

Lecture 6: Execute and Process Queries

Complete Query Execution Code:

```
import java.sql.*;

public class DemoJdbc {
    public static void main(String[] args) {
        String url = "jdbc:postgresql://localhost:5432/demo";
        String username = "postgres";
        String password = "0000";

        Connection conn = null;
        Statement stmt = null;
        ResultSet rs = null;

        try {
            // Load driver and create connection
            Class.forName("org.postgresql.Driver");
            conn = DriverManager.getConnection(url, username, password);
            System.out.println("Connection established");

            // SQL query
            String query = "SELECT sname FROM student WHERE sid = 1";

            // Create statement
            stmt = conn.createStatement();

            // Execute query
            rs = stmt.executeQuery(query);

            // Process result
            if (rs.next()) {
                String studentName = rs.getString("sname");
                System.out.println("Student name: " + studentName);
            } else {
                System.out.println("No student found with sid = 1");
            }
        } catch (Exception e) {
            System.out.println("Error: " + e.getMessage());
            e.printStackTrace();
        } finally {
            // Close resources in reverse order
            try {
                if (rs != null) rs.close();
                if (stmt != null) stmt.close();
            }
        }
    }
}
```

```

        if (conn != null) conn.close();
        System.out.println("Connection closed");
    } catch (SQLException e) {
        System.out.println("Error closing resources: " + e.getMessage());
    }
}
}
}
}

```

Understanding ResultSet:

- **rs.next():** Moves cursor to next row, returns true if row exists
- **rs.getString("column_name"):** Gets string value from named column
- **rs.getInt("column_name"):** Gets integer value from named column
- **rs.getString(1):** Gets string value from first column (1-indexed)