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");
```

```java
        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 per aðgerð við innsetningu			
án vísi		með vísi	
án autocommit	með autocommit	án autocommit	með autocommit
0.01771762 ms	2.7678 ms	0.0018 ms	2.4677496 ms

Tími fyrir leit	
án vísi	með vísi
0.1493 ms	0.0165 ms