

## Aplikacione në Java që ruajnë të dhëna në databazë

Në këtë leksion do sqarohen nëpërmjet shembujve konkrete, krijimi dhe aksesi në database nëpërmjet aplikacioneve JDBC. Para se të ekzekutoni shembujt e mëposhtëm, sigurohuni që të plotësoni këto kritere:

- 1-të keni privilegje administrative për krijimin e databases
- 2-të zevendësoni username me emrin tuaj te logimit, dhe password me fjalekalimin tuaj në MYSQL
- 3-MYSQL server të jetë në gjendjen running.

Hapat e kërkuar, të përdorur në cdo shembull:

1-Importimi i paketave: kjo nënkupton përfshirjen në kod të paketavë që përmbajnë klasat JDBC që kërkohen në programimin në Java dhe database. Shumicën e rasteve mjafton `java.sql.*`

2-Regjistrimi i JDBC driver: kjo nënkupton që do inicializoni një driver që të mund të hapni një kanal komunikimi me databasen.

3-Hapja e connection: kjo përfshin përdorimin e metodës `DriverManager.getConnection()` për të krijuar një objekt `Connection`, e cila përfaqson një lidhje fizike me serverin e database.

4-Ekzekutimi i query: kjo përfshin përdorimin e një objekti `Statement`, për të kryer veprimet SQL me databasen.

Mbyllja e lidhjeve të hapura përfshin mbylljen eksplicite të të gjithë resurseve të databases, dhe jo lënia e kësaj detyre për garbage collector.

### Shembull 1:

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCExample {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/";

    // Kredencialet ne database
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Krijimi i connection
            System.out.println("Lidhja me database...");
```

```

conn = DriverManager.getConnection(DB_URL, USER, PASS);

//HAPI 4: Ekzekutimi i query
System.out.println("Krijimi i database...");
stmt = conn.createStatement();

String sql = "CREATE DATABASE STUDENTS";
stmt.executeUpdate(sql);
System.out.println("Database u krijua me sukses...");
}catch(SQLException se){
    //Trajtimi i perjashtimit te JDBC
    se.printStackTrace();
}catch(Exception e){
    //Trajtimi i perjashtimit te Class.forName
    e.printStackTrace();
}finally{
    //blloku finally qe mbyll resurset
    try{
        if(stmt!=null)
            stmt.close();
    }catch(SQLException se2){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
}
System.out.println("Dalje....");
}
}

```

Ne console :

```

Lidhja me database...
Krijimi i database...
Database u krijua me sukses...
Dalje....

```

### Shembull 2:

```

//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCDropExample {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/";

```

```
// Kredencialet e Database
static final String USER = "username";
static final String PASS = "password";

public static void main(String[] args) {
    Connection conn = null;
    Statement stmt = null;
    try{
        //HAPI 2: Regjistrimi i JDBC driver
        Class.forName("com.mysql.jdbc.Driver");

        //HAPI 3: Hapja e nje connection
        System.out.println("Lidhja me databasen e perzgjedhur...");
        conn = DriverManager.getConnection(DB_URL, USER, PASS);
        System.out.println("Lidhja u krye me sukses...");

        //HAPI 4: Ekzekutimi i query
        System.out.println("Duke fshire database...");
        stmt = conn.createStatement();

        String sql = "DROP DATABASE STUDENTS";
        stmt.executeUpdate(sql);
        System.out.println("Database u fshi me sukses ...");
    }catch(SQLException se){
        //Trajtimi i perjashtimeve te JDBC
        se.printStackTrace();
    }catch(Exception e){
        //Trajtimi i perjashtimeve te Class.forName
        e.printStackTrace();
    }finally{
        //finally qe mbyll resurset e hapura
        try{
            if(stmt!=null)
                conn.close();
        }catch(SQLException se){
        }
        try{
            if(conn!=null)
                conn.close();
        }catch(SQLException se){
            se.printStackTrace();
        }
    }
}
System.out.println("Dalje....");
}
```

## Në console:

