**Task 6 by Dzmitry Shautsou**

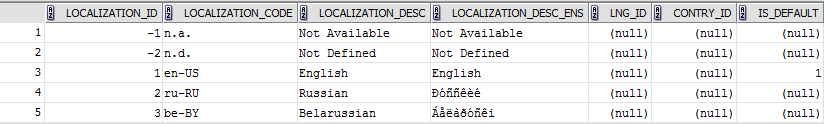
# OLTP – Load External References – Normalization of Data

**Task Results:**

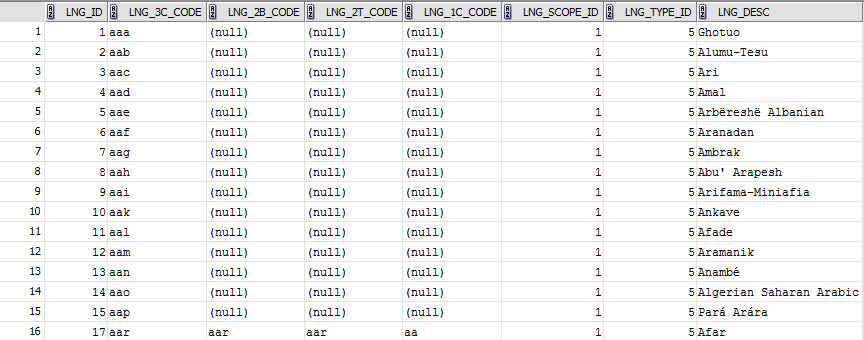
* Create sql scripts to show All created Tables and Views – Screenshot
* Create DataFlow: Sketch Diagram of loading external References (MS Visio, MS Paint, MS Word, etc.)
* Create sql: Showing result of data on next objects:
  + t\_localizations
  + cu\_languages
  + w\_lng\_links
  + cu\_lng\_scopes
  + cu\_lng\_types

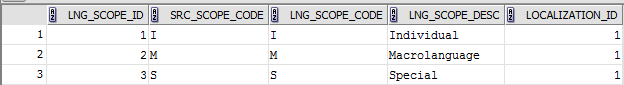
(User u\_dw\_references)

select \* from t\_localizations;

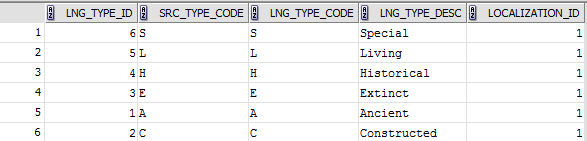


select \* from cu\_languages;

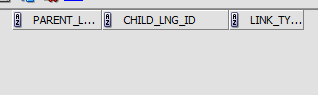


select \* from cu\_lng\_scopes;

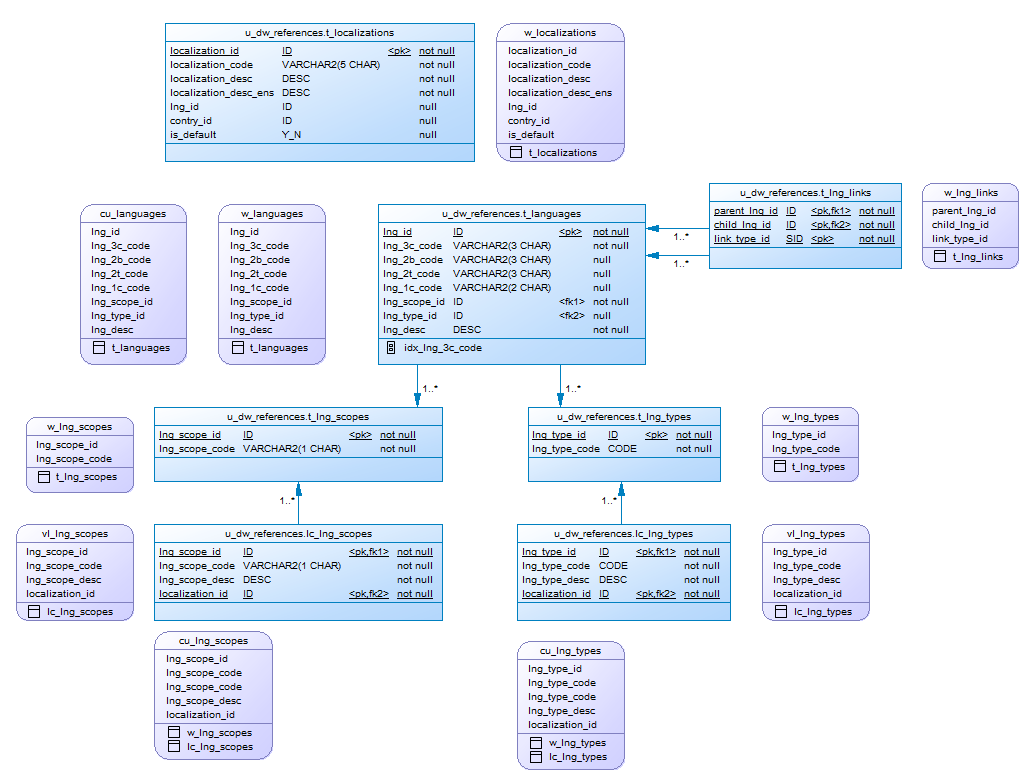
select \* from cu\_lng\_types;

