Gagnasafnsfræði Verkefni 11

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5. nóvember 2024

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

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++ )
            {
                                if (System.nanoTime()-start > 6e+10) break;
                                pstmt.setInt(1, i);
                                pstmt.setDouble(2, Math.random()*2);
                                pstmt.executeUpdate();
            }
            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 0.01 AND 0.10"
                    );
            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 vísis		**Með vísi**	
Án AutoCommit	**Með AutoCommit**	**Án AutoCommit**	**Með AutoCommit**
1.4286 *ms*	8.127808 μs	6.40508 μs	9.681787 *ms*

Tími fyrir leit	
Án vísis	**Með vísi**
11.91289 ms	8.127808 ms