Interval App User Manual

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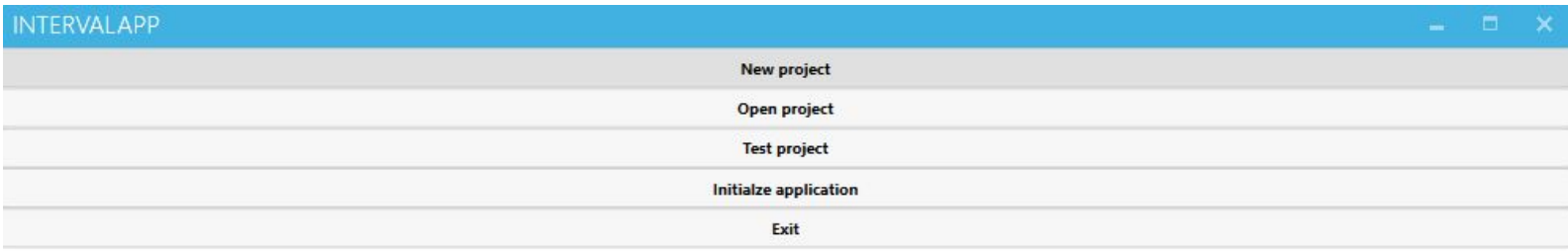
1. Startup app

1. Create file connection.txt with your connection string.
2. In the main menu click *Initialize project* button. This will create required tables, triggers and sequence in your database and test project with *TES* will be created.

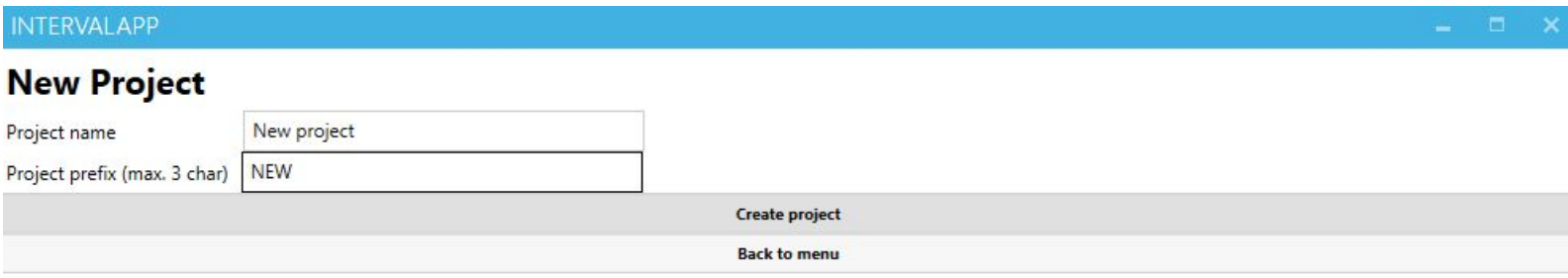
3. App is ready to use

2. Create new project

1. In the main menu choose *New project* button.



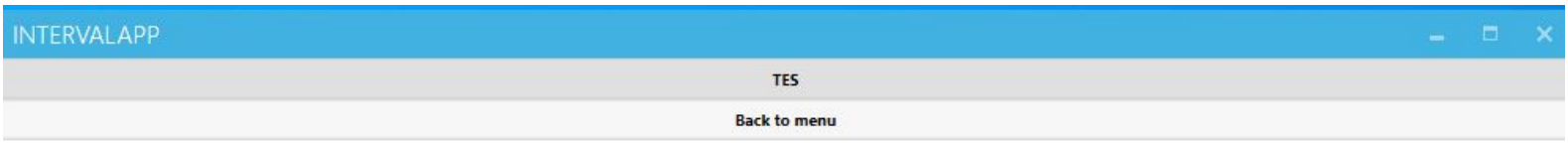
2. Fill with unique values name and prefix fields.



3. Open existing project

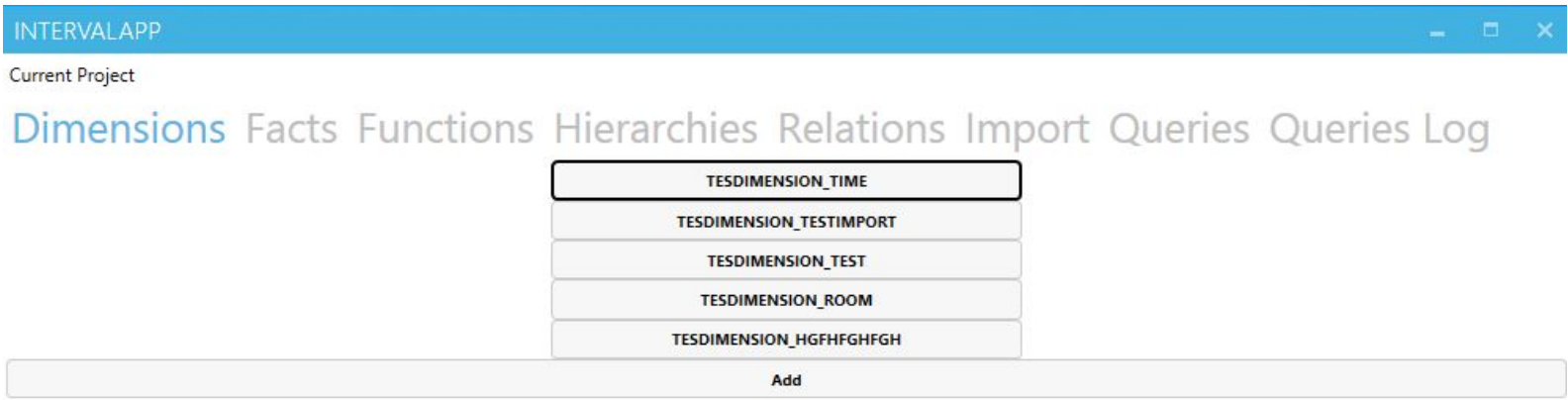
1. In the main menu choose *Open project* button.

2. Click button with selected project.



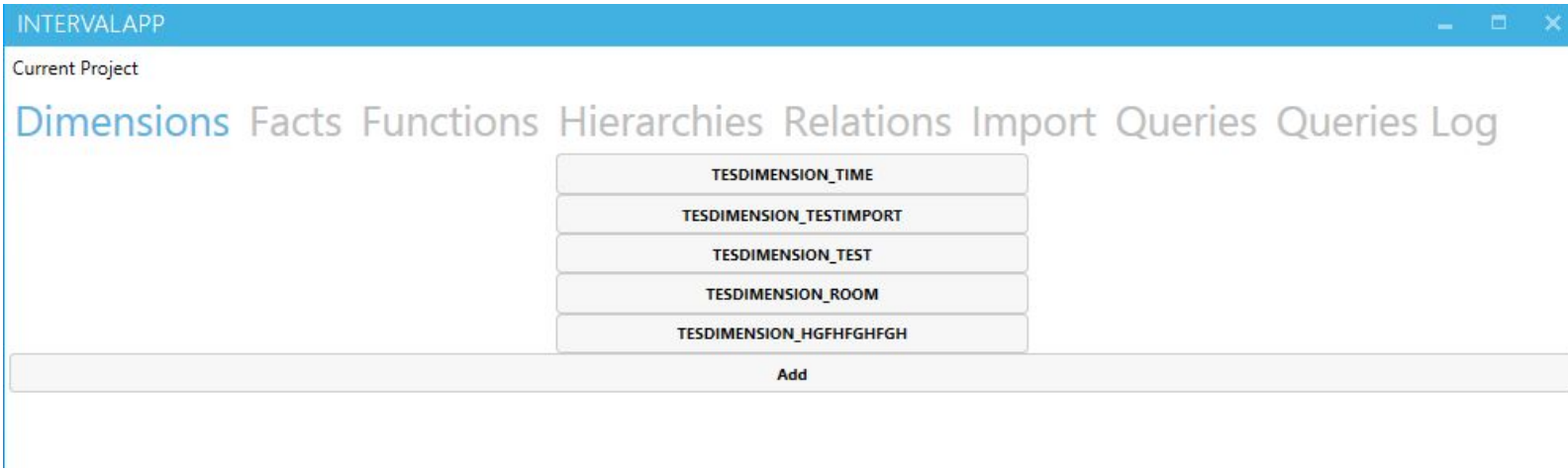
4. Main view - project page

- Contains tabs with all features needed to create your own data warehouse and to create interval functions. App contains
  - creating dimension, facts, relations, hierarchies,
  - creating function table with calculated slopes and intercepts,
  - importing data to tables,
  - executing queries,
  - saving queries, executing time and comments,
  - creating bar plots with selected queries logs

