



# RAMA UNIVERSITY

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## FACULTY OF ENGINEERING & TECHNOLOGY

### BCS-503: Object Oriented Techniques

#### Lecture-40

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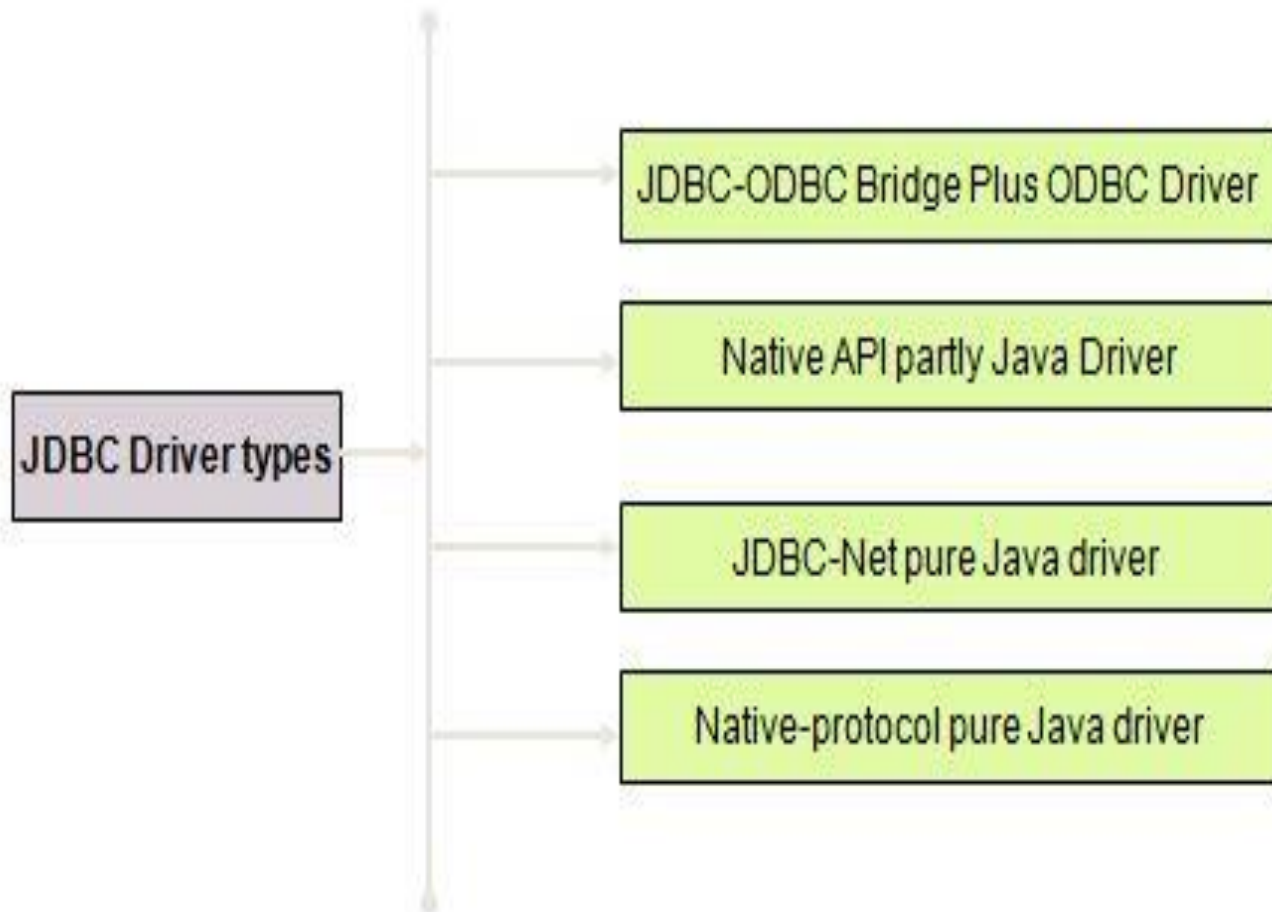
# OBJECTIVES

In this PPT, you will learn to:

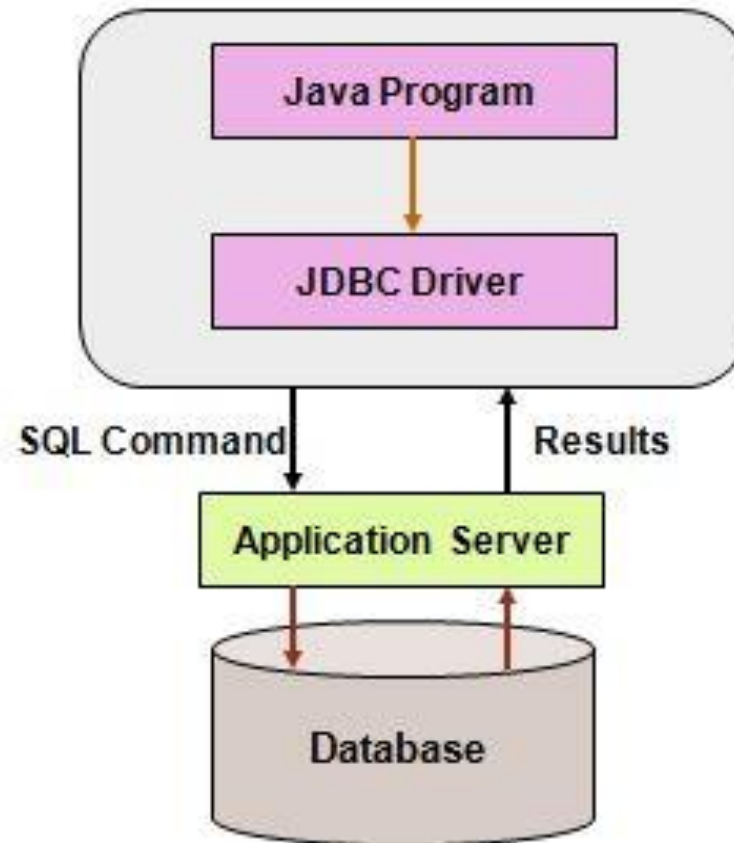
- ❖ Discuss types of JDBC drivers
- ❖ Explain the anatomy of a JDBC program
- ❖ java.sql package
- ❖ Steps for Database Access



