9 Dec 2022:

JDBC Steps:

1. Load the driver / register the driver with the Driver Manager.

Class.forName('com.jdbc.......Driver');

2. Get the connection by providing the url, username, password

Connection connection= DriverManager.getConnection(url, username, password)

3. Create a pipeline to send sql queries to database from java application

Statement statement= connection.createStatement(); // creates a pipeline

4. use statement object to add queries

example: insert an employee into db.

statement.execute(query)

5. close the connection

Problem Statement: Insert data into mysql db

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.ResultSetMetaData;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**public** **class** InsertData {

**public** **static** **void** main(String[] args) **throws** ClassNotFoundException, SQLException {

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

Connection connection=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/EmployeesDB", "root", "ipl2021@dubai");

Statement statement = connection.createStatement();

// insert data into the database.

String query = "insert into customer values(14, 9014,29000,'anil')";

statement.execute(query);

}

Problem statement: retrieve the data from the db - table

**public** **class** InsertData {

**public** **static** **void** main(String[] args) **throws** ClassNotFoundException, SQLException {

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

Connection connection=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/EmployeesDB", "root", "ipl2021@dubai");

Statement statement = connection.createStatement();

// get all the customers data from db

String query= "select \* from customer";

ResultSet resultset=statement.executeQuery(query);

System.***out***.println("Resultset"+ resultset);

**while**(resultset.next()) {

System.***out***.println(resultset.getInt("id")+ "\t"+ resultset.getInt("accountNumber")+"\t"+ resultset.getInt("balance")+"\t"+ resultset.getString("name"));

}

Problem Statement:

Get column names dynamically.

**package** com.firstapp;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.ResultSetMetaData;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**public** **class** InsertData {

**public** **static** **void** main(String[] args) **throws** ClassNotFoundException, SQLException {

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

Connection connection=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/EmployeesDB", "root", "ipl2021@dubai");

Statement statement = connection.createStatement();

// Get column names dynamically.

String query= "select \* from customer";

ResultSet resultset=statement.executeQuery(query);

ResultSetMetaData rsmd=resultset.getMetaData();

**int** count = rsmd.getColumnCount();

**int** i=1;

**while**( i <=count) {

System.***out***.println(rsmd.getColumnLabel(i));

}

}

}

13 Dec 2022: CRUD application using MYSQL and JDBC:

**package** com.firstapp;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**import** java.util.Scanner;

**public** **class** CRUD {

Statement statement= **null**;

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

**public** **static** **void** main(String[] args) **throws** SQLException {

CRUD c = **new** CRUD();

c.getDBConnection();

System.***out***.println(c.statement);

// c.add();

//c.getAllCustomers();

c.deleteCustomer();

}

**public** **void** getDBConnection() {

**try** {

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

Connection connection=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/EmployeesDB", "root", "ipl2021@dubai");

statement = connection.createStatement();

}

**catch**(Exception e) {

System.***out***.println(e);

}

}

**public** **void** addCustomer() **throws** SQLException {

System.***out***.println("Enter id");

**long** id = sc.nextLong();

System.***out***.println("Enter accno");

**long** accNo = sc.nextLong();

System.***out***.println("Enter balance");

**long** accBalance = sc.nextLong();

System.***out***.println("Enter name");

String name = sc.next();

System.***out***.println(accNo + "\t"+ accBalance +"\t"+ name);

// insert into customer values(10, 9011,9000,'kiran');

String query = "insert into customer values("+id+ ","+accNo+ "," + accBalance + ",'"+ name+"')";

System.***out***.println("query" + query);

statement.execute(query);

**boolean** result = getCustomerById(id);

**if**(result == **true**) {

System.***out***.println("customer added successfully!");

}

**else** {

System.***out***.println("Failure in addition of the customer");

}

}

**public** **boolean** getCustomerById(**long** id) **throws** SQLException {

String query = "select \* from customer where id="+id;

ResultSet rs= statement.executeQuery(query);

**return** rs.next();

}

**public** **void** deleteCustomer() **throws** SQLException {

System.***out***.println("Enter id");

**long** id = sc.nextLong();

String query = "delete from customer where id="+id;

System.***out***.println("query" + query);

statement.execute(query);

}

**public** **void** updateCustomer() {

// please write the code in busy schedule

}

**public** **void** getAllCustomers() **throws** SQLException {

String query = "select \* from customer";

ResultSet rs= statement.executeQuery(query);

System.***out***.println("All Customers Data");

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

**while**(rs.next()) {

System.***out***.println(rs.getLong(1) +"\t"+ rs.getLong(2)+"\t"+rs.getLong(3)+"\t"+ rs.getString(4));

}

}

}

/\*

\*

\* Implement the interactive system for the above example

\*

\* 1 add 2 remove 3 get all customers 4 update 5 exit

\*

\* 1

\*

\* customer added successfully

\*

\*

\* 1 add 2 remove 3 get all customers 4 update 5 exit

\*

\* 2

\*

\*

\*

\*

\*/