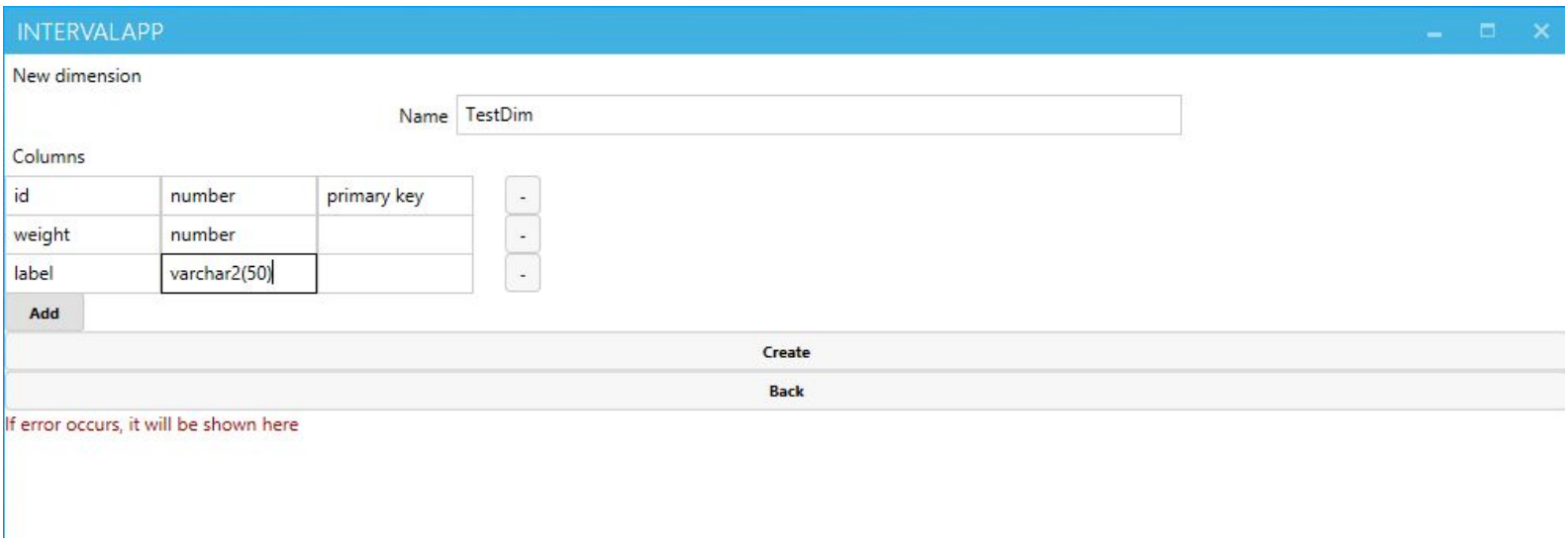


5. Create dimension

1. Go to *Dimensions* tab
2. Click *Add* button



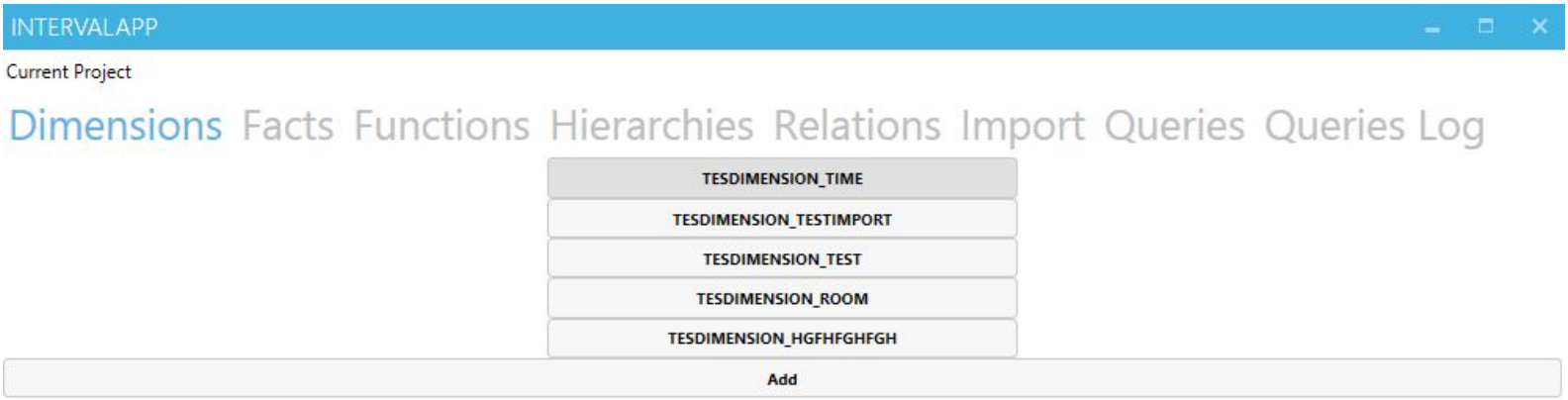
3. Put table name then columns name, columns type and column constraint.



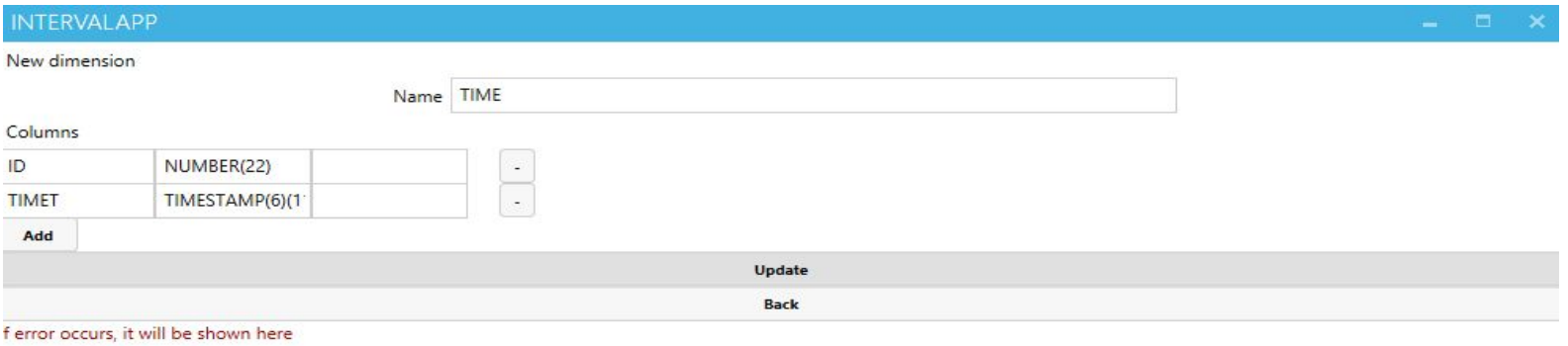
You can add new column with *Add* button or delete extra columns with **-** button

6. Update dimension

1. Go to *Dimensions* tab
2. Click dimension table button

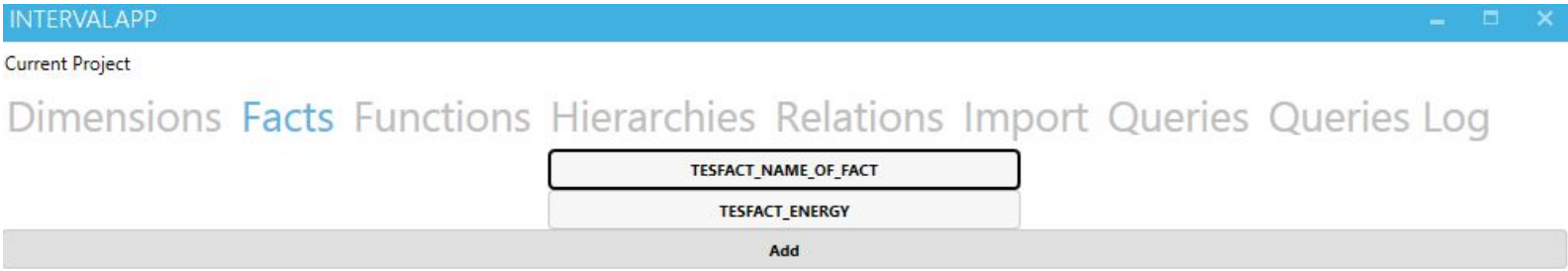


3. Change table name, columns name, columns type and column constraint.
4. Click *Update* button.
   You can add new column with *Add* button or delete extra columns with - button
   Important thing is that table will be dropped before creating updated version.

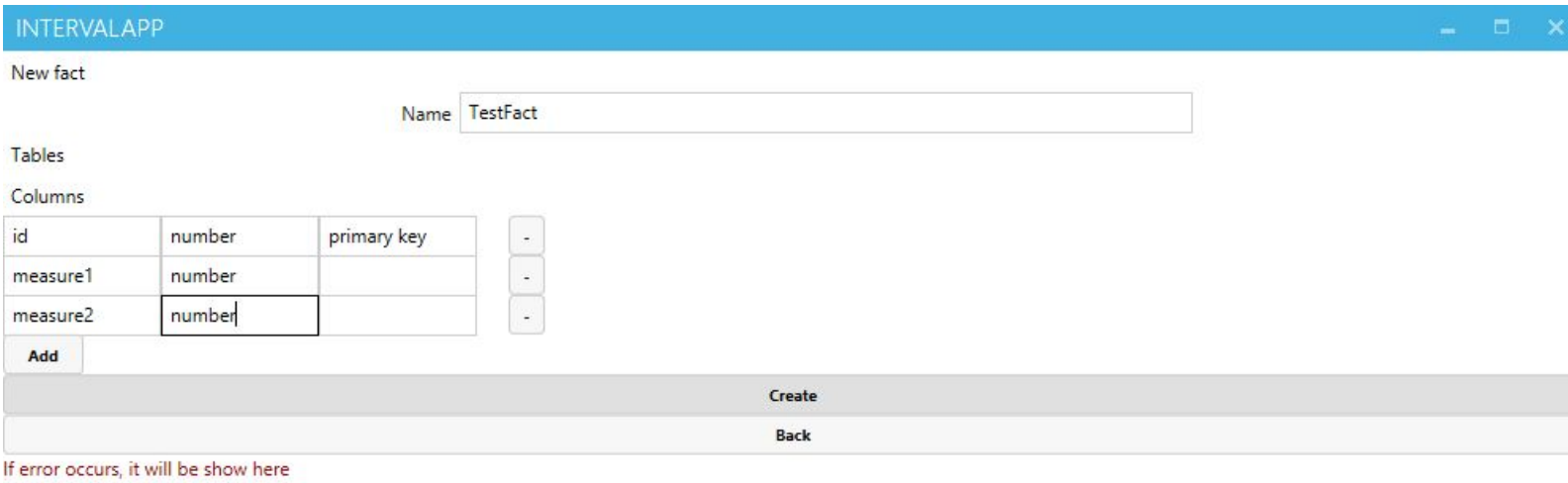


7. Create fact

1. Go to *Facts* tab.
2. Click *Add* button.

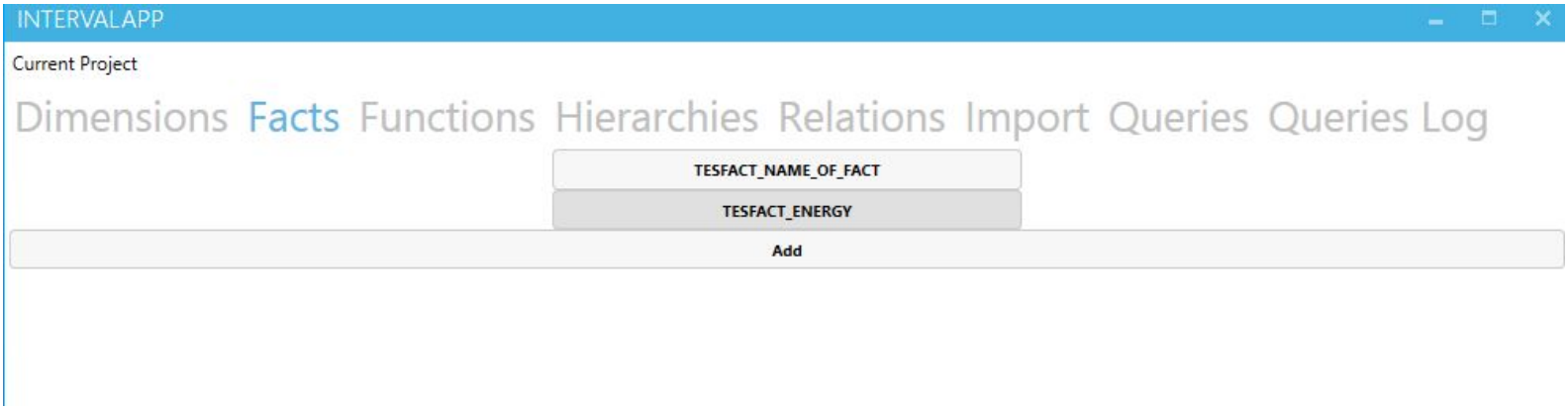


3. Fill table name, columns name, columns type and column constraint fields. You can add new column with *Add* button or delete extra columns with - button

