U1M7.LW.Dimension and Facts Basics

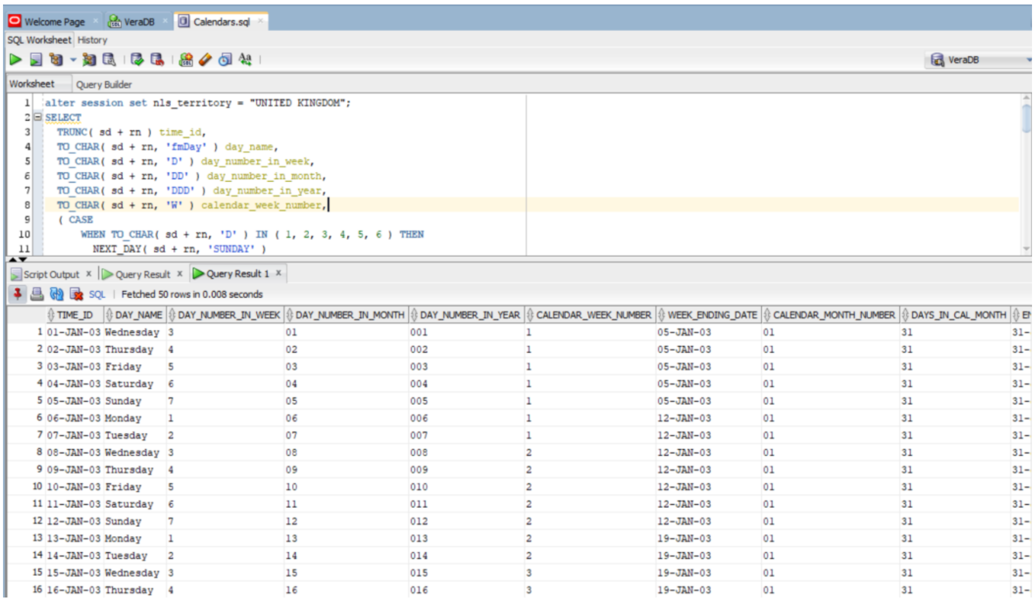
Part 1

Shkrabatouskaya Vera

https://github.com/VeraShkrabatouskaya/DataMola_Data-Camping-2022

2. Create and populate Dimension of TIME DW – Layer

Using External Resources to Populate Time dims:

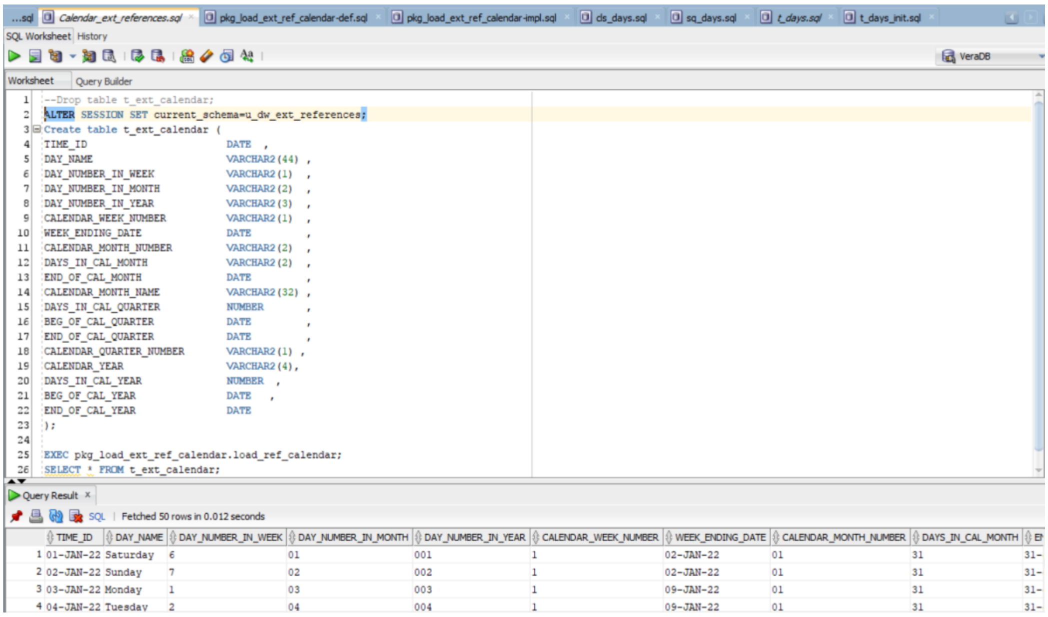


```sql
alter session set nls_territory = "UNITED KINGDOM";
SELECT
  TRUNC( sd + rn ) time_id,
  TO_CHAR( sd + rn, 'fmDay' ) day_name,
  TO_CHAR( sd + rn, 'D' ) day_number_in_week,
  TO_CHAR( sd + rn, 'DD' ) day_number_in_month,
  TO_CHAR( sd + rn, 'DDD' ) day_number_in_year,
  TO_CHAR( sd + rn, 'W' ) calendar_week_number,
 ( CASE
     WHEN TO_CHAR( sd + rn, 'D' ) IN ( 1, 2, 3, 4, 5, 6 ) THEN
       NEXT_DAY( sd + rn, 'SUNDAY' )
```

Fetched 50 rows in 0.008 seconds

	TIME_ID	DAY_NAME	DAY_NUMBER_IN_WEEK	DAY_NUMBER_IN_MONTH	DAY_NUMBER_IN_YEAR	CALENDAR_WEEK_NUMBER	WEEK_ENDING_DATE	CALENDAR_MONTH_NUMBER	DAYS_IN_CAL_MONTH	EN
1	01-JAN-03	Wednesday	3	01	001	1	05-JAN-03	01	31	31-
2	02-JAN-03	Thursday	4	02	002	1	05-JAN-03	01	31	31-
3	03-JAN-03	Friday	5	03	003	1	05-JAN-03	01	31	31-
4	04-JAN-03	Saturday	6	04	004	1	05-JAN-03	01	31	31-
5	05-JAN-03	Sunday	7	05	005	1	05-JAN-03	01	31	31-
6	06-JAN-03	Monday	1	06	006	1	12-JAN-03	01	31	31-
7	07-JAN-03	Tuesday	2	07	007	1	12-JAN-03	01	31	31-
8	08-JAN-03	Wednesday	3	08	008	2	12-JAN-03	01	31	31-
9	09-JAN-03	Thursday	4	09	009	2	12-JAN-03	01	31	31-
10	10-JAN-03	Friday	5	10	010	2	12-JAN-03	01	31	31-
11	11-JAN-03	Saturday	6	11	011	2	12-JAN-03	01	31	31-
12	12-JAN-03	Sunday	7	12	012	2	12-JAN-03	01	31	31-
13	13-JAN-03	Monday	1	13	013	2	19-JAN-03	01	31	31-
14	14-JAN-03	Tuesday	2	14	014	2	19-JAN-03	01	31	31-
15	15-JAN-03	Wednesday	3	15	015	3	19-JAN-03	01	31	31-
16	16-JAN-03	Thursday	4	16	016	3	19-JAN-03	01	31	31-

For creating Objects on DW layer, we used External Table t_ext_calendar.

