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public class **DatabaseUtils** Summary: Nested Classes | Constants | Ctors | Methods | Inherited Methods | [Expand All]
extends [Object](#) Added in API level 1

[java.lang.Object](#)
android.database.DatabaseUtils

Class Overview

Static utility methods for dealing with databases and [Cursors](#).

Summary

Nested Classes		
class	DatabaseUtils.InsertHelper	<i>This class was deprecated in API level 17. Use SQLiteStatement instead.</i>
Constants		
int	STATEMENT_ABORT	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_ATTACH	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_BEGIN	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_COMMIT	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_DDL	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_OTHER	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_PRAGMA	One of the values returned by getSqlStatementType (String) .

int	STATEMENT_SELECT	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_UNPREPARED	One of the values returned by getSqlStatementType (String) .
int	STATEMENT_UPDATE	One of the values returned by getSqlStatementType (String) .

Public Constructors

[DatabaseUtils\(\)](#)

Public Methods

static void	appendEscapedSQLString (StringBuilder sb, String sqlString) Appends an SQL string to the given StringBuilder, including the opening and closing single quotes.
static String[]	appendSelectionArgs (String[] originalValues, String[] newValues) Appends one set of selection args to another.
final static void	appendValueToSql (StringBuilder sql, Object value) Appends an Object to an SQL string with the proper escaping, etc.
static void	bindObjectToProgram (SQLiteProgram prog, int index, Object value) Binds the given Object to the given SQLiteProgram using the proper typing.
static ParcelFileDescriptor	blobFileDescriptorForQuery (SQLiteStatement prog, String[] selectionArgs) Utility method to run the pre-compiled query and return the blob value in the first column of the first row.
static ParcelFileDescriptor	blobFileDescriptorForQuery (SQLiteDatabase db, String query, String[] selectionArgs) Utility method to run the query on the db and return the blob value in the first column of the first row.
static String	concatenateWhere (String a, String b) Concatenates two SQL WHERE clauses, handling empty or null values.
static void	createDbFromSqlStatements (Context context, String dbName, int dbVersion, String sqlStatements) Creates a db and populates it with the sql statements in sqlStatements.
static void	cursorDoubleToContentValues (Cursor cursor, String field, ContentValues values, String key) Reads a Double out of a field in a Cursor and writes it to a Map.
static void	cursorDoubleToContentValuesIfPresent (Cursor cursor, ContentValues values, String column)

		Reads a Double out of a column in a Cursor and writes it to a ContentValues.
	static void	cursorDoubleToCursorValues (Cursor cursor, String field, ContentValues values) Reads a Double out of a field in a Cursor and writes it to a Map.
	static void	cursorFloatToContentValuesIfPresent (Cursor cursor, ContentValues values, String column) Reads a Float out of a column in a Cursor and writes it to a ContentValues.
	static void	cursorIntToContentValues (Cursor cursor, String field, ContentValues values, String key) Reads a Integer out of a field in a Cursor and writes it to a Map.
	static void	cursorIntToContentValues (Cursor cursor, String field, ContentValues values) Reads an Integer out of a field in a Cursor and writes it to a Map.
	static void	cursorIntToContentValuesIfPresent (Cursor cursor, ContentValues values, String column) Reads a Integer out of a column in a Cursor and writes it to a ContentValues.
	static void	cursorLongToContentValues (Cursor cursor, String field, ContentValues values, String key) Reads a Long out of a field in a Cursor and writes it to a Map.
	static void	cursorLongToContentValues (Cursor cursor, String field, ContentValues values) Reads a Long out of a field in a Cursor and writes it to a Map.
	static void	cursorLongToContentValuesIfPresent (Cursor cursor, ContentValues values, String column) Reads a Long out of a column in a Cursor and writes it to a ContentValues.
	static void	cursorRowToContentValues (Cursor cursor, ContentValues values) Read the entire contents of a cursor row and store them in a ContentValues.
	static void	cursorShortToContentValuesIfPresent (Cursor cursor, ContentValues values, String column) Reads a Short out of a column in a Cursor and writes it to a ContentValues.
	static void	cursorStringToContentValues (Cursor cursor, String field, ContentValues values, String key) Reads a String out of a field in a Cursor and writes it to a Map.
	static void	cursorStringToContentValues (Cursor cursor, String field, ContentValues values) Reads a String out of a field in a Cursor and writes it to a Map.
	static void	cursorStringToContentValuesIfPresent (Cursor cursor, ContentValues values, String column) Reads a String out of a column in a Cursor and writes it to a ContentValues.
	static void	cursorStringToInsertHelper (Cursor cursor, String field, DatabaseUtils.InsertHelper inserter, int index) Reads a String out of a field in a Cursor and writes it to an InsertHelper.
	static void	dumpCurrentRow (Cursor cursor, PrintStream stream)