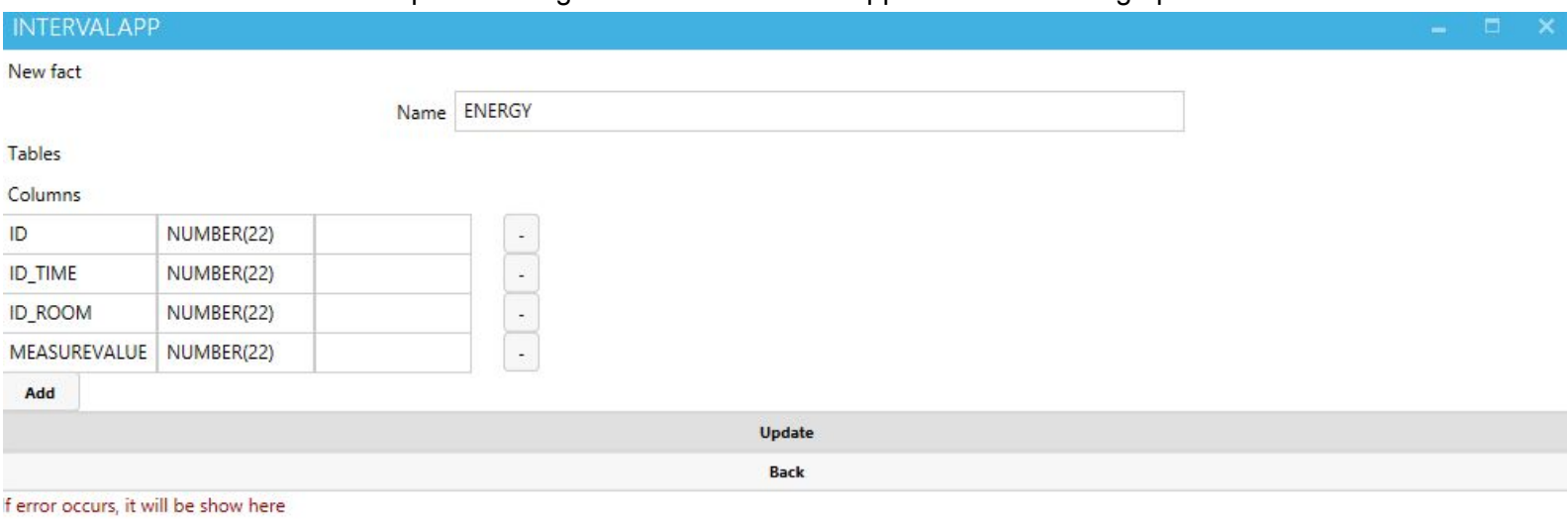


8. Update fact

1. Go to *Facts* tab.
2. Click fact table button.

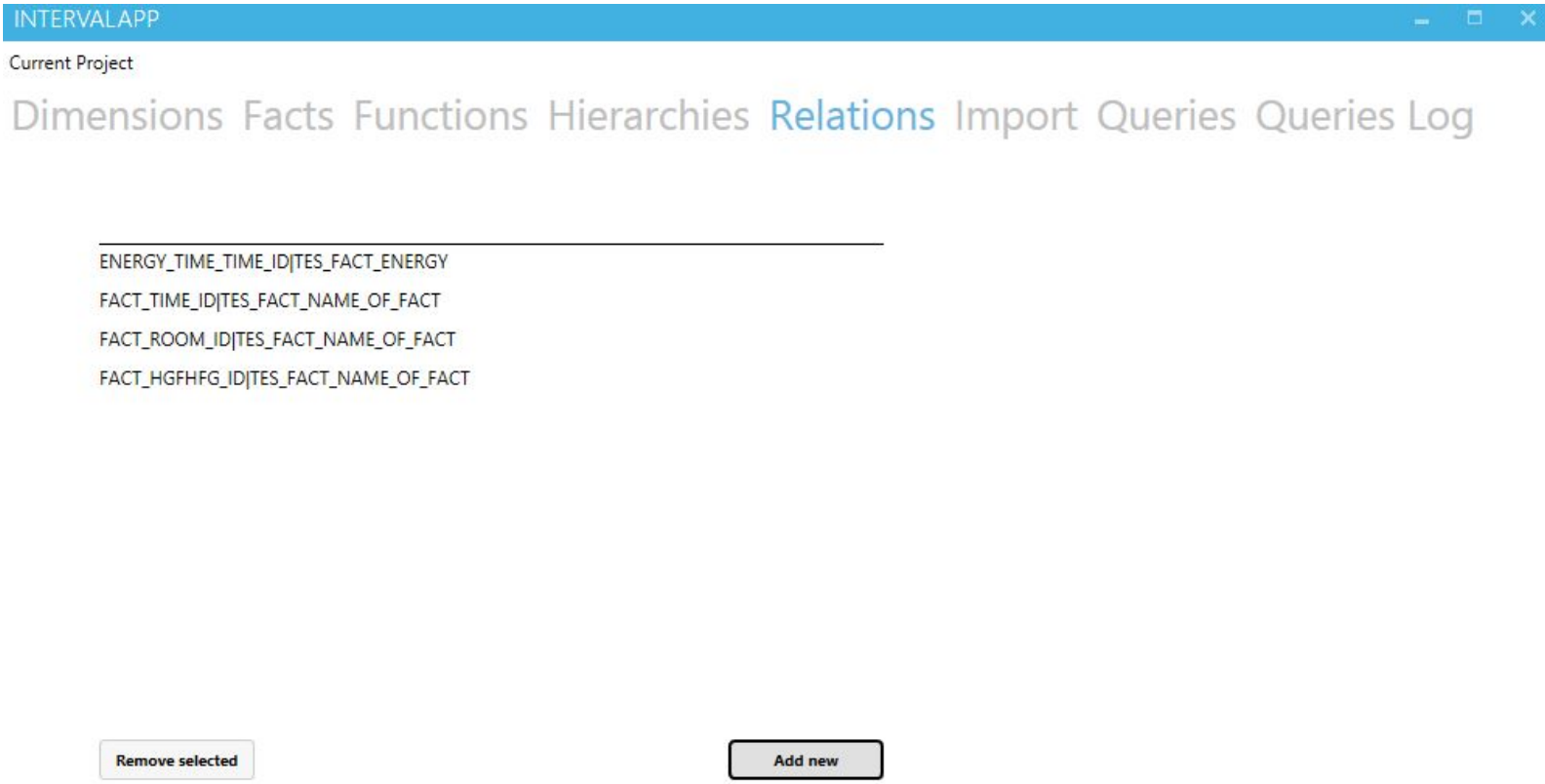


3. Change table name, columns name, columns type or column constraint.
4. Click *Update* button.
   You can add new column with *Add* button or delete extra columns with - button.
   Important thing is that table will be dropped before creating updated version.

