



Administrator's Manual

STOP C Analytics

2018

1 Tabel of Contencts

1	PICTURES AND DIAGRAMS	3
2	PURPOSE OF THE DOCUMENT	4
3	SHORT DESCRIPTION OF STOP C ANALYTICS AND ITS FUNCTIONALITY	4
4	STOP C PROGRAM ECOSYSTEM	4
4.1	NCDC. E-Health	4
4.2	MOH. ElimC	4
4.3	MOH. E-Health	5
4.4	Other Related Modules	5
5	TECHNICAL CAPABILITIES	5
6	CONFIGURATION	7
6.1	Configuration	7
6.2	Home	8
6.3	Categories	10
6.3.1	Add new category	11
6.4	Tables	11
6.4.1	Actions with table columns	12
6.5	Logics	13
6.6	Reports	16

2 Pictures and Diagrams

Picture 1. General architecture of Stop C Analytics and related ecosystems	6
Picture 2. Components of configuration: 1. Main Menu 2. Additional Menu 3. Analytics Interface	7
Picture 3. Home Interface	7
Picture 4. Logical Diagram of Report Creation Process	8
Picture 5. Basic Elements of Report	9
Picture 6. Home Interface of Analytics (Dashboard)	9
Picture 7. Available actions on diagram	10
Picture 8. Lists of Categories in configuration	10
Picture 9. Add New Category	11
Picture 10. List of Tables	12
Picture 11. List of table columns (1)	12
Picture 12. Add column on a table	13
Picture 13. Edit or delete table columns	13
Picture 14. List of logics	14
Picture 15. Add New Logic	14
Picture 16. Creating logics based on existing logic	15
Picture 17. Add Select Condition	15
Picture 18. Adding new logic based on SQL query	16
Picture 19. Add new Select	16
Picture 20. List of Reports	17
Picture 21. Adding new reports	17
Picture 22. Parametes when adding logic on a report	17

3 Purpose of the Document

Administrator's manual for Stop C analytics is fundamental for developing and launching Hepatitis C analytical module. Document describes general structure of system components and provides system administrator detailed instruction to work with system configuration.

Following document does not involve any information on technical structure of system components, their interactions or applied technologies. This kind of information is provided in separate Analytics Architecture Document, which is created for system administrators and developers and combines all necessary information for system support and further development.

4 Short Description of STOP C Analytics and its functionality

STOP C analytics is a part of STOP C Elimination ecosystem, which aims to record, analyze and visualize all Hepatitis C data within Hepatitis C state program, including data from screening and other components, data related to sample taking for confirmation tests and transportation.

STOP C Analytics is allocated on following web address : [STOP-C Analytics Engine](#).

5 STOP C Program Ecosystem

Besides the STOP C Analytics, STOP C Elimination ecosystem unites different types of systems and modules, which are allocated in different physical and program platforms. These modules are divided into 4 main groups:

- NCDC. E - Health
- MOH. ElimC
- MOH. E-Health
- Other modules

5.1 NCDC. E-Health

These modules involve different program tools for National Center of Disease Control and Public Health (NCDC) to manage processes. STOP C Analytics is part of these processes. It also combines following modules for managing hepatitis C programs:

- NCDC.eHealth.Screening: Hepatitis C Screening Module
- **NCDC.eHealth.Analytics: Stop C Analytics**
- NCDC.eHealth.UM: User Management Module
- NCDC.eHealth.CM: Common Data
- NCDC.eHealth.SB: Integration Module (RPC)
- NCDC.eHealth.Tools: Tool Libraries
- NCDC.eHealth.SMS: SMS Module

5.2 MOH. ElimC

These are part of Social Service Agency modules, which are applied for managing Hepatitis C Elimination Program and consists of following components:

- MOH.ElimC.Treatment: Treatment
- MOH.ElimC.SSA: SSA Commission
- MOH.ElimC.Drugs: Drug Management
- MOH.ElimC.Monitoring: Monitoring

5.3 MOH. E-Health

E health of Ministry of Labour, Health and Social Affairs of Georgia (MoLHSA) is complex, independent ecosystem, which is considered to automate different state processes. E health involves more than 30 modules, but data source and target for Stop C analytics, are following modules:

- MOH.eHealth.Billing: Billing Module
- MOH.eHealth.Reporting: Reporting Module

5.4 Other Related Modules

Two other external modules are also united in the ecosystem, which are involved in Hepatitis C business processes:

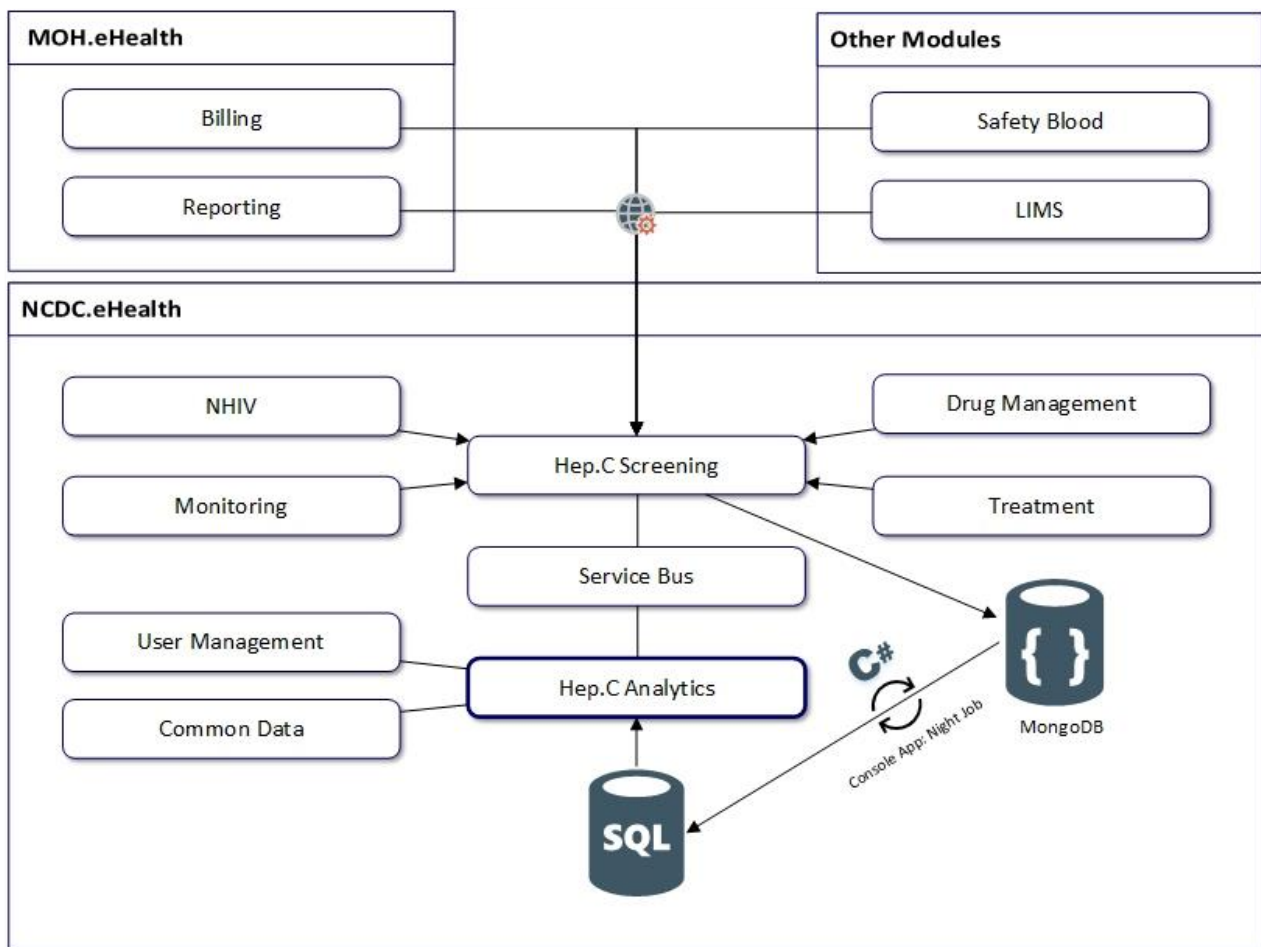
- SafetyBlood: Safe Blood Module
- LMIS: Laboratory Management Information System

