

# Database Connectivity with Java and SQLite

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# Download and SQLite Installation

SQLite Tool

<https://www.sqlite.org/2018/sqlite-tools-win32-x86-3230100.zip>

DLL files for Windows 64

<https://www.sqlite.org/2018/sqlite-dll-win64-x64-3230100.zip>

SQLiteStudio for Graphical Interface

<https://sqlitestudio.pl/files/sqlitestudio3/complete/win32/sqlitestudio-3.1.1.zip>

# Download and JDBC Installation

Download latest version of *sqlite-jdbc-(VERSION).jar* from [sqlite-jdbc](#) repository.

<http://www.java2s.com/Code/Jar/s/Downloadssqlitejdbc372jar.htm>

Add downloaded jar file *sqlite-jdbc-(VERSION).jar* in your class path, or you can use it along with - classpath option as explained in the following examples.

# SQLite Connect to Database

```
import java.sql.*;

public class SQLiteJDBC {
    public static void main( String args[] ) {
        Connection c = null;
        try {
            Class.forName("org.sqlite.JDBC");
            c = DriverManager.getConnection("jdbc:sqlite:test.db");
        }
        catch ( Exception e ) {
            System.err.println( e.getClass().getName() + ": " +
e.getMessage() );
            System.exit(0);
        }
        System.out.println("Opened database successfully");
    }
}
```

# SQLite Connect to Database Compile

Compile

```
javac SQLiteJDBC.java
```

Run

```
java -classpath ".;sqlite-jdbc-3.7.2.jar" SQLiteJDBC
```

Opened database successfully

# Create Table

```
import java.sql.*;
public class SQLiteJDBC {
    public static void main( String args[] ) {
        Connection c = null;
        Statement stmt = null;
        try {
            Class.forName("org.sqlite.JDBC");
            c = DriverManager.getConnection("jdbc:sqlite:test.db");
            System.out.println("Opened database successfully");
```

# Create Table cont..

```
stmt = c.createStatement();
String sql = "CREATE TABLE COMPANY " +
            "(ID INT PRIMARY KEY   NOT NULL," +
            " NAME          TEXT   NOT NULL, " +
            " AGE           INT    NOT NULL, " +
            " ADDRESS       CHAR(50), " +
            " SALARY        REAL)";

stmt.executeUpdate(sql);
stmt.close();
c.close();
} catch ( Exception e ) {
    System.err.println( e.getClass().getName() + ": " + e.getMessage() );
    System.exit(0);
}
System.out.println("Table created successfully");
}
}
```

# Insert Data

```
import java.sql.*;

public class SQLiteJDBC {

    public static void main( String args[] ) {
        Connection c = null;
        Statement stmt = null;

        try {
            Class.forName("org.sqlite.JDBC");
            c = DriverManager.getConnection("jdbc:sqlite:test.db");
            c.setAutoCommit(false);
            System.out.println("Opened database successfully");

            stmt = c.createStatement();
            String sql = "INSERT INTO COMPANY (ID,NAME,AGE,ADDRESS,SALARY) " +
                "VALUES (1, 'Paul', 32, 'California', 20000.00 );";
            stmt.executeUpdate(sql);
```



# Insert Data cont..

```
sql = "INSERT INTO COMPANY (ID,NAME,AGE,ADDRESS,SALARY) " +  
      "VALUES (2, 'Allen', 25, 'Texas', 15000.00 );";  
stmt.executeUpdate(sql);
```

```
sql = "INSERT INTO COMPANY (ID,NAME,AGE,ADDRESS,SALARY) " +  
      "VALUES (3, 'Teddy', 23, 'Norway', 20000.00 );";  
stmt.executeUpdate(sql);
```

```
sql = "INSERT INTO COMPANY (ID,NAME,AGE,ADDRESS,SALARY) " +  
      "VALUES (4, 'Mark', 25, 'Rich-Mond ', 65000.00 );";  
stmt.executeUpdate(sql);  
stmt.close();  
c.commit();  
c.close();
```

```
} catch ( Exception e ) {  
    System.err.println( e.getClass().getName() + ": " + e.getMessage() );  
    System.exit(0);  
}
```

```
System.out.println("Records created successfully");
```

```
}
```

```
}
```