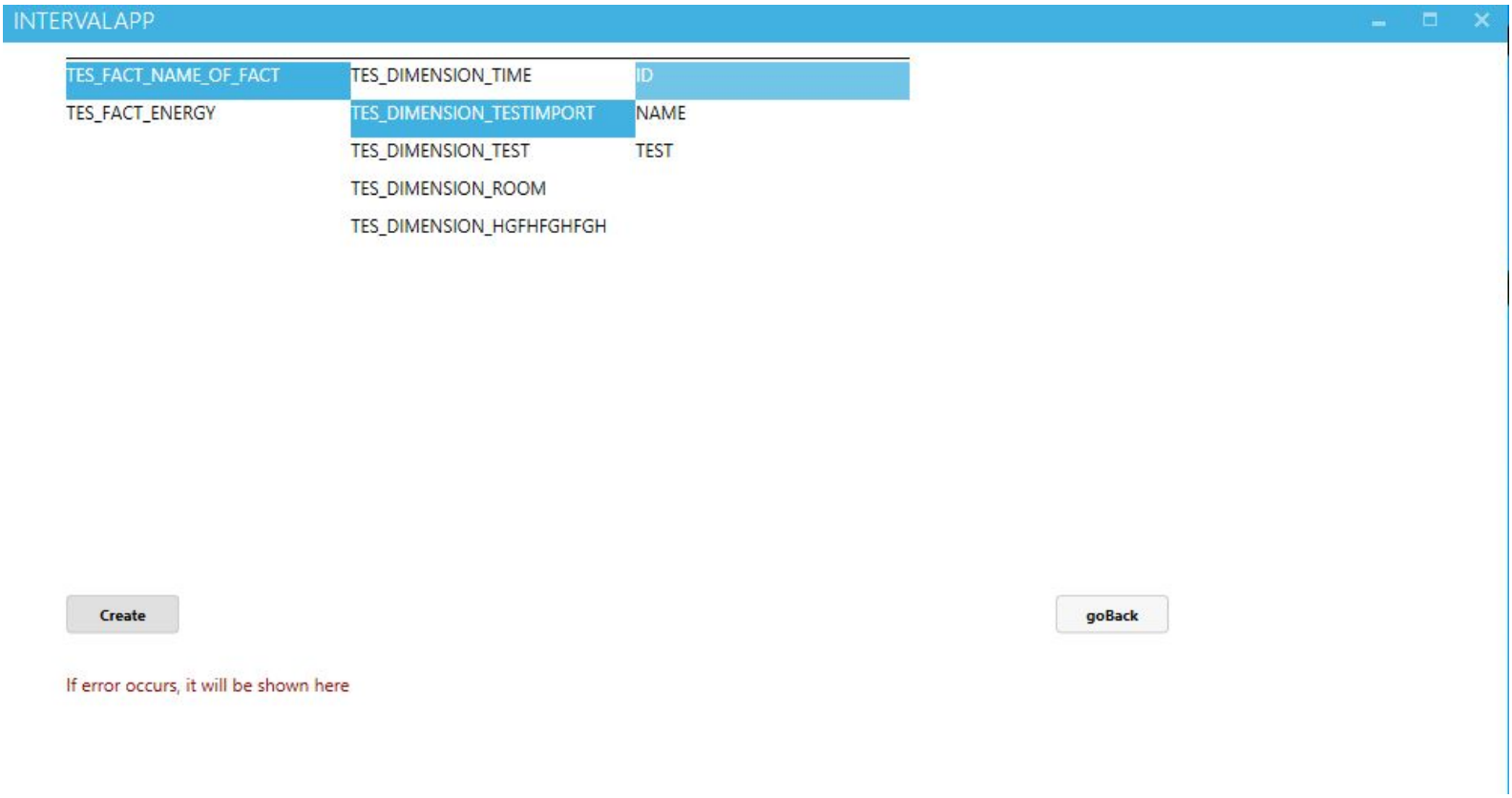


9. Create relation

1. Go to *Relations* tab.
2. Click *Add new* button.

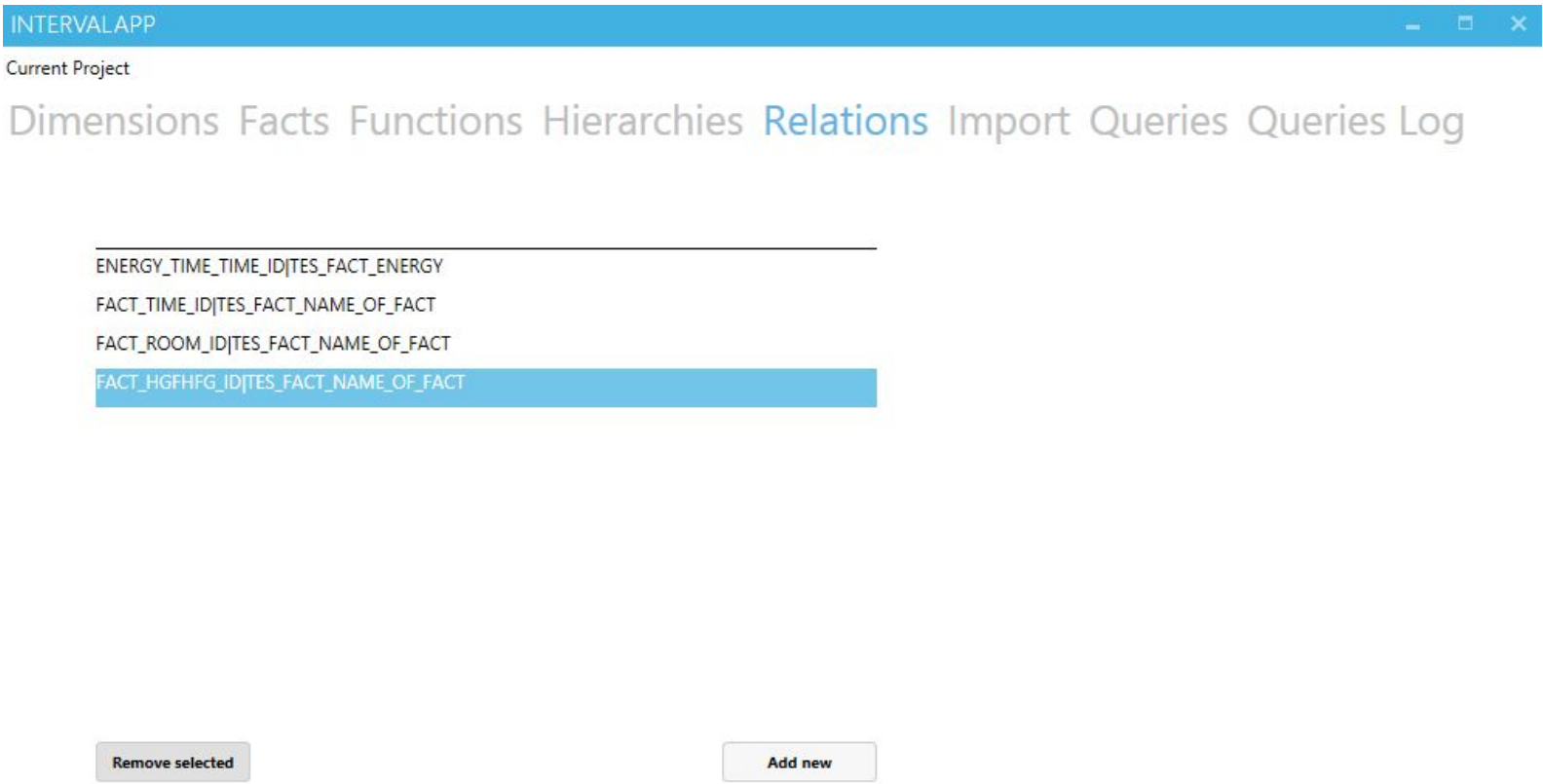


3. In the first column select FACT in which you want to create foreign key. In example its TES_FACT_NAME_OF_FACT.
4. In the second column select DIMENSION table which contains column you want you want to reference in the created foreign key. In example it's TES_DIMENSION_TESTIMPORT
5. Finally in the third column select column you want to reference - it should be column with either UNIQUE or PRIMARY KEY constraint otherwise there will be an error.
6. Click *Create* button.


INTERVALAPP
TES_FACT_NAME_OF_FACT
TES_FACT_ENERGY
TES_DIMENSION_TIME
TES_DIMENSION_TESTIMPORT
TES_DIMENSION_TEST
TES_DIMENSION_ROOM
TES_DIMENSION_HGFHFGHFGH
ID
NAME
TEST
Create
goBack
If error occurs, it will be shown here