6 Technical Capabilities

Two main functions are realized in STOP C Analytics:

1. Data Storage
 - a. This function is realized through database, all collected data from connected systems, which are stored in Stop C screening Database (Mongo DB) every day copies to relative database (Microsoft SQL, data storage for Stop C Analytics, which is later applied for data visualization).
2. Data Analysis and Visualization
 - a. Data analysis and visualization is direct function of STOP C analytics, which allows creating reports, tables and graphs from structured data collected in Microsoft SQL database.
 - b. Function of analytics itself combines two sub functions:
 - i. Visualization of existing reports on an interface
 - ii. Creating and modifying reports by administrator

1. Following document is instruction for this tool

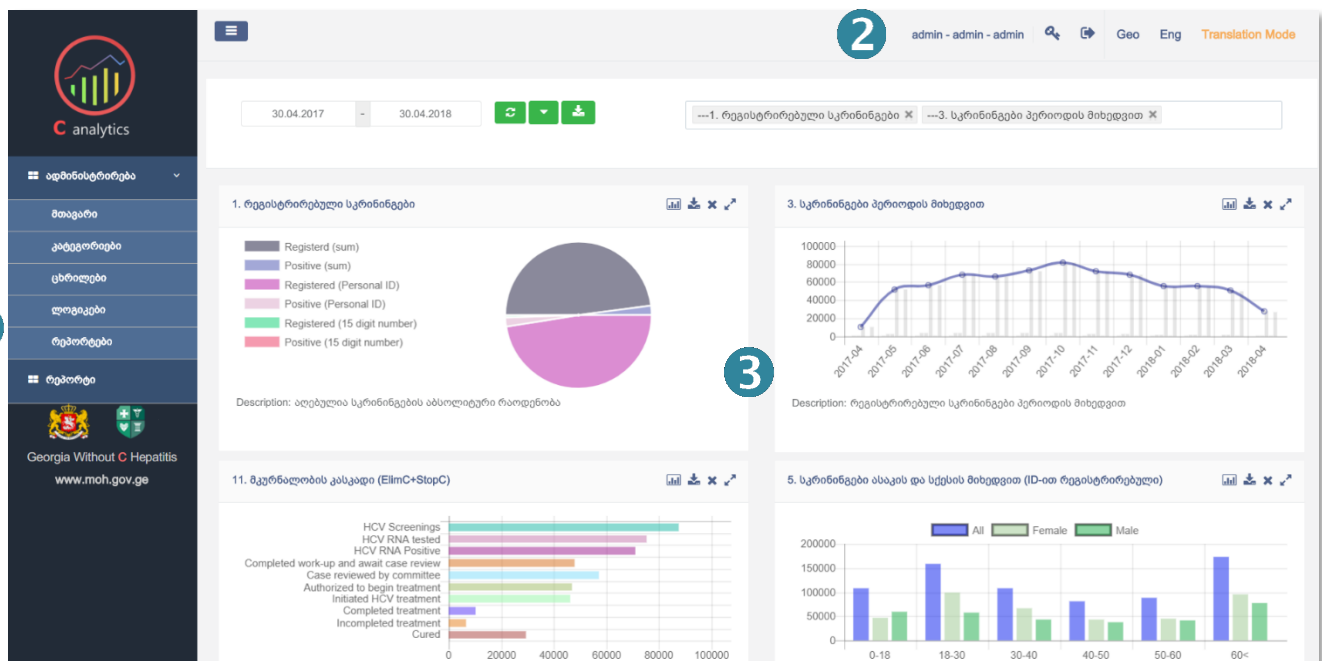


Picture 1. General architecture of Stop C Analytics and related ecosystems

Besides the main functions of the analytical system, additional functions are managing users and common data. Mentioned functions are realized in assistance of additional modules: User Management Module (UM) and Common Data Module (CM). Common data module is also determined to support multilingual and logging functions.

Picture 1 Picture shows diagrams of main and additional tool in hepatitis C Ecosystem

7 Configuration



Picture 2.Components of configuration:1. Main Menu 2. Additional Menu 3. Analytics Interface

Configuration interface consists of 3 main components: 1. Main Menu 2. Additional Menu 3. Analytics Interface (so called Dashboards). **Picture 2** shows main components of interface.

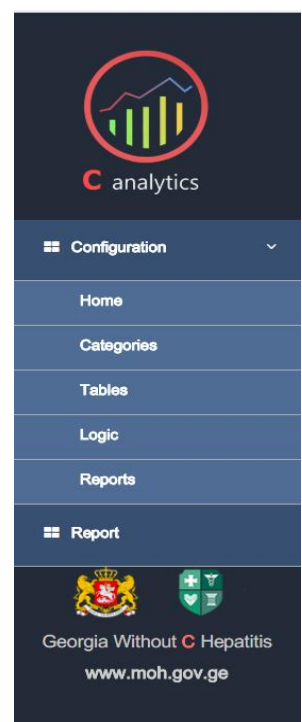
Main menu ensures navigation within main administration components. While additional menu guarantees changing passwords and working languages, also ensures system Translation Mode. It consists of following components itself: (**Picture 3**):

