



Vidyavardhini's College of Engineering and Technology
Department of Artificial Intelligence & Data Science

Experiment No.9

Demonstrate Database connectivity

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.

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

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

➔ Steps to Connect a Java Application with the MySQL Database:

- To connect a Java application to a MySQL database, follow these steps:
1. **Download MySQL Connector/J:**
 - Download the MySQL Connector/J (JDBC driver) JAR file.
 - Add it to your project's classpath.
2. **Load the Driver Class:**



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- Load the MySQL JDBC driver class using
`Class.forName("com.mysql.cj.jdbc.Driver").`
- 3. **Establish a Connection:**
 - Create a connection URL:
`jdbc:mysql://localhost:3306/mydb` (replace mydb with your database name).
 - Use `DriverManager.getConnection(url, username, password)` to establish a connection.
- 4. **Create a Statement Object:**
 - Create a `Statement` or `PreparedStatement` object to execute SQL queries.
- 5. **Execute Queries:**
 - Execute SQL queries using the statement object.
- 6. **Process Results:**
 - Process the result set obtained from executing queries.
- 7. **Close the Connection:**
 - Close the connection using `connection.close()`.