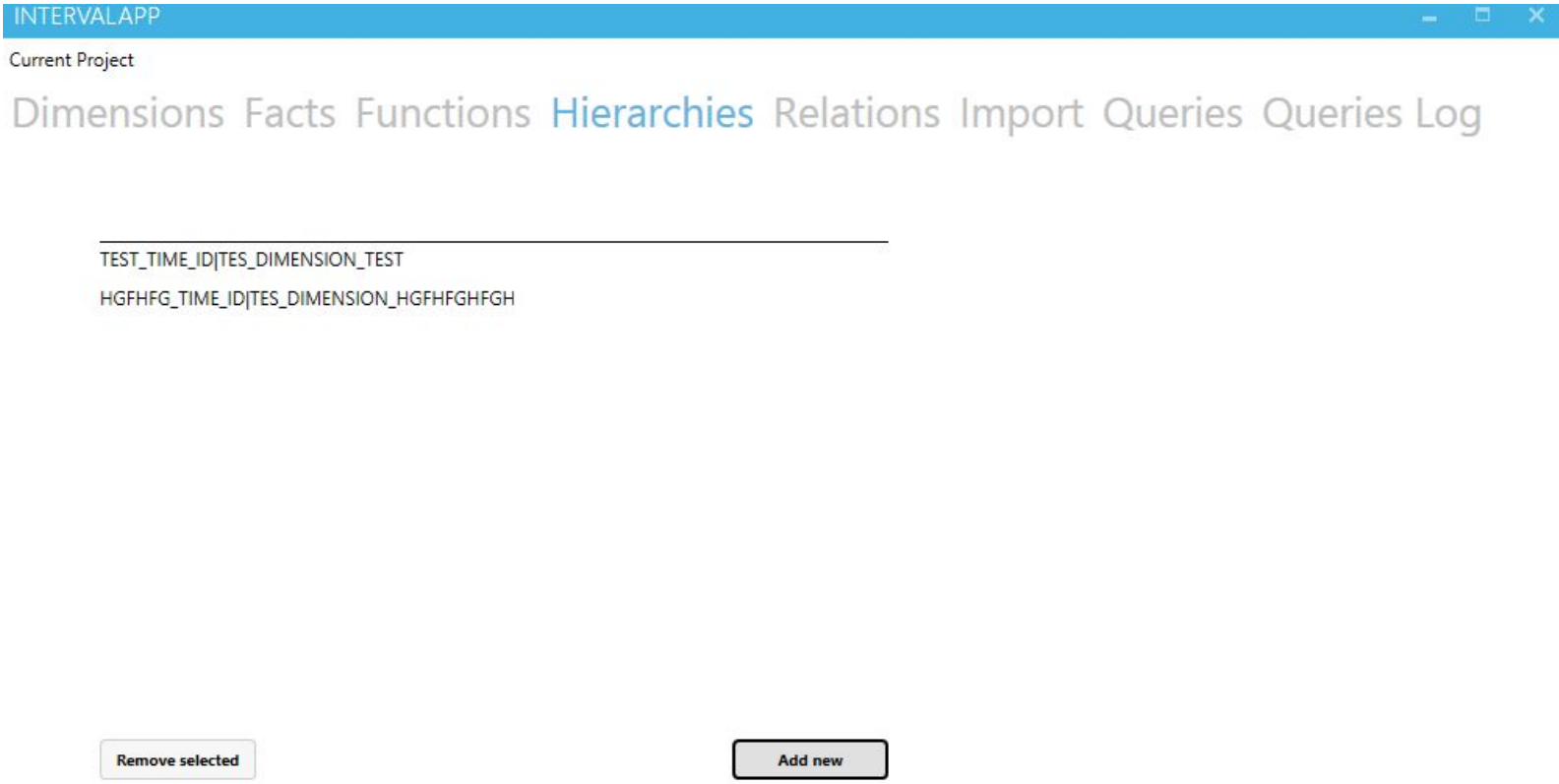
10. Delete relation

1. Go to *Relations* tab
2. Select relation.
3. Click *Remove selected* button.

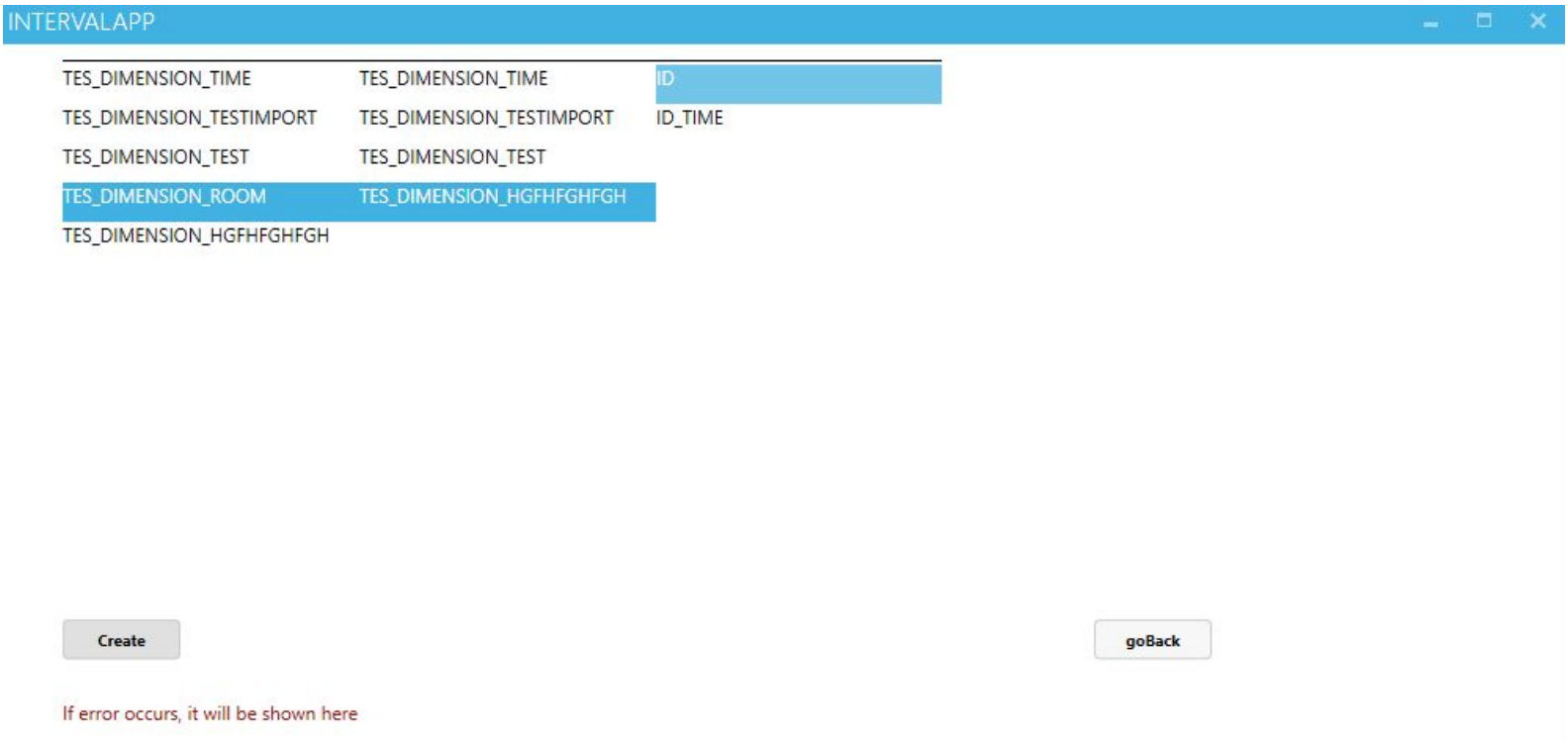


11. Create hierarchy

1. Go to *Hierarchies* tab.
2. Click *Add new* button.

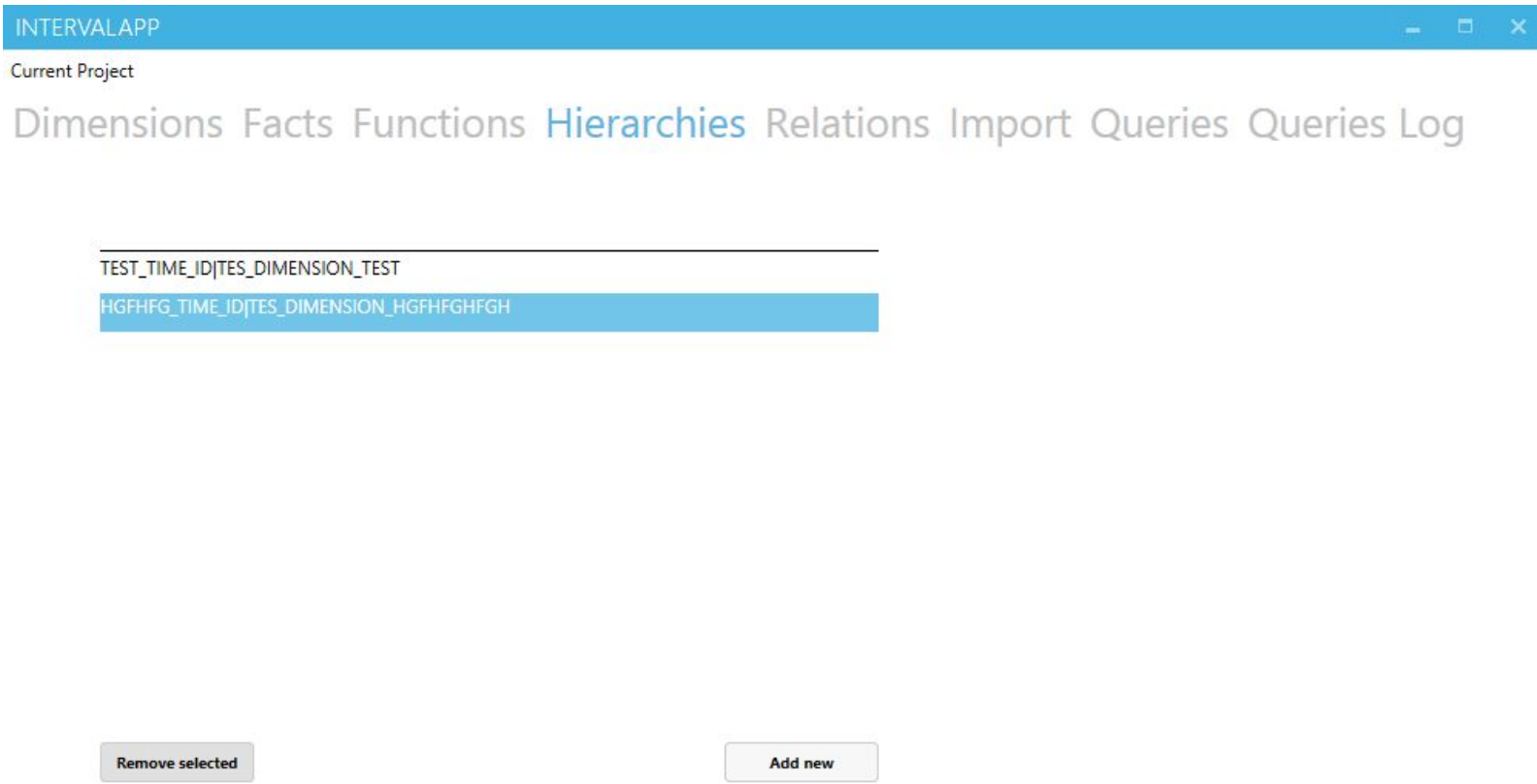


3. In the first column select DIMENSION in which you want to create foreign key. In example its TES_DIMENSION_ROOM.
4. In the second column select DIMENSION table which contains column you want you want to reference in the created foreign key. In example it's TES_DIMENSION_HFHFHGHFH
5. Finally in the third column select column you want to reference - it should be column with either UNIQUE or PRIMARY KEY constraint otherwise there will be an error.
6. Click *Create* button.


INTERVALAPP
TES_DIMENSION_TIME
TES_DIMENSION_TESTIMPORT
TES_DIMENSION_TEST
TES_DIMENSION_ROOM
TES_DIMENSION_HGFHFGHFGH
TES_DIMENSION_TIME
TES_DIMENSION_TESTIMPORT
TES_DIMENSION_TEST
TES_DIMENSION_HGFHFGHFGH
ID
ID_TIME
Create
goBack
If error occurs, it will be shown here