- Configuration
 - Home
 - Categories
 - Tables
 - Logics
 - Reports
- Report

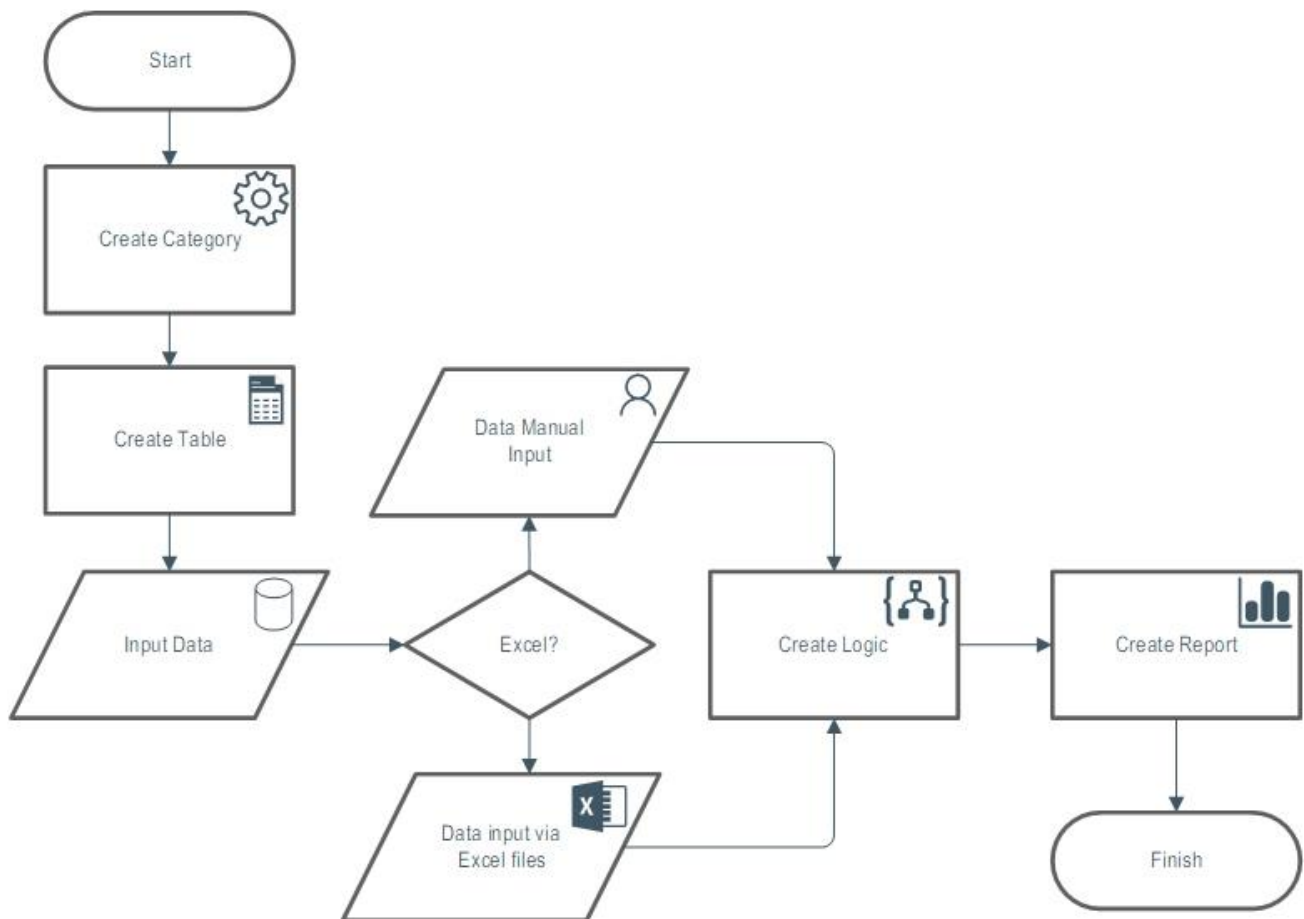
7.1 Configuration

Picture 4 configuration of reports generally. The process consists of several stages:

1. Creation of categories
2. Creation of tables
 - a. Should be allocated in predefined category
 - b. Table can be created manually
 - c. Table can be created via Excel files
3. Creation of Logics
 - a. Existing logic can be used in logic creation process



Picture 3. Home Interface



Picture 4. Logical Diagram of Report Creation Process

- b. Logic can be created based on tables
4. Creation of final report based on table and logic

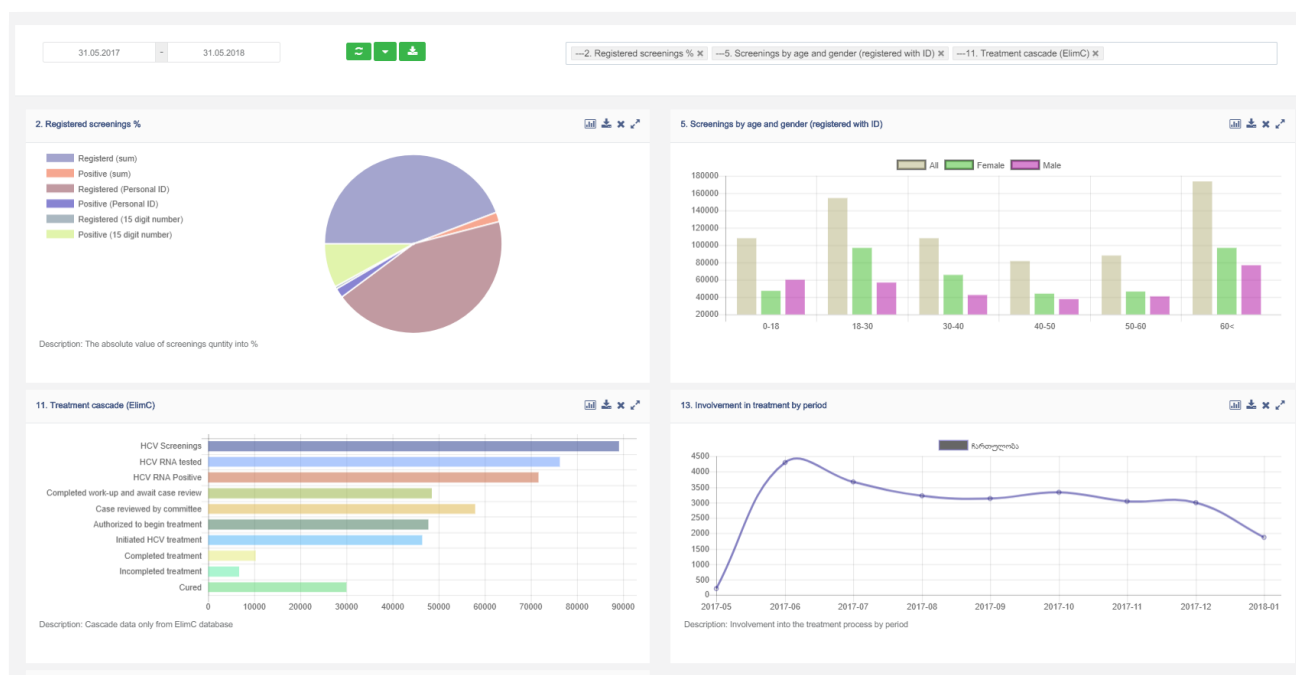
7.2 Home

Home is main interface of web page, where all created reports are displayed (same as report, **Picture 6**).

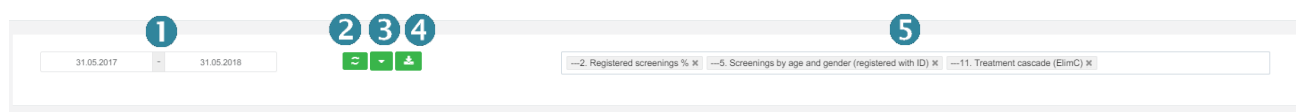
For working with reports at home category, unified tool can be used (**Picture 5**):

1. Period – Reports can be retrieved in different time period
2. Refresh – Necessary when time period is changed
3. Single/Multiple - It is possible to display single or multiple charts at the same time
4. Download databases – Following databases can be downloaded from the system
 - a. Detailed System Variables
 - b. Screening Database
 - c. eHealth Monitoring database
 - d. eHealth Diagnostic Database
 - e. Stop-C Treatment Database
 - f. Elim-C Treatment Database

5. Filters – Chose desirable report



Picture 6. Home Interface of Analytics (Dashboard)



Picture 5. Basic Elements of Report

Following actions can be done for each chart (**Picture 7**):

