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Difference Between Execute(), query() and Update() Methods in Java

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Before getting started, let us have prior knowledge of parameters that makes use of the following three queries parameters, which are as follows:

- boolean execute(String SQL): Returns a boolean value of true if a
 ResultSet object can be retrieved; otherwise, it returns false. Use this
 method to execute SQL DDL statements or when you need to use
 truly dynamic SQL.
- int executeUpdate(String SQL): Returns the number of rows
 affected by the execution of the SQL statement. Use this method to
 execute SQL statements, for which you expect to get a number of
 rows affected for example, an INSERT, UPDATE, or DELETE
 statement.
- ResultSet executeQuery(String SQL): Returns a ResultSet object.
 Use this method when you expect to get a result set, as you would with a SELECT statement.

They are discussed in below listed manner as follows:

- 1. execute()
- 2. execute Query()
- 3. execute Update()

Method 1: execute()

• **Description:** The method used for all types of SQL statements, and that is, returns a Boolean value of TRUE or FALSE.

- **Return type:** This method return a Boolean value. TRUE indicates that query returned a Result Set object and FALSE indicate returned an int value or returned nothing.
- **Usage:** This method is use to execute Both select and non select queries.
- Example: All SQL statements.

Illustration:

Java

```
// Java Program to Illustrate usage of execute() Method
// Loading the driver using forName() method
Class.forName(driver);
// Registering the driver using Drivermanager.getConnection() method
Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:3306/
                  "root", "1234");
// Get database connection
stmt = conn.createStatement();
// Use Connection to create a Statement object
// Execute SQL and return boolean value to
// indicate whether it contains ResultSet
boolean hasResultSet = stmt.execute(sql);
// Condition holds true till there is a single element
if (hasResultSet)
    // If there is a ResultSet result set after execution
    rs = stmt.getResultSet();
    // Get the result set
    ResultSetMetaData rsmd = rs.getMetaData();
    // ResultSetMetaData is a metadata interface for analyzing result sets
        columnCount = rsmd.getColumnCount();
    // Getting the output ResultSet object
    // with help of object of ResultSet
    while (rs.next ())
```

Method 2: execute Query()

- **Description:** Now this method execute statements that returns a result set by fetching some data from the database.
- Usage: This method is use to execute select query.
- Return type: This method returns a Result Set object which contains the result returned by query.
- One of it's example that is widely common: 'SELECT'

Illustration:

Java

Method 3: execute Update()

- **Description:** This method is used for execution of DML statement(INSERT, UPDATE and DELETE) which is return int value, count of the affected rows.
- **Usage:** This method is use to execute non select query. This method is use to execute select and non select queries.
- **Return type:** An integer value which represent number of rows affected by the query. This will be 0 for statement which are returning nothing.
- Example:

```
DML->INSERT , UPDATE and DELETE DDL-> CREATE, ALTER
```

Illustration:

return stmt.executeUpdate(sql);

// Execute the DML statement and return the number of records
affected

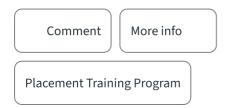
Now let us finally conclude out the differences in return types as spotted in the above illustrations

- 1. execute(): The return type is Boolean, indicating whether ResultSet return
- 2. executeQuery(): Type method returns a ResultSet, execute returns the results of the query, often used to perform the query
- 3. executeUpdate(): The return type is int, that the implementation of a number of rows affected after the sql statement, usually used to execute modification statements.

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