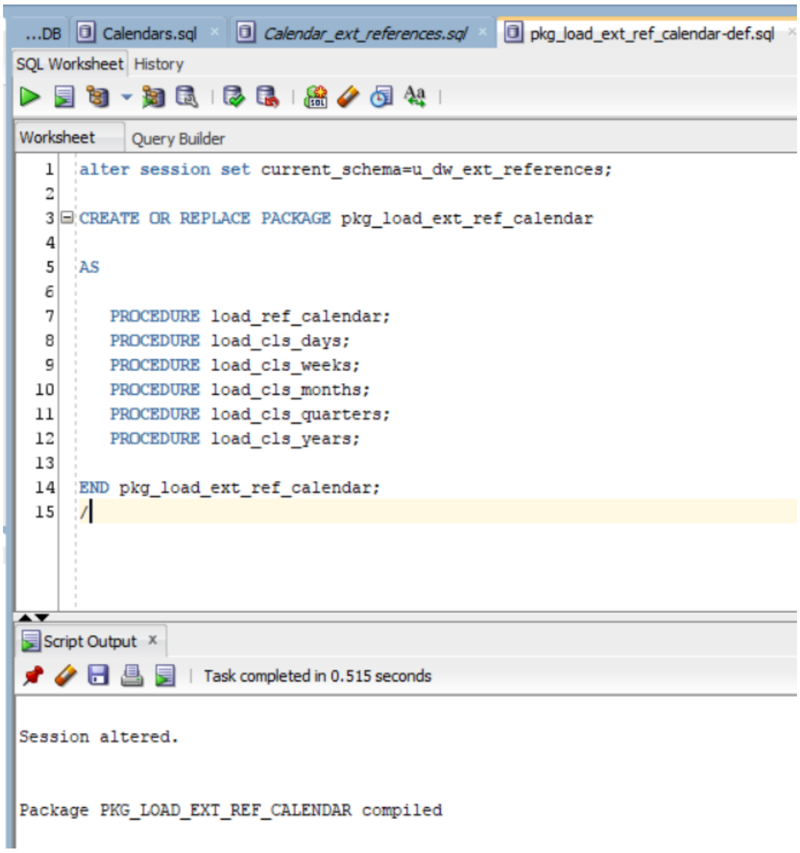


```sql
--Drop table t_ext_calendar;
ALTER SESSION SET current_schema=u_dw_ext_references;
Create table t_ext_calendar (
TIME_ID                     DATE  ,
DAY_NAME                    VARCHAR2(44) ,
DAY_NUMBER_IN_WEEK          VARCHAR2(1)  ,
DAY_NUMBER_IN_MONTH         VARCHAR2(2)  ,
DAY_NUMBER_IN_YEAR          VARCHAR2(3)  ,
CALENDAR_WEEK_NUMBER        VARCHAR2(1)  ,
WEEK_ENDING_DATE            DATE         ,
CALENDAR_MONTH_NUMBER       VARCHAR2(2)  ,
DAYS_IN_CAL_MONTH           VARCHAR2(2)  ,
END_OF_CAL_MONTH            DATE         ,
CALENDAR_MONTH_NAME         VARCHAR2(32) ,
DAYS_IN_CAL_QUARTER         NUMBER       ,
BEG_OF_CAL_QUARTER          DATE         ,
END_OF_CAL_QUARTER          DATE         ,
CALENDAR_QUARTER_NUMBER     VARCHAR2(1) ,
CALENDAR_YEAR               VARCHAR2(4),
DAYS_IN_CAL_YEAR            NUMBER  ,
BEG_OF_CAL_YEAR             DATE   ,
END_OF_CAL_YEAR             DATE
);

EXEC pkg_load_ext_ref_calendar.load_ref_calendar;
SELECT * FROM t_ext_calendar;
```

Fetched 50 rows in 0.012 seconds

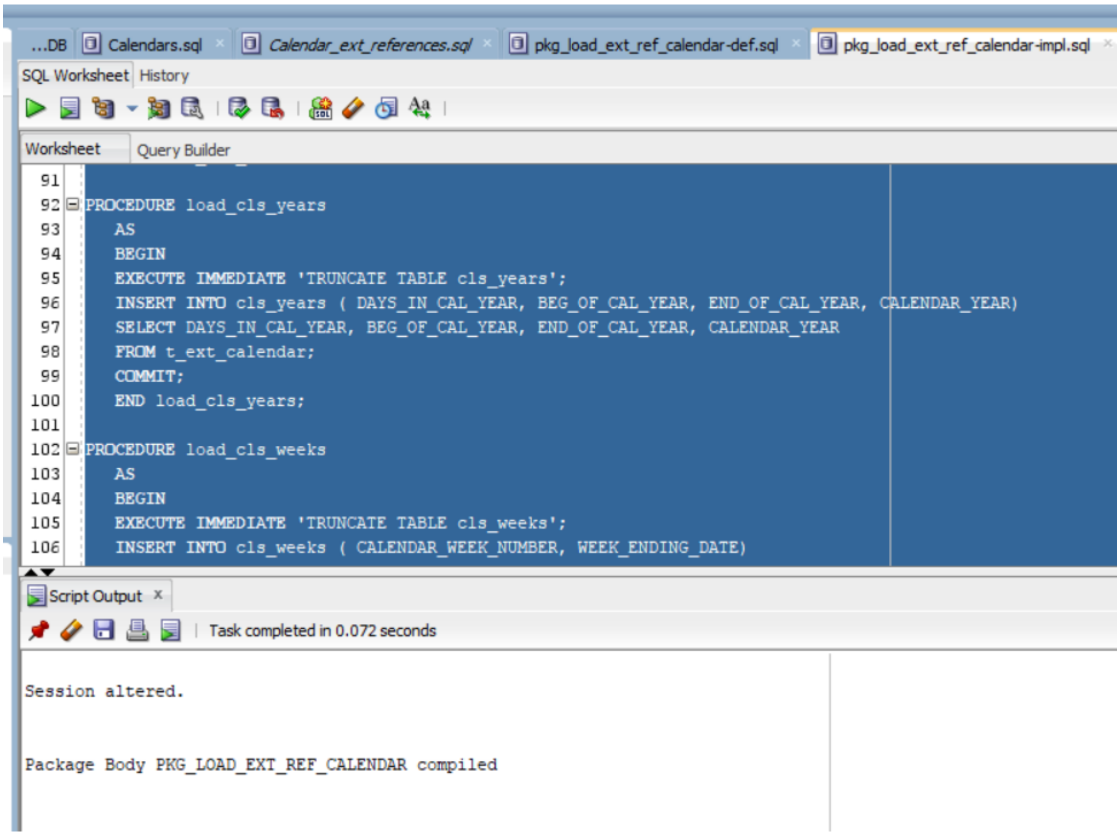
	TIME_ID	DAY_NAME	DAY_NUMBER_IN_WEEK	DAY_NUMBER_IN_MONTH	DAY_NUMBER_IN_YEAR	CALENDAR_WEEK_NUMBER	WEEK_ENDING_DATE	CALENDAR_MONTH_NUMBER	DAYS_IN_CAL_MONTH	EN
1	01-JAN-22	Saturday	6	01	001	1	02-JAN-22	01	31	31-
2	02-JAN-22	Sunday	7	02	002	1	02-JAN-22	01	31	31-
3	03-JAN-22	Monday	1	03	003	1	09-JAN-22	01	31	31-
4	04-JAN-22	Tuesday	2	04	004	1	09-JAN-22	01	31	31-

We used packages to divide the calendar data into different layers and load them into cleansing tables.


...DB
Calendars.sql
Calendar_ext_references.sql
pkg_load_ext_ref_calendar-def.sql
SQL Worksheet
History
Worksheet
Query Builder
Script Output
Task completed in 0.515 seconds

```sql
alter session set current_schema=u_dw_ext_references;

CREATE OR REPLACE PACKAGE pkg_load_ext_ref_calendar

AS

    PROCEDURE load_ref_calendar;
    PROCEDURE load_cls_days;
    PROCEDURE load_cls_weeks;
    PROCEDURE load_cls_months;
    PROCEDURE load_cls_quarters;
    PROCEDURE load_cls_years;

END pkg_load_ext_ref_calendar;
/
```

```
Session altered.


Package PKG_LOAD_EXT_REF_CALENDAR compiled
```


...DB
Calendars.sql
Calendar_ext_references.sql
pkg_load_ext_ref_calendar-def.sql
pkg_load_ext_ref_calendar-impl.sql
SQL Worksheet
History
Worksheet
Query Builder
Script Output
Task completed in 0.072 seconds

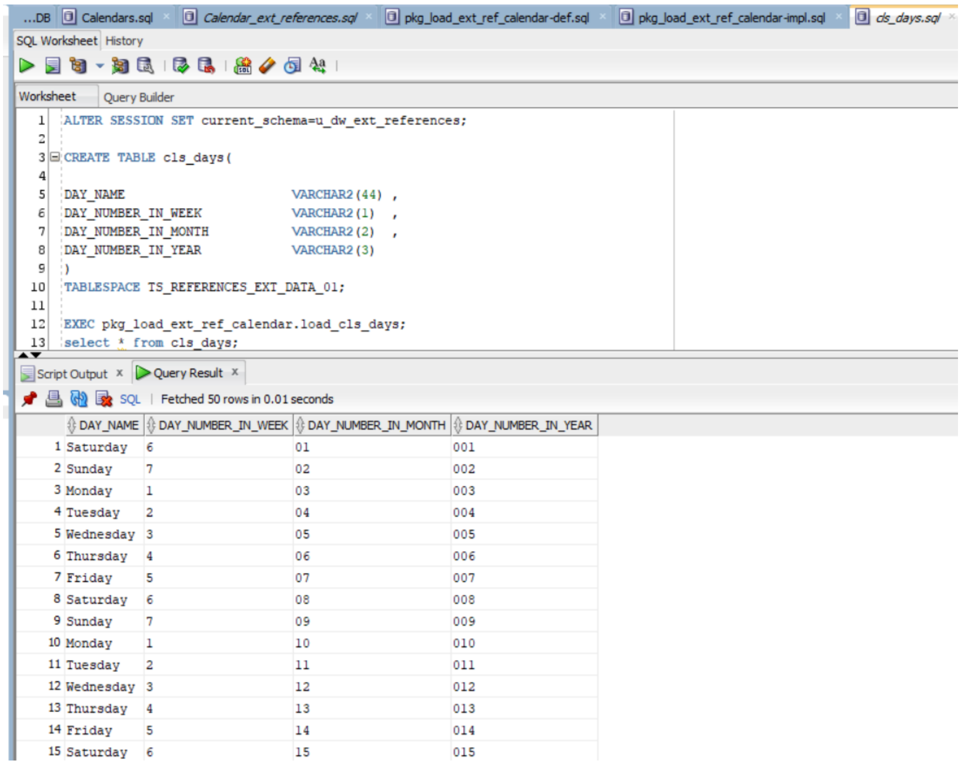
```sql

PROCEDURE load_cls_years
   AS
   BEGIN
   EXECUTE IMMEDIATE 'TRUNCATE TABLE cls_years';
   INSERT INTO cls_years ( DAYS_IN_CAL_YEAR, BEG_OF_CAL_YEAR, END_OF_CAL_YEAR, CALENDAR_YEAR)
   SELECT DAYS_IN_CAL_YEAR, BEG_OF_CAL_YEAR, END_OF_CAL_YEAR, CALENDAR_YEAR
   FROM t_ext_calendar;
   COMMIT;
   END load_cls_years;

PROCEDURE load_cls_weeks
   AS
   BEGIN
   EXECUTE IMMEDIATE 'TRUNCATE TABLE cls_weeks';
   INSERT INTO cls_weeks ( CALENDAR_WEEK_NUMBER, WEEK_ENDING_DATE)
```

```
Session altered.


Package Body PKG_LOAD_EXT_REF_CALENDAR compiled
```