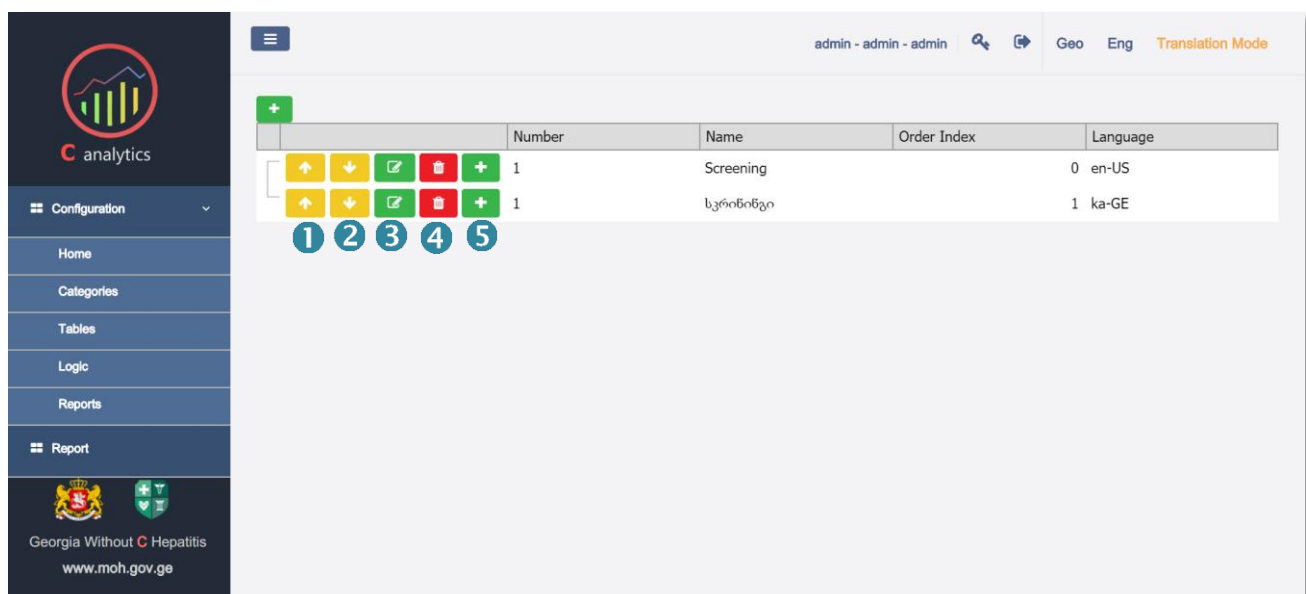
1. Chart Types: change chart type. Available options are:
 - a. Bar
 - b. GroupedBar
 - c. Line
 - d. Pie
 - e. Radar
 - f. Polar Area
 - g. Doughnut
 - h. Horizontal Bar
 - i. Bubble
2. Export: Download analytical report. Available formats are:
 - a. Excel
 - b. CSV
 - c. PDF
 - d. Image
3. Close: Close the Diagram
4. Expand: Display diagram on full screen



Picture 7. Available actions on diagram

7.3 Categories

Category should be created before creating any report, where different reports will be united. Categories are grouped in configuration. List of created categories is available in category component (Picture 8).



Number	Name	Order Index	Language
1	Screening	0	en-US
1	სკრინინგის	1	ka-GE

Picture 8. Lists of Categories in configuration

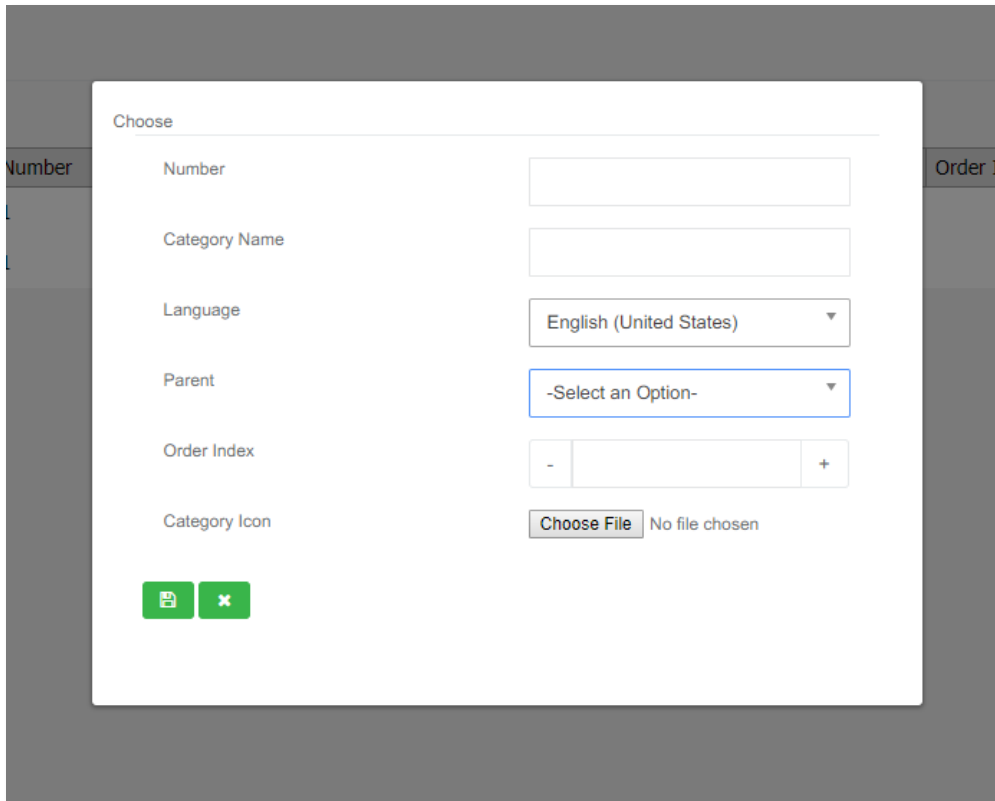
It is available to move category up, down, edit, delete or add:

1. Up – Moving category up on a list
2. Down - Moving category down on a list
3. Edit – Edit category
4. Delete – Delete category
5. Add – Add new category

7.3.1 Add new category

Pressing the Add button will open window to add new category (**Picture 9**). When creating the category, following features should be appointed:

- Number
- Category Name
- Language
- Parent
- Order Index
- Category Icon



Picture 9. Add New Category

7.4 Tables

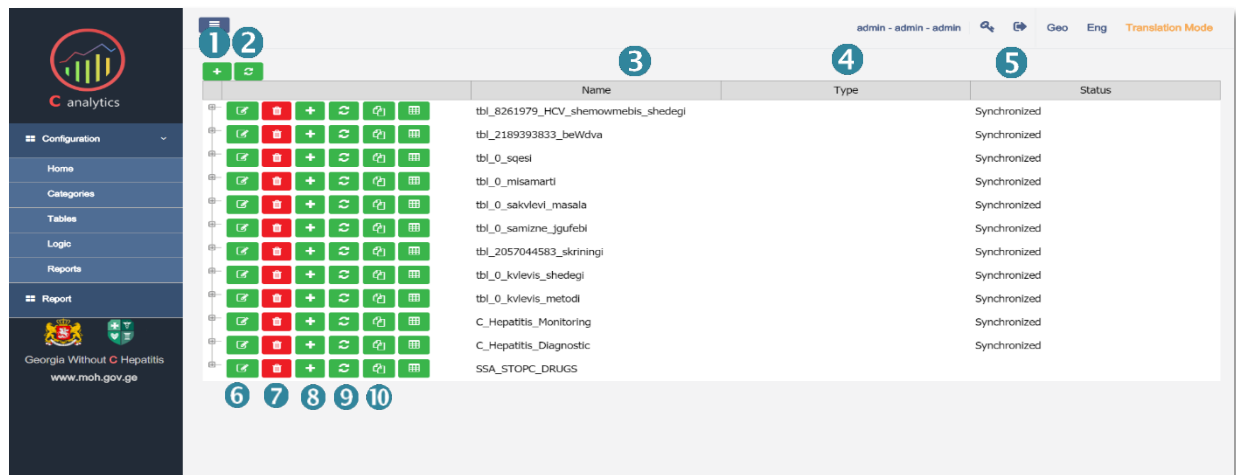
Tables are data sources which are used later for creating different reports. Tables can be filled manually or by imported data (**Picture 10**).

