**Java Database Connectivity:**

JDBC is java database connectivity.

Java JDBC is a Java API to connect and execute queries with the database. JDBC API uses jdbc drivers to connect with the database.

There are 5 steps to connect any java application with the database using JDBC. These steps are as follows:

* Register the Driver class
* Create connection
* Create statement
* Execute queries
* Close connection

1. Register the Driver Class

The forName() method of class Class is used to register the driver class.

For MySQL it is:

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

For Oracle it is:

Class.forName("oracle.jdbc.driver.OracleDriver");

1. Create a connection object

For MySQL:

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/dbname","root","root");

For Oracle:

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","password");

1. Create the statement object

For MysQL/Oracle:

Statement stmt=con.createStatement();

1. Execute Query

ResultSet rs=stmt.executeQuery("select \* from emp");

While(rs.next()){

System.out.println(rs.getInt(1)+” “+rs.getString(2));

}

**Note: For selecting data we use stmt.executeQuery**

**For inserting, updating, deleting data we use stmt.executeUpdate**

1. Close the connection

con.close()

**Example for Connecting to MySQL:**

**package** FPPackage;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.Statement;

**public** **class** JDBCTest {

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

**try** {

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

//Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?useSSL=false","root","vinayaka123");

Connection con = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/jdbctesting","subbu123","subbu123");

Statement stmt=con.createStatement();

//stmt.executeUpdate("insert into jdbctesting.employees ( firstname, lastname, age, company, salary)VALUES('robert', 'smith', 30, 'HONDA', 1250000)");

ResultSet rs=stmt.executeQuery("select \* from jdbctesting.employees");

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

System.***out***.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getInt(4)+" "+rs.getString(5)+" "+rs.getInt(6));

con.close();

//stmt.executeUpdate("UPDATE jdbctesting.employees SET firstname='Mary', age=30, company='Infosys', salary=1800000 where id=2");

//stmt.executeUpdate("DELETE FROM jdbctesting.employees where id=3");

}

**catch**(Exception e) {

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

}

}

}

Results:

1 Maruti 2017-06-18 21:54:34

2 BMW 2017-06-18 21:54:50

3 Audi 2017-06-18 21:55:03

4 Nissan 2017-06-18 21:55:13

5 Toyota 2017-06-18 21:55:24

7 Marutiu 2017-06-19 11:52:13

**Example for connecting to Oracle:**

**package** FPPackage;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.Statement;

**public** **class** JDBCTest {

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

**try** {

Class.*forName*("oracle.jdbc.driver.OracleDriver");

Connection con=DriverManager.*getConnection*("jdbc:oracle:thin:@localhost:1521:carrental","root","password");

Statement stmt=con.createStatement();

ResultSet rs=stmt.executeQuery("select \* from carrental.tblbrands");

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

System.***out***.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3));

con.close();

}

**catch**(Exception e) {

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

}

}

}