Introduction to JDBC

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What's in This Module

JDBC Interfaces

JDBC Driver Manager

JDBC Driver

JDBC URL

Initial connection to database

JDBC Interfaces

- ✓ **Driver**
- ✓ **Connection**
- ✓ **PreparedStatement**
- ✓ **CallableStatement**
- ✓ **ResultSet**

```
// Get Connection (conn) from somewhere

PreparedStatement ps =

    conn.prepareStatement("SELECT ...");


ResultSet rs = ps.executeQuery();


while(rs.next()) {...}
```

- See how we get a connection in a moment

- Connection lets us get a PreparedStatement

- Execute a query and get a ResultSet

- Use the ResultSet

All of this is coded against the interfaces, not against the implementations

Getting the Connection

```
String url = "..."

Connection conn = DriverManager.getConnection(url);
```

To get a connection need to use the DriverManager

The URL identifies the database to connect to and is database specific

Output

```
com.mysql.cj.jdbc.ConnectionImpl@2ea41516
```

Notice that it prints the driver specific class name

Demo

Loading the Driver

JDBC Driver

JDBC Classes

The Driver Manager loads the driver

Driver provides implementations of the JDBC interfaces

These classes know how to talk to this specific database

Loading the Driver

```
DriverManager.getConnection("jdbc:mysql://localhost:3306/loboticket")
```

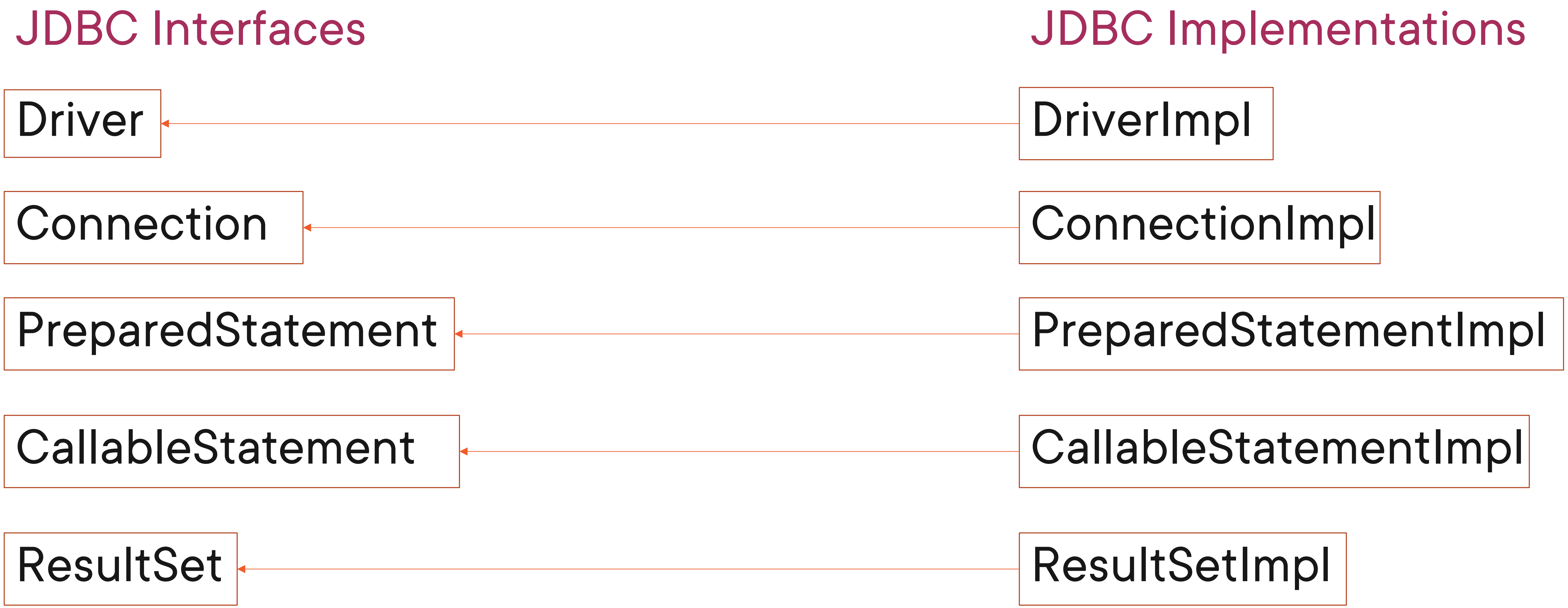
Loading the Driver

```
DriverManager.getConnection("jdbc:mysql://localhost:3306/loboticket")
```

Driver code : Contains the JDBC classes

```
com.mysql.cj.jdbc.ConnectionImpl implements Connection {}
```

Implementation Classes



JDBC Interfaces	JDBC Implementations
Driver	DriverImpl
Connection	ConnectionImpl
PreparedStatement	PreparedStatementImpl
CallableStatement	CallableStatementImpl
ResultSet	ResultSetImpl

Summary

Code against the 5 specific interfaces

Use DriverManager to load the driver

The loaded driver code has classes that implement the interfaces

Course Demonstrations Setup

All code is in IntelliJ Idea

Gradle script to manage the code

Use 'Flyway' to setup the database

The Database

A 'Ticket' database

Has 'Gigs', 'Acts' and 'Venues'

These are related (see module 2)

Also has stored procedures (see module 7)

Up Next:
Connection to a Database