```
Duke u lidhur me databasen e perzgjedhur...
Lidhja u krye me sukses...
Duke fshire database...
Database u fshi me sukses ...
Dalje....
```

## Shembull 3

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCCreateTables {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e Database
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Hapja e nje connection
            System.out.println("Lidhja me databasen e perzgjedhur...");
            conn = DriverManager.getConnection(DB_URL, USER, PASS);
            System.out.println("Lidhja u krye me sukses...");

            //HAPI 4: Ekzekutimi i query
            System.out.println("Krijimi i tabelave ne database...");
            stmt = conn.createStatement();

            String sql = "CREATE TABLE REGISTRATION " +
                "(id INTEGER not NULL, " +
                " first VARCHAR(255), " +
                " last VARCHAR(255), " +
                " age INTEGER, " +
                " PRIMARY KEY ( id ))";

            stmt.executeUpdate(sql);
            System.out.println("Tabelat u krijuan me sukses...");
        }catch(SQLException se){
            //Trakjtimi i perjashtimi per JDBC
            se.printStackTrace();
        }
    }
}
```

```
}catch(Exception e){
    //Trajtimi i perjashtimit te Class.forName
    e.printStackTrace();
}finally{
    //finally mbyll resurset e hapura
    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
System.out.println("Dalje...");
}
}
```

#### Në console:

```
Lidhja me databasen e perzgjedhur...
Lidhja u krye me sukses...
Krijimi i tabelave ne database...
Tabelat u krijuan me sukses...
Dalje...
```

#### Shembull 4:

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCDropTables {
    // emri i JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS";

    // Kredencialet ne database
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Registrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");
```

```
//HAPI 3: Krijimi i connection
System.out.println("Lidhja me database...");
conn = DriverManager.getConnection(DB_URL, USER, PASS);
System.out.println("Lidhja me databasen u krye me sukses...");

//HAPI 4: Ekzekutimi i query
System.out.println("Fshirja e tabelës në database...");
stmt = conn.createStatement();

String sql = "DROP TABLE REGISTRATION ";

stmt.executeUpdate(sql);
System.out.println("Fshirja e tabelës u krye me sukses...");
}catch(SQLException se){
    //Trajtimi i perjashtimit të JDBC
    se.printStackTrace();
}catch(Exception e){
    //Trajtimi i perjashtimit të Class.forName
    e.printStackTrace();
}finally{
    //finally përdoret për të mbyllë saktë resurset
    try{
        if(stmt!=null)
            stmt.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
System.out.println("Dalje...");
}
}
```

#### Në console:

```
Lidhja me database...
Lidhja me databasen u krye me sukses...
Fshirja e tabelës në database...
Fshirja e tabelës u krye me sukses...
Dalje...
```

**Shembull 5:**

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCInsert {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e Database
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Hapja e connection
            System.out.println("Lidhja me databasen e perzgjedhur...");
            conn = DriverManager.getConnection(DB_URL, USER, PASS);
            System.out.println("Lidhja me databasen u krye e sukses...");

            //HAPI 4: Ekzekutimi i query
            System.out.println("Shtimi i rekordeve ne tabele...");
            stmt = conn.createStatement();

            String sql = "INSERT INTO Registration " +
                "VALUES (100, 'Smith', 'John', 18)";
            stmt.executeUpdate(sql);
            sql = "INSERT INTO Registration " +
                "VALUES (101, 'Oder', 'Sarah', 25)";
            stmt.executeUpdate(sql);
            sql = "INSERT INTO Registration " +
                "VALUES (102, 'Zaid', 'Philippe', 30)";
            stmt.executeUpdate(sql);

            System.out.println("Te dhenat u ruajten me sukses...");

        }catch(SQLException se){
            //Trajtimi i perjashtimit te JDBC
            se.printStackTrace();
        }catch(Exception e){
            //Trajtimi i perjashtimit te Class.forName
            e.printStackTrace();
        }finally{
            //finally mbyll resurset

```

```

    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
System.out.println("Dalje....");
}
}

```

#### Në console:

```

Lidhja me databasen e perzgjedhur...
Lidhja me databasen u krye e sukses...
Shtimi i rekordeve ne tabele...
Te dhenat u ruajten me sukses...
Dalje....

```

#### Shembull 6:

```

//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCSelect {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e databases
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Hapja e connection
            System.out.println("Lidhja me databasen e perzgjedhur...");
            conn = DriverManager.getConnection(DB_URL, USER, PASS);
            System.out.println("Lidhja me databasen u krye me sukses...");