Following actions can be performed with tables:

1. Add Table
2. Sync Tables - Synchronization (generation table into SQL)

Each table has:

3. Name
4. Type
5. Status

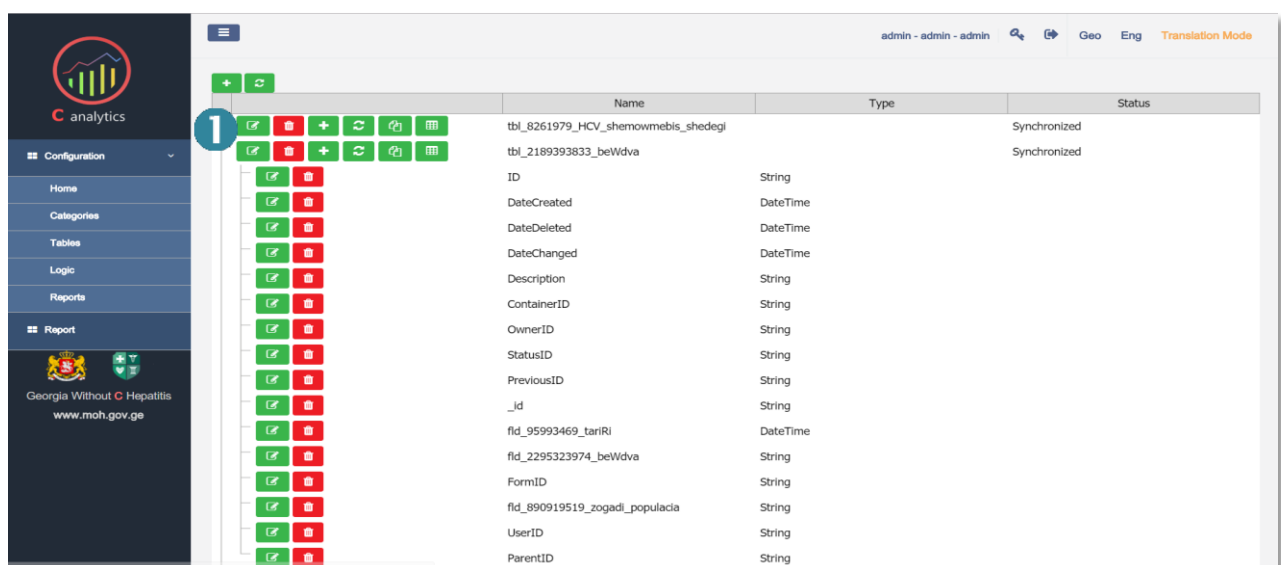


Name	Type	Status
tbl_8261979_HCV_shemowmebis_shedegi		Synchronized
tbl_2189393833_beWdva		Synchronized
tbl_0_sqesi		Synchronized
tbl_0_misamarti		Synchronized
tbl_0_sakvlevi_masala		Synchronized
tbl_0_samizne_jgufebi		Synchronized
tbl_2057044583_skriningi		Synchronized
tbl_0_kvlevis_shedegi		Synchronized
tbl_0_kvlevis_metodi		Synchronized
C_Hepatitis_Monitoring		Synchronized
C_Hepatitis_Diagnostic		Synchronized
SSA_STOPC_DRUGS		Synchronized

Picture 10. List of Tables

The following actions can be done with each table:

6. Edit – Edit table
7. Delete – Delete table
8. Add – Add column on a table
9. Synchronize – synchronization of table data
10. Clone - Copy of table (manually entered or imported data)
11. Table Data - Manually entered or imported data



Name	Type	Status
tbl_8261979_HCV_shemowmebis_shedegi		Synchronized
tbl_2189393833_beWdva		Synchronized
ID	String	
DateCreated	DateTime	
DateDeleted	DateTime	
DateChanged	DateTime	
Description	String	
ContainerID	String	
OwnerID	String	
StatusID	String	
PreviousID	String	
_id	String	
fld_95993469_tariRi	DateTime	
fld_2295323974_beWdva	String	
FormID	String	
fld_890919519_zogadi_populacia	String	
UserID	String	
ParentID	String	

Picture 11. List of table columns (1)

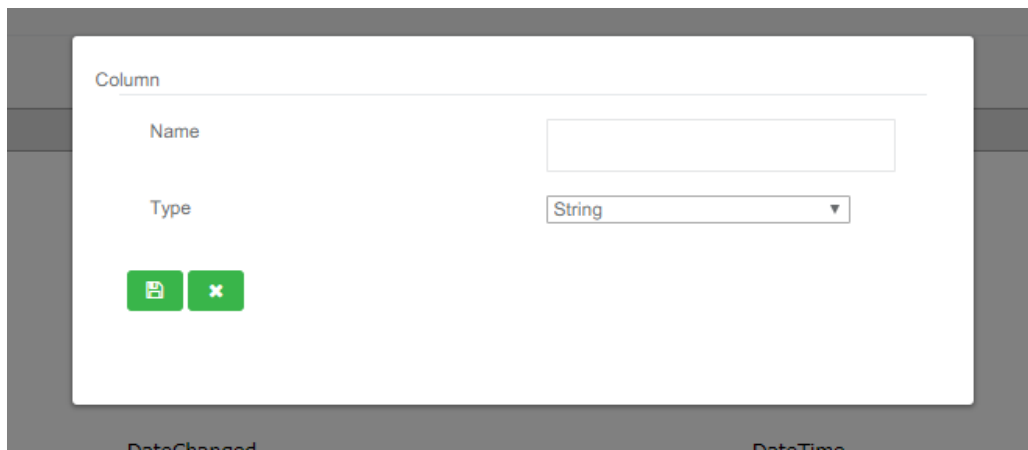
Using “+”- button , names and types of table columns can be displayed (Picture 11).

7.4.1 Actions with table columns

Since table is created, columns/fields can be added to the table (Picture 12). Each column has its name and type, which can be in 4 forms:

1. String: Text type column
2. Integer: Numeric type of column Integer
3. Float: Numeric type of column Float

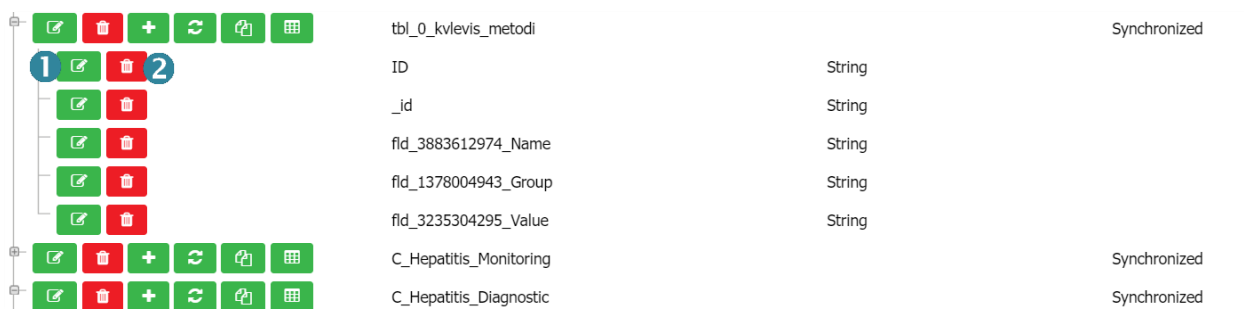
4. DateTime: Date type of column



Picture 12. Add column on a table

Columns can be edited or deleted (**Picture 13**):

1. Edit
2. Delete



Picture 13. Edit or delete table columns

7.5 Logics

List of already created logics can be displayed and new logics can be added in Logics category. (**Picture 14**).

