

# JDBC

## Workbook

### Answer the Following

1. Explain basic steps in writing a Java program using JDBC?

2. What is ResultSet?

3. What is the need of BatchUpdates?

4. What is the difference between a Statement and a PreparedStatement?

5. What does the connection object represents?

6. How do I load a database driver in JDBC?

### State whether the following are True/False

1. MySQL is an open source DBMS product that runs on UNIX, Linux and Windows. [ ]

2. By using PreparedStaement interface, we can store and retrieve images. [ ]
3. The ResultSet object represents a column of a table. [ ]
4. The DatabaseMetaData interface returns the information of the database. [ ]
5. The Connection interface maintains a session with the database.[ ]

## Multiple Choice Questions

1. The \_\_\_\_\_ method executes a simple query and returns a single ResultSet object.
  - (a) executeUpdate()
  - (b) executeQuery()
  - (c) execute()
  - (d) noexecute()
2. The \_\_\_\_\_ method sets the query parameters of the Prepared-Statement Object.
  - (a) putString()
  - (b) insertString()
  - (c) setString()
  - (d) setToString()
3. Connection object can be initialized using the \_\_\_\_\_ method of the Driver Manager class.
  - (a) putConnection()
  - (b) setConnection()
  - (c) Connection()
  - (d) getConnetion()
4. The \_\_\_\_\_ object provides you with methods to access data from the table.
  - (a) ResultSet
  - (b) Parametrized
  - (c) TableStatement
  - (d) Condition

5. The \_\_\_\_\_ object allows you to execute parametrized queries.
  - (a) ResultSet
  - (b) Parametrized
  - (c) PreparedStatement
  - (d) Condition
  
6. The \_\_\_\_\_ package contains classes that help in connecting to a database, sending SQL statements to the database, and processing the query results.
  - (a) connection.sql
  - (b) db.sql
  - (c) pkg.sql
  - (d) java.sql

## Exercises

- Write the expected output, or compiler errors if any, for each of the following programs in the box provided below each program.
- Then execute the programs and check your answers.
- Then answer the questions given below.

### Program 1

```

1 Class.forName( 'com.mysql.jdbc.Driver' );
2 Connection conection = DriverManager.getConnection
  ( --- , ---- , ---- );
3 Statement statement = conection.createStatement( )
  ;

```

**Q1:** What is the exception thrown by a statement at line 1?

**Q2:** Fill the blanks with suitable parameters in line 2?

**Q3:** what is the actual class of **Connection** and **Statement**?

### Program 2

```

1 Statement statement = connection.createStatement();
2 ResultSet result = statement.executeQuery(“select
  * from people”);

```

**Q1:** Rewrite above two statements using PreparedStatement ?

### Program 3

```

1 String sql = “select * from people where
  firstname=? and lastname=?”;

```

**Q1:** How can you insert parameters at the location of the question mark in the above?.

### Program 4

```

1 Statement statement = connection.createStatement();
2
3 ResultSet result = statement.executeQuery(“select
  * from people”);
4 while(result.next()) {
5     String name = result.getString(“name”);
6     long age = result.getLong(“age”);
7     System.out.println(name + “, ” + age);
8 }

```

Assume one record in table ‘people’ is,

name	age
James	45

**Q1:** What will be the output of the above program?



**Q2:** What happens if line 4 changed as `String name = result.getString(1);`  
?

**Q3:** What happens if line 5 changed as `long age = result.getLong(2);`  
?