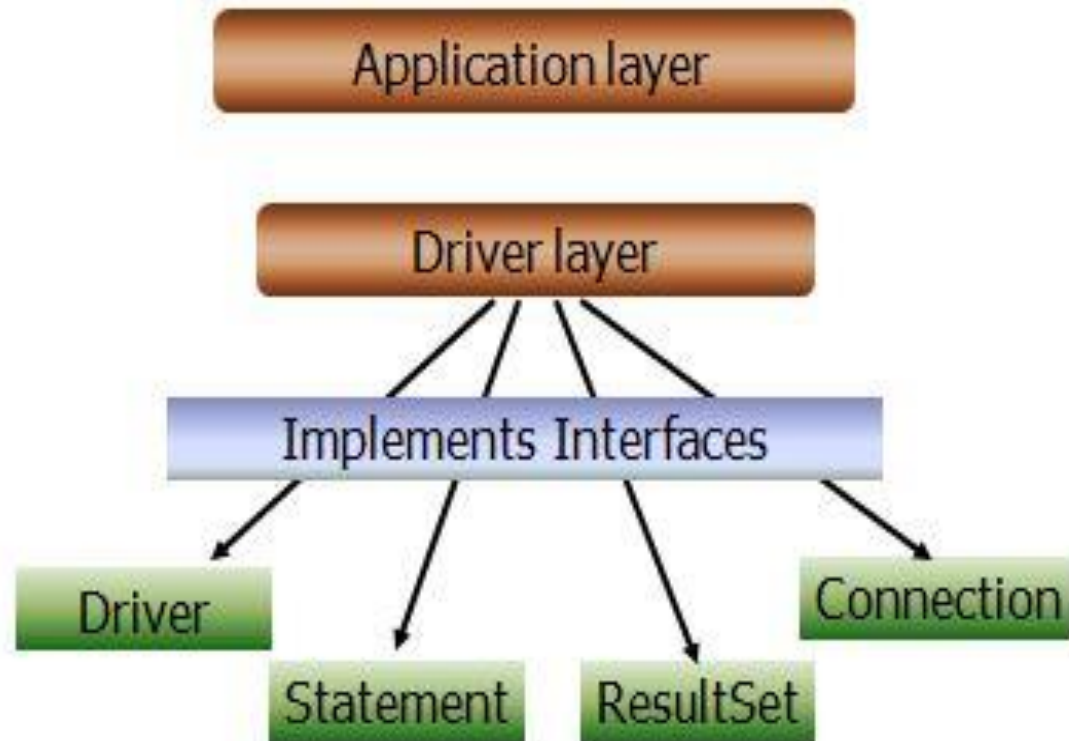
# JDBC DRIVER TYPES



# JDBC ARCHITECTURE



## JDBC ARCHITECTURE (Contd.)



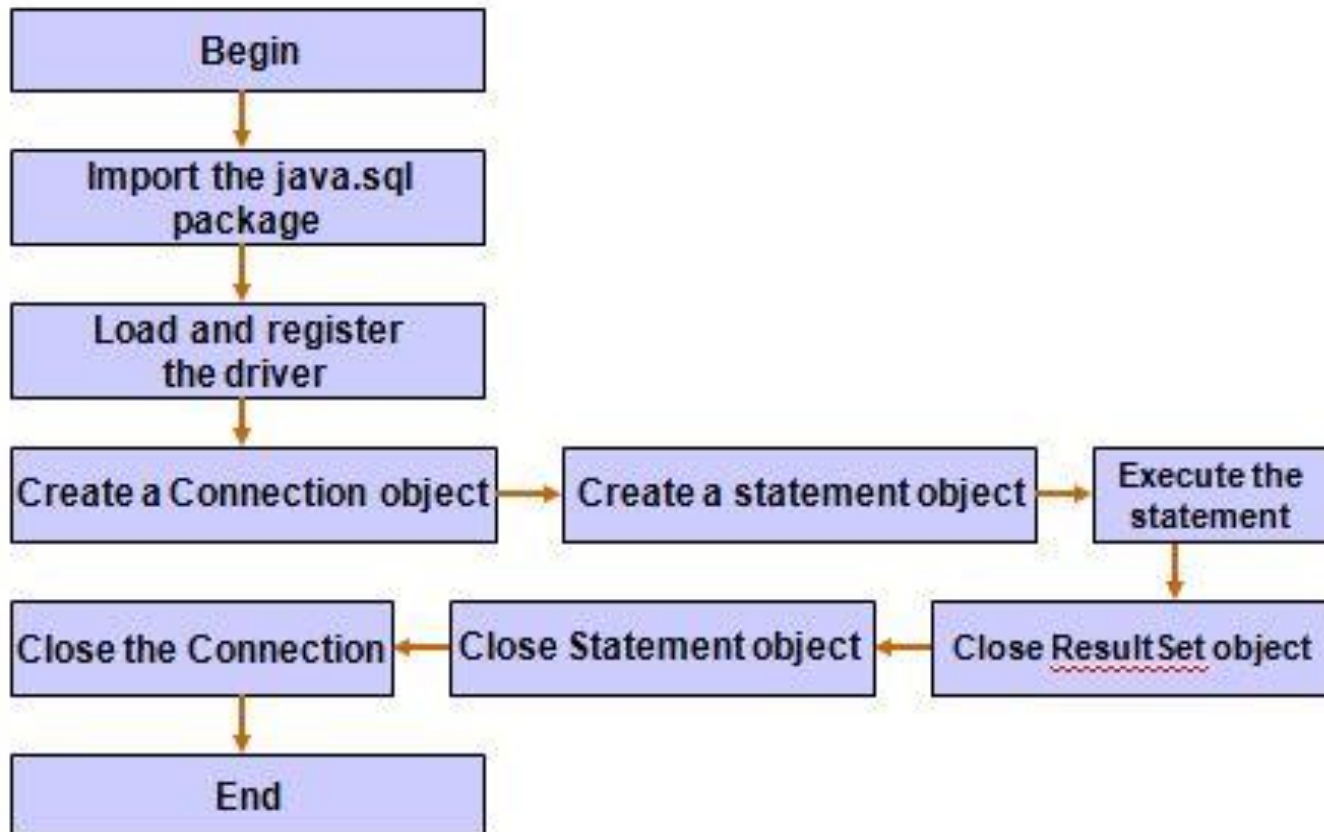
## JAVA.SQL PACKAGE

Interface Name	Description
CallableStatement	This contains methods that are used for execution of SQL stored procedures.
Connection	This is used to maintain and monitor database sessions. Data access can also be controlled using the transaction locking mechanism.
DatabaseMetaData	This interface provides database information such as the version number, names of the tables and functions supported.
Driver	This interface is used to create Connection objects.
PreparedStatement	This is used to execute pre-compiled SQL statements.
ResultSet	This interface provides methods for retrieving data returned by an SQL statement.
ResultSetMetaData	This interface is used to collect the meta data information associated with the last ResultSet object.
Statement	It is used to execute SQL statements and retrieve data into the ResultSet.