Each logic in the system has following features:

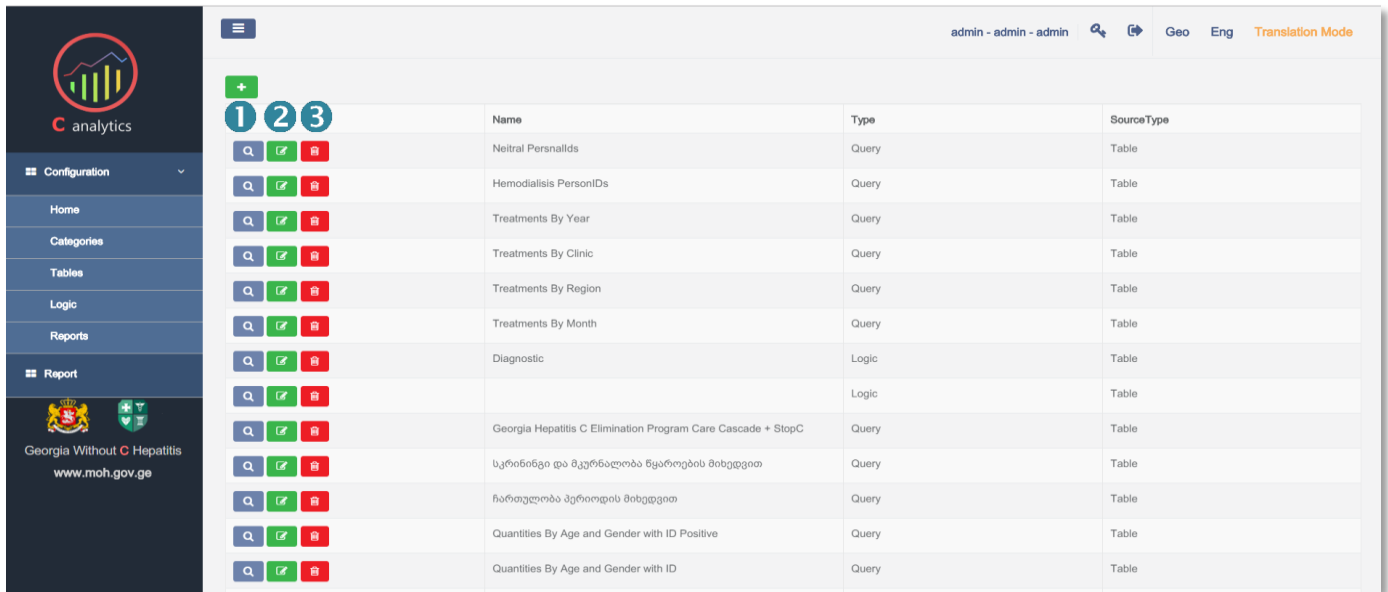
1. Name: Name of Logic
2. Type: Logic Type (Logic or Query)
3. SourceType: Data source type (e.g.: Table)

In the list of created logics, logics can be viewed, Edited or Deleted.

While adding new logics (Add Logic), following attributes should be selected (**Picture 15**):

1. Source Type: Data Source type (Table or Logic)
2. Source: Data source is Table
3. Source: Data source is Logic
4. Logic Type: Logic or Query

5. Name: Name of logic

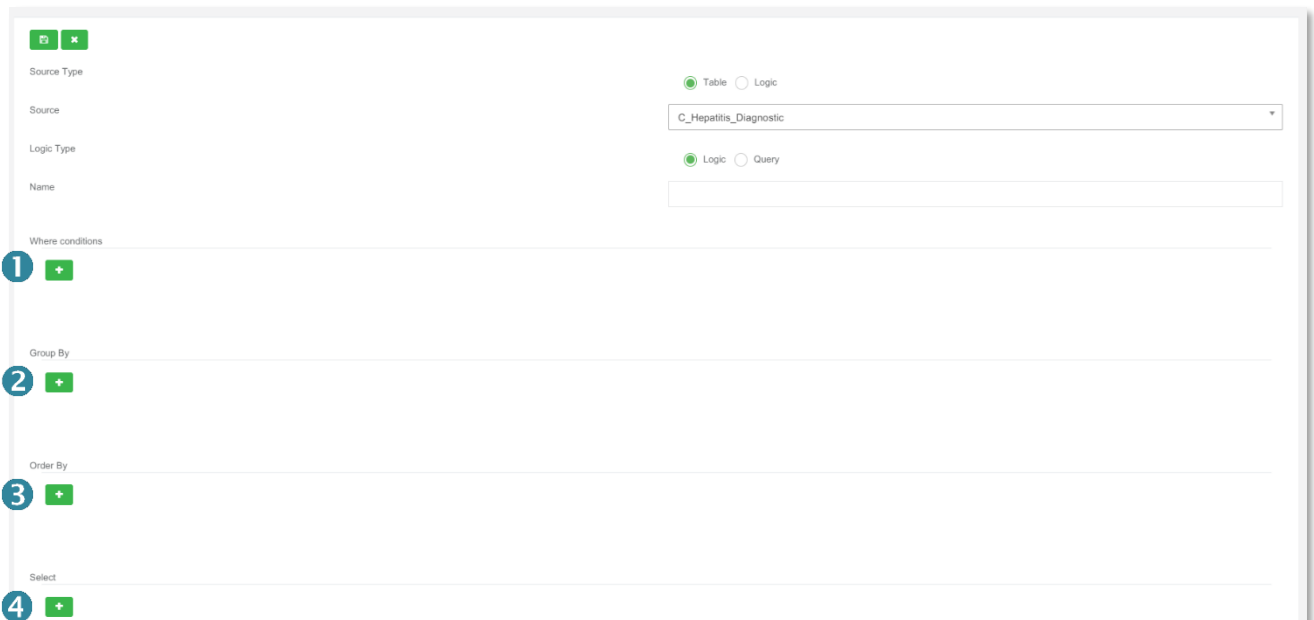


	Name	Type	SourceType
1	Neutral Persnalids	Query	Table
2	Hemodialisis PersonIDs	Query	Table
3	Treatments By Year	Query	Table
	Treatments By Clinic	Query	Table
	Treatments By Region	Query	Table
	Treatments By Month	Query	Table
	Diagnostic	Logic	Table
		Logic	Table
	Georgia Hepatitis C Elimination Program Care Cascade + StopC	Query	Table
	სკრინინგი და მკურნალობა წყაროების მიხედვით	Query	Table
	ჩართულობა პერიოდის მიხედვით	Query	Table
	Quantities By Age and Gender with ID Positive	Query	Table
	Quantities By Age and Gender with ID	Query	Table