# MySQL Select Data

```
import java.sql.*;

public class SQLiteJDBC {

    public static void main( String args[] ) {

        Connection c = null;
        Statement stmt = null;
        try {
            Class.forName("org.sqlite.JDBC");
            c = DriverManager.getConnection("jdbc:sqlite:test.db");
            c.setAutoCommit(false);
            System.out.println("Opened database successfully");

            stmt = c.createStatement();
            ResultSet rs = stmt.executeQuery( "SELECT * FROM COMPANY;" );
```

```
while ( rs.next() ) {  
    int id = rs.getInt("id");  
    String name = rs.getString("name");  
    int age = rs.getInt("age");  
    String address = rs.getString("address");  
    float salary = rs.getFloat("salary");  
    System.out.println( "ID = " + id );  
    System.out.println( "NAME = " + name );  
    System.out.println( "AGE = " + age );  
    System.out.println( "ADDRESS = " + address );  
    System.out.println( "SALARY = " + salary );  
    System.out.println();  
}  
rs.close();  
stmt.close();  
c.close();  
} catch ( Exception e ) {  
    System.err.println( e.getClass().getName() + ": " + e.getMessage() );  
    System.exit(0);  
}  
System.out.println("Operation done successfully");  
}  
}
```

# Update Data

```
import java.sql.*;

public class SQLiteJDBC {

    public static void main( String args[] ) {

        Connection c = null;
        Statement stmt = null;

        try {
            Class.forName("org.sqlite.JDBC");
            c = DriverManager.getConnection("jdbc:sqlite:test.db");
            c.setAutoCommit(false);
            System.out.println("Opened database successfully");

            stmt = c.createStatement();
            String sql = "UPDATE COMPANY set SALARY = 25000.00 where
ID=1;";
            stmt.executeUpdate(sql);
            c.commit();
        }
    }
}
```

# Update Data ..

```
ResultSet rs = stmt.executeQuery( "SELECT * FROM COMPANY;" );

while ( rs.next() ) {
    int id = rs.getInt("id");
    String name = rs.getString("name");
    int age = rs.getInt("age");
    String address = rs.getString("address");
    float salary = rs.getFloat("salary");

    System.out.println( "ID = " + id );
    System.out.println( "NAME = " + name );
    System.out.println( "AGE = " + age );
    System.out.println( "ADDRESS = " + address );
    System.out.println( "SALARY = " + salary );
    System.out.println();
}
rs.close();
stmt.close();
c.close();
} catch ( Exception e ) {
    System.err.println( e.getClass().getName() + ": " + e.getMessage() );
    System.exit(0);
}
System.out.println("Operation done successfully");
}
}
```

# Delete Data

```
import java.sql.*;

public class SQLiteJDBC {

    public static void main( String args[] ) {
        Connection c = null;
        Statement stmt = null;

        try {
            Class.forName("org.sqlite.JDBC");
            c = DriverManager.getConnection("jdbc:sqlite:test.db");
            c.setAutoCommit(false);
            System.out.println("Opened database successfully");

            stmt = c.createStatement();
            String sql = "DELETE from COMPANY where ID=2;";
            stmt.executeUpdate(sql);
            c.commit();
        }
    }
}
```

# Delete Data Cont ..

```
ResultSet rs = stmt.executeQuery( "SELECT * FROM COMPANY;" );
```

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

```
int id = rs.getInt("id");
```

```
String name = rs.getString("name");
```

```
int age = rs.getInt("age");
```

```
String address = rs.getString("address");
```

```
float salary = rs.getFloat("salary");
```

```
System.out.println( "ID = " + id );
```

```
System.out.println( "NAME = " + name );
```

```
System.out.println( "AGE = " + age );
```

```
System.out.println( "ADDRESS = " + address );
```

```
System.out.println( "SALARY = " + salary );
```

```
System.out.println();
```

```
}
```

# Delete Data Cont ..

```
rs.close();
    stmt.close();
    c.close();
} catch ( Exception e ) {
    System.err.println( e.getClass().getName() + ": " + e.getMessage() );
    System.exit(0);
}
System.out.println("Operation done successfully");
}
}
```



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