	Prints the contents of a Cursor's current row to a PrintStream.
static void	<code>dumpCurrentRow (Cursor cursor, StringBuilder sb)</code> Prints the contents of a Cursor's current row to a StringBuilder.
static void	<code>dumpCurrentRow (Cursor cursor)</code> Prints the contents of a Cursor's current row to System.out.
static String	<code>dumpCurrentRowToString (Cursor cursor)</code> Dump the contents of a Cursor's current row to a String.
static void	<code>dumpCursor (Cursor cursor, PrintStream stream)</code> Prints the contents of a Cursor to a PrintStream.
static void	<code>dumpCursor (Cursor cursor, StringBuilder sb)</code> Prints the contents of a Cursor to a StringBuilder.
static void	<code>dumpCursor (Cursor cursor)</code> Prints the contents of a Cursor to System.out.
static String	<code>dumpCursorToString (Cursor cursor)</code> Prints the contents of a Cursor to a String.
static String	<code>getCollationKey (String name)</code> return the collation key
static String	<code>getHexCollationKey (String name)</code> return the collation key in hex format
static int	<code>getSqlStatementType (String sql)</code> Returns one of the following which represent the type of the given SQL statement.
static long	<code>longForQuery (SQLiteDatabase db, String query, String[] selectionArgs)</code> Utility method to run the query on the db and return the value in the first column of the first row.
static long	<code>longForQuery (SQLiteStatement prog, String[] selectionArgs)</code> Utility method to run the pre-compiled query and return the value in the first column of the first row.
static long	<code>queryNumEntries (SQLiteDatabase db, String table)</code> Query the table for the number of rows in the table.
static long	<code>queryNumEntries (SQLiteDatabase db, String table, String selection)</code> Query the table for the number of rows in the table.

static long	queryNumEntries (SQLiteDatabase db, String table, String selection, String[] selectionArgs) Query the table for the number of rows in the table.
final static void	readExceptionFromParcel (Parcel reply) Special function for reading an exception result from the header of a parcel, to be used after receiving the result of a transaction.
static void	readExceptionWithFileNotFoundExceptionFromParcel (Parcel reply)
static void	readExceptionWithOperationApplicationExceptionFromParcel (Parcel reply)
static String	sqlEscapeString (String value) SQL-escape a string.
static String	stringForQuery (SQLiteDatabase db, String query, String[] selectionArgs) Utility method to run the query on the db and return the value in the first column of the first row.
static String	stringForQuery (SQLiteStatement prog, String[] selectionArgs) Utility method to run the pre-compiled query and return the value in the first column of the first row.
final static void	writeExceptionToParcel (Parcel reply, Exception e) Special function for writing an exception result at the header of a parcel, to be used when returning an exception from a transaction.

Inherited Methods

[\[Expand\]](#)

► From class [java.lang.Object](#)

Constants

public static final int **STATEMENT_ABORT**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType](#) ([String](#)) .

Constant Value: 6 (0x00000006)

public static final int **STATEMENT_ATTACH**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType](#) ([String](#)) .