Picture 14. List of logics

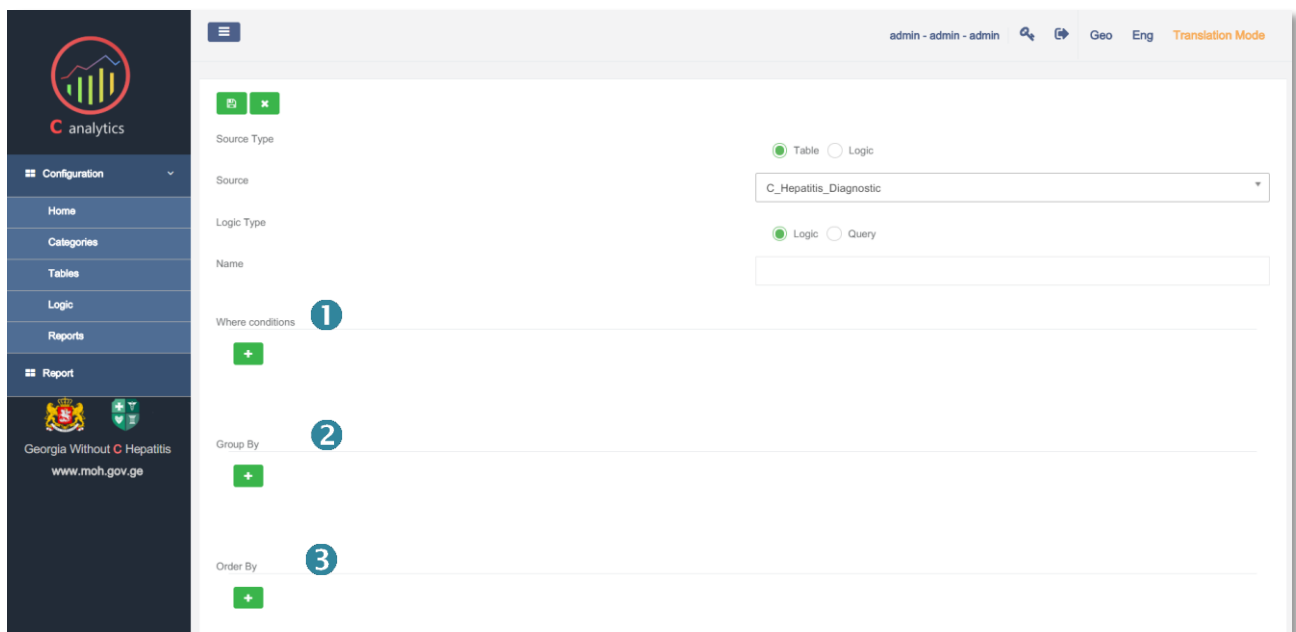
When logic is created based on existing logic (Logic Type = Logic), following conditions should be defined:
(Picture 15, Picture 16):

1. Where condition: Indicating data table
2. Group by: Grouping by some conditions
3. Order by: Sorting by some conditions
4. Select: Selecting fields/columns



Picture 15. Add New Logic

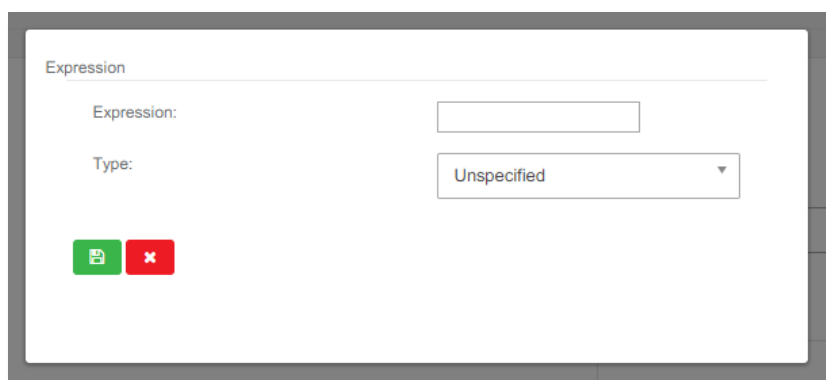
When indicating conditions, relevant Expression and Type should be selected. Conditions Type can be (Picture 17):



Picture 16. Creating logics based on existing logic

1. Unspecified
2. Text
3. Number
4. DateTime

Only in case of filed selection (Select), relevant Name, Expression and Type should be selected (**Picture 19**).

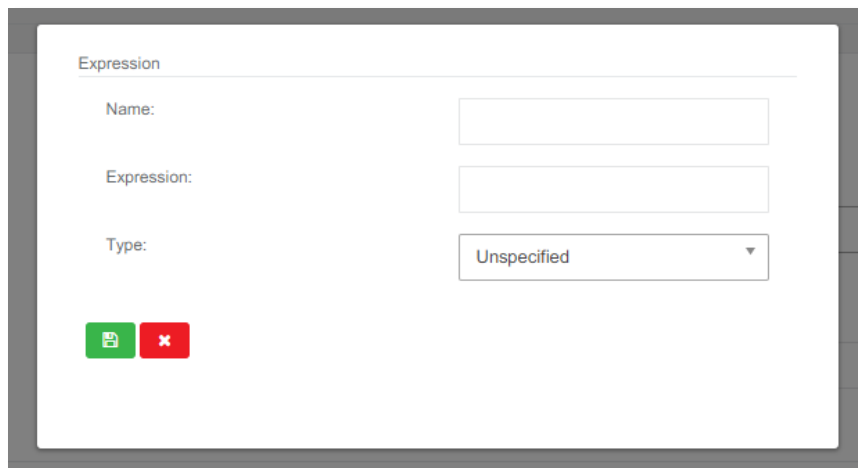


Picture 17. Add Select Condition

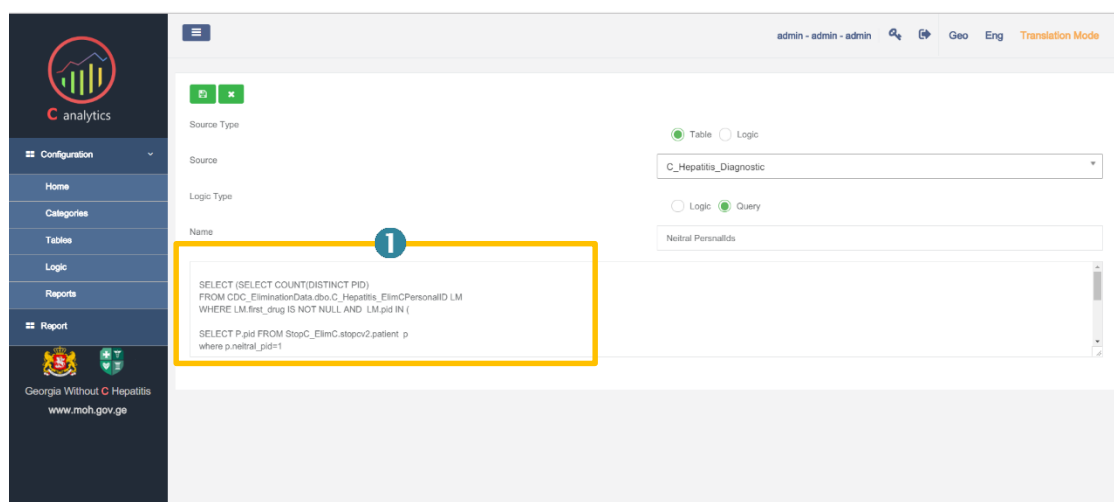
When logic is created based on SQL Query ^{1 2}, (Logic Type = Query), relevant query should be written (**Picture 18**).

