event.ActionEvent evt)**

* Inserts a new record into the info table based on user input.

1. **jButton2MouseClicked(java.awt.event.MouseEvent evt)**

* Updates the selected record in the info table.

1. **jButton3ActionPerformed(java.awt.event.ActionEvent evt)**

* Deletes the selected record from the info table.

1. **jTable1MouseClicked(java.awt.event.MouseEvent evt)**

* Populates the input fields with data from the selected row in jTable1.

# GUI Components

* jTable1 - Displays employee records.
* jScrollPane1 - Scroll pane for jTable1.
* jLabel1, jLabel2, jLabel3, jLabel4 - Labels for input fields.
* txtf\_name, txtl\_name, txtemail, txtaddress - Text fields for employee information.
* jButton1 - Insert button.
* jButton2 - Update button.
* jButton3 - Delete button.

# Event Handlers

1. **jButton1ActionPerformed**

* Inserts a new employee record.

1. **jButton2MouseClicked**

* Updates the selected employee record.

1. **jButton3ActionPerformed**

* Deletes the selected employee record.

1. **jTable1MouseClicked**

* Populates input fields with data from the selected row.

# Error Handling

* SQL exceptions are managed using try-catch blocks.
* Errors are logged using the Logger class and displayed to the user via JOptionPane.

# Future Improvements

* Enhance input validation.
* Add search functionality.
* Implement pagination for large datasets.
* Add data export to CSV or Excel formats.

# Summary

The Employee Info application is a basic CRUD interface for managing employee records using Java Swing and MySQL. It includes error handling and can be enhanced with additional features. This documentation provides the necessary information for understanding and modifying the code.