```



```
//HAPI 4: Ekzekutimi i query
System.out.println("Krijimi i perzgjedhjes...");
stmt = conn.createStatement();

String sql = "SELECT id, first, last, age FROM Registration";
ResultSet rs = stmt.executeQuery(sql);
//STEP 5: Marrja e te dhenave te perzgjedhura
while(rs.next()){
    //Emrat e kolonave
    int id = rs.getInt("id");
    int age = rs.getInt("age");
    String first = rs.getString("first");
    String last = rs.getString("last");

    //Afishimi i vlerave
    System.out.print("ID: " + id);
    System.out.print(", Age: " + age);
    System.out.print(", First: " + first);
    System.out.println(", Last: " + last);
}
rs.close();
}catch(SQLException se){
    //Trajtimi i perjashtimeve te JDBC
    se.printStackTrace();
}catch(Exception e){
    //Trajtimi i perjashtimeve te Class.forName
    e.printStackTrace();
}finally{
    //finally per te mbyllur resurset
    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
}
System.out.println("Dalje...");
}
}
```

#### Ne console:

```
Lidhja me databasen e perzgjedhur...
Lidhja me databasen u krye me sukses...
Krijimi i perzgjedhjes...
```

ID: 100, Age: 18, First: Smith, Last: John  
ID: 101, Age: 25, First: Oder, Last: Sarah  
ID: 102, Age: 30, First: Zaid, Last: Philippe  
Dalje...

### Shembull 7:

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCUpdate {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e database
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Hapja e nje connection
            System.out.println("Lidhja me databasen e perzgjedhur...");
            conn = DriverManager.getConnection(DB_URL, USER, PASS);
            System.out.println("Lidhja u krye me sukses...");

            //HAPI 4: Ekzekutimi i query
            System.out.println("Krijimi i zgjedhjes...");
            stmt = conn.createStatement();
            String sql = "UPDATE Registration " +
                "SET age = 30 WHERE id in (100, 101)";
            stmt.executeUpdate(sql);

            // Mund te marrim gjithe rekordet
            // per te pare rekordet e ndryshuara
            sql = "SELECT id, first, last, age FROM Registration";
            ResultSet rs = stmt.executeQuery(sql);

            while(rs.next()){
                //Emrat e kolonave
                int id = rs.getInt("id");
                int age = rs.getInt("age");
                String first = rs.getString("first");
```

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

//Vlerat perkatese
System.out.print("ID: " + id);
System.out.print(", Age: " + age);
System.out.print(", First: " + first);
System.out.println(", Last: " + last);
}
rs.close();
}catch(SQLException se){
    //Trajtimi i perjashtimeve te JDBC
    se.printStackTrace();
}catch(Exception e){
    //Trajtimi i perjashtimeve te Class.forName
    e.printStackTrace();
}finally{
    //finally mbyll resurset e perdorura
    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
}
System.out.println("Dalje...");
}
}
```

#### Në console:

Lidhja me databasen e perzgjedhur...

Lidhja u krye me sukses...

Krijimi i zgjedhjes...

ID: 100, Age: 30, First: Smith, Last: John

ID: 101, Age: 30, First: Oder, Last: Sarah

ID: 102, Age: 30, First: Zaid, Last: Philippe

Dalje...

**Shembull 8:**

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCDelete {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e database
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Hapja e nje connection
            System.out.println("Lidhja me databasen e perzgjedhur...");
            conn = DriverManager.getConnection(DB_URL, USER, PASS);
            System.out.println("Lidhja u krye me sukses...");

            //HAPI 4: Ekzekutimi i query
            System.out.println("Krijimi i perzgjedhjes...");
            stmt = conn.createStatement();
            String sql = "DELETE FROM Registration " +
                "WHERE id = 101";
            stmt.executeUpdate(sql);

            // Mund te afishojme gjithë rekordet
            // per te pare cilat rekorde kane mbetur
            sql = "SELECT id, first, last, age FROM Registration";
            ResultSet rs = stmt.executeQuery(sql);

            while(rs.next()){
                //Emrat e kolonave
                int id = rs.getInt("id");
                int age = rs.getInt("age");
                String first = rs.getString("first");
                String last = rs.getString("last");

                //Vlerat perkatese
                System.out.print("ID: " + id);
                System.out.print(", Age: " + age);
                System.out.print(", First: " + first);
                System.out.println(", Last: " + last);
            }
        } catch (Exception e) {
            System.out.println("Error: " + e);
        }
    }
}
```

```

    }
    rs.close();
}catch(SQLException se){
    //Trajtimi i perjashtimeve te JDBC
    se.printStackTrace();
}catch(Exception e){
    //Trajtimi i perjashtimeve te Class.forName
    e.printStackTrace();
}finally{
    //finally per mbylljen e resurseve
    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
}
System.out.println("Dalje..");
}
}

```

#### Në console:

```

Lidhja me databasen e perzgjedhur...
Lidhja u krye me sukses...
Krijimi i perzgjedhjes...
ID: 100, Age: 30, First: Smith, Last: John
ID: 102, Age: 30, First: Zaid, Last: Philippe
Dalje..

```

#### Shembull 9:

```

//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCWhere {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e database
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {

```

```
Connection conn = null;
Statement stmt = null;
try{
    //HAPI 2: Regjistrimi i JDBC driver
    Class.forName("com.mysql.jdbc.Driver");

    //HAPI 3: Hapja e nje connection
    System.out.println("Lidhja me databasen e zgjedhur...");
    conn = DriverManager.getConnection(DB_URL, USER, PASS);
    System.out.println("Lidhja e database u krye me sukses...");

    //HAPI 4: Ekzekutimi i query
    System.out.println("Krijimi i perzgjedhjes...");
    stmt = conn.createStatement();

    // Marrja e gjithë rekordeve
    System.out.println("Afishimi i gjithë rekordeve...");
    String sql = "SELECT id, first, last, age FROM Registration";
    ResultSet rs = stmt.executeQuery(sql);

    while(rs.next()){
        //Emrat e kolonave
        int id = rs.getInt("id");
        int age = rs.getInt("age");
        String first = rs.getString("first");
        String last = rs.getString("last");

        //Afishimi i vlerave
        System.out.print("ID: " + id);
        System.out.print(", Age: " + age);
        System.out.print(", First: " + first);
        System.out.println(", Last: " + last);
    }

    // Select all records having ID equal or greater than 101
    System.out.println("Afishimi i rekordeve me kusht Where...");
    sql = "SELECT id, first, last, age FROM Registration" +
        " WHERE id >= 101 ";
    rs = stmt.executeQuery(sql);

    while(rs.next()){
        //Afishimi i kolonave
        int id = rs.getInt("id");
        int age = rs.getInt("age");
        String first = rs.getString("first");
        String last = rs.getString("last");

        //Afishimi i vlerave
        System.out.print("ID: " + id);
```

```
        System.out.print(", Age: " + age);
        System.out.print(", First: " + first);
        System.out.println(", Last: " + last);
    }
    rs.close();
} catch (SQLException se) {
    //Trajtimi i perjashtimeve te JDBC
    se.printStackTrace();
} catch (Exception e) {
    //Trajtimi i perjashtimeve te Class.forName
    e.printStackTrace();
} finally {
    //finally mbyll resurset e hapura
    try {
        if (stmt != null)
            conn.close();
    } catch (SQLException se) {
    }
    try {
        if (conn != null)
            conn.close();
    } catch (SQLException se) {
        se.printStackTrace();
    }
}
System.out.println("Dalje....");
}
}
```

#### Në console :

```
Lidhja me databasen e zgjedhur...
Lidhja e database u krye me sukses...
Krijimi i perzgjedhjes...
Afishimi i gjithe rekordeve...
ID: 100, Age: 30, First: Smith, Last: John
ID: 102, Age: 30, First: Zaid, Last: Philippe
Afishimi i rekordeve me kusht Where...
ID: 102, Age: 30, First: Zaid, Last: Philippe
Dalje....
```

**Shembull 10:**

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCLike {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e databases
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Hapja e nje connection
            System.out.println("Lidhja me databasen e perzgjedhur...");
            conn = DriverManager.getConnection(DB_URL, USER, PASS);
            System.out.println("Lidhja u krye me sukses...");

            //HAPI 4: Ekzekutimi i query
            System.out.println("Krijimi i perzgjedhjes...");
            stmt = conn.createStatement();

            // Afishimi i rekordeve pa filter perzgjedhes
            System.out.println("Afishimi i rekordeve pa ndonje kusht...");
            String sql = "SELECT id, first, last, age FROM Registration";
            ResultSet rs = stmt.executeQuery(sql);

            while(rs.next()){
                //Emrat e kolonave
                int id = rs.getInt("id");
                int age = rs.getInt("age");
                String first = rs.getString("first");
                String last = rs.getString("last");

                //Afishimi i vlerave
                System.out.print("ID: " + id);
                System.out.print(", Age: " + age);
                System.out.print(", First: " + first);
                System.out.println(", Last: " + last);
            }
        }
    }
}
```



```
// Marrja e rekordeve qe kane ID = ose > 101
System.out.println("Afishimi i rekordeve qe kane Id > = 101...");
sql = "SELECT id, first, last, age FROM Registration" +
      " WHERE first LIKE '%za%' ";
rs = stmt.executeQuery(sql);

while(rs.next()){
    //Emrat e kolonave
    int id = rs.getInt("id");
    int age = rs.getInt("age");
    String first = rs.getString("first");
    String last = rs.getString("last");

    //Afishimi i vlerave
    System.out.print("ID: " + id);
    System.out.print(", Age: " + age);
    System.out.print(", First: " + first);
    System.out.println(", Last: " + last);
}
rs.close();
}catch(SQLException se){
    //Trajtimi i perjashtimeve te JDBC
    se.printStackTrace();
}catch(Exception e){
    //Trajtimi i perjashtimeve te Class.forName
    e.printStackTrace();
}finally{
    //finally mbyll resurset e perdorura
    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
}
System.out.println("Dalje...");
}
}
```