Constant Value: 3 (0x00000003)

public static final int **STATEMENT_BEGIN**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType \(String\)](#).

Constant Value: 4 (0x00000004)

public static final int **STATEMENT_COMMIT**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType \(String\)](#).

Constant Value: 5 (0x00000005)

public static final int **STATEMENT_DDL**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType \(String\)](#).

Constant Value: 8 (0x00000008)

public static final int **STATEMENT_OTHER**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType \(String\)](#).

Constant Value: 99 (0x00000063)

public static final int **STATEMENT_PRAGMA**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType \(String\)](#).

Constant Value: 7 (0x00000007)

public static final int **STATEMENT_SELECT**

Added in [API level 11](#)

One of the values returned by [getSqlStatementType \(String\)](#).

Constant Value: 1 (0x00000001)

public static final int **STATEMENT_UNPREPARED**

Added in [API level 11](#)

One of the values returned by `getSqlStatementType (String)`.

Constant Value: 9 (0x00000009)

```
public static final int STATEMENT_UPDATE
```

Added in [API level 11](#)

One of the values returned by `getSqlStatementType (String)`.

Constant Value: 2 (0x00000002)

Public Constructors

```
public DatabaseUtils ()
```

Added in [API level 1](#)

Public Methods

```
public static void appendEscapedSQLString (StringBuilder sb, String sqlString)
```

Added in [API level 1](#)

Appends an SQL string to the given `StringBuilder`, including the opening and closing single quotes. Any single quotes internal to `sqlString` will be escaped. This method is deprecated because we want to encourage everyone to use the "?" binding form. However, when implementing a `ContentProvider`, one may want to add WHERE clauses that were not provided by the caller. Since "?" is a positional form, using it in this case could break the caller because the indexes would be shifted to accomodate the `ContentProvider`'s internal bindings. In that case, it may be necessary to construct a WHERE clause manually. This method is useful for those cases.

Parameters

- sb* the `StringBuilder` that the SQL string will be appended to
- sqlString* the raw string to be appended, which may contain single quotes

```
public static String[] appendSelectionArgs (String[] originalValues, String[] newValues)
```

Added in [API level 11](#)

Appends one set of selection args to another. This is useful when adding a selection argument to a user provided set.

```
public static final void appendValueToSql (StringBuilder sql, Object value)
```

Added in [API level 1](#)

Appends an `Object` to an SQL string with the proper escaping, etc.

```
public static void bindObjectToProgram (SQLiteProgram prog, int index, Object value)
```

Added in [API level 1](#)

Binds the given Object to the given SQLiteProgram using the proper typing. For example, bind numbers as longs/doubles, and everything else as a string by call toString() on it.

Parameters

prog the program to bind the object to
index the 1-based index to bind at
value the value to bind

```
public static ParcelFileDescriptor blobFileDescriptorForQuery (SQLiteStatement prog, String[]  
selectionArgs)
```

Added in [API level 11](#)

Utility method to run the pre-compiled query and return the blob value in the first column of the first row.

Returns

A read-only file descriptor for a copy of the blob value.

```
public static ParcelFileDescriptor blobFileDescriptorForQuery (SQLiteDatabase db, String  
query, String[] selectionArgs)
```

Added in [API level 11](#)

Utility method to run the query on the db and return the blob value in the first column of the first row.

Returns

A read-only file descriptor for a copy of the blob value.

```
public static String concatenateWhere (String a, String b)
```

Added in [API level 11](#)

Concatenates two SQL WHERE clauses, handling empty or null values.

```
public static void createDbFromSqlStatements (Context context, String dbName, int  
dbVersion, String sqlStatements)
```

Added in [API level 1](#)

Creates a db and populates it with the sql statements in sqlStatements.

Parameters

context the context to use to create the db
dbName the name of the db to create

dbVersion the version to set on the db

sqlStatements the statements to use to populate the db. This should be a single string of the form returned by sqlite3's `.dump` command (statements separated by semicolons)

```
public static void cursorDoubleToContentValues (Cursor cursor, String field, ContentValues values, String key)
```

Added in [API level 1](#)

Reads a Double out of a field in a Cursor and writes it to a Map.

Parameters

cursor The cursor to read from

field The REAL field to read

values The [ContentValues](#) to put the value into

key The key to store the value with in the map

```
public static void cursorDoubleToContentValuesIfPresent (Cursor cursor, ContentValues values, String column)
```

Added in [API level 8](#)

Reads a Double out of a column in a Cursor and writes it to a ContentValues. Adds nothing to the ContentValues if the column isn't present or if its value is null.

Parameters

cursor The cursor to read from

values The [ContentValues](#) to put the value into

column The column to read

```
public static void cursorDoubleToCursorValues (Cursor cursor, String field, ContentValues values)
```

Added in [API level 1](#)

Reads a Double out of a field in a Cursor and writes it to a Map.

Parameters

cursor The cursor to read from

field The REAL field to read

values The [ContentValues](#) to put the value into

```
public static void cursorFloatToContentValuesIfPresent (Cursor cursor, ContentValues values, String column)
```

Added in [API level 8](#)

Reads a Float out of a column in a Cursor and writes it to a ContentValues. Adds nothing to the ContentValues if the column isn't present or if its value is null.

Parameters

cursor The cursor to read from
values The [ContentValues](#) to put the value into
column The column to read

```
public static void cursorIntToContentValues (Cursor cursor, String field, ContentValues values, String key)
```

Added in [API level 1](#)

Reads a Integer out of a field in a Cursor and writes it to a Map.

Parameters

cursor The cursor to read from
field The INTEGER field to read
values The [ContentValues](#) to put the value into, with the field as the key
key The key to store the value with in the map

```
public static void cursorIntToContentValues (Cursor cursor, String field, ContentValues values)
```

Added in [API level 1](#)

Reads an Integer out of a field in a Cursor and writes it to a Map.

Parameters

cursor The cursor to read from
field The INTEGER field to read
values The [ContentValues](#) to put the value into, with the field as the key

```
public static void cursorIntToContentValuesIfPresent (Cursor cursor, ContentValues values, String column)
```

Added in [API level 8](#)

Reads a Integer out of a column in a Cursor and writes it to a ContentValues. Adds nothing to the ContentValues if the column isn't present or if its value is null.

Parameters

- cursor* The cursor to read from
- values* The [ContentValues](#) to put the value into
- column* The column to read

```
public static void cursorLongToContentValues (Cursor cursor, String field, ContentValues values, String key)
```

Added in [API level 1](#)

Reads a Long out of a field in a Cursor and writes it to a Map.

Parameters

- cursor* The cursor to read from
- field* The INTEGER field to read
- values* The [ContentValues](#) to put the value into
- key* The key to store the value with in the map

```
public static void cursorLongToContentValues (Cursor cursor, String field, ContentValues values)
```

Added in [API level 1](#)

Reads a Long out of a field in a Cursor and writes it to a Map.

Parameters

- cursor* The cursor to read from
- field* The INTEGER field to read
- values* The [ContentValues](#) to put the value into, with the field as the key

```
public static void cursorLongToContentValuesIfPresent (Cursor cursor, ContentValues values, String column)
```

Added in [API level 8](#)

Reads a Long out of a column in a Cursor and writes it to a ContentValues. Adds nothing to the ContentValues if the column isn't present or if its value is null.

Parameters

- cursor* The cursor to read from
- values* The [ContentValues](#) to put the value into
- column* The column to read

```
public static void cursorRowToContentValues (Cursor cursor, ContentValues values)
```

Added in [API level 1](#)

Read the entire contents of a cursor row and store them in a ContentValues.

Parameters

cursor the cursor to read from.
values the [ContentValues](#) to put the row into.

```
public static void cursorShortToContentValuesIfPresent (Cursor cursor, ContentValues values,  
String column)
```

Added in [API level 8](#)

Reads a Short out of a column in a Cursor and writes it to a ContentValues. Adds nothing to the ContentValues if the column isn't present or if its value is null.

Parameters

cursor The cursor to read from
values The [ContentValues](#) to put the value into
column The column to read

```
public static void cursorStringToContentValues (Cursor cursor, String field, ContentValues  
values, String key)
```

Added in [API level 1](#)

Reads a String out of a field in a Cursor and writes it to a Map.

Parameters

cursor The cursor to read from
field The TEXT field to read
values The [ContentValues](#) to put the value into, with the field as the key
key The key to store the value with in the map

```
public static void cursorStringToContentValues (Cursor cursor, String field, ContentValues  
values)
```

Added in [API level 1](#)

Reads a String out of a field in a Cursor and writes it to a Map.

Parameters

cursor The cursor to read from
field The TEXT field to read
values The [ContentValues](#) to put the value into, with the field as the key

```
public static void cursorStringToContentValuesIfPresent (Cursor cursor, ContentValues values,  
String column)
```

Added in [API level 8](#)

Reads a String out of a column in a Cursor and writes it to a ContentValues. Adds nothing to the ContentValues if the column isn't present or if its value is null.

Parameters

cursor The cursor to read from
values The [ContentValues](#) to put the value into
column The column to read

```
public static void cursorStringToInsertHelper (Cursor cursor, String field,  
DatabaseUtils.InsertHelper inserter, int index)
```

Added in [API level 1](#)

Reads a String out of a field in a Cursor and writes it to an InsertHelper.

Parameters

cursor The cursor to read from
field The TEXT field to read
inserter The InsertHelper to bind into
index the index of the bind entry in the InsertHelper

```
public static void dumpCurrentRow (Cursor cursor, PrintStream stream)
```

Added in [API level 1](#)

Prints the contents of a Cursor's current row to a PrintStream.

Parameters

cursor the cursor to print
stream the stream to print to

```
public static void dumpCurrentRow (Cursor cursor, StringBuilder sb)
```

Added in [API level 1](#)

Prints the contents of a Cursor's current row to a StringBuilder.

Parameters

cursor the cursor to print
sb the StringBuilder to print to

```
public static void dumpCurrentRow (Cursor cursor)
```

Added in [API level 1](#)

Prints the contents of a Cursor's current row to System.out.

Parameters

cursor the cursor to print from

```
public static String dumpCurrentRowToString (Cursor cursor)
```

Added in [API level 1](#)

Dump the contents of a Cursor's current row to a String.

Parameters

cursor the cursor to print

Returns

a String that contains the dumped cursor row

```
public static void dumpCursor (Cursor cursor, PrintStream stream)
```

Added in [API level 1](#)

Prints the contents of a Cursor to a PrintStream. The position is restored after printing.

Parameters

cursor the cursor to print
stream the stream to print to

```
public static void dumpCursor (Cursor cursor, StringBuilder sb)
```

Added in [API level 1](#)

Prints the contents of a Cursor to a StringBuilder. The position is restored after printing.

Parameters

cursor the cursor to print
sb the StringBuilder to print to

```
public static void dumpCursor (Cursor cursor)
```

Added in [API level 1](#)

Prints the contents of a [Cursor](#) to System.out. The position is restored after printing.

Parameters

cursor the cursor to print

```
public static String dumpCursorToString (Cursor cursor)
```

Added in [API level 1](#)

Prints the contents of a [Cursor](#) to a [String](#). The position is restored after printing.

Parameters

cursor the cursor to print

Returns

a [String](#) that contains the dumped cursor

```
public static String getCollationKey (String name)
```

Added in [API level 1](#)

return the collation key

Returns

the collation key

```
public static String getHexCollationKey (String name)
```

Added in [API level 1](#)

return the collation key in hex format

Returns

the collation key in hex format

```
public static int getSqlStatementType (String sql)
```

Added in [API level 11](#)

Returns one of the following which represent the type of the given SQL statement.