2.1. Task 01: CREATE DW.T_DAYS

Create Object T_DAYS on DW layer:

- cls

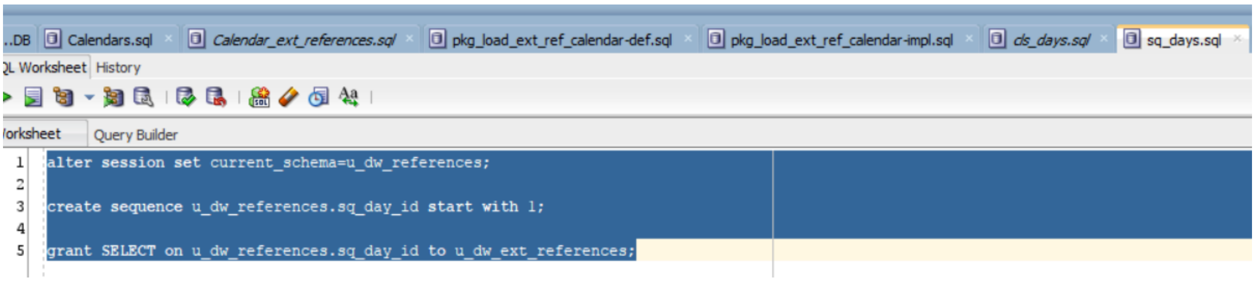


```sql
ALTER SESSION SET current_schema=u_dw_ext_references;

CREATE TABLE cls_days(

DAY_NAME                      VARCHAR2(44)  ,
DAY_NUMBER_IN_WEEK            VARCHAR2(1)   ,
DAY_NUMBER_IN_MONTH           VARCHAR2(2)   ,
DAY_NUMBER_IN_YEAR            VARCHAR2(3)
)
TABLESPACE TS_REFERENCES_EXT_DATA_01;

EXEC pkg_load_ext_ref_calendar.load_cls_days;
select * from cls_days;
```

Fetched 50 rows in 0.01 seconds

	DAY_NAME	DAY_NUMBER_IN_WEEK	DAY_NUMBER_IN_MONTH	DAY_NUMBER_IN_YEAR
1	Saturday	6	01	001
2	Sunday	7	02	002
3	Monday	1	03	003
4	Tuesday	2	04	004
5	Wednesday	3	05	005
6	Thursday	4	06	006
7	Friday	5	07	007
8	Saturday	6	08	008
9	Sunday	7	09	009
10	Monday	1	10	010
11	Tuesday	2	11	011
12	Wednesday	3	12	012
13	Thursday	4	13	013
14	Friday	5	14	014
15	Saturday	6	15	015

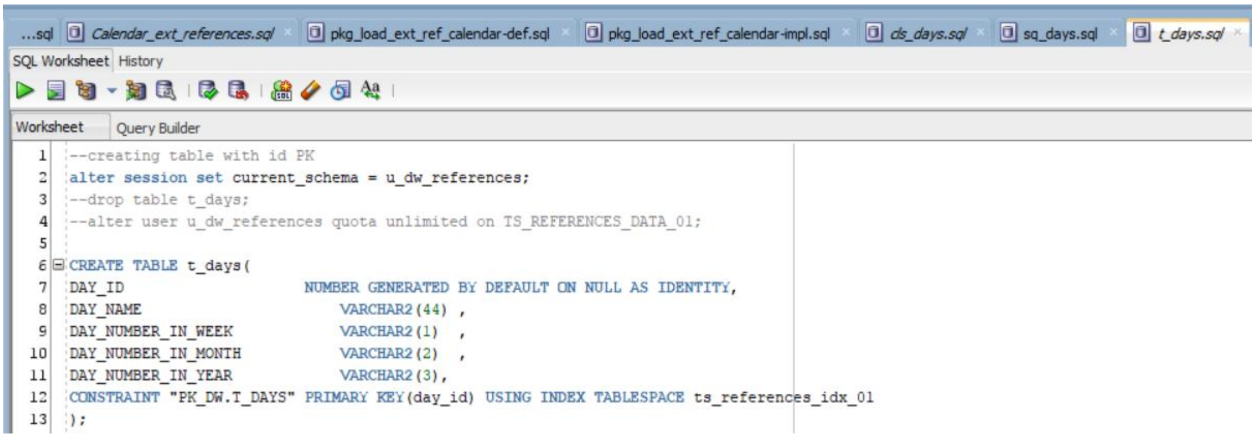
- sq



..DB
Calendars.sql
Calendar_ext_references.sql
pkg_load_ext_ref_calendar-def.sql
pkg_load_ext_ref_calendar-impl.sql
cls_days.sql
sq_days.sql
QL Worksheet
History
/orksheet
Query Builder

```sql
alter session set current_schema=u_dw_references;

create sequence u_dw_references.sq_day_id start with 1;

grant SELECT on u_dw_references.sq_day_id to u_dw_ext_references;
```

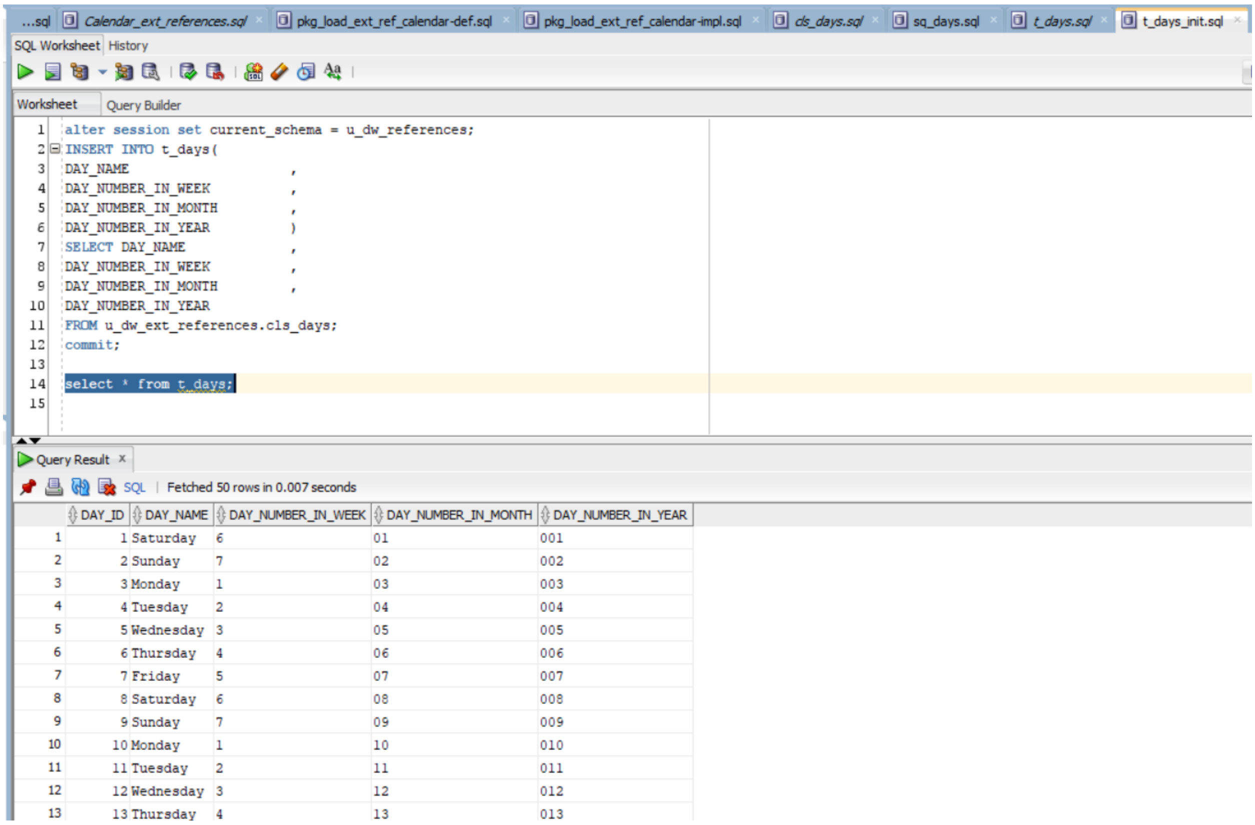
- t



…sql
Calendar_ext_references.sql
pkg_load_ext_ref_calendar-def.sql
pkg_load_ext_ref_calendar-impl.sql
cls_days.sql
sq_days.sql
t_days.sql
SQL Worksheet
History
Worksheet
Query Builder

```sql
--creating table with id PK
alter session set current_schema = u_dw_references;
--drop table t_days;
--alter user u_dw_references quota unlimited on TS_REFERENCES_DATA_01;

CREATE TABLE t_days(
DAY_ID                          NUMBER GENERATED BY DEFAULT ON NULL AS IDENTITY,
DAY_NAME                             VARCHAR2(44)  ,
DAY_NUMBER_IN_WEEK                   VARCHAR2(1)   ,
DAY_NUMBER_IN_MONTH                  VARCHAR2(2)   ,
DAY_NUMBER_IN_YEAR                   VARCHAR2(3),
CONSTRAINT "PK_DW.T_DAYS" PRIMARY KEY(day_id) USING INDEX TABLESPACE ts_references_idx_01
);
```

- t_init

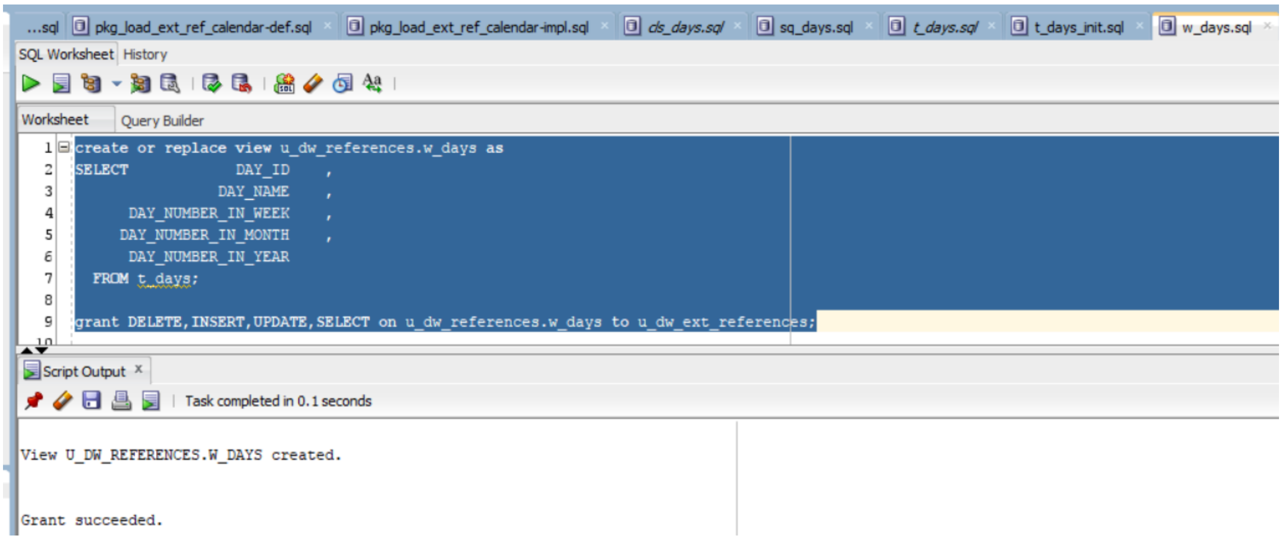


```
alter session set current_schema = u_dw_references;
INSERT INTO t_days(
DAY_NAME                ,
DAY_NUMBER_IN_WEEK      ,
DAY_NUMBER_IN_MONTH     ,
DAY_NUMBER_IN_YEAR      )
SELECT DAY_NAME         ,
DAY_NUMBER_IN_WEEK      ,
DAY_NUMBER_IN_MONTH     ,
DAY_NUMBER_IN_YEAR
FROM u_dw_ext_references.cls_days;
commit;

select * from t_days;
```

Fetched 50 rows in 0.007 seconds

	DAY_ID	DAY_NAME	DAY_NUMBER_IN_WEEK	DAY_NUMBER_IN_MONTH	DAY_NUMBER_IN_YEAR
1	1	Saturday	6	01	001
2	2	Sunday	7	02	002
3	3	Monday	1	03	003
4	4	Tuesday	2	04	004
5	5	Wednesday	3	05	005
6	6	Thursday	4	06	006
7	7	Friday	5	07	007
8	8	Saturday	6	08	008
9	9	Sunday	7	09	009
10	10	Monday	1	10	010
11	11	Tuesday	2	11	011
12	12	Wednesday	3	12	012
13	13	Thursday	4	13	013

- w



```
create or replace view u_dw_references.w_days as
SELECT              DAY_ID      ,
                  DAY_NAME      ,
        DAY_NUMBER_IN_WEEK      ,
       DAY_NUMBER_IN_MONTH      ,
        DAY_NUMBER_IN_YEAR
  FROM t_days;

grant DELETE,INSERT,UPDATE,SELECT on u_dw_references.w_days to u_dw_ext_references;
```

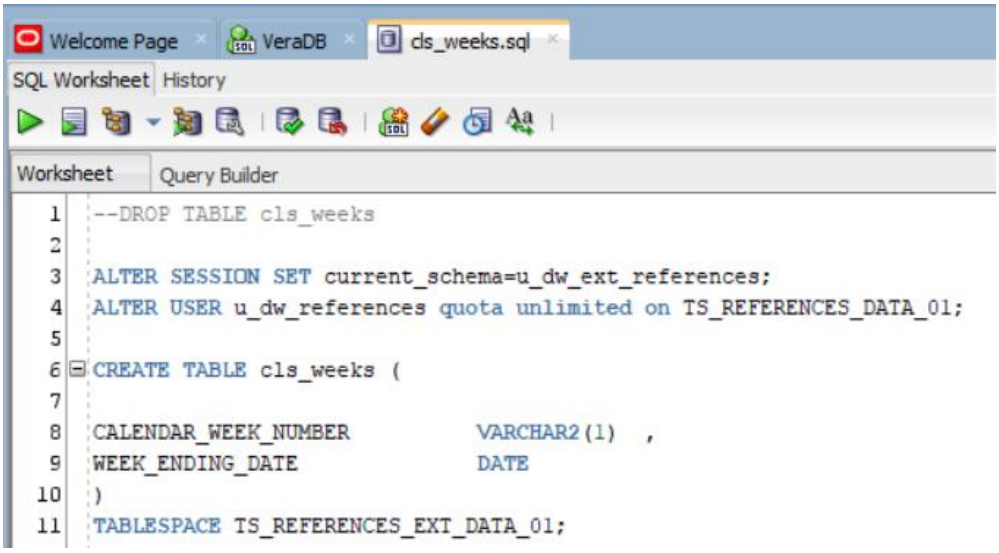
Task completed in 0.1 seconds

```
View U_DW_REFERENCES.W_DAYS created.


Grant succeeded.
```

2.2. Task 02: CREATE DW.T_WEEKS

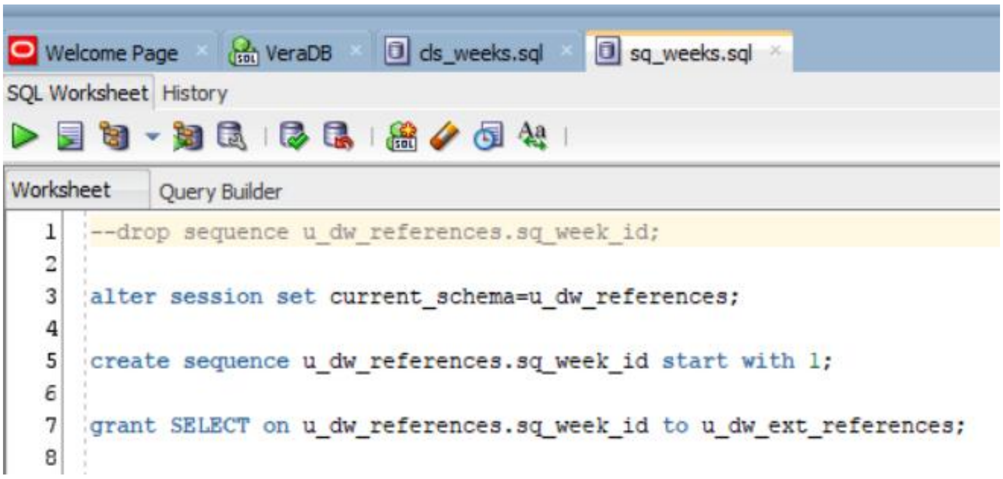
Create Object T_WEEKS on DW layer:

- cls



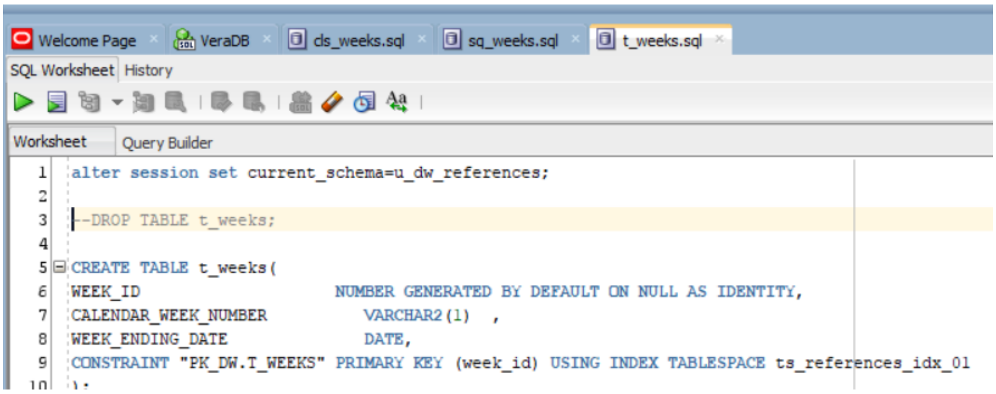
```
--DROP TABLE cls_weeks

ALTER SESSION SET current_schema=u_dw_ext_references;
ALTER USER u_dw_references quota unlimited on TS_REFERENCES_DATA_01;

CREATE TABLE cls_weeks (

CALENDAR_WEEK_NUMBER             VARCHAR2(1)   ,
WEEK_ENDING_DATE                 DATE
)
TABLESPACE TS_REFERENCES_EXT_DATA_01;
```

- sq



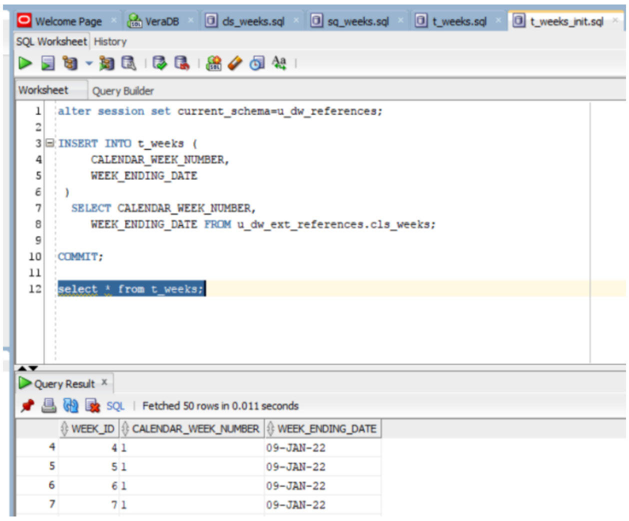
```
--drop sequence u_dw_references.sq_week_id;

alter session set current_schema=u_dw_references;

create sequence u_dw_references.sq_week_id start with 1;

grant SELECT on u_dw_references.sq_week_id to u_dw_ext_references;

```

- t



```
alter session set current_schema=u_dw_references;

--DROP TABLE t_weeks;

CREATE TABLE t_weeks(
WEEK_ID                          NUMBER GENERATED BY DEFAULT ON NULL AS IDENTITY,
CALENDAR_WEEK_NUMBER                VARCHAR2(1)   ,
WEEK_ENDING_DATE                    DATE,
CONSTRAINT "PK_DW.T_WEEKS" PRIMARY KEY (week_id) USING INDEX TABLESPACE ts_references_idx_01
);
```

- t_init

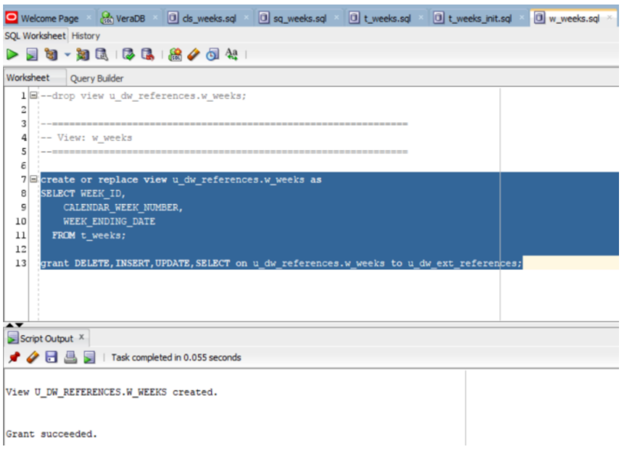


```sql
alter session set current_schema=u_dw_references;

INSERT INTO t_weeks (
     CALENDAR_WEEK_NUMBER,
     WEEK_ENDING_DATE
 )
  SELECT CALENDAR_WEEK_NUMBER,
     WEEK_ENDING_DATE FROM u_dw_ext_references.cls_weeks;

COMMIT;

select * from t_weeks;
```

Fetched 50 rows in 0.011 seconds

	WEEK_ID	CALENDAR_WEEK_NUMBER	WEEK_ENDING_DATE
4	4	1	09-JAN-22
5	5	1	09-JAN-22
6	6	1	09-JAN-22
7	7	1	09-JAN-22

- w



```sql
--drop view u_dw_references.w_weeks;

--==================================================================
-- View: w_weeks
--==================================================================

create or replace view u_dw_references.w_weeks as
SELECT WEEK_ID,
    CALENDAR_WEEK_NUMBER,
    WEEK_ENDING_DATE
  FROM t_weeks;

grant DELETE,INSERT,UPDATE,SELECT on u_dw_references.w_weeks to u_dw_ext_references;
```

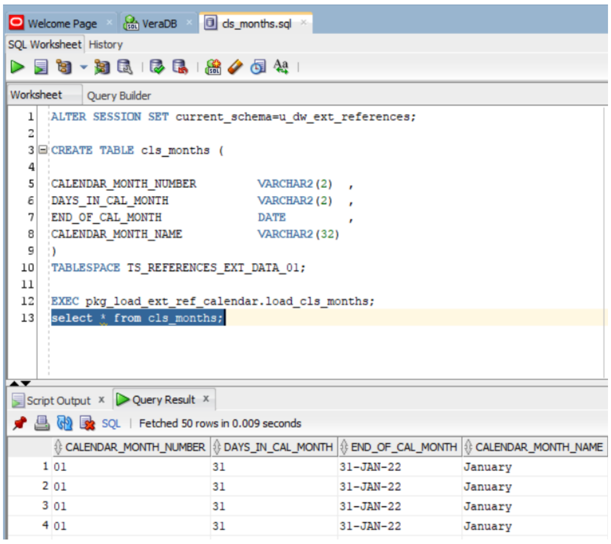
Task completed in 0.055 seconds

```
View U_DW_REFERENCES.W_WEEKS created.


Grant succeeded.
```

2.3. Task 03: CREATE DW.T_MONTHS

Create Object T_MONTHS on DW layer:

- cls

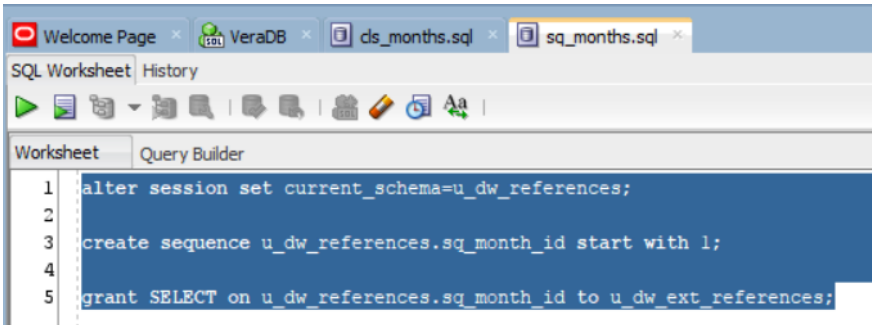


```sql
ALTER SESSION SET current_schema=u_dw_ext_references;

CREATE TABLE cls_months (

CALENDAR_MONTH_NUMBER          VARCHAR2(2)   ,
DAYS_IN_CAL_MONTH              VARCHAR2(2)   ,
END_OF_CAL_MONTH               DATE          ,
CALENDAR_MONTH_NAME            VARCHAR2(32)
)
TABLESPACE TS_REFERENCES_EXT_DATA_01;

EXEC pkg_load_ext_ref_calendar.load_cls_months;
select * from cls_months;
```

Fetched 50 rows in 0.009 seconds

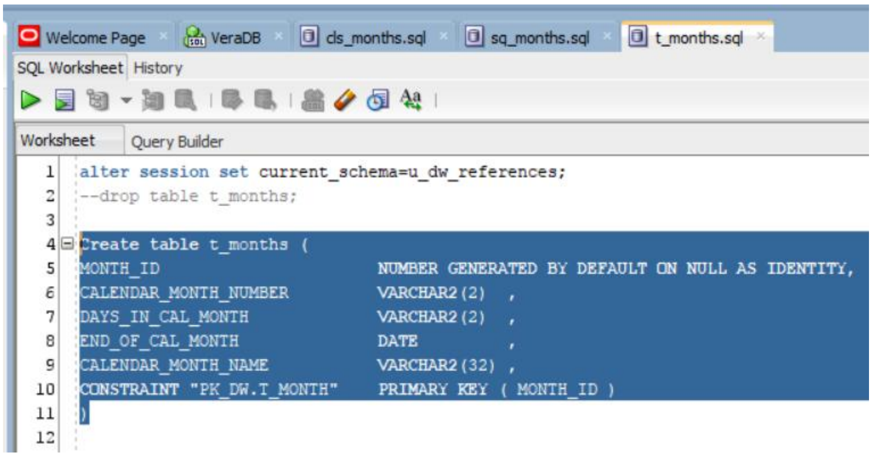
	CALENDAR_MONTH_NUMBER	DAYS_IN_CAL_MONTH	END_OF_CAL_MONTH	CALENDAR_MONTH_NAME
1	01	31	31-JAN-22	January
2	01	31	31-JAN-22	January
3	01	31	31-JAN-22	January
4	01	31	31-JAN-22	January

- sq



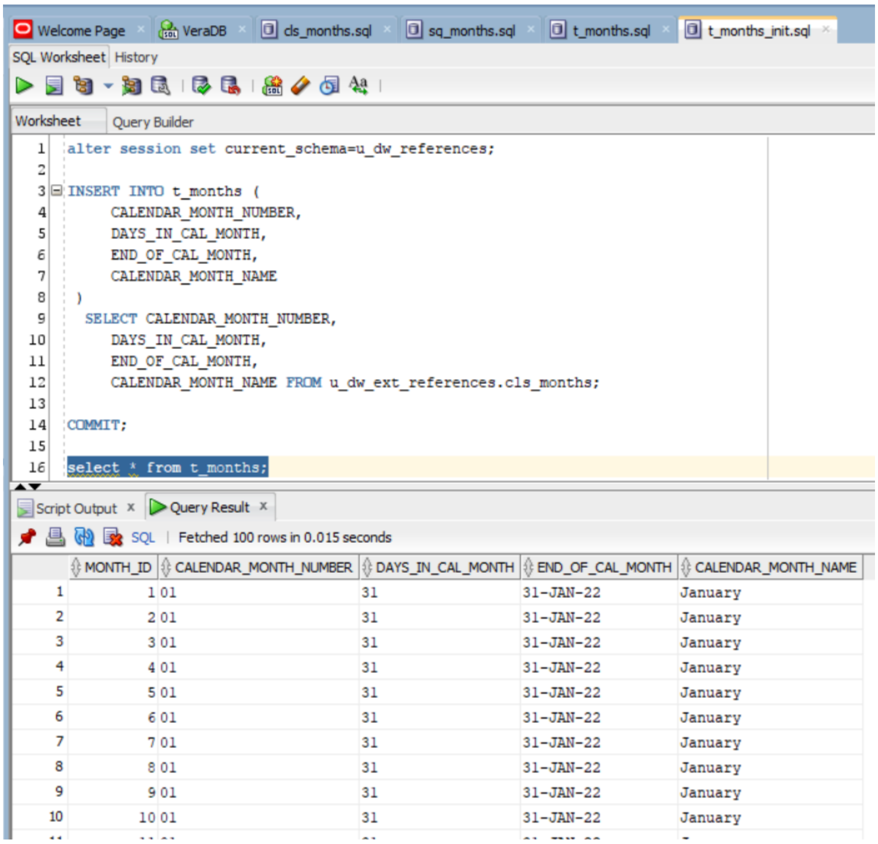
```
alter session set current_schema=u_dw_references;

create sequence u_dw_references.sq_month_id start with 1;

grant SELECT on u_dw_references.sq_month_id to u_dw_ext_references;
```

- t



```
alter session set current_schema=u_dw_references;
--drop table t_months;

create table t_months (
MONTH_ID                    NUMBER GENERATED BY DEFAULT ON NULL AS IDENTITY,
CALENDAR_MONTH_NUMBER       VARCHAR2(2)  ,
DAYS_IN_CAL_MONTH           VARCHAR2(2)  ,
END_OF_CAL_MONTH            DATE         ,
CALENDAR_MONTH_NAME         VARCHAR2(32) ,
CONSTRAINT "PK_DW.T_MONTH"   PRIMARY KEY ( MONTH_ID )
)

```

- t_init

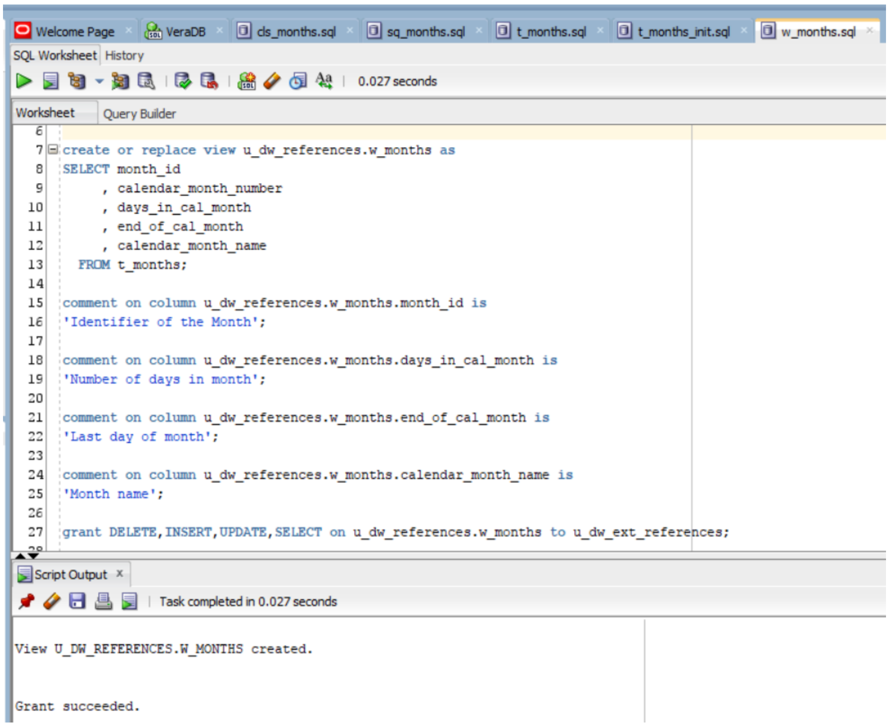


```
alter session set current_schema=u_dw_references;

INSERT INTO t_months (
     CALENDAR_MONTH_NUMBER,
     DAYS_IN_CAL_MONTH,
     END_OF_CAL_MONTH,
     CALENDAR_MONTH_NAME
 )
  SELECT CALENDAR_MONTH_NUMBER,
     DAYS_IN_CAL_MONTH,
     END_OF_CAL_MONTH,
     CALENDAR_MONTH_NAME FROM u_dw_ext_references.cls_months;

COMMIT;

select * from t_months;
```

Fetched 100 rows in 0.015 seconds

	MONTH_ID	CALENDAR_MONTH_NUMBER	DAYS_IN_CAL_MONTH	END_OF_CAL_MONTH	CALENDAR_MONTH_NAME
1	1	01	31	31-JAN-22	January
2	2	01	31	31-JAN-22	January
3	3	01	31	31-JAN-22	January
4	4	01	31	31-JAN-22	January
5	5	01	31	31-JAN-22	January
6	6	01	31	31-JAN-22	January
7	7	01	31	31-JAN-22	January
8	8	01	31	31-JAN-22	January
9	9	01	31	31-JAN-22	January
10	10	01	31	31-JAN-22	January

- w



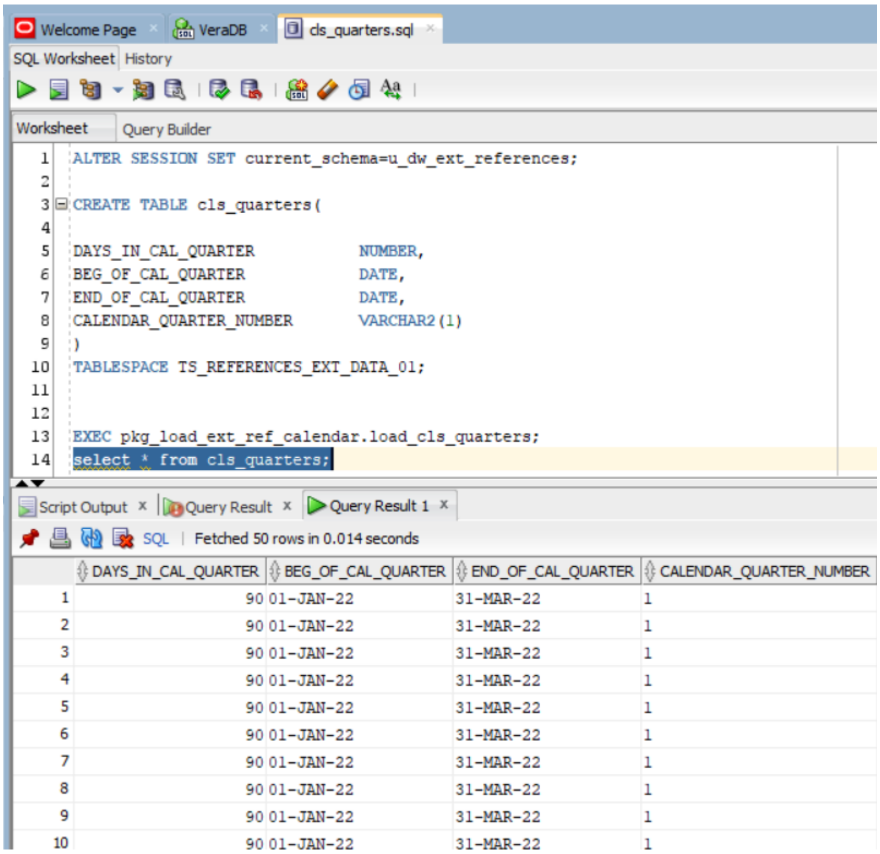
```
create or replace view u_dw_references.w_months as
SELECT month_id
     , calendar_month_number
     , days_in_cal_month
     , end_of_cal_month
     , calendar_month_name
  FROM t_months;

comment on column u_dw_references.w_months.month_id is
'Identifier of the Month';

comment on column u_dw_references.w_months.days_in_cal_month is
'Number of days in month';

comment on column u_dw_references.w_months.end_of_cal_month is
'Last day of month';

comment on column u_dw_references.w_months.calendar_month_name is
'Month name';

grant DELETE,INSERT,UPDATE,SELECT on u_dw_references.w_months to u_dw_ext_references;
```

```
View U_DW_REFERENCES.W_MONTHS created.


Grant succeeded.
```

2.4. Task 04: CREATE DW.T_QUARTERS

Create Object T_QUARTERS on DW layer:

- cls

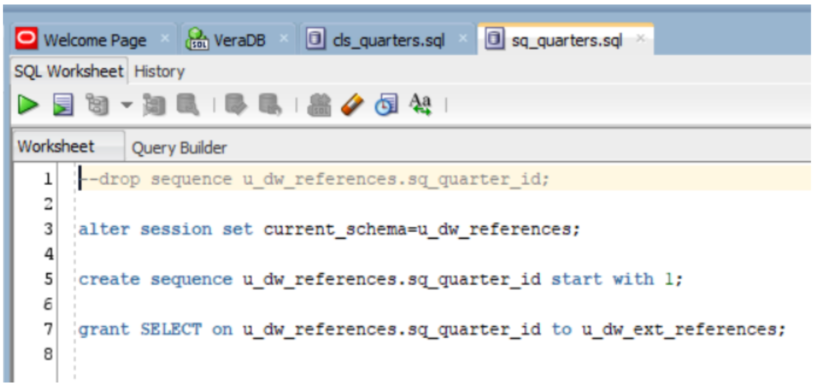


```
ALTER SESSION SET current_schema=u_dw_ext_references;

CREATE TABLE cls_quarters(

DAYS_IN_CAL_QUARTER             NUMBER,
BEG_OF_CAL_QUARTER              DATE,
END_OF_CAL_QUARTER              DATE,
CALENDAR_QUARTER_NUMBER         VARCHAR2(1)
)
TABLESPACE TS_REFERENCES_EXT_DATA_01;


EXEC pkg_load_ext_ref_calendar.load_cls_quarters;
select * from cls_quarters;
```

Fetched 50 rows in 0.014 seconds

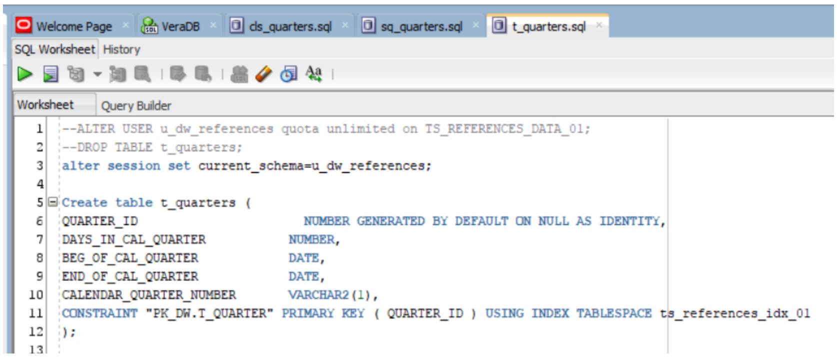
	DAYS_IN_CAL_QUARTER	BEG_OF_CAL_QUARTER	END_OF_CAL_QUARTER	CALENDAR_QUARTER_NUMBER
1	90	01-JAN-22	31-MAR-22	1
2	90	01-JAN-22	31-MAR-22	1
3	90	01-JAN-22	31-MAR-22	1
4	90	01-JAN-22	31-MAR-22	1
5	90	01-JAN-22	31-MAR-22	1
6	90	01-JAN-22	31-MAR-22	1
7	90	01-JAN-22	31-MAR-22	1
8	90	01-JAN-22	31-MAR-22	1
9	90	01-JAN-22	31-MAR-22	1
10	90	01-JAN-22	31-MAR-22	1

- sq



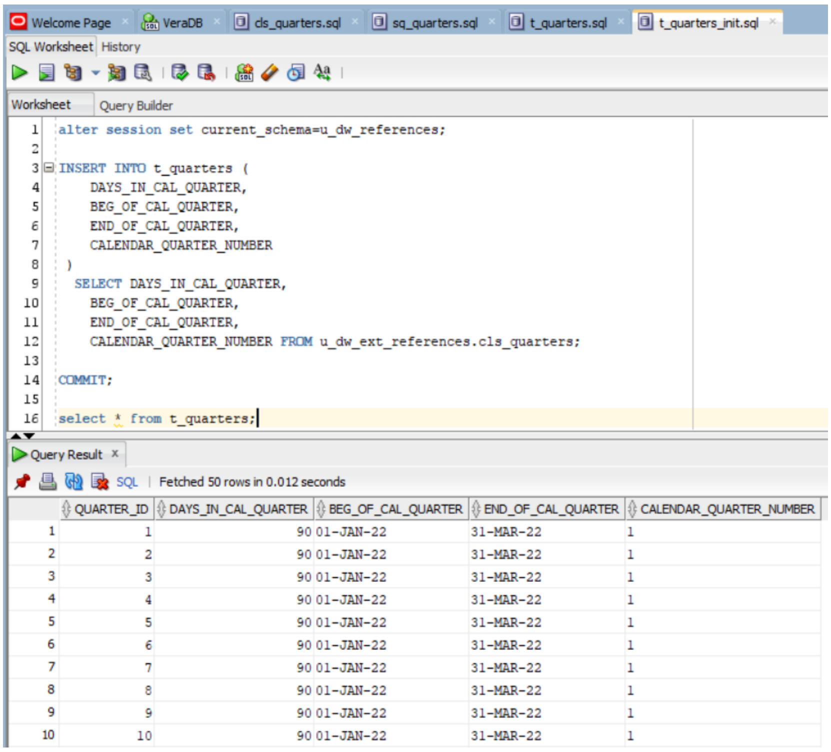
```sql
--drop sequence u_dw_references.sq_quarter_id;

alter session set current_schema=u_dw_references;

create sequence u_dw_references.sq_quarter_id start with 1;

grant SELECT on u_dw_references.sq_quarter_id to u_dw_ext_references;