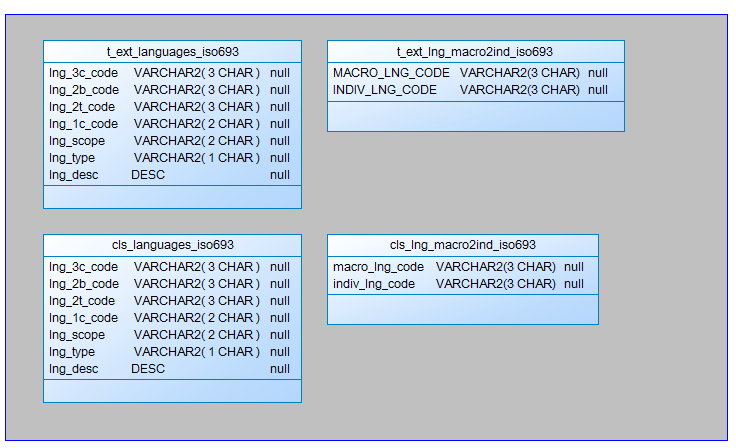


select \* from t\_lng\_links;



The Physical Diagram of T\_Languages below:





## Task 02 – Create load process for External references T\_Countries

**The Main Task** is to develop SQL scripts and install needed objects for load external reference T\_Countries.

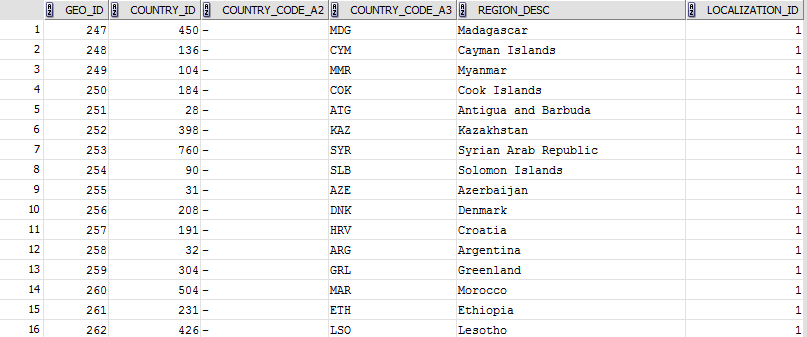
**Task Results:**

* Create SQL scripts to show All created Tables and Views – Screenshot
* Create DataFlow: Sketch Diagram of loading external References (MS Visio, MS Paint, MS Word, etc.)

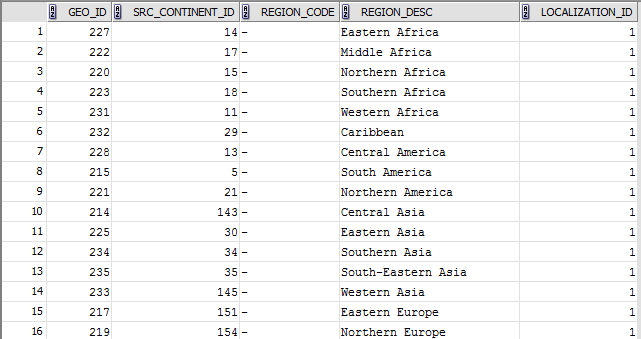


* Create SQL: Showing result of data on main objects:

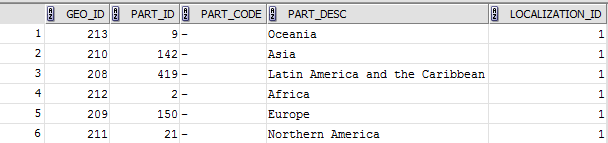
SELECT \* FROM CU\_COUNTRIES;

