

Gagnasafnsfræði Vikublað 8

brj46

October 2024



HÁSKÓLI ÍSLANDS

V8a

```
import java.sql.*;

public class V8a {

    // Les inn laun fra ollum employees ur company.db
    // gagnagrunninum og prentar ut heildarlaunin samanlogd.
    public static void main(String[] args) {
        double salary = 0;
        double sum = 0;
        Connection connection = null;
        try
        {
            connection = DriverManager.getConnection("jdbc:sqlite:
                company.db");
            Statement statement = connection.createStatement();

            ResultSet rs = statement.executeQuery("select Salary
                from EMPLOYEE");

            while(rs.next()) {
                salary = rs.getDouble("Salary");
                sum += salary;
            }
        } catch(SQLException e)
        {
            // if the error message is "out of memory",
            // it probably means no database file is found
            System.err.println(e.getMessage());
        }
        finally
        {
            try
            {
                if(connection != null)
                    connection.close();
            }
            catch(SQLException e)
            {
                // connection close failed.
                System.err.println(e);
            }
        }
        System.out.println("Heildarlaun starfsmanna: " + sum);
    }
}
```

Hér er skjáskot af keyrslu:

```
s\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8a
Heildarlaun starfsmanna: 281000.0
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> █
```

V8b

```
import java.sql.*;

public class V8b {

    public static void main(String[] args) {
        Connection connection = null;
        try
        {
            connection = DriverManager.getConnection("jdbc:sqlite:
                company.db");
            Statement statement = connection.createStatement();

            String sql = "UPDATE EMPLOYEE set Salary = Salary *
                1.05";

            int rows = statement.executeUpdate(sql);
            System.out.println("Laun uppfærð fyrir : " + rows);

        } catch (SQLException e)
        {
            // if the error message is "out of memory",
            // it probably means no database file is found
            System.err.println(e.getMessage());
        }
        finally
        {
            try
            {
                if(connection != null)
                    connection.close();
            }
            catch (SQLException e)
            {
                // connection close failed.
                System.err.println(e);
            }
        }
    }
}
```

```
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> javac V8b.java
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8a
Heildarlaun starfsmanna: 281000.0
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8b
Laun uppfærð fyrir : 8
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8a
Heildarlaun starfsmanna: 295050.0
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> 
```

V8c

```
import java.sql.*;

public class V8c {
    public static void main(String[] args) {
        Connection connection = null;
        Statement statement = null;
        PreparedStatement updateStatement = null;
        try
        {
            connection = DriverManager.getConnection("jdbc:sqlite:
                company.db");
            statement = connection.createStatement();

            ResultSet rs = statement.executeQuery("SELECT Ssn FROM
                EMPLOYEE");

            String updateSql = "UPDATE EMPLOYEE SET Salary = Salary
                + 100 WHERE Ssn = ?";
            updateStatement = connection.prepareStatement(updateSql
                );

            while(rs.next()) {
                String ssn = rs.getString("Ssn");
                updateStatement.setString(1, ssn);
                updateStatement.executeUpdate();
            }
            System.out.println("Laun haekkudu jibbi");

        } catch(SQLException e)
        {
            // if the error message is "out of memory",
            // it probably means no database file is found
            System.err.println(e.getMessage());
        }
        finally
        {
            try
            {
                if(connection != null)
                    connection.close();
            }
            catch(SQLException e)
            {
                // connection close failed.
                System.err.println(e);
            }
        }
    }
}
```

```
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> javac v8c.java
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8a
Heildarlaun starfsmanna: 295050.0
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8c
Laun hækkuðu jibbi
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8a
Heildarlaun starfsmanna: 295850.0
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> |
```

James E. Borg

```
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" V8a
Heildarlaun starfsmanna: 295850.0
javac JDBC1.java
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> java -cp ".;sqlite-jdbc-3.43.0.0.jar" JDBC1
Enter a Social Security Number: 888665555
Borg 57850.0
PS C:\Users\benja\OneDrive\Desktop\gagnasafnsfraedi\forritun> |
```