¹ <https://docs.microsoft.com/en-us/sql/odbc/reference/structured-query-language-sql?view=sql-server-2017>

² <https://www.w3schools.com/sql/>



Picture 19. Add new Select



Picture 18. Adding new logic based on SQL query

7.6 Reports

In reports category list of created reports can be displayed (**Picture 20**).

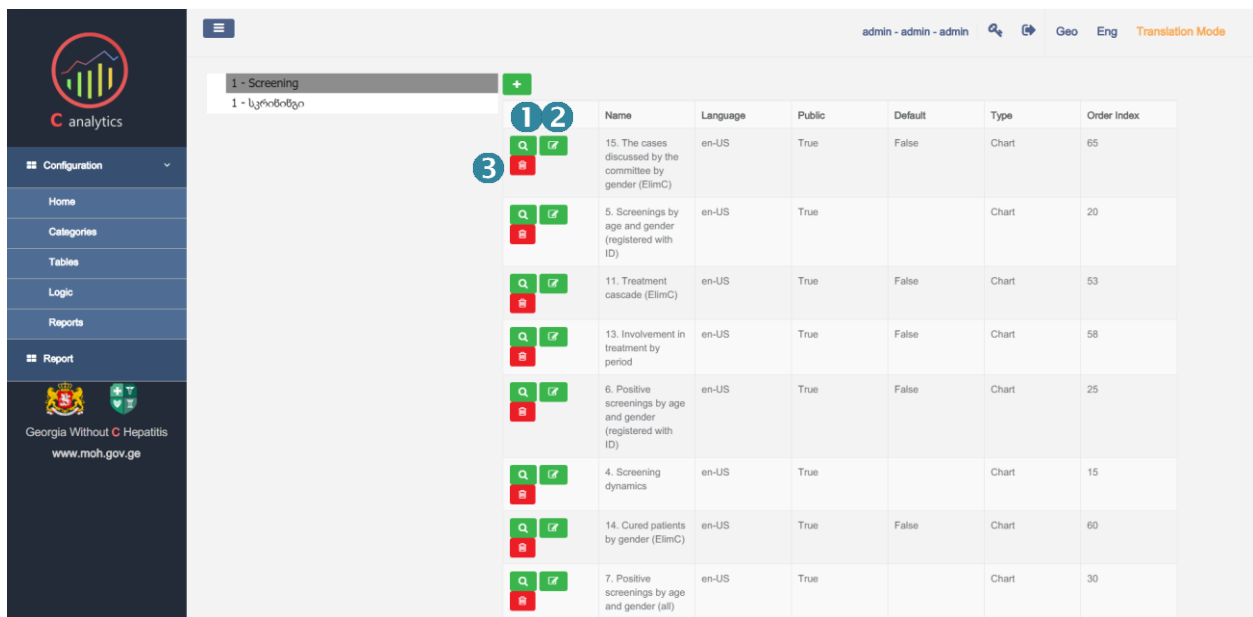
Created reports can be viewed, edited and deleted:

1. View
2. Edit
3. Delete

When adding new report, following information should be added (**Picture 21**):

- Public: Make report visible for public
- Default: Chose report automatic
- Language: Chose report name
- Name: Name report
- Order Index: Report order index
- XlabelAngle: N/A
- Category: Category where this report is grouped
- Description: Report description

- Interpretation: Report description/ Interpretation
- Source: Source
- Type: Report Type (Grid/Chart)
- Logics: Logic which is used to create report

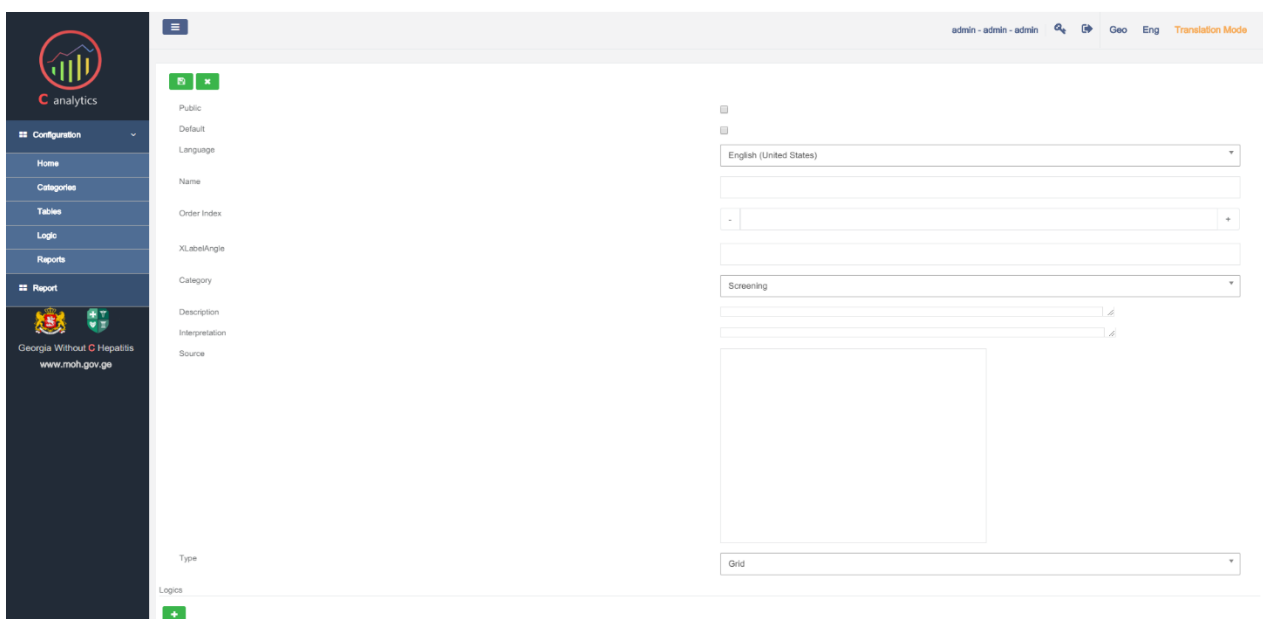


Name	Language	Public	Default	Type	Order Index
1 - Screening					
15. The cases discussed by the committee by gender (ElimC)	en-US	True	False	Chart	65
5. Screenings by age and gender (registered with ID)	en-US	True		Chart	20
11. Treatment cascade (ElimC)	en-US	True	False	Chart	53
13. Involvement in treatment by period	en-US	True	False	Chart	58
6. Positive screenings by age and gender (registered with ID)	en-US	True	False	Chart	25
4. Screening dynamics	en-US	True		Chart	15
14. Cured patients by gender (ElimC)	en-US	True	False	Chart	60
7. Positive screenings by age and gender (all)	en-US	True		Chart	30

Picture 20. List of Reports

When adding existing logic to the report, following parameters should be selected (**Picture 22**):

- Type – Can be:
 - Ba
 - GroupedBa
 - Line



Picture 21. Adding new reports

- Pie
- Radar
- Polar Area
- Doughnut
- Horizontal Bar
- Bubble
- Table – Existing table in the system
- Logic - Existing logic in the system
- Caption – Short description
- Xvalue – X Value
- Yvalue – Y Value

Type

Select An Option ▼

Table

Select an Option ▼

Logic

Select an Option ▼

Caption

Select an Option ▼

XValue

Select an Option ▼

YValue

Select an Option ▼

+

Showing 1 to 1 of 1 entries

Search:

	Caption	XValue	YValue
			

Show

10 ▼

entries

Previous

1

Next





Picture 22. Parametes when adding logic on a report