

Summary: in this tutorial, you will learn how to query data from a table using Java JDBC.

To query data from a table, you use the following steps:

1. First, create a `Connection` object to [connect to the SQLite database](#).
2. Next, create an instance of the `Statement` class from the `Connection` object.
3. Then, create an instance of the `ResultSet` class by calling the `executeQuery` method of the `Statement` object. The `executeQuery()` method accepts a [SELECT statement](#).
4. After that, loop through the result set using the `next()` method of the `ResultSet` object.
5. Finally, use the `get*` method of the `ResultSet` object such as `getInt()`, `getString()`, `getDouble()`, etc., to get the data in each iteration.

The following program selects all rows from the `warehouses` table.

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```
1 package net.sqlitetutorial;
2
3 import java.sql.DriverManager;
4 import java.sql.Connection;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.sql.Statement;
8
9 /**
10  *
11  * @author sqlitetutorial.net
12  */
13 public class SelectApp {
14
15     /**
16      * Connect to the test.db database
17      * @return the Connection object
18      */
19     private Connection connect() {
20         // SQLite connection string
21         String url = "jdbc:sqlite:C://sqlite/db/test.db";
22         Connection conn = null;
23         try {
24             conn = DriverManager.getConnection(url);
25         } catch (SQLException e) {
26             System.out.println(e.getMessage());
27         }
28         return conn;
29     }
30
31
32     /**
33      * select all rows in the warehouses table
34      */
35     public void selectAll(){
36         String sql = "SELECT id, name, capacity FROM warehouses";
37
38         try (Connection conn = this.connect();
39             Statement stmt = conn.createStatement();
40             ResultSet rs = stmt.executeQuery(sql)){
41
42             // loop through the result set
43             while (rs.next()) {
44                 System.out.println(rs.getInt("id") + "\t" +
45                                     rs.getString("name") + "\t" +
46                                     rs.getDouble("capacity"));
47             }
48         } catch (SQLException e) {
49             System.out.println(e.getMessage());
50         }
51     }
52
53
54     /**
55      * @param args the command line arguments
56      */
57     public static void main(String[] args) {
58         SelectApp app = new SelectApp();
59         app.selectAll();
60     }
61
62 }
```

The following illustrates the output of the program:

```
run:
1      Raw Materials      3000.0
2      Semifinished Goods    4000.0
3      Finished Goods    5000.0
BUILD SUCCESSFUL (total time: 0 seconds)
```

Querying data with parameters

To use parameters in the query, you use the `PreparedStatement` object instead. For example, the following method selects the warehouse whose capacity is greater than a specified capacity.

```
1  /**
2   * Get the warehouse whose capacity greater than a specified capacity
3   * @param capacity
4   */
5  public void getCapacityGreaterThan(double capacity){
6      String sql = "SELECT id, name, capacity "
7                  + "FROM warehouses WHERE capacity > ?";
8
9      try (Connection conn = this.connect();
10          PreparedStatement pstmt = conn.prepareStatement(sql)){
11
12          // set the value
13          pstmt.setDouble(1, capacity);
14          //
15          ResultSet rs = pstmt.executeQuery();
16
17          // loop through the result set
18          while (rs.next()) {
19              System.out.println(rs.getInt("id") + "\t" +
20                               rs.getString("name") + "\t" +
21                               rs.getDouble("capacity"));
22          }
23      } catch (SQLException e) {
24          System.out.println(e.getMessage());
25      }
26  }
```

To find the warehouses whose capacities are greater than 3600, you use the

`getCapacityGreaterThan()` method as follows:

```
1  SelectApp app = new SelectApp();
2  app.getCapacityGreaterThan(3600);
```

The following is the output:

```
run:
2      Semifinished Goods    4000.0
3      Finished Goods    5000.0
BUILD SUCCESSFUL (total time: 0 seconds)
```

In this tutorial, you have learned how to query data from the table in SQLite database from a Java program.