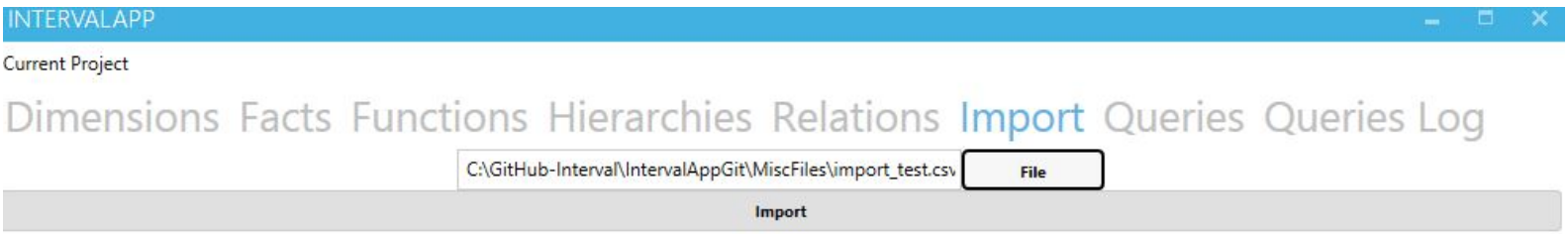
12. Delete hierarchy

1. Go to *Hierarchies* tab
2. Select hierarchy.
3. Click *Remove selected* button.



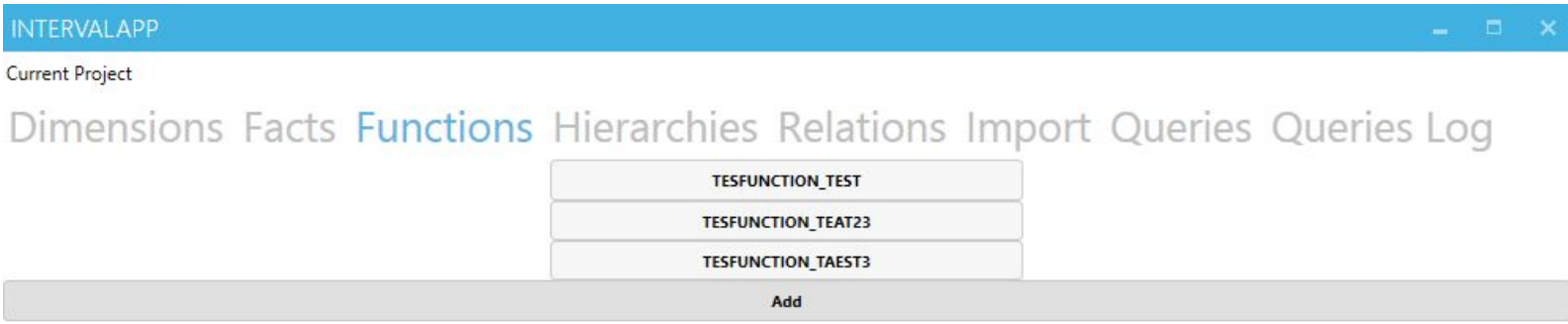
13. Import data

1. Go to *Import* tab.
2. Fill path field or use *Windows* file dialog to choose *csv* file.
3. Click *Import* button.

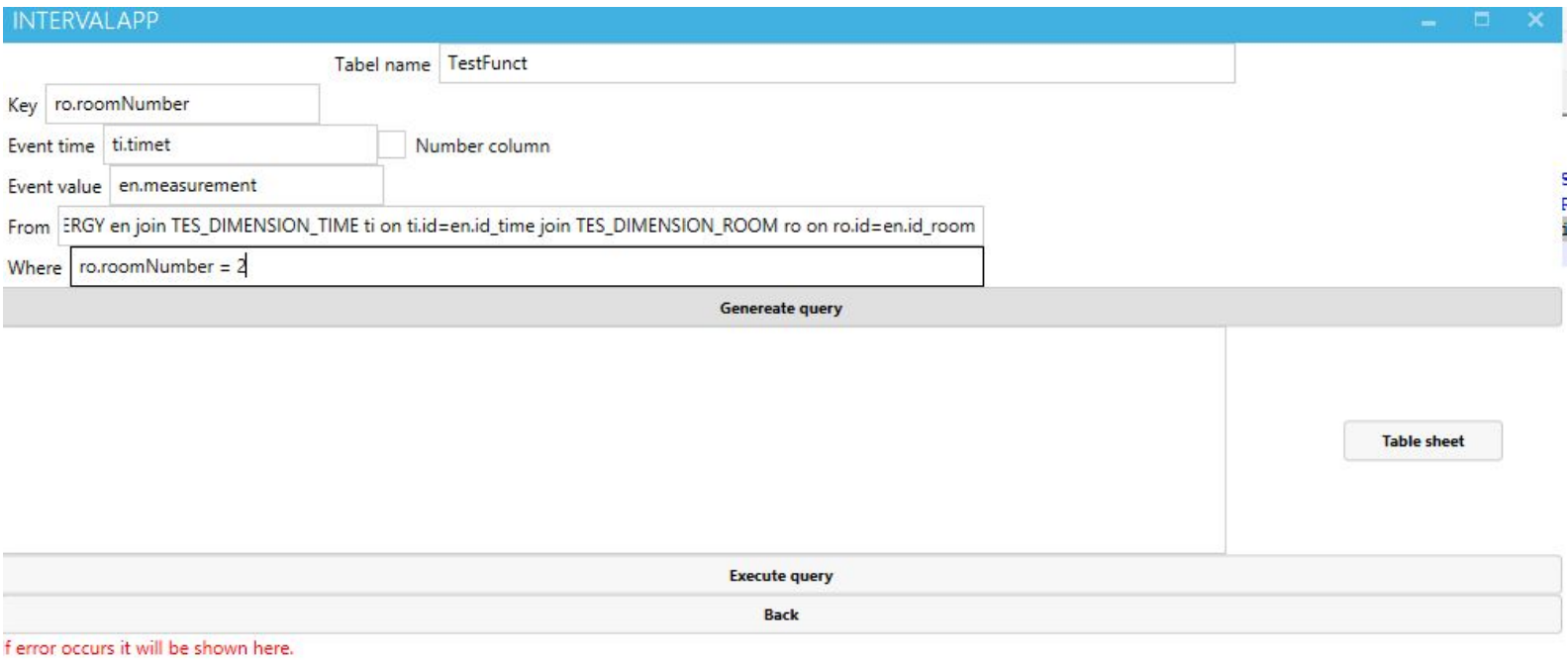


14. Create function

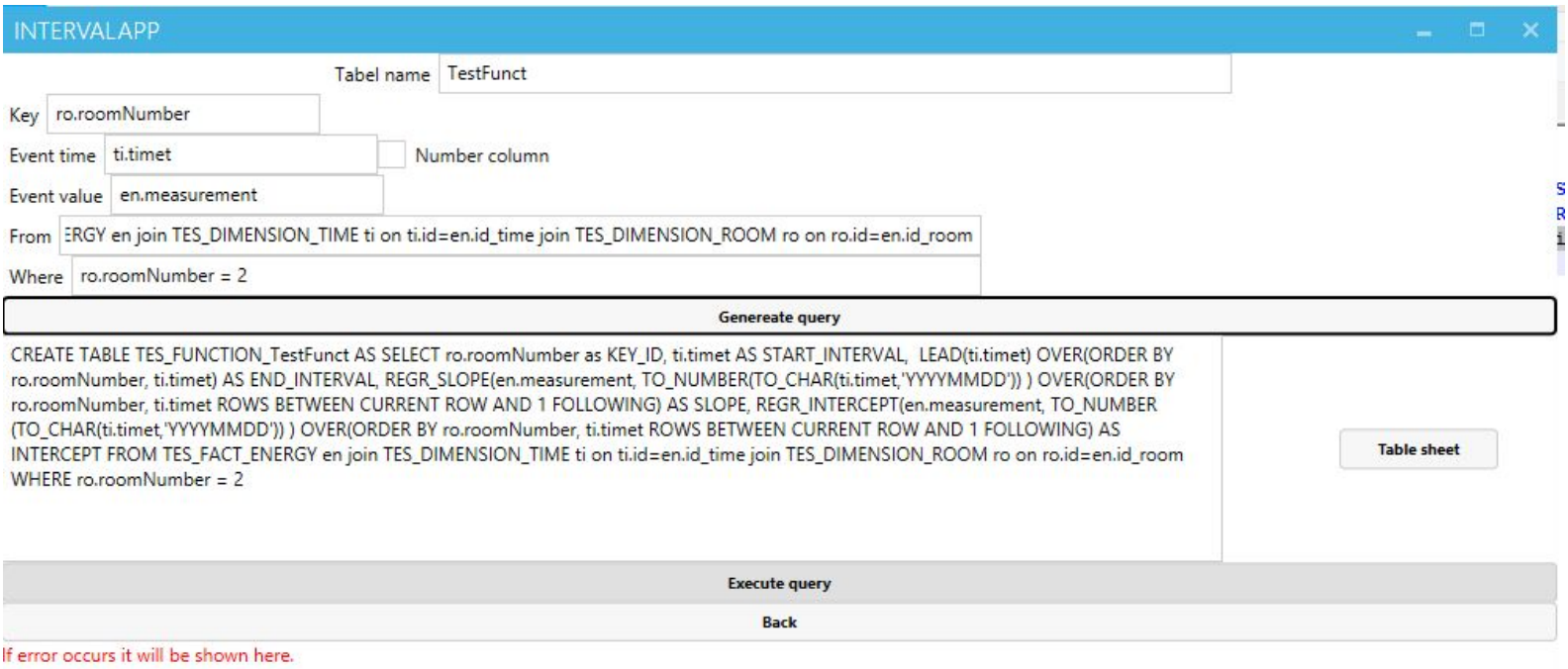
1. Go to *Functions* tab
2. Click *Add* button



3. Fill all required fields with columns names with prefixes if needed(*Table name, Key* - information to identify row, *Event time* - *Datetime* or *Number*, *Event value, From*).
4. Fill required field - *From* with tables names and joins.
5. Fill optional field *Where* if needed.
6. Click *Generate query* button.

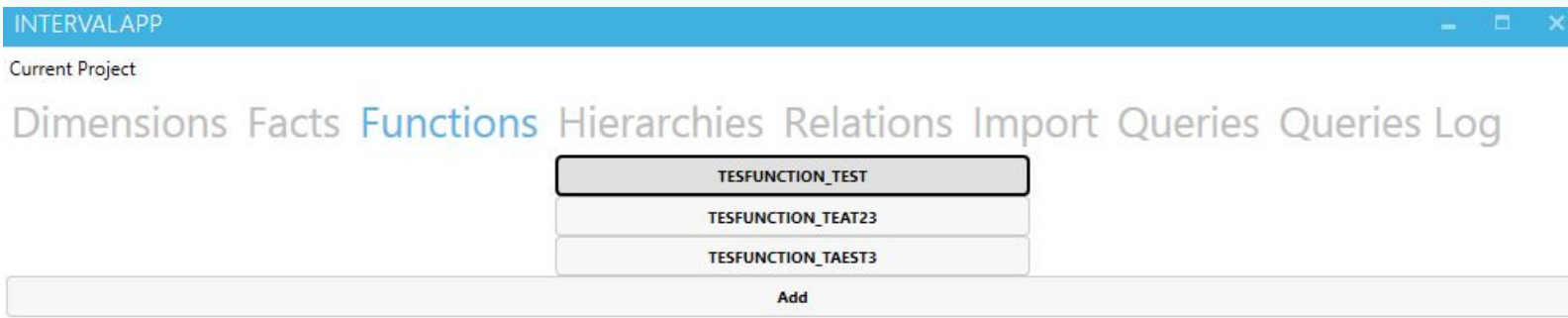


7. App will generate query to create function table. User can modify it if needed.
8. Click *Execute query* if everything is fine
   User can use *Table sheet* button to open new window which contains all projects tables with columns name



15. Delete function

1. Go to *Functions* tab
2. Select function table button



3. Click *Delete function* button.

INTERVALAPP

Table name TEAT23

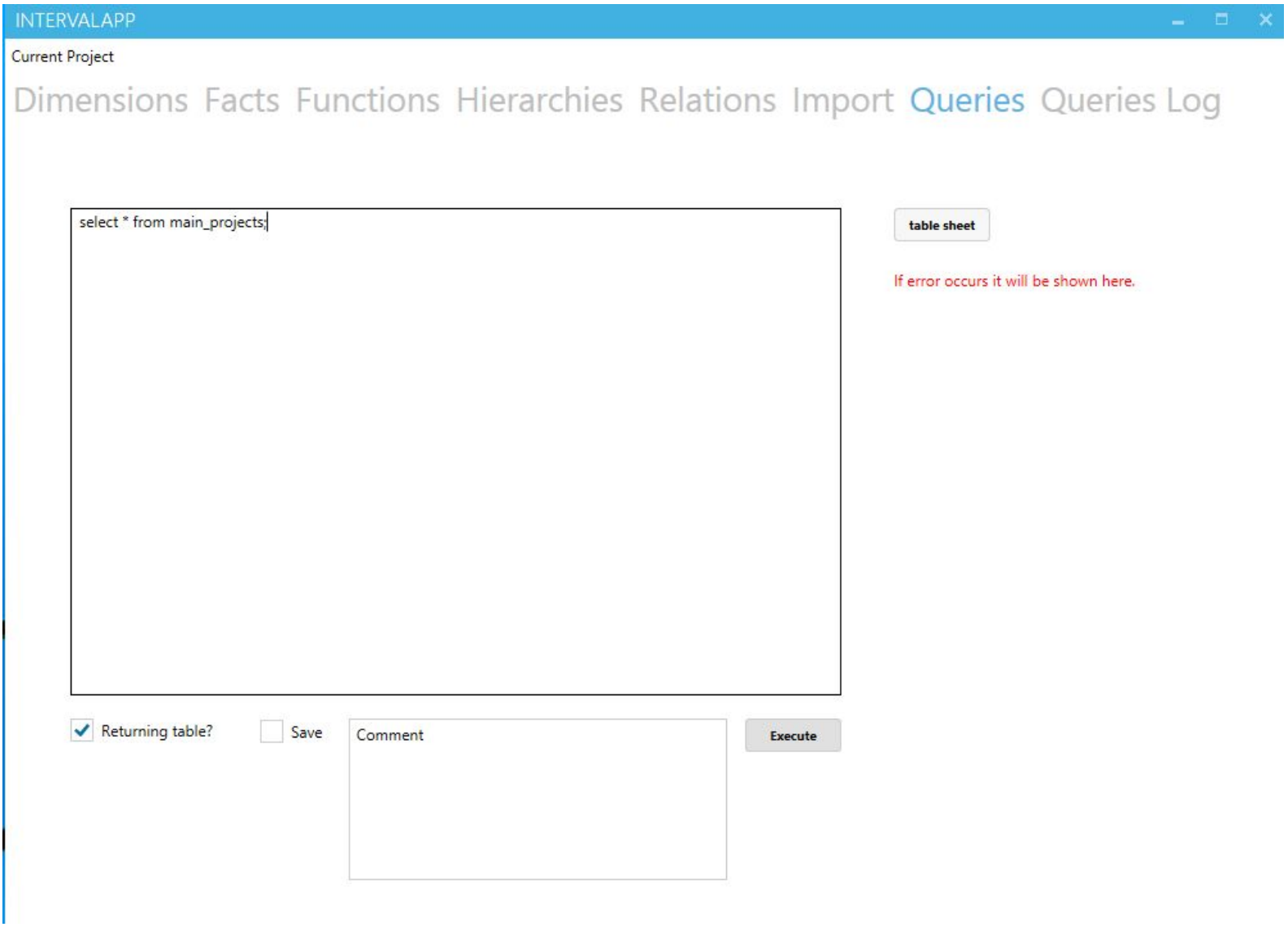
Delete function

KEYID	STARTINTERVAL	ENDINTERVAL	SLOPE	INTERCEPT
1	1/1/2012 10:00:00 AM	1/2/2012 10:00:00 AM	1	-20120100
1	1/2/2012 10:00:00 AM	1/3/2012 10:00:00 AM	3	-60360304
1	1/3/2012 10:00:00 AM	1/4/2012 10:00:00 AM	4	-80480407
1	1/4/2012 10:00:00 AM	1/5/2012 10:00:00 AM	9	-181080927
1	1/5/2012 10:00:00 AM	1/6/2012 10:00:00 AM	-8	160960858
1	1/6/2012 10:00:00 AM	1/7/2012 10:00:00 AM	12	-241441262
1	1/7/2012 10:00:00 AM	1/8/2012 10:00:00 AM	12	-241441262
1	1/8/2012 10:00:00 AM	1/9/2012 10:00:00 AM	1	-20120074

