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| **Class: FYMCA Div: A**  **Semester: II** | **Course Code:**  MCA01554  **Course Name: Java Programming Laboratory** | | **Batch:**  **F1** |
| **Name: Anurag Dalal** | | **Roll No: 51009** | |
| **CO No: CO515.4** | | **Assignment No: 11** | |

**PRACTICAL SUBMISSION RECORD- A.Y. 2024-25**

Title:

Write JDBC backend class, which establishes a connection with the database having a table “STUDENT” with structure – roll no, name, class, DOB. Using the above backend class WAP to accept roll\_no from command line and display the details with proper error messages. Display all the records from table with proper formatting.

Code:

SQL Description

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Description automatically generated

Records

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Description automatically generated

DatabaseManager

package practice\_java;

import java.sql.\*;

public class DatabaseManager {

private static final String ***URL*** = "jdbc:mysql://localhost:3306/java\_practice";

private static final String ***USER*** = "root";

private static final String ***PASSWORD*** = "";

private Connection connection;

public DatabaseManager() throws SQLException, ClassNotFoundException {

Class.*forName*("com.mysql.cj.jdbc.Driver");

connection = DriverManager.*getConnection*(***URL***, ***USER***, ***PASSWORD***);

}

public Connection getConnection() {

return connection;

}

public void close() {

try {

if (connection != null) connection.close();

} catch (SQLException e) {

System.***err***.println("Error closing connection: " + e.getMessage());

}

}

}

Main

package practice\_java;

import java.sql.\*;

import java.util.Scanner;

public class Assignment\_No\_11 {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.***in***);

try {

DatabaseManager dbManager = new DatabaseManager();

Connection conn = dbManager.getConnection();

System.***out***.print("Enter Roll Number to search: ");

int rollNo = scanner.nextInt();

String query = "SELECT \* FROM STUDENT WHERE roll\_no = ?";

PreparedStatement pstmt = conn.prepareStatement(query);

pstmt.setInt(1, rollNo);

ResultSet rs = pstmt.executeQuery();

if (rs.next()) {

System.***out***.println("\nStudent Details:");

System.***out***.printf("Roll No : %d\n", rs.getInt("roll\_no"));

System.***out***.printf("Name : %s\n", rs.getString("name"));

System.***out***.printf("Class : %s\n", rs.getString("class"));

System.***out***.printf("DOB : %s\n", rs.getDate("DOB"));

} else {

System.***out***.println("No student found with roll number " + rollNo);

}

System.***out***.println("\nAll Students:");

Statement stmt = conn.createStatement();

ResultSet allRs = stmt.executeQuery("SELECT \* FROM STUDENT");

System.***out***.printf("%-10s %-20s %-10s %-15s\n", "Roll No", "Name", "Class", "DOB");

System.***out***.println("--------------------------------------------------------------");

while (allRs.next()) {

System.***out***.printf("%-10d %-20s %-10s %-15s\n",

allRs.getInt("roll\_no"),

allRs.getString("name"),

allRs.getString("class"),

allRs.getDate("DOB").toString());

}

dbManager.close();

} catch (ClassNotFoundException e) {

System.***err***.println("MySQL JDBC Driver not found. Add the driver to your classpath.");

} catch (SQLException e) {

System.***err***.println("Database error: " + e.getMessage());

}

}

}

A screenshot of a computer

Description automatically generatedOutput: