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| , RD Dep.  MTN.\*NIX.07 Oracle DB. Introduction to DWH |
| MTN.\*NIX.07 Labs - Dimension and Facts Basics |

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# Prerequisites Task

## Passwords Index

|  |  |  |
| --- | --- | --- |
| Password Group | Login Name | Password |
| Operation System | root | “rootadmin” |
|  | oracle | “oracleadmin” |
|  |  |  |
| Oracle System | sys | “sysadmin” |
|  | system | “sysadmin” |
|  |  |  |
| Oracle Users | All DB users | “%PWD%” |
|  |  |  |
|  |  |  |

## Folder Paths Index

|  |  |  |
| --- | --- | --- |
| Path Group | Path Description | Path |
| Operation System | Oracle RDBMS – BIN | /oracle/app/oracle |
|  | Oracle Inventory | /oracle/app/oraInventory |
|  | Oracle Database Storage | /oracle/oradata |
|  | Oracle Install Directory | /oracle/install |
| Oracle | ORACLE\_BASE | /oracle/app/oracle |
|  | ORACLE\_HOME | $ORACLE\_BASE/product/11.2 |
|  |  |  |
| FTP | ftp Incoming Folder | **/ftp/incoming** |
|  |  |  |
|  |  |  |

# Create and populate Dimension of TIME DW – Layer

**Notes:**

To Populate Time dims use External Resources:

|  |  |
| --- | --- |
| File Name | Path |
| Calendars.sql | … \Topic 07 - Dimension and Facts Basics\LabScripts\ |

## Task 01: CREATE DW.T\_DAYS

**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

## Task 02: CREATE DW.T\_WEEKS

**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

## Task 03: CREATE DW.T\_MONTHS

**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

## Task 04: CREATE DW.T\_QUARTERS

**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

## Task 05: CREATE DW.T\_YEARS

**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\_GEN\_TIME | SCD1 | BIG | DW.T\_DAYS, DW.T\_WEEKS, DW.T\_MONTHS, DW.T\_QUARTERS,  DW.T\_YEARS | TBD – Example row |
| Dim\_products | SCD2 | BIG | Dw.products,  Dw.prod\_type,  Dw.prod\_sub\_type,  Dw.prod\_conf\_type | In Dim\_products we have field “Prod\_apear\_year”. It means that each year we will have new dimension record. The surrogate key will change, prod name – won’t and Prod\_apear\_year – will. |
| DIM\_TIME | SCD2 | BIG | Dw\_days,  Dw\_weeks,  Dw\_months,  Dw\_quarters,  Dw\_yaers | Dim consists days, weeks, months, quarters and so on. |
| DIM\_GEO\_LOCATIONS | SCD3 | BIG | lc\_cntr\_group\_systems, lc\_cntr\_groups,  lc\_cntr\_sub\_groups,  t\_geo\_object\_links,  lc\_countries,  lc\_geo\_regions,  lc\_geo\_parts,  lc\_geo\_systems,  t\_geo\_types | SDC3 because country may change name, but we also have to be able to work with old and new names. |
| DIM\_GEN\_PERIODS | **CD** | Small |  |  |

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

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

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 Hierarchies

**DIM\_GEN\_TIME:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| DAYs | DAY | Store all day at the calendar | DAY\_ID |
| WEEKs | WEEK | Store all weeks at the calendar year | WEEK\_ID |
| **MONTHs** | **MONTH** | Store all **MONTHs** at the calendar year | **MONTH\_id** |
| **YEARs** | **YEAR** | Store all **YEARs** at the business calendar | **YEAR\_id** |

**Hierarchy DAY--MONTH- QUARTER -YEAR**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| DAYs | DAY | Store all day at the calendar | DAY\_ID |
| MONTHSs | MONTH | Store all months at the calendar year | WEEK\_ID |
| **QUARTERs** | **QUARTER** | Store all **QUARTER**s at the calendar year | **QUARTER\_id** |
| **YEARs** | **YEAR** | Store all **YEARs** at the business calendar | **YEAR\_id** |

**DIM\_products**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| Prod\_types | Prod\_type | Store all types of products | Prod\_type\_id |
| Prod\_sub\_types | Prod\_sub\_type | Store all sub\_types of products | Prod\_sub\_type\_id |
| Prod\_names | Prod\_name | Store all Prod\_names of products list | Prod\_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 |
| Counts Contracts | count\_cntr | FCT\_TEST | + | Calculate distinct values of Contracts at the event\_dt period. |
| Counts Order's, Order’s Sum | Store\_id, Store\_location\_id,  Cust\_id,  Cust\_education\_level\_id,  Cust\_soshial\_status\_id,  Geo\_id,  Order's\_count\_for\_day,  Order's\_sum\_for\_day | Store, Customers,  Geo\_locations, | + | Calculate distinct values and sum of orders by deminsions. |