



# Using SQL Reports

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# About me...

- Len Kranendonk
- 32 years old
- Living in The Netherlands
- Freelance Unix/Linux contractor



# About me...

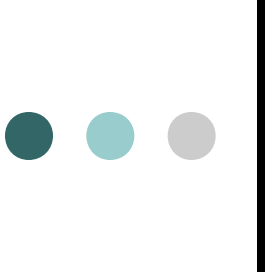
- Using WebGUI since 2003
- Did core development on WebGUI 5 and 6
- Built a large scale WebGUI implementation knvb.nl
- Coded SQL Reports advancements like nested queries and placeholders





# Introduction to SQLReports

- A WebGUI utility for presenting data
- Database can be any DBI supported database drivers [List of available drivers](#)
- Queries can use dynamic values, like user input and macro's.
- Output can be customized using WebGUI's template engine
- Output can be downloaded.



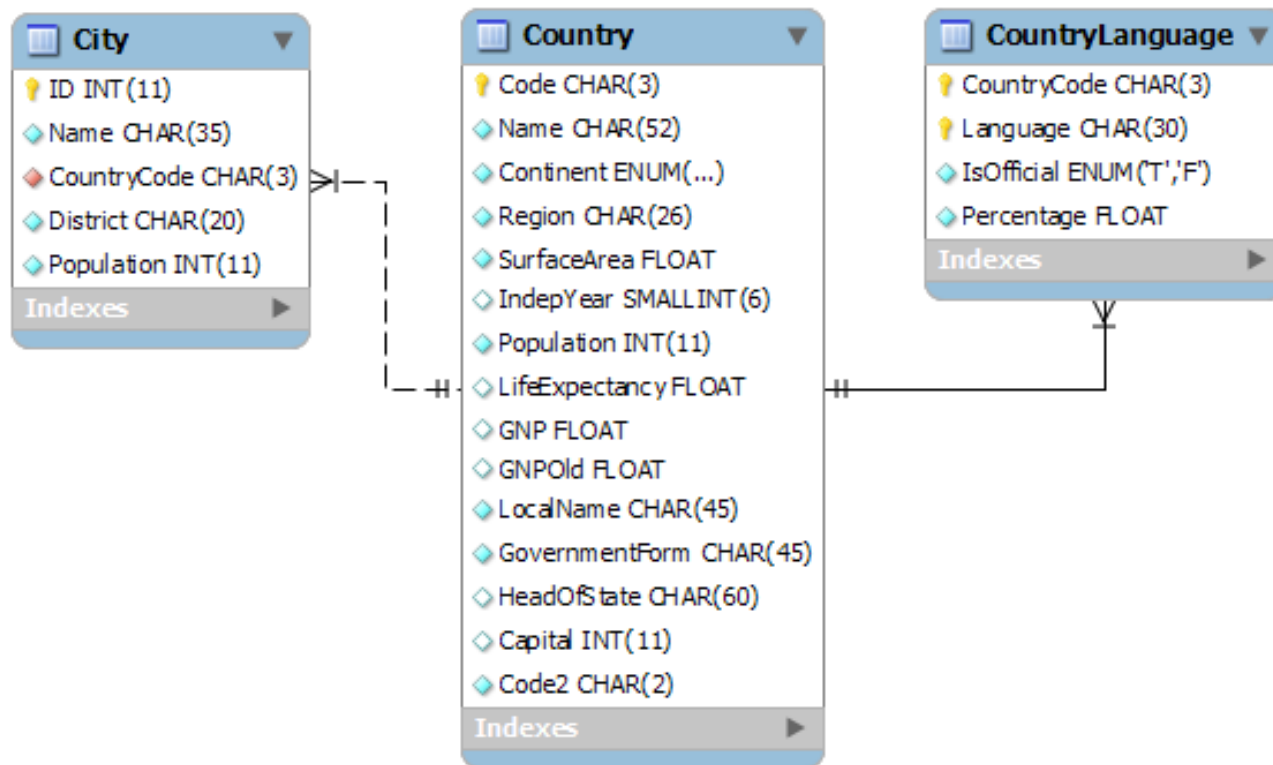
# SQLReports are readonly

- Default allowed queries:

- select
- describe
- show
- call

# The World database

Example “world” database, used to display the features of SQL Report.  
Can be downloaded here: <http://dev.mysql.com/doc/#sampledb>



# Database link

**EDIT DATABASE LINK**

Database Link ID: `wJc0oEpjK7vakhJjZDeww`

Title:

DSN:

Database User:

Database Password:

Allowed keywords:

Allow access from Macro's:  Yes  No

Additional database parameters:

*Accessible via Admin Console -> Databases*

# Simple query on the World DB

**Query1:**

Preprocess macros on query?  Yes  No

Placeholder Parameters

Prequery statements

Query  Toggle editor

```
SELECT Name, Continent FROM Country ORDER BY Name
```

Database Link  Toggle editor

World Database

# Pagination

The screenshot shows a configuration window with four tabs: Properties, Display (selected), Security, and Metadata. The 'Display' tab contains several settings:

- Hide from navigation?  Yes  No
- Open in new window?  Yes  No
- Display the title?  Yes  No
- Style Template: Style 03 (dropdown) [Edit] [Manage]
- Printable Style: Make Page Printable (dropdown) [Edit] [Manage]
- SQL Report Template: Default SQL Report (dropdown) [Edit] [Manage]
- Cache Timeout: 0 (text input) [Second(s)] (dropdown)
- Paginate After: 100 (text input)

The 'Cache Timeout' and 'Paginate After' fields are circled in red in the original image.

SQL Reports may never be cached !



# Data download

Download Type	<input type="radio"/> No Download
	<input checked="" type="radio"/> CSV
	<input type="radio"/> Template
Download File Name	<input type="text" value="countries.csv"/>

- Disabled by default
- Enabled by choosing CSV or Template.
- Template can be used to create custom text, xml, csv or html downloads.



# Customize output

- [SQL Report template](#) documented in the online help.
- `<tmpl_loop rows_loop>` is the loop containing the data returned from the query.
- Inside the loop:  
`<tmpl_var row.field.__NAME__.value>`  
  
where `__NAME__` is the name of the field.



# Custom template

In the simplest form:

```
<tmpl_loop rows_loop>
  <b><tmpl_var row.field.Name.value></b>
  (<tmpl_var row.field.Continent.value>)
  <br>
</tmpl_loop>
```

This will display Country names and their Continent.  
However, there are no controls, no pagination, no title, etc.

Complete template for World countries:

`world_sql_template.txt`



# Placeholder Parameters

- Are used to create dynamic queries
- Indicate a value in a query

```
select Name from Country where Name = ?
```

The ? represents a placeholder.

- No need to quote the placeholder



# Placeholder Parameters

Following input types are supported:

- Integer `42`
- String `foobar`
- HTTP Form variable  
`form:field1`
- Result of a previous query  
`query1:Name`

# Example form parameter

**Query1:**

Preprocess macros on query?  Yes  No

Placeholder Parameters

Prequery statements

Toggle editor

Query

Toggle editor

Database Link

Adding ?c=Asia will display all countries in Asia.



# Nested queries - Intro

- Not the same as **sql subquery** !
- For each result of query1, the nested query2 will be performed.
- WebGUI supports up to 5 nested queries.
- Can be used to create lists with main / sub categories.



# Nested queries – example

- Using nested queries to display a list with all continents and their countries
  - Continent
    - Country
    - Country
  - Continent

# Nested queries – query1

**Query1:**

Preprocess macros on query?  Yes  No

Placeholder Parameters

Prequery statements

Toggle editor

**Query**

Toggle editor

Database Link

First query will give a list of Continents

# Nested queries – query2

Query2:

Preprocess macros on query?  Yes  No

Placeholder Parameters

Prequery statements

Query  Toggle editor  
`SELECT Name FROM Country WHERE Continent = ?`

Database Link  Toggle editor  
World SampleDB

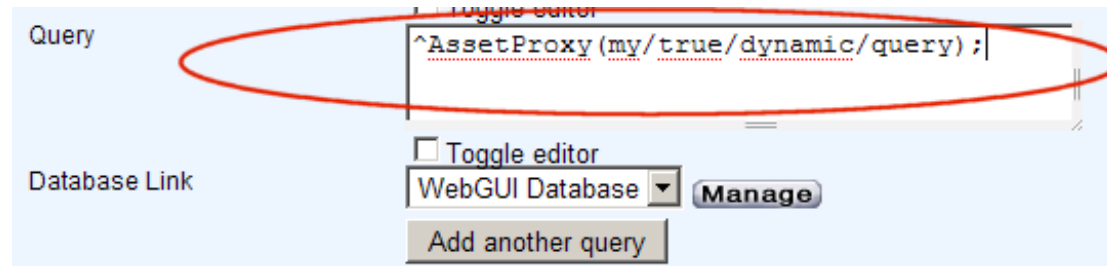
Second query will give a list of Countries for each Continent