1. [STATEMENT_SELECT](#)
2. [STATEMENT_UPDATE](#)
3. [STATEMENT_ATTACH](#)
4. [STATEMENT_BEGIN](#)

5. [STATEMENT_COMMIT](#)
6. [STATEMENT_ABORT](#)
7. [STATEMENT_OTHER](#)

Parameters

sql the SQL statement whose type is returned by this method

Returns

one of the values listed above

```
public static long longForQuery (SQLiteDatabase db, String query, String\[\] selectionArgs) Added in API level 1
```

Utility method to run the query on the db and return the value in the first column of the first row.

```
public static long longForQuery (SQLiteStatement prog, String\[\] selectionArgs) Added in API level 1
```

Utility method to run the pre-compiled query and return the value in the first column of the first row.

```
public static long queryNumEntries (SQLiteDatabase db, String table) Added in API level 1
```

Query the table for the number of rows in the table.

Parameters

db the database the table is in

table the name of the table to query

Returns

the number of rows in the table

```
public static long queryNumEntries (SQLiteDatabase db, String table, String selection) Added in API level 11
```

Query the table for the number of rows in the table.

Parameters

db the database the table is in

table the name of the table to query

selection A filter declaring which rows to return, formatted as an SQL WHERE clause (excluding the WHERE itself). Passing null will count all rows for the given table

Returns

the number of rows in the table filtered by the selection

```
public static long queryNumEntries (SQLiteDatabase db, String table, String selection, String\[\] selectionArgs)
```

Added in [API level 11](#)

Query the table for the number of rows in the table.

Parameters

<i>db</i>	the database the table is in
<i>table</i>	the name of the table to query
<i>selection</i>	A filter declaring which rows to return, formatted as an SQL WHERE clause (excluding the WHERE itself). Passing null will count all rows for the given table
<i>selectionArgs</i>	You may include ?s in selection, which will be replaced by the values from selectionArgs, in order that they appear in the selection. The values will be bound as Strings.

Returns

the number of rows in the table filtered by the selection

```
public static final void readExceptionFromParcel (Parcel reply)
```

Added in [API level 1](#)

Special function for reading an exception result from the header of a parcel, to be used after receiving the result of a transaction. This will throw the exception for you if it had been written to the Parcel, otherwise return and let you read the normal result data from the Parcel.

Parameters

reply Parcel to read from

See Also

[writeNoException\(\)](#)

[readException\(\)](#)

```
public static void readExceptionWithFileNotFoundExceptionFromParcel (Parcel reply)
```

Added in [API level 1](#)

Throws

[FileNotFoundException](#)

public static void **readExceptionWithOperationApplicationExceptionFromParcel** ([Parcel](#) reply) Added in [API level 5](#)

Throws

[OperationApplicationException](#)

public static [String](#) **sqlEscapeString** ([String](#) value) Added in [API level 1](#)

SQL-escape a string.

public static [String](#) **stringForQuery** ([SQLiteDatabase](#) db, [String](#) query, [String](#)[] selectionArgs) Added in [API level 1](#)

Utility method to run the query on the db and return the value in the first column of the first row.

public static [String](#) **stringForQuery** ([SQLiteStatement](#) prog, [String](#)[] selectionArgs) Added in [API level 1](#)

Utility method to run the pre-compiled query and return the value in the first column of the first row.

public static final void **writeExceptionToParcel** ([Parcel](#) reply, [Exception](#) e) Added in [API level 1](#)

Special function for writing an exception result at the header of a parcel, to be used when returning an exception from a transaction. exception will be re-thrown by the function in another process

Parameters

- reply* Parcel to write to
- e* The Exception to be written.

See Also

[writeNoException\(\)](#)

[writeException\(Exception\)](#)

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