Experiment No.9
Demonstrate Database connectivity
Date of Performance:
Date of Submission:

Aim :- Write a java program to connect Java application with the MySQL database Objective :- To learn database connectivity

Theory:

Database used : MySql

1. Driver class: The driver class for the mysql database is com.mysql.jdbc.Driver. 2. Connection URL: The connection URL for the mysql database is jdbc:mysql://localhost:3306/loan management where jdbc is the API, mysql is the database, localhost is the server name on which mysql is running, can also use IP address, 3306 is the port number and loan management is the database name. 3. Username: The default username for the mysql database is Hiren.
4. Password: It is the password given by the user at the time of installing the mysql database. Password used is " ".

To connect a Java application with the MySQL database, follow the following steps.

- First create a database and then create a table in the mysql database. ● To connect java application with the mysql database, mysqlconnector.jar file is required to be loaded.
- download the jar file mysql-connector.jar
- add the jar file to the same folder as the java program.
- Compile and run the java program to retrieve data from the database.

Code :

```
import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.Statement;


public class Main {

   public static void main(String[] args) {
```

```
// Database credentials
String url = "jdbc:mysql://localhost:3306/HOTEL_MANAGEMENT_SYSTEM";
String user = "root";
String password = “ketan4321";

// Establishing the connection
try (Connection connection = DriverManager.getConnection(url, user, password)) {
    System.out.println("Connected to the database.");

    // Creating a statement
    Statement statement = connection.createStatement();

    // Executing a query
    String query = "SELECT * FROM customer";
    ResultSet resultSet = statement.executeQuery(query);

    // Displaying the result
    while (resultSet.next()) {
        int customerId = resultSet.getInt("Custermor_id");
        String customerName = resultSet.getString("Cust_name");
        String address = resultSet.getString("cu_address");
        int phoneNo = resultSet.getInt("phone_no");
```

```
            int aadharNo = resultSet.getInt("aadhar_no");
            String dob = resultSet.getString("DOB");

            System.out.println("Customer ID: " + customerId);
            System.out.println("Customer Name: " + customerName);
            System.out.println("Address: " + address);
            System.out.println("Phone No: " + phoneNo);
            System.out.println("Aadhar No: " + aadharNo);
            System.out.println("Date of Birth: " + dob);
            System.out.println();
        }
    } catch (Exception e) {
        System.err.println("Error: " + e.getMessage());
    }
  }
}
```

Conclusion: Data has been retrieved successfully from a table by establishing database connectivity of java program with mysql database.

2. Explain steps to connect a java application with the MySQL database

- Download and install MySQL Connector/J.
- Include the MySQL Connector/J JAR file in your Java project.
- Import the necessary classes from the `java.sql` package.
- Use the `DriverManager.getConnection()` method to establish a connection to the MySQL database.
- Provide the JDBC URL, username, and password for authentication.

- Perform database operations using `Statement` or `PreparedStatement` objects.
- Close the connection and resources after completing the database operations.