```

- t



```sql
--ALTER USER u_dw_references quota unlimited on TS_REFERENCES_DATA_01;
--DROP TABLE t_quarters;
alter session set current_schema=u_dw_references;

Create table t_quarters (
QUARTER_ID                          NUMBER GENERATED BY DEFAULT ON NULL AS IDENTITY,
DAYS_IN_CAL_QUARTER              NUMBER,
BEG_OF_CAL_QUARTER               DATE,
END_OF_CAL_QUARTER               DATE,
CALENDAR_QUARTER_NUMBER          VARCHAR2(1),
CONSTRAINT "PK_DW.T_QUARTER" PRIMARY KEY ( QUARTER_ID ) USING INDEX TABLESPACE ts_references_idx_01
);

```

- t_init

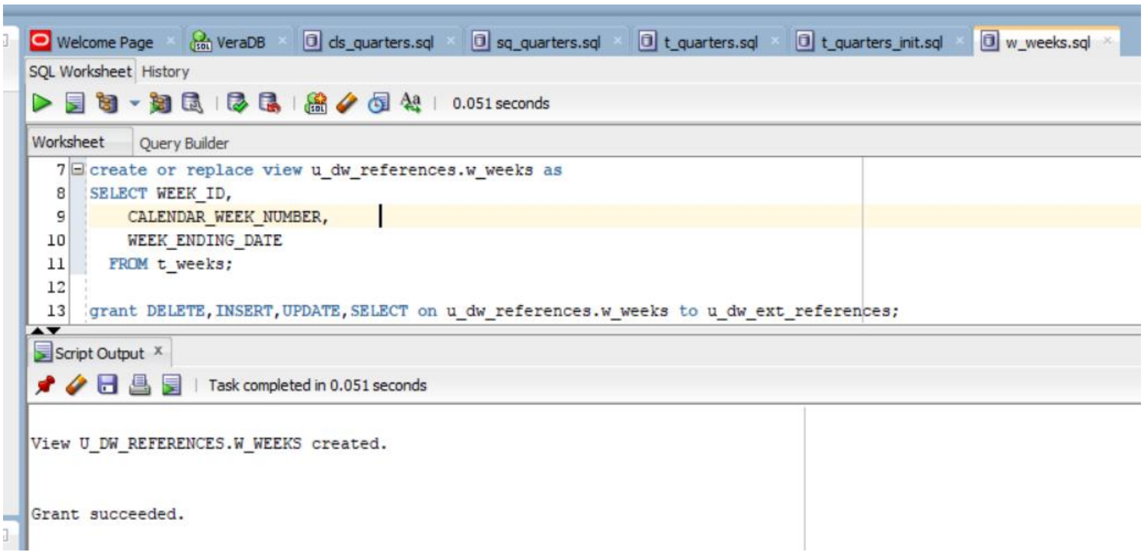


```sql
alter session set current_schema=u_dw_references;

INSERT INTO t_quarters (
    DAYS_IN_CAL_QUARTER,
    BEG_OF_CAL_QUARTER,
    END_OF_CAL_QUARTER,
    CALENDAR_QUARTER_NUMBER
 )
  SELECT DAYS_IN_CAL_QUARTER,
    BEG_OF_CAL_QUARTER,
    END_OF_CAL_QUARTER,
    CALENDAR_QUARTER_NUMBER FROM u_dw_ext_references.cls_quarters;

COMMIT;

select * from t_quarters;
```

Fetched 50 rows in 0.012 seconds

	QUARTER_ID	DAYS_IN_CAL_QUARTER	BEG_OF_CAL_QUARTER	END_OF_CAL_QUARTER	CALENDAR_QUARTER_NUMBER
1	1	90	01-JAN-22	31-MAR-22	1
2	2	90	01-JAN-22	31-MAR-22	1
3	3	90	01-JAN-22	31-MAR-22	1
4	4	90	01-JAN-22	31-MAR-22	1
5	5	90	01-JAN-22	31-MAR-22	1
6	6	90	01-JAN-22	31-MAR-22	1
7	7	90	01-JAN-22	31-MAR-22	1
8	8	90	01-JAN-22	31-MAR-22	1
9	9	90	01-JAN-22	31-MAR-22	1
10	10	90	01-JAN-22	31-MAR-22	1

- w



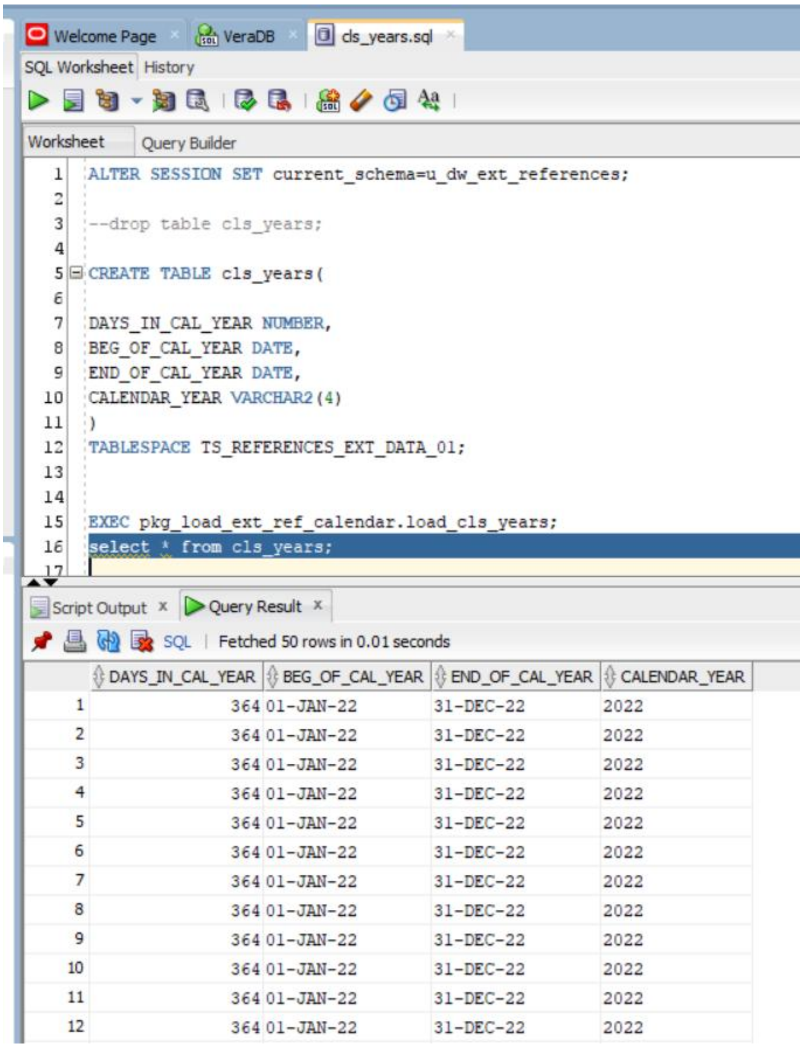
```
create or replace view u_dw_references.w_weeks as
SELECT WEEK_ID,
    CALENDAR_WEEK_NUMBER,
    WEEK_ENDING_DATE
  FROM t_weeks;

grant DELETE,INSERT,UPDATE,SELECT on u_dw_references.w_weeks to u_dw_ext_references;
```

```
View U_DW_REFERENCES.W_WEEKS created.


Grant succeeded.
```

2.5. Task 05: CREATE DW.T_YEARS

Create Object T_YEARS on DW layer:

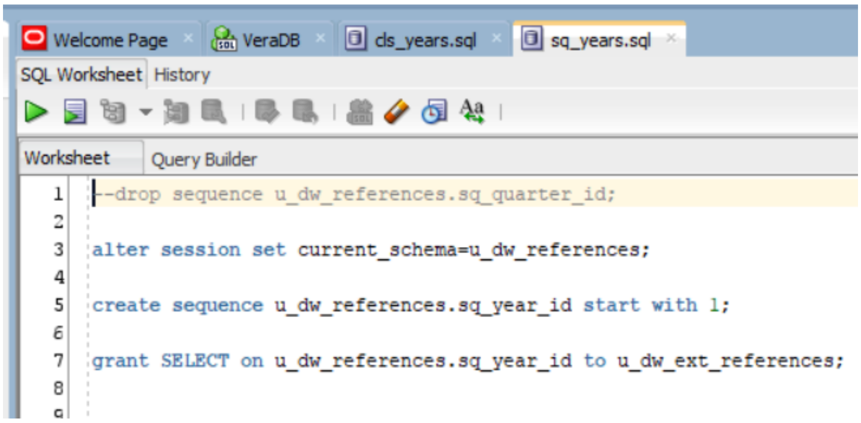
- cls



```
ALTER SESSION SET current_schema=u_dw_ext_references;

--drop table cls_years;

CREATE TABLE cls_years(

DAYS_IN_CAL_YEAR NUMBER,
BEG_OF_CAL_YEAR DATE,
END_OF_CAL_YEAR DATE,
CALENDAR_YEAR VARCHAR2(4)
)
TABLESPACE TS_REFERENCES_EXT_DATA_01;


EXEC pkg_load_ext_ref_calendar.load_cls_years;
select * from cls_years;
```

