**Anton Slizh’s**

**U1M7.LW.Dimension and Facts Basics**

**Part 2**

*GitHub:* [*https://github.com/drapejny/DataCamp2022*](https://github.com/drapejny/DataCamp2022)

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Type | Size | DW – Merged Dimensions | Descriptions |
| DIM\_GEN\_DATE | SCD1 | BIG | DW.T\_DAYS, DW.T\_WEEKS, DW.T\_MONTHS, DW.T\_QUARTERS,  DW.T\_YEARS | TBD – Example row |
| DIM\_PRODUCT\_SCD | SCD2 | SMALL | product\_id  sku\_num  eff\_time  exp\_time  price  description  type  brand  producer\_country  volume  shelf\_width  shelf\_hight  shelf\_depth  package  package\_color  package\_reusable  tase  alcohol | This dimension contains the information about kvas drinks products, which are presented in company stores. The dimension has SCD2 type, which allow us to keep history of product changes (for example producer changed the volume or color of package). The *eff\_time* and *exp\_time* attributes represent the time period when record was active. The *sku\_num* attribute represented as natural key for dimension. |
| DIM\_CUSTOMER | SCD1 | SMALL | customer\_id  name  first\_name  last\_name  phone  country  email  birthday | This dimension contains information about ordinary customers. |
| DIM\_STORE | SCD1 | SMALL | store\_id  address  country  region  city  phone | This dimension contains information about company stores, which are located in different countries and cities. |
| DIM\_GEO\_LOCATION | SCD1 | SMALL | Geo\_id  Geo\_group\_id  Geo\_group\_desc  Geo\_sub\_group\_id  Geo\_dub\_group\_desc  Geo\_system\_code  Geo\_system\_desc  Geo\_region\_id  Geo\_region\_desc  Geo\_country\_code\_a2  Geo\_country\_code\_a3  Geo\_country\_id  Geo\_country\_desc | This dimension contains information about countries, regions, groups. This information describes the location where company stores are located. |

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

**DIM\_GEN\_DATE:**

**Hierarchy DAY-WEEK-MONTH-YEAR**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| DAYs | DAY | Store all day at the calendar week | DAY\_ID |
| WEEKs | WEEK | Store all weeks at the calendar month | WEEK\_ID |
| MONTHs | MONTH | Store all months at the calendar year | MONTH\_ID |
| YEARs | YEAR | Store all years | YEAR\_ID |

**Hierarchy DAY-QUARTER-YEAR**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| DAYs | DAY | Store all day at the calendar week | DAY\_ID |
| QUARTERs | QUARTER | Store all quarters at the calendar year | QUARTER\_ID |
| YEARs | YEAR | Store all years | YEAR\_ID |

**DIM\_GEO\_LOCATION:**

**Hierarchy COUNTRY-REGION-PART-SYSTEM**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| COUNTRIEs | COUNTRY | Store all counties in the geographic region | COUNTRY\_ID |
| REGIONs | REGION | Store all regions in the part of the world | REGION\_ID |
| PARTs | PART | Store all parts int the world | PART\_ID |
| SYSTEMs | SYSTEM | Store system world | GEO\_SYSTEM\_ID |

**DIM\_PRODUCT:**

**Hierarchy PRODUCT-BRAND-TYPE**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| PRODUCTs | PRODUCT | Store all products of definite brand | PRODUCT\_ID |
| BRANDs | BRAND | Store all brands of definite type | BRAND\_ID |
| TYPEs | TYPE | Store all types | TYPE\_ID |

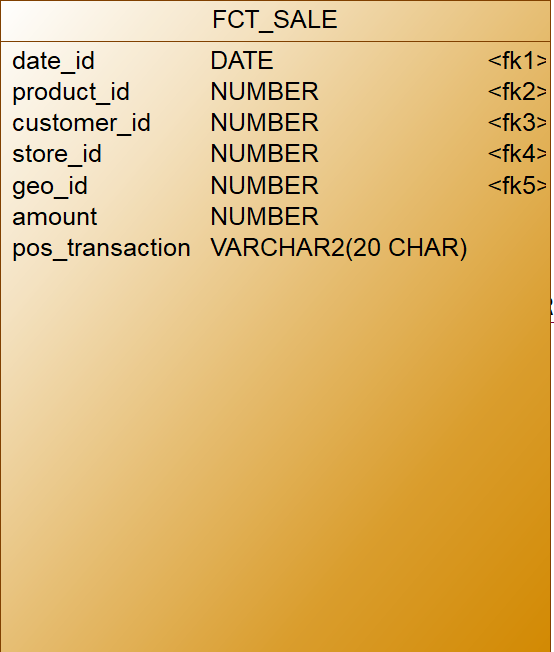
**DIM\_STORE:**

**Hierarchy STORE-CITY-REGION-COUNTRY**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| STOREs | STORE | Store all stores of city | STORE\_ID |
| CITIes | CITY | Store all cities of country region | CITY\_ID |
| REGIONs | REGION | Store all regions of country | REGION\_ID |
| COUNTRIes | COUNTRY | Store all countries where stores are located | COUNTRY\_ID |

## 3.2. Task 08 – Solution concept – Add: Chapter Facts

FCT\_SALES



FCT\_SALES represent individual sale transaction. Table contains 2 fact attributes. The *amount* attribute represents the number of individual product units. The *pos\_transaction* represents the code of transaction that provide us to accumulate all products in definite basket.

Facts aggregations for the FCT\_SALES table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Code | Table Name | Additive | Descriptions |
| Total number of products sold | amount | FCT\_SALES | + | Calculates the number of sales according to range of time, product etc. |
| The code of transaction | pos\_transaction | FCT\_SALES | - | Accumulate all products from one basket (with same *pos\_transaction)* |