JDBC (Java Database connectivity)

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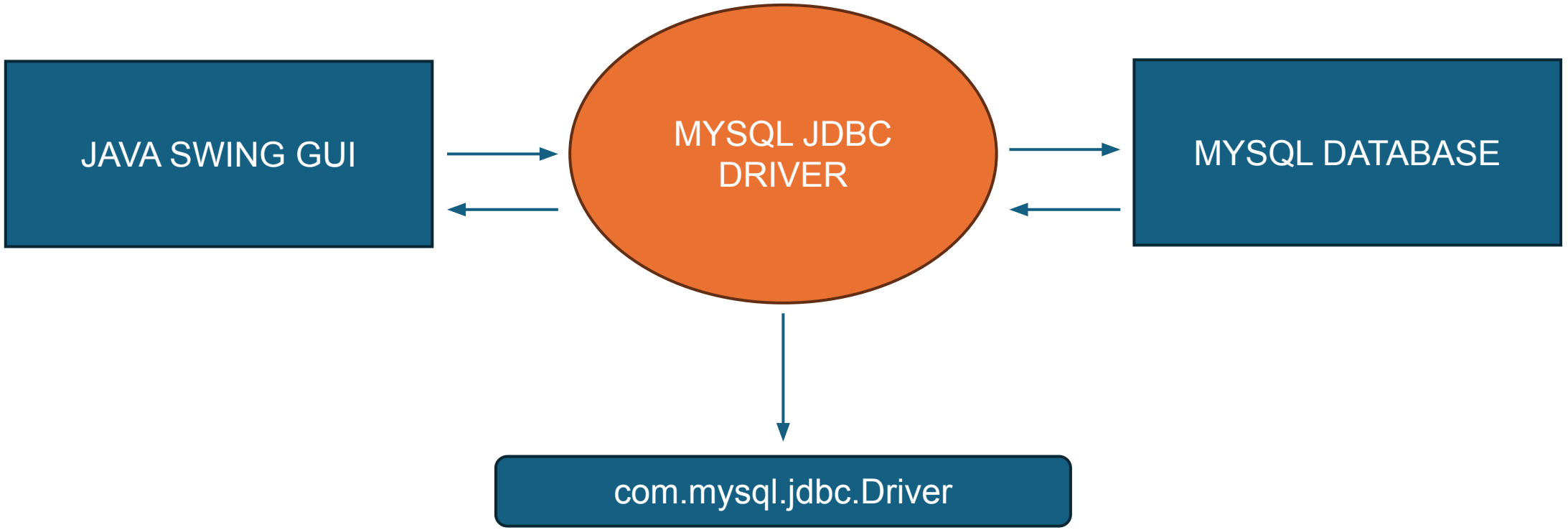
OBJECTIVES

- What is JDBC?
- Create a database and table in MySQL.
- How to connect java swing app to MYSQL Database?

JAVA DATABASE CONNECTIVITY CONCEPT



What is JDBC?

- An API
- Allowing java programs to access DBMS (Database Management Systems)
- Contains multiple interfaces and classes written in java programming language

Use of JDBC

- Simply allows to make connection with a data source in order to:
  - Insert data
  - Send Queries
  - Update Values
  - Process Results

STEPS

- Download and Install XAMPP Server for windows:
  - https://www.apachefriends.org/download.html
  - Start apache services
  - Start mySql services and click on admin
  - Create a database in myphp
- Download mysql jdbc driver:
  - https://dev.mysql.com/downloads/connector/j/
  - Select Operating system as platform independent
  - Unzip the folder
  - Copy the .jar file and paste it into C drive
  - Now add the .jar file in library folder of your project

Imports:

- import java.sql.Connection;
- import java.sql.DriverManager;
- import java.sql.SQLException;
- import java.sql.PreparedStatement;

Event Handling for Insert

- Class.forName("com.mysql.jdbc.Driver");
- String db= "jdbc:mysql://localhost:3306/swing_db";
- String username="root";
- String password="";
- Connection con= DriverManager.getConnection(db,username,password);
- String query="insert into user_info (NAME,GENDER,CONTACT) values (?,?,?)";
- PreparedStatement pst=con.prepareStatement(query);
- pst.setString(1, jTextField2.getText());
- pst.setString(2, jTextField3.getText());
- pst.setString(3, jTextField4.getText());
- int val=pst.executeUpdate();
- if(val>0){
- JOptionPane.showMessageDialog(StudentInfo.this, "Query Success");
- }
- else{
- JOptionPane.showMessageDialog(StudentInfo.this, "Query UnSuccess");

- }
- con.close();

Imports

- import java.sql.connection
- import java.sql.DriverManager
- import java.sql.Resultset
- import java.sql.PreparedStatement
- import javax.swing.table.DefaultTableModel

Event handler for retreive

- String query="select * from user_info";
- PreparedStatement pst=con.prepareStatement(query);
- ResultSet rs=pst.executeQuery();
- DefaultTableModel model=(DefaultTableModel)jTable1.getModel();
- model.setRowCount(0);
- while(rs.next()){
- model.addRow(new String[]{rs.getString(1),rs.getString(2),rs.getString(3),rs.getStrin g(4)})