## JAVA.SQL PACKAGE (Contd.)

Class Name	Description
Date	This class contains methods for performing conversion of SQL date formats to Java Date formats.
DriverManager	This class is used to handle loading and unloading of drivers and establish connection with the database.
DriverPropertyInfo	The methods in this class are used to retrieve or insert driver properties.
Time	This class provides formatting and parsing operations for Time values.
TimeStamp	This provides precision to Java Date object by adding a Nanosecond field.
Types	This class has no methods. This class defines the constants used to identify the SQL types.

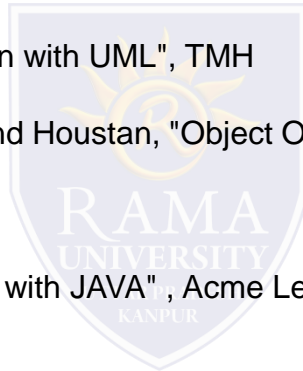
# STEPS FOR DATABASE ACCESS





# REFERENCES

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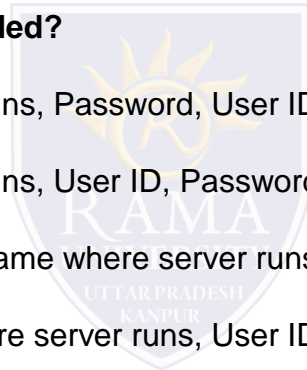
# MULTIPLE CHOICE QUESTION

## Multiple Choice Question:

Q1. DriverManager.getConnection(\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_)

What are the two parameters that are included?

- a) URL or machine name where server runs, Password, User ID
- b) URL or machine name where server runs, User ID, Password
- c) User ID, Password, URL or machine name where server runs
- d) Password, URL or machine name where server runs, User ID



# MULTIPLE CHOICE QUESTION

## Multiple Choice Question:

**Q2. Which of the following invokes functions in sql?**

- a) Prepared Statements
- b) Connection statement
- c) Callable statements
- d) All of the mentioned

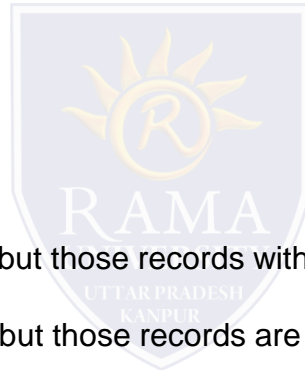


# MULTIPLE CHOICE QUESTION

## Multiple Choice Question:

**Q3. Execution of SQL command like `SELECT * FROM myTable` using JDBC program will return a `ResultSet` object. This object is**

- a) Same as the myTable.
- b) All records in verbatim from the table.
- c) All records in verbatim from the table but those records with null values.
- d) All records in verbatim from the table but those records are not with null values.



# MULTIPLE CHOICE QUESTION

## Multiple Choice Question:

**Q4. Which of the following is used to rollback a JDBC transaction?**

- a) rollback()
- b) rollforward()
- c) deleteTransaction()
- d) RemoveTransaction()



# MULTIPLE CHOICE QUESTION

## Multiple Choice Question:

**Q5. Which of the following is not a JDBC connection isolation levels?**

- a) TRANSACTION\_NONE
- b) TRANSACTION\_READ\_COMMITTED
- c) TRANSACTION\_REPEATABLE\_READ
- d) TRANSACTION\_NONREPEATABLE\_READ



# Summary

## In this PPT, you learned that:

- The driver is loaded into the java interpreter using the Class.forName method
- Establish a connection using the getConnection() method of DriverManager class and use the createStatement() method of the Connection object .
- Finally, SQL statements are constructed and executed through the statement instance by using either executeQuery() or executeUpdate() methods.

