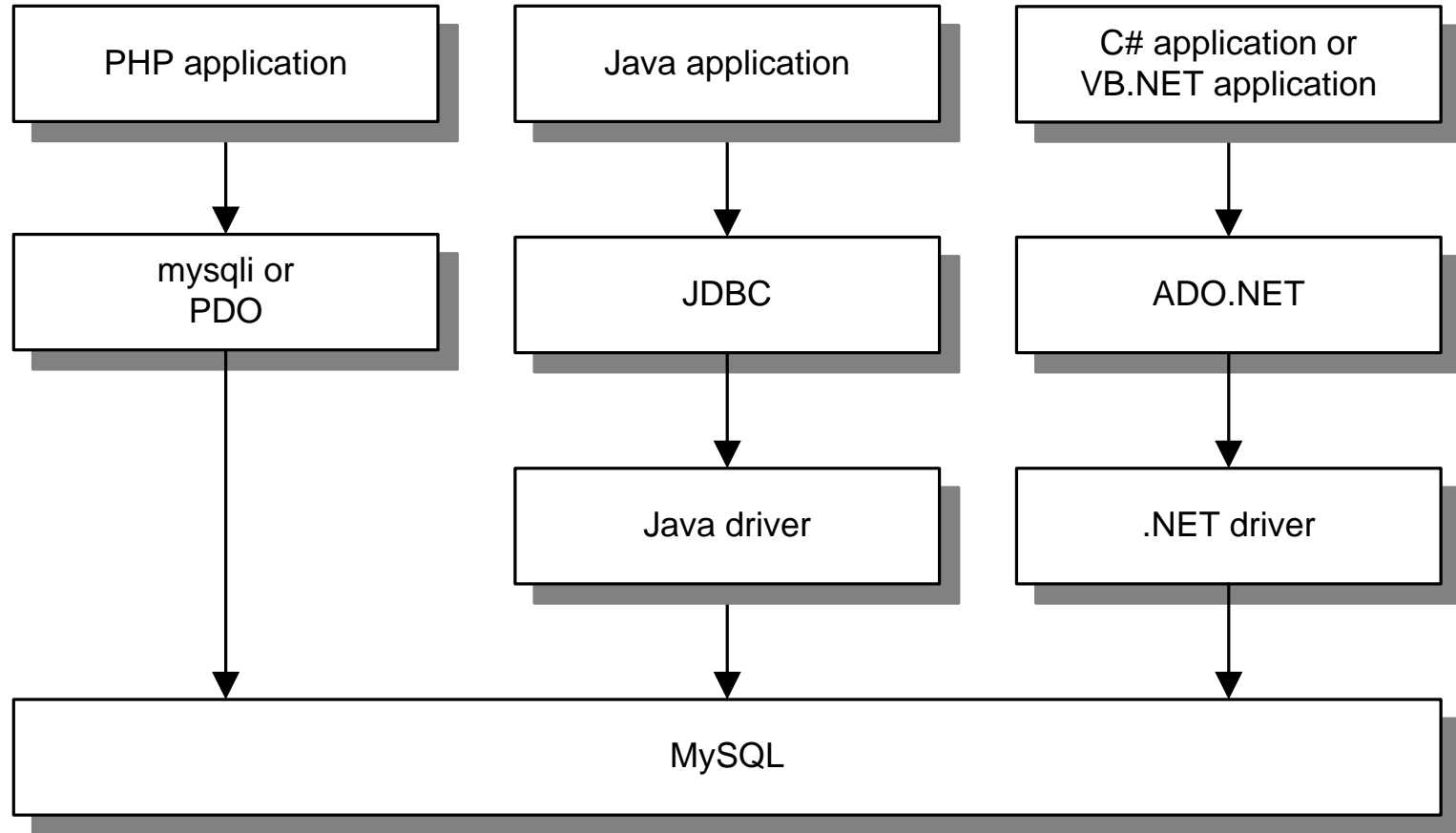


# Connecting to MySQL

From Murach Chapter 1

# Common options for accessing MySQL data



## Two commonly used MySQL drivers

- Connector/J
- Connector/Net

## Terms to know

- Data access API
- mysqli API (for PHP)
- PDO API (for PHP)
- JDBC API (for Java)
- ADO.NET API (for .NET languages)
- Database driver

# PHP code that gets data from MySQL

```
<?php
    $query =
        "SELECT vendor_name, invoice_number, invoice_total
        FROM vendors INNER JOIN invoices
            ON vendors.vendor_id = invoices.vendor_id
        WHERE invoice_total >= 500
        ORDER BY vendor_name, invoice_total DESC";

    $dsn = 'mysql:host=localhost;dbname=ap';
    $username = 'ap_tester';
    $password = 'sesame';

    try {
        $db = new PDO($dsn, $username, $password);
    } catch (PDOException $e) {
        $error_message = $e->getMessage();
        echo $error_message;
        exit();
    }
    $rows = $db->query($query);
?>
```

# PHP code that gets data from MySQL (cont.)

```
<!DOCTYPE html>
<html>
  <head>
    <title>DB Test</title>
  </head>
  <body>
    <h1>Invoices with totals over 500:</h1>

    <?php foreach ($rows as $row) : ?>
    <p>
      Vendor: <?php echo
        $row['vendor_name']; ?><br/>
      Invoice No: <?php echo
        $row['invoice_number']; ?><br/>
      Total: $<?php echo
        number_format($row['invoice_total'], 2); ?>
    </p>
    <?php endforeach; ?>

  </body>
</html>
```

# Java code that gets data from MySQL

```
package murach.ap;

import java.sql.*;
import java.text.NumberFormat;

public class DBTestApp {

    public static void main(String args[]) {
        String query
            = "SELECT vendor_name, invoice_number, invoice_total "
            + "FROM vendors INNER JOIN invoices "
            + "    ON vendors.vendor_id = invoices.vendor_id "
            + "WHERE invoice_total >= 500 "
            + "ORDER BY vendor_name, invoice_total DESC";

        String dbUrl = "jdbc:mysql://localhost:3306/ap";
        String username = "ap_tester";
        String password = "sesame";
```

## Java code that gets data from MySQL (cont.)

```
// define common JDBC objects
try (Connection connection =
    DriverManager.getConnection(
        dbUrl, username, password);
    Statement statement =
        connection.createStatement();
    ResultSet rs = statement.executeQuery(query)) {

    // Display the results of a SELECT statement
    System.out.println(
        "Invoices with totals over 500:\n");
    while (rs.next()) {
        String vendorName =
            rs.getString("vendor_name");
        String invoiceNumber =
            rs.getString("invoice_number");
        double invoiceTotal =
            rs.getDouble("invoice_total");
```



## Java code that gets data from MySQL (cont.)

```
        NumberFormat currency =
            NumberFormat.getCurrencyInstance();
        String invoiceTotalString =
            currency.format(invoiceTotal);

        System.out.println(
            "Vendor:      " + vendorName + "\n"
            + "Invoice No: " + invoiceNumber + "\n"
            + "Total:       " + invoiceTotalString
            + "\n");
    }
} catch (SQLException e) {
    System.out.println(e.getMessage());
}
}
```