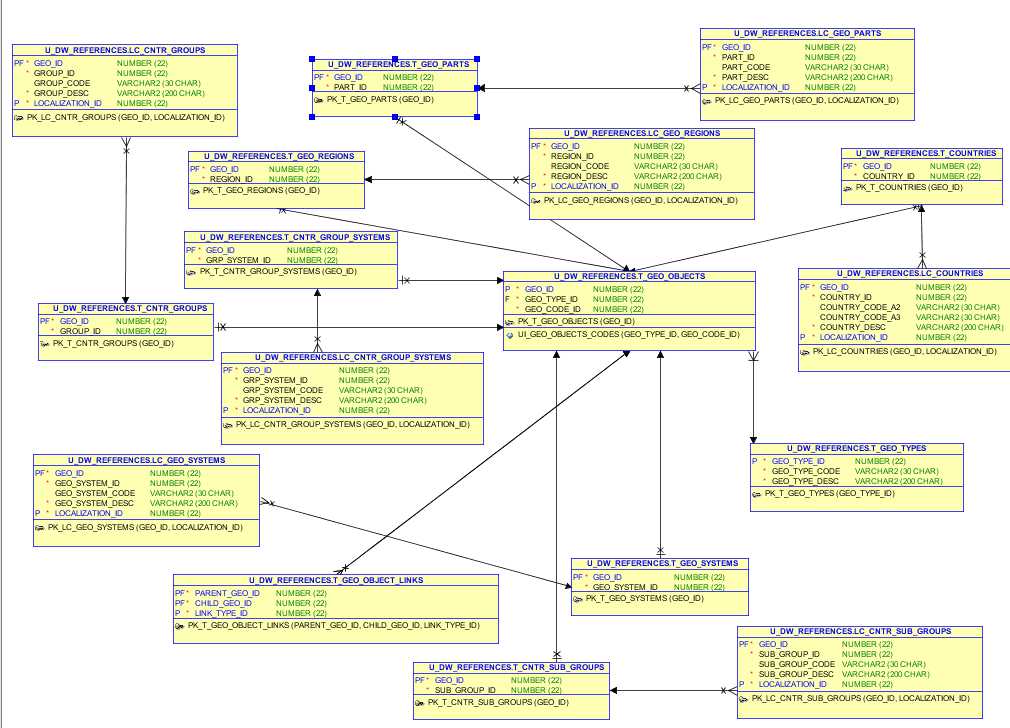


SELECT \* FROM CU\_GEO\_REGIONS;



SELECT \* FROM CU\_GEO\_PARTS;



* Prepare The Physical Diagram of T\_Countries

# OLAP – Business analyses task

Create any business analyses task for interesting for your business. The main idea is to use next main dimension:

* Time
* Geo-Location – T\_COUNTRIES

## Task 02 – Solution concept – Business background

**The Main Task** is to create Solution concept of yours any business analyses task. You should use Developing Model, that described on MTN.NIX.07.Oracle DB.DWH\_courseware06\_Star Schema Basics.docx.

**Task Results:**

Create Solution Concept document, which contained next chapters:

Overview

Business Background

Benefit

Requirements

Business Requirements

Technical Requirements

Solution Sketch

Source Tables structure

Summarize Data Plan

(Watch “BusinessProposal.docx” in the same folder)

# OLAP – Develop Star-Scheme and SnowFlake Scheme.

## Task 03 – Develop Star-Scheme physical diagram

**The Main Task** is to create Star Physical diagram and Logical diagram of solution.

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram



* + Logical diagram



## Task 04 – Develop SnowFlake physical diagram

**The Main Task** is to create SnowFlake Physical diagram and Logical diagram of solution.

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram
  + Logical diagram
* **Logical**



* **Physical**
* 

# Create and populate Dimension of TIME DW – Layer

**The Main Task** is to create Physical diagram and Objects on DW layer:

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram store on GIT
  + Links to Scripts on GIT



# OLAP – Business analyses task

## Task 06 – Solution concept – Add: Chapter Dimensions Types

**The Main Task** is to create summary table to describe all future STAR Dimensions:

Next points are mandatory:

* Start scheme must use no less one of SCD type 2 Dimension
* Start scheme must use prepared dimensions: DIM\_TIME, DIM\_GEO\_LOCATIONS
* Start scheme must use one of period dimensions: DIM\_GEN\_PERIODS



**Task Results:**

Create document, which contained next chapters:

* + Chapter: Dimensions Types Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Type | Size | DW – Merged Dimensions | Descriptions |
| DIM\_TIMES | TYPE 1 | BIG | DW.T\_DAYS, DW.T\_WEEKS, DW.T\_MONTHS, DW.T\_QUARTERS,  DW.T\_YEARS | It is a specific type of dimension. Appears at the DWH and contains all the time since the introduction of the project until its completion. |
| DIM\_GEO\_LOCATIONS | TYPE 1 | SMALL | DW.T\_COUNTRIES  DW.T\_CNTR\_GROUPS  DW.T\_CNTR\_SUB\_GROUPS  DW.LC\_CNTR\_GROUPS  DW.T\_GEO\_TYPES  DW.T\_GEO\_SYSTEMS  DW.LC\_GEO\_SYSTEMS  DW.T\_GEO\_PARTS  DW.T\_GEO\_REGIONS  DW.T\_GEO\_OBJECTS  DW.T\_CNTR\_GROUP\_SYSTEMS  DW. LC\_CNTR\_GROUP\_SYSTEMS  DW.LC\_CNTR\_SUB\_GROUPS  DW.LC\_ GEO\_PARTS  DW.LC\_COUNTRIES  DW.LC\_ GEO\_REGIONS | This kind of dimension contains information about all countries, subregions, regions of the world. And also enters information on the types of economic development and unions according to the international classification. |
| DIM\_CLIENT\_SCD | SCD TYPE 2 | BIG | DW.T\_CUSTOMERS  DW.T\_TARIFFS | This dimension contains information about clients, their persons data, and tariff plan which they use(used). |
| DIM\_SERVERS | TYPE 1 | BIG | DW.T\_SERVERS  DW.T\_LOCATIONS  DW.T\_CHANNELS | This dimension contains information about our servers, their technical properties. |
| DIM\_TARIFFS | TYPE 1 | SMALL | DW.T\_TARIFFS | Provides information about channels of sales (description and class) |
| DIM\_GEN\_PERIODS | TYPE 1 | SMALL | DW.T\_PERIOD\_DESC | Dimension specific type, which allows grouping of facts on the basis of logic (clients tariff in our case) |

## Task 07 – Solution concept – Add: Chapter Dimensions Hierarchies

**Task Results:**

Create document, which contained next chapters:

* + Chapter: Dimensions Hierarchies

**DIM\_GEN\_TIME:**

**Hierarchy DAY / MONTH / QUARTER / YEAR**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| DAY | DAY | Store all day at the calendar year | DAY\_ID |
| MONTH | MONTH | Store all months at the calendar year | WEEK\_ID |
| QUAR | QUARTER | Store all quarters at the calendar year | QUAR\_ID |
| YEAR | YEAR | Store all years at the calendar year | YEAR\_ID |

**Hierarchy WEEK / MONTH / QUARTER / YEAR**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| WEEK | DAY | Store all weeks at the calendar year | WEEK\_ID |
| MONTH | MONTH | Store all months at the calendar year | MONTH\_ID |
| QUAR | QUARTER | Store all quarters at the calendar year | QUAR\_ID |
| YEAR | YEAR | Store all years at the calendar year | YEAR\_ID |

**DIM\_SERVERS:**

**Hierarchy PRODUCTS / SUBCATEGORY / CATEGORY**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| SERVER | PROD\_NAME | Store all servers of ever y type | SERVER\_ID |
| TYPE | PROD\_SUBCATEGORY | Store all type of internet we provide | TYPE\_ID |

**DIM\_GEO LOCATIONS:**

**Hierarchy COUNTRY / SUBREGION / REGION**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| COUNTRIES | COUNTRY\_NAME | Store all countries for each region. | COUNTRY\_ID |
| SUBREGIONS | COUNTRY\_SUBREGION | Store all subregions for each region . | COUNTRY\_SUBREGION\_ID |
| REGIONS | COUNTRY\_REGION | Store all regions of the world. | COUNTRY\_REGION\_ID |

**Hierarchy COUNTRY / REGION / CONTINENT**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| COUNTRIES | COUNTRY\_NAME | Store all countries for each region. | COUNTRY\_ID |
| SUBREGIONS | COUNTRY\_SUBREGION | Store all regions for each region . | COUNTRY\_REGION\_ID |
| REGIONS | COUNTRY\_CONTINENT | Store all continents of the world. | COUNTRY\_CONTINENT\_ID |

## Task 08 – Solution concept – Add: Chapter Facts Aggregations

**The Main Task** is to create summary table to describe all future STAR Fact Table Aggregations:

Next points are mandatory:

* Create more than one measurement
  + Summarize aggregation
  + Additional task: Not Additive measurement

**Task Results:**

Create document, which contained next chapters:

* + Chapter: Facts Aggregations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Code | Table Name | Additive | Descriptions |
| TRAFFIC\_IN | TRAFFIC\_IN | FCT\_SPENDINGS\_D | YES | Calculate sum incoming traffic by day. |
| TRAFFIC\_OUT | TRAFFIC\_OUT | FCT\_SPENDINGS\_D | YES | Calculate sum outgoing traffic by day. |
| SPENDING | SPENDING | FCT\_SPENDINGS\_D | YES | Calculate sum of money spent on incoming and outgoing traffic |