# Nested queries - thoughts

- + Can combine data from different sources.
- + Ability to create output without the need to program
- Performance intensive

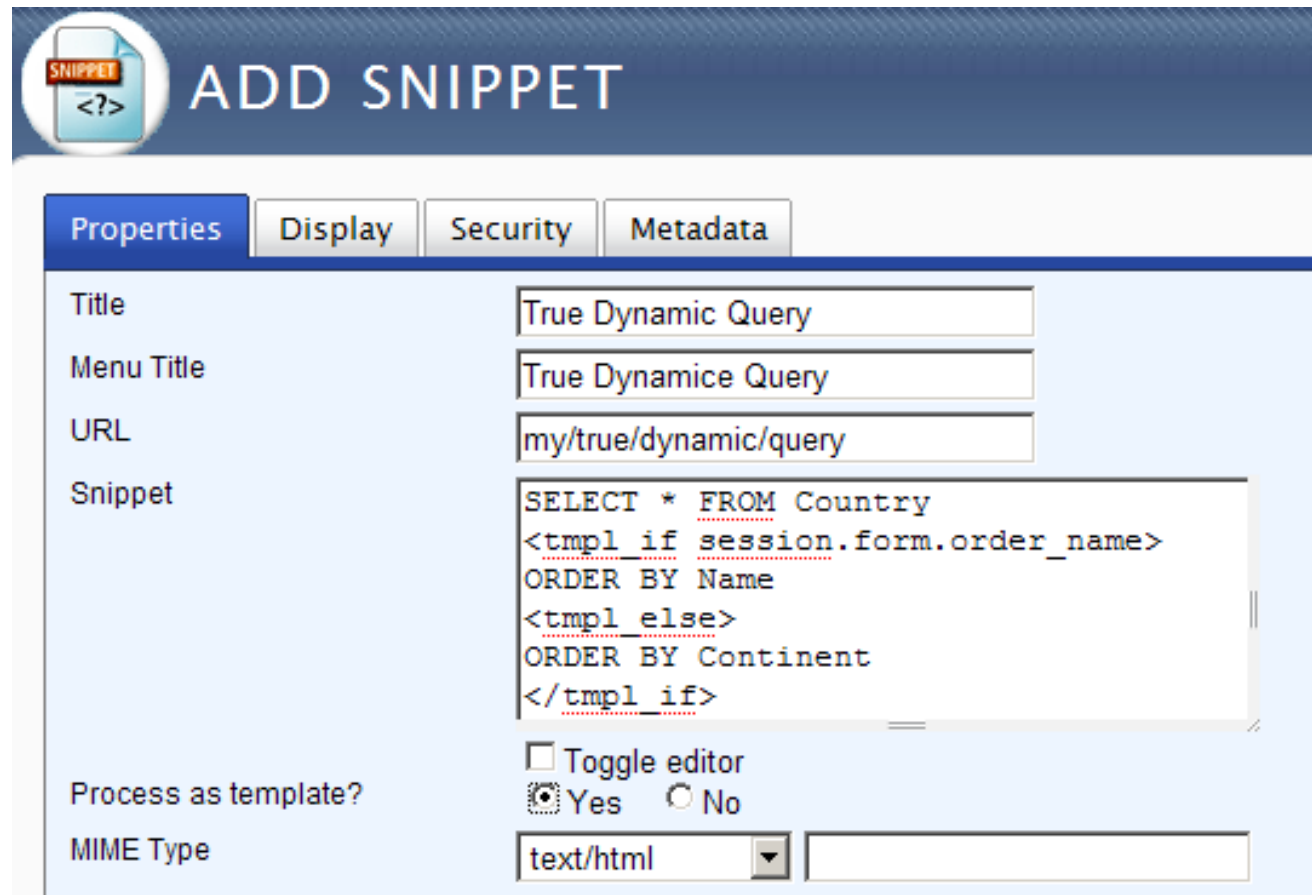
# Tricks – True Dynamic Query



The query is a snippet, which we call using the AssetProxy macro.

Since it's a snippet, we can use template logic to dynamically create the query.

# Snippet as a query



**ADD SNIPPET**

Properties | Display | Security | Metadata

Title: True Dynamic Query

Menu Title: True Dynamice Query

URL: my/true/dynamic/query

Snippet:  

```
SELECT * FROM Country
<tmpl_if session.form.order_name>
ORDER BY Name
<tmpl_else>
ORDER BY Continent
</tmpl_if>
```

Process as template?  Toggle editor  Yes  No

MIME Type: text/html



End of presentation

questions ?