

# Query Execution

TIK :

Mahasiswa dapat  
memahami perintah query  
dan menerapkan pada  
pemrograman Java

# Menyisipkan data (insert)

- Perintah menyisipkan/menambah data:  
**INSERT into table\_name VALUES(field\_values)**
- **executeUpdate(String sql)**  
fungsi yang digunakan untuk mengeksekusi string sql untuk manipulasi data.

```
try{
    Statement st = koneksi.createStatement();
    int val = st.executeUpdate("INSERT
into barang VALUES('000003','Mouse','Buah',30000,35000,1
0,5)");
    System.out.println("1 row affected");
}
catch (SQLException s){
    System.out.println("SQL statement is not executed!");
}
```

# Menampilkan Data (select)

- **SELECT \* FROM table\_name**
  - Perintah menampilkan data
- **executeQuery(String sql)**
  - Method untuk mengeksekusi perintah SQL dan dikembalikan pada obyek **ResultSet**
- **getInt(String column\_name):**
  - Method pd **java.sql.ResultSet** untuk mengambil data dengan parameter berupa tipe string dengan keluaran type data **Integer**
- **getString(String column\_name)**
  - Method pd **java.sql.ResultSet** untuk mengambil data dengan parameter berupa tipe string dengan keluaran type data **String**

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# Menampilkan Data (select)

```
try{  
    Statement st = con.createStatement();  
    ResultSet res = st.executeQuery  
    ("SELECT * FROM barang");  
    System.out.println("Kode " + "\t" + "Nama  
        Barang ");  
    while (res.next()) {  
        int i = res.getInt("kd_brg");  
        String s = res.getString("nm_brg");  
        System.out.println(i + "\t\t" + s);  
    }  
    con.close();  
}
```

# Hapus data (delete)

- **DELETE FROM nama\_tabel WHERE kondisi**

```
try{
    Statement st = con.createStatement();
    String sql = "DELETE FROM barang
                  WHERE kd_brg = '1111111111'";
    int delete = st.executeUpdate(sql);
    if(delete == 1){
        System.out.println("Row is deleted.");
    }
    else{
        System.out.println("Row is not deleted.");
    }
}
catch (SQLException s){
    System.out.println("SQL statement is not executed!");
}
```

# Update data (update)

- **Update nama\_tabel Set nama\_field=nilai WHERE kondisi**

```
try{
    Statement st = con.createStatement();
    String sql = "UPDATE barang SET satuan='Biji'
                  WHERE kd_brg = '1111111111'";
    int update = st.executeUpdate(sql);
    if(update == 1){
        System.out.println("Row is updated.");
    }
    else{
        System.out.println("Row is not updated.");
    }
}
catch (SQLException s){
    System.out.println("SQL statement is not executed!");
}
```

# Sum of Column in a Database Table

## ■ **SELECT SUM(col\_name) FROM table\_name**

```
try{
    Statement st = con.createStatement();
    BufferedReader bf = new BufferedReader(new InputStreamReader(System
.in));
    System.out.println("Enter table name:");
    String table = bf.readLine();
    System.out.println("Enter column name which have to sum:");
    String col = bf.readLine();
    ResultSet res = st.executeQuery("SELECT SUM"+"("+col+")"+" FROM "+ta
ble);
    while (res.next()){
        int c = res.getInt(1);
        sum = sum+c;
    }
    System.out.println("Sum of column = "+sum);
}
catch (SQLException s){
    System.out.println("SQL statement is not executed!");
}
```

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# Getting Column Names from a database table in Java

- **ResultSetMetaData:**

- Interface dari paket *java.sql* yang dapat digunakan untuk memperoleh informasi types dan properties dari columns pada sebuah obyek **ResultSet**.

- **getColumnCount():**

- Method untuk memperoleh jumlah dari columns (integer types data) pada obyek **ResultSet**.

- **columnName(int column):**

- Method yang memberikan nama columns (string type data) dari obyek **ResultSetMetaData** dan memberikan nilai type data integer.



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# Code Program Getting Column Names

```
try{
    Statement st = con.createStatement();
    ResultSet rs = st.executeQuery("SELECT * FROM barang");
    ResultSetMetaData md = rs.getMetaData();
    int col = md.getColumnCount();
    System.out.println("Number of Column : "+ col);
    System.out.println("Columns Name: ");
    for (int i = 1; i <= col; i++){
        String col_name = md.getColumnName(i);
        System.out.println(col_name);
    }
}
catch (SQLException s){
    System.out.println("SQL statement is not executed!");
}
```

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# Code Koneksi Database

```
import java.sql.*;
public class KoneksiMysql {
    String url, usr, pwd, dbn;
    public KoneksiMysql (String dbn) {
        this.url = "jdbc:mysql://localhost/" + dbn;
        this.usr = "root";
        this.pwd = ""; }
    public KoneksiMysql (String host, String user, String pass, String dbn) {
        this.url = "jdbc:mysql://" + host + "/" + dbn;
        this.usr = user;
        this.pwd = pass; }
    public Connection getConnection() {
        Connection con = null;
        try {            Class.forName("com.mysql.jdbc.Driver");
                        con = DriverManager.getConnection(this.url, this.usr, this.pwd);
        } catch (ClassNotFoundException e) {
            System.out.println ("Error #1 : " + e.getMessage());
            System.exit(0);
        } catch (SQLException e) {
            System.out.println ("Error #2 : " + e.getMessage());
            System.exit(0);
        }
        return con;
    }
}
```

# Code Display Data

```
import java.sql.*;
import java.io.*;
class tampil
{
public static void main (String args[]){
    try{
        KoneksiMysql kon = new KoneksiMysql ("akademik");
        Connection c = kon.getConnection();
        ResultSet hasilQuery = null;
        Statement stm = c.createStatement();
        hasilQuery = stm.executeQuery("SELECT * FROM mahasiswa");
        while (hasilQuery.next()) {
            String nim_mhs = hasilQuery.getString("nim");
            String nama_mhs = hasilQuery.getString("nama");
            System.out.println(nim_mhs+" -> " + nama_mhs);
        }
        c.close();
    }
    catch (Exception e) {
        System.out.println("Error : "+e);
    }
}
}
```

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# Ada Pertanyaan

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## Latihan 3

- Buat class Barang dengan method insertData, updateData, deleteData dari tabel barang.



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# Rehat Sejenak

- Very Funny Commercial