#### Në console:

```
Lidhja me databasen e perzgjedhur...
Lidhja u krye me sukses...
Krijimi i perzgjedhjes...
Afishimi i rekordeve pa ndonje kusht...
```

ID: 100, Age: 30, First: Smith, Last: John  
ID: 102, Age: 30, First: Zaid, Last: Philippe  
Afishimi i rekordeve qe kane Id > = 101...  
ID: 102, Age: 30, First: Zaid, Last: Philippe  
Dalje...

### Shembull 11:

```
//HAPI 1. Importimi i paketave
import java.sql.*;

public class JDBCSort {
    // JDBC driver dhe database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/STUDENTS1";

    // Kredencialet e databases
    static final String USER = "username";
    static final String PASS = "password";

    public static void main(String[] args) {
        Connection conn = null;
        Statement stmt = null;
        try{
            //HAPI 2: Regjistrimi i JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            //HAPI 3: Hapja e nje connection
            System.out.println("Lidhja me databasen e perzgjedhur...");
            conn = DriverManager.getConnection(DB_URL, USER, PASS);
            System.out.println("Lidhja u krye me sukses...");

            //HAPI 4: Ekzekutimi i query
            System.out.println("Krijimi i perzgjedhjes...");
            stmt = conn.createStatement();

            // Afishimi i rekordeve ne rendin rrites sipas emrit
            System.out.println("Afishimi i rekordeve sipas rendit rrites te
emrit...");
            String sql = "SELECT id, first, last, age FROM Registration" +
                " ORDER BY first ASC";
            ResultSet rs = stmt.executeQuery(sql);

            while(rs.next()){
                //Emrat e kolonave
                int id = rs.getInt("id");
                int age = rs.getInt("age");
                String first = rs.getString("first");
                String last = rs.getString("last");
            }
        } catch (Exception e) {
            System.out.println("Error: " + e);
        }
    }
}
```

```
//Afishimi i vlerave
System.out.print("ID: " + id);
System.out.print(", Age: " + age);
System.out.print(", First: " + first);
System.out.println(", Last: " + last);
}

// Afishimi i rekordeve sipas rendit zbrites te emrit
System.out.println("\nAfishimi i rekordeve sipas rendit zbrites
te emrit...");
sql = "SELECT id, first, last, age FROM Registration" +
      " ORDER BY first DESC";
rs = stmt.executeQuery(sql);

while(rs.next()){
    //Emrat e kolonave
    int id = rs.getInt("id");
    int age = rs.getInt("age");
    String first = rs.getString("first");
    String last = rs.getString("last");

    //Afishimi i vlerave
    System.out.print("ID: " + id);
    System.out.print(", Age: " + age);
    System.out.print(", First: " + first);
    System.out.println(", Last: " + last);
}
rs.close();
}catch(SQLException se){
    //Trajtimi i perjashtimeve te JDBC
    se.printStackTrace();
}catch(Exception e){
    //Trajtimi i perjashtimeve te Class.forName
    e.printStackTrace();
}finally{
    //finally mbyll resurset e hapura
    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
}
}
```

```
System.out.println("Dalje...");  
}  
}
```

#### Ne console :

Lidhja me databasen e perzgjedhur...

Lidhja u krye me sukses...

Krijimi i perzgjedhjes...

Afishimi i rekordeve sipas rendit rrites te emrit...

ID: 100, Age: 30, First: Smith, Last: John

ID: 102, Age: 30, First: Zaid, Last: Philippe

Afishimi i rekordeve sipas rendit zbrates te emrit...

ID: 102, Age: 30, First: Zaid, Last: Philippe

ID: 100, Age: 30, First: Smith, Last: John

Dalje...