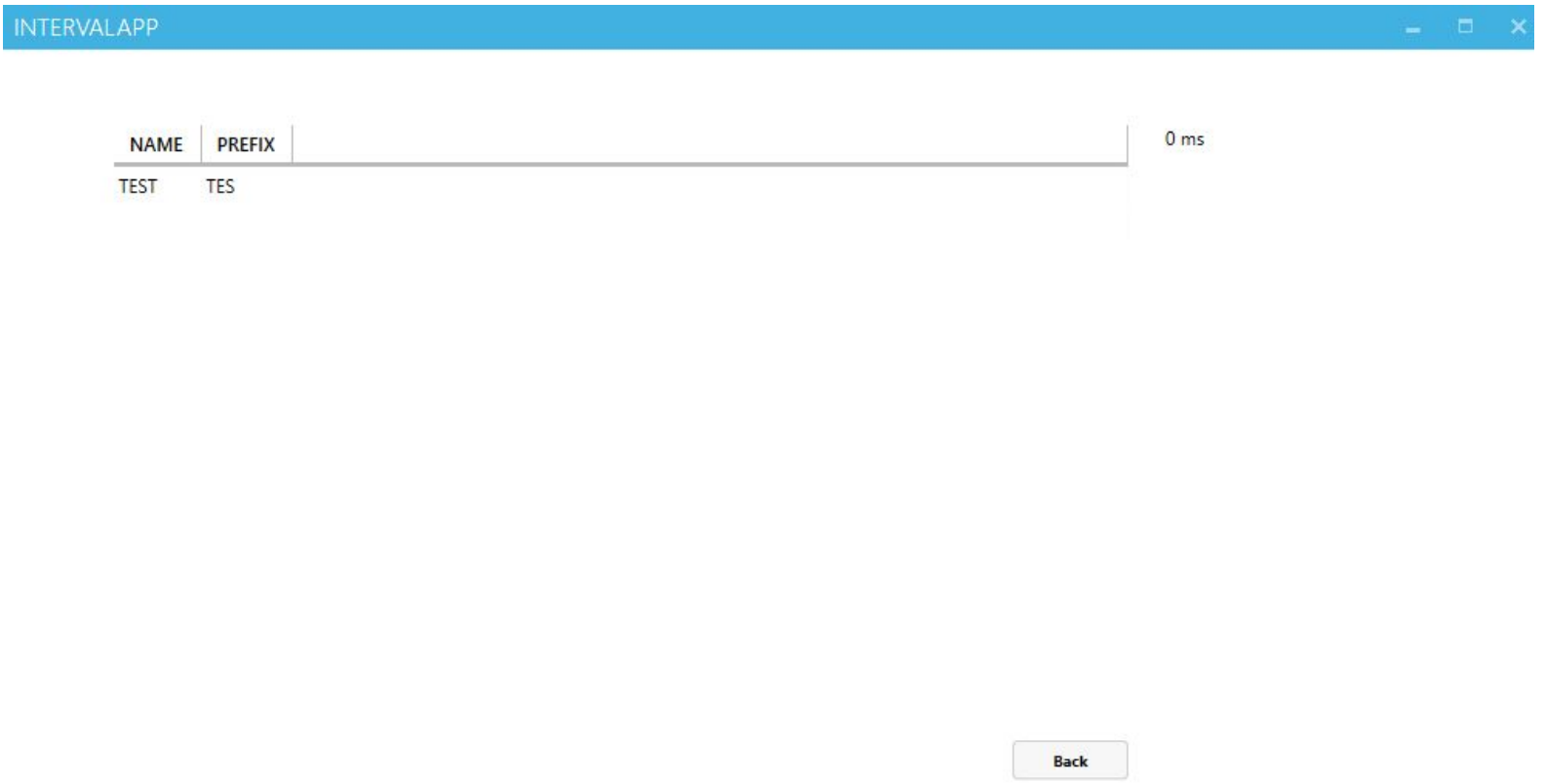
Back

16. Execute query

1. Go to *Queries* tab.
2. Write your query into main field.
3. Choose if your query should return table (checkbox *Returning table?* selected) or no.
4. Click *Execute* button.

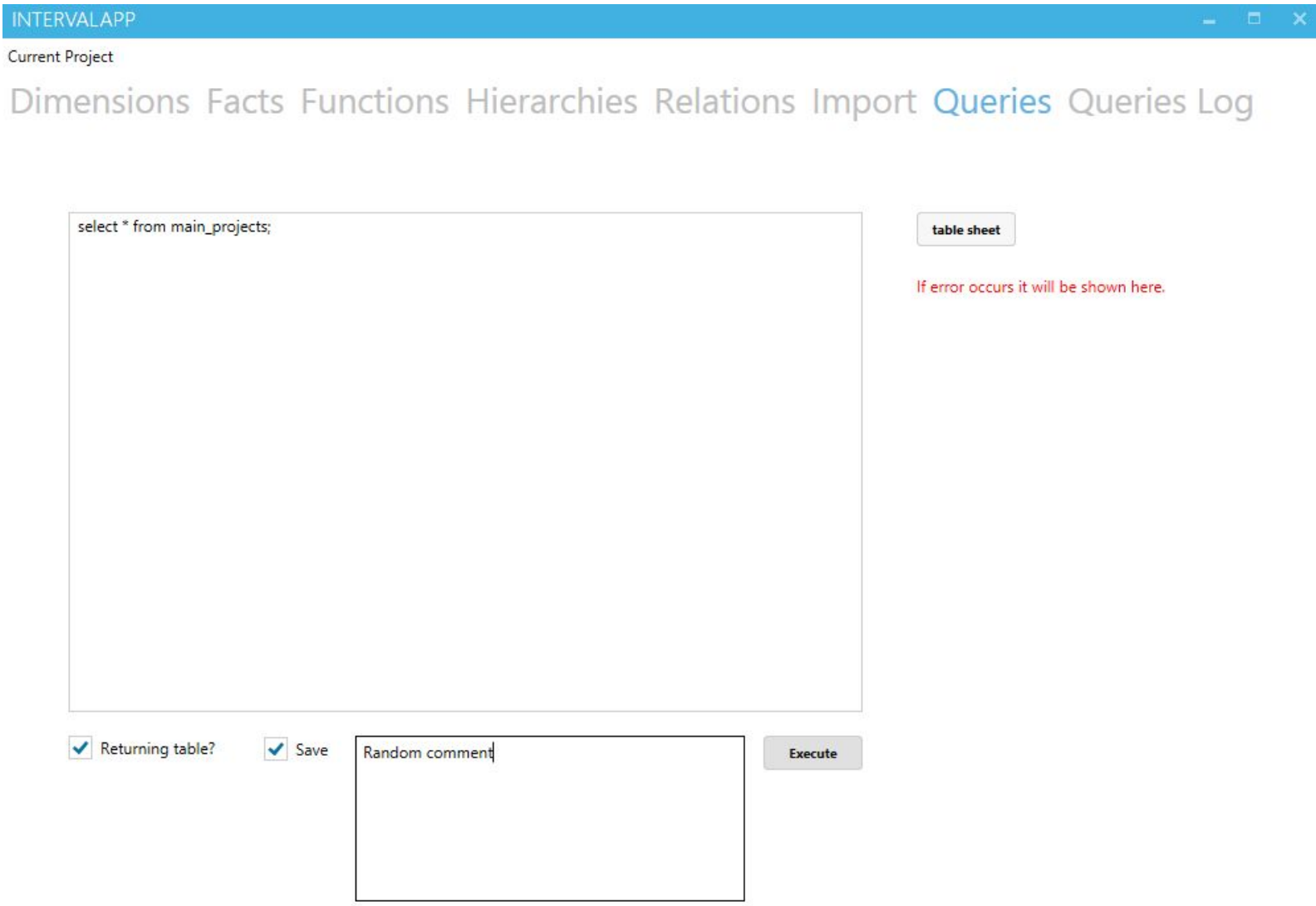


5. If in 16.3 checkbox was select, app will open new window with result



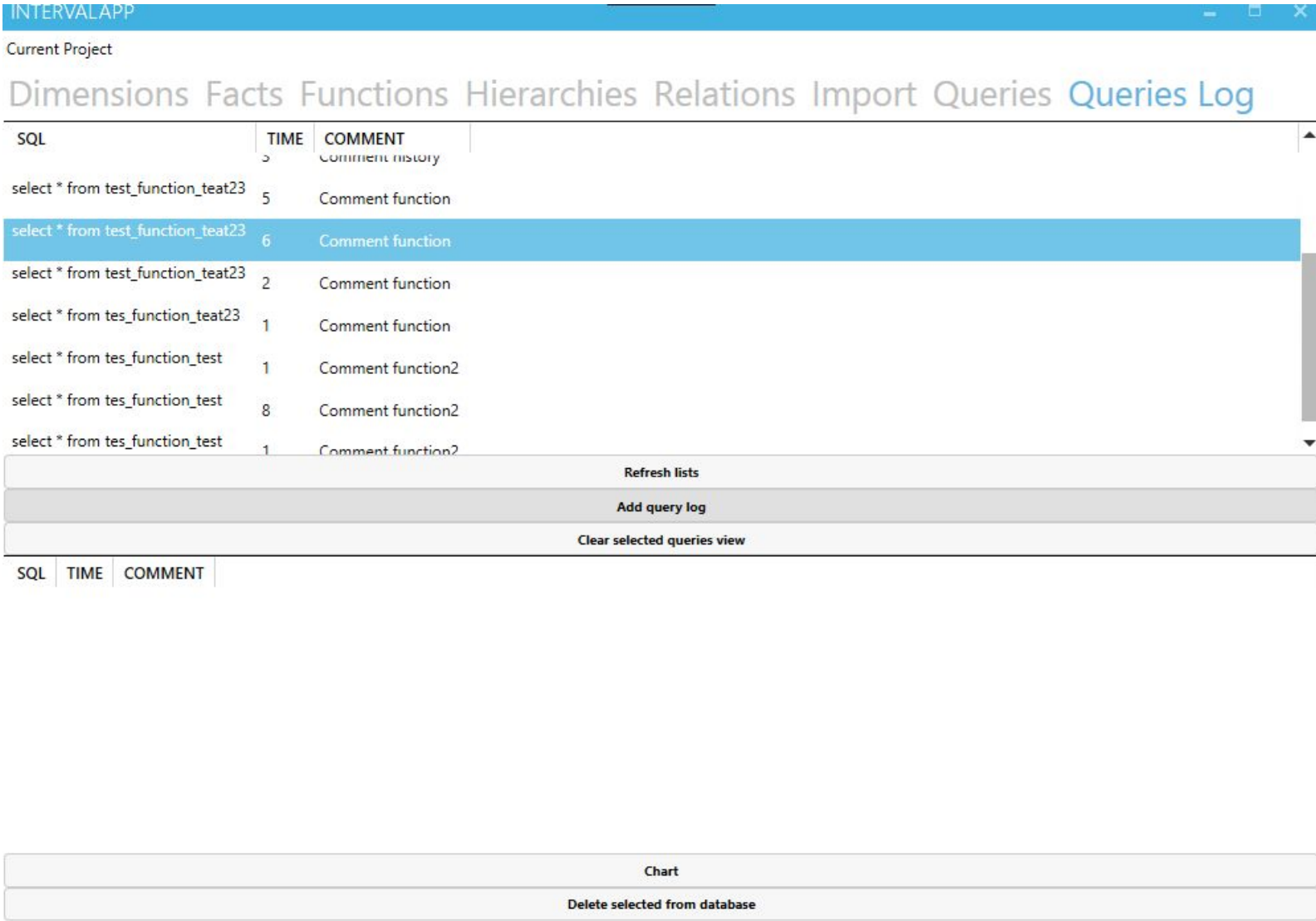
17. Save query

1. Go to *Queries* tab.
2. Write your query into main field.
3. Choose if your query return table (checkbox *Returning table?* selected) or no.
4. Click *Save* checkbox.
5. Fill *Comment* textbox if needed.
6. Click *Execute* button.
7. If in 16.3 checkbox was select, app will open new window with result
8. Query will be save.


INTERVALAPP
Current Project
Dimensions Facts Functions Hierarchies Relations Import Queries Queries Log
select * from main_projects;
table sheet
If error occurs it will be shown here.
Returning table?
Save
Random comment
Execute

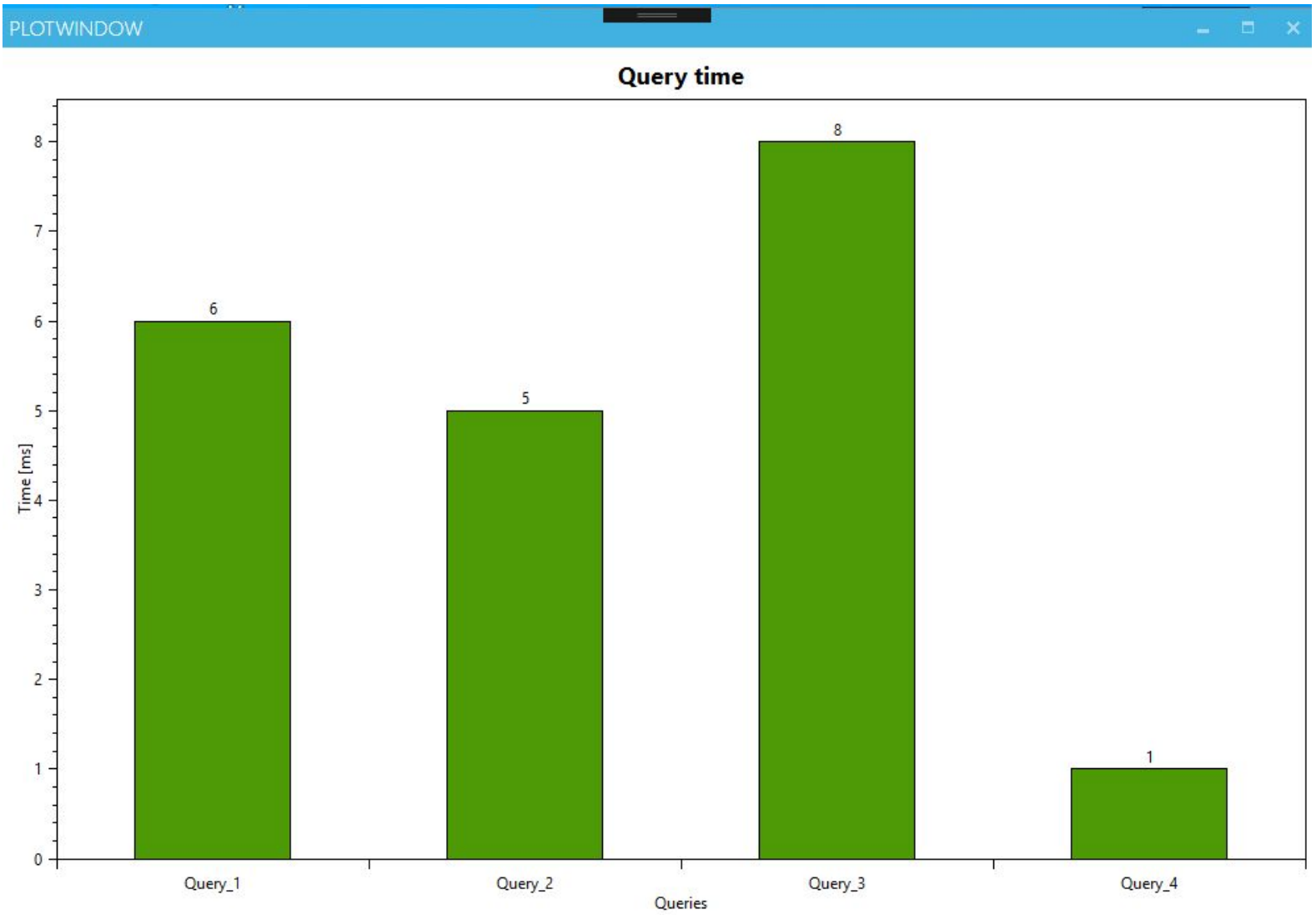
18. Select saved queries and create plot

1. Go to *Queries Log.*
2. Select query log form first list view.
3. Click *Add query log* button to add it to plot.



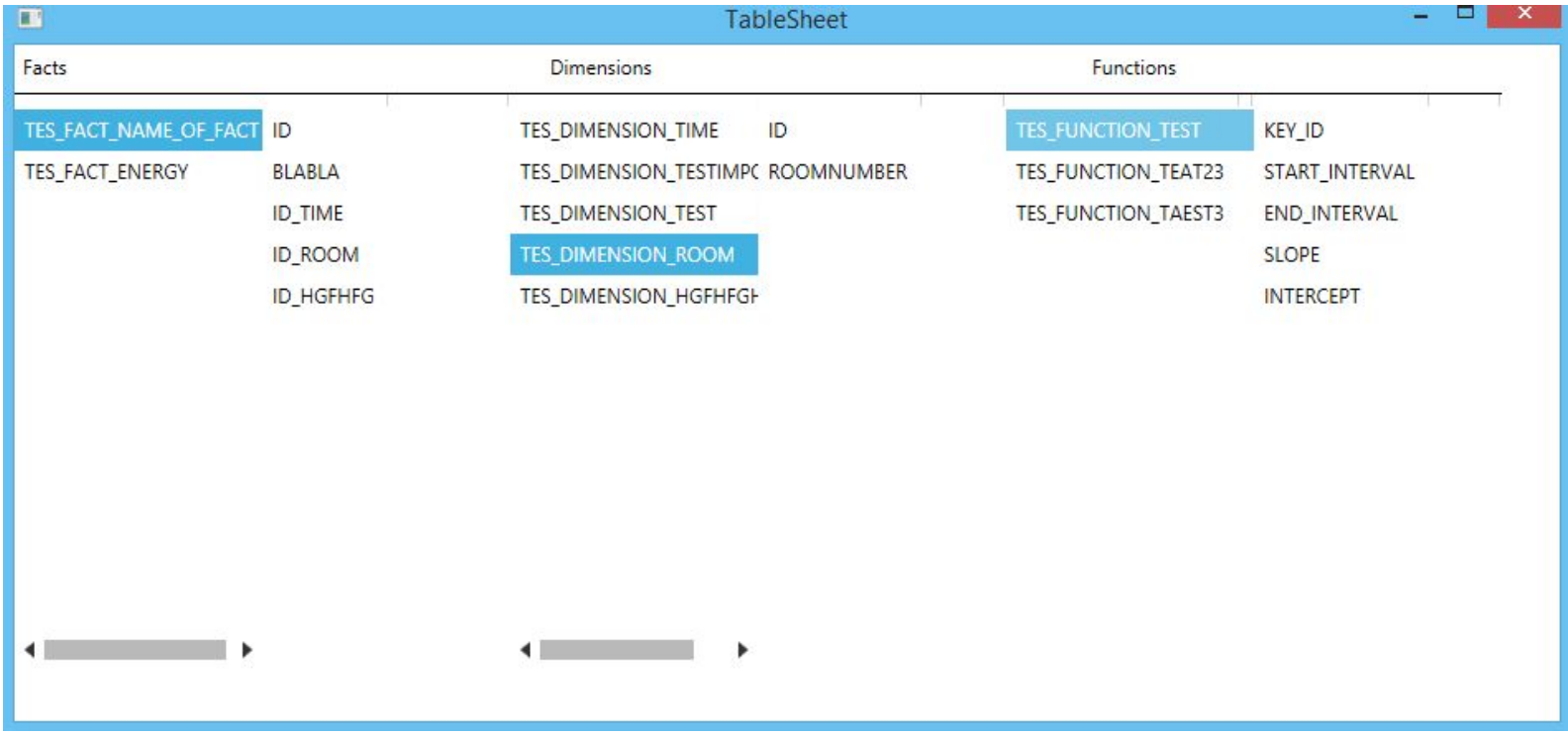
4. Click *Chart* button to how window with bar chart.

- Button *Refresh lists* will download for database all logs.
- Button *Clear selected queries view* to clean second list view.
- Button *Delete selected form database* will delete all query logs in second list view in database.


PLOTWINDOW
Query time
Time [ms]
0
1
2
3
4
5
6
7
8
6
5
8
1
Query_1
Query_2
Query_3
Query_4
Queries

19. Table sheet

- Some views contains *Table sheet* button. This button open new window.
- Window contains tables name in three columns (*Dimensions, Facts, Functions*).
- Click on table name to show columns



20. Import file examples

- Import file must be *csv* file
- Required markers
  - table config row - table; <table_name>;<FACT,FUNCTION,DIMENSION>
  - column config row - columns;<column_name1>|<column type1> <primarykey>;<column_name2>|<column type2> <primarykey>;(...)
  - data - after this next rows must be contains data to insert, this marker must be the last one config markers.
  - insert row - <data1>;<data2>;(..)<dataN>
- Optional markers
  - onlydata - if table exists rows after data marker will be add to database, otherwise you will get MessageBox. **File must contain this marker if table exists.**
  - drop - drop old table if exists and create new one
- Example 1 - create table + insert

```
table;testimport;dimension;
columns;id|int;name|varchar2(50);test|int;
data;
1;test;1;
2;test2;2;
3;test3;3;
4;test4;4;
```

- Example 2 - only data

```
onlydata
table;testimport;dimension;
columns;id|int;name|varchar2(50);test|int;
data;
5;test5;5;
6;test6;6;
7;test7;7;
8;test8;8;
```

- Example 3 - drop and create table + insert

```
drop
table;testimport;dimension;
columns;id|int;name|varchar2(50);test|int;
data;
8;test8;8;
9;test9;9;
```

21. GitHub link

- https://github.com/Adek2kk/IntervalAppGit