gsf v11

hir12

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```java
package forritun;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.sql.PreparedStatement;

// Notkun: java -cp .;sqlite-jdbc-....jar V11 <args>
//         þar sem <args> er: [autocommit|noautocommit] [index|noindex]
// Eftir:  Búið er að mæla tíma fyrir gagnagrunnsaðgerðir og
//         skrifa niðurstöður

// Use:  java -cp .;sqlite-jdbc-....jar V11 <args>
//       where <args> is: [autocommit|noautocommit] [index|noindex]
// Post: The duration of database operations has been measured and
//       the results written.
public class V11
{
    public static void main( String[] args )
        throws Exception
    {
        Class.forName("org.sqlite.JDBC");
        boolean USE_AUTOCOMMIT = args[0].equals("autocommit");
        boolean USE_INDEX = args[1].equals("index");

        Connection conn = null;
        try
        {
            conn = DriverManager.getConnection("jdbc:sqlite:v11.db");
            conn.setAutoCommit(USE_AUTOCOMMIT);

            Statement stmt = conn.createStatement();
            stmt.executeUpdate("DROP TABLE IF EXISTS R");
            stmt.executeUpdate("DROP INDEX IF EXISTS RINDEX");
```

```
        stmt.executeUpdate("CREATE TABLE R(key integer primary key, value double)");
        if(USE_INDEX) stmt.executeUpdate("CREATE INDEX RINDEX ON R (VALUE)");
        PreparedStatement pstmt = conn.prepareStatement("INSERT INTO R VALUES(?, ?)");

        long start,end;

        start = System.nanoTime();
        int i;
        for( i=0 ; i!=1000000 ; i++ ) {
            pstmt.setInt(1, i);
            pstmt.setDouble(2, 2.0*Math.random());
            pstmt.executeUpdate();
            if( System.nanoTime() - start > 60e9) break;
        }
        if( !USE_AUTOCOMMIT ) conn.commit();

        end = System.nanoTime();
        System.out.println("Tími fyrir/Time for "+
                           i+" innsetningar/inserts: "+
                           (double)(end-start)/1e9
                          );

        System.out.println("Tími per innsetningu/Time per insert: "+
                           (double)(end-start)/1e9/i
                          );

        start = System.nanoTime();
        ResultSet r =
            stmt.executeQuery
                ("SELECT COUNT(*) FROM R WHERE "+
                 "value BETWEEN 0.05 AND 0.15"
                );
        r.next();
        System.out.println("Niðurstaða leitar/Result of search: "+r.getInt(1));
        System.out.println("Tími fyrir leit/Time for search: "+
                           (double)(System.nanoTime()-start)/1e9
                          );
    }
    catch(SQLException e)
    {
        System.err.println(e.getMessage());
    }
    finally
    {
        try
        {
```

```
                if(conn != null)
                  conn.close();
            }
            catch(SQLException e)
            {
                System.err.println(e);
            }
        }
    }
}
```

Tími fyrir innsetningu			
án vísi		með vísi	
án autocommit	með autocommit	án autocommit	með autocommit
1.803292	60.000459	17.7176205	60.0008646

Tími fyrir leit	
án vísi	með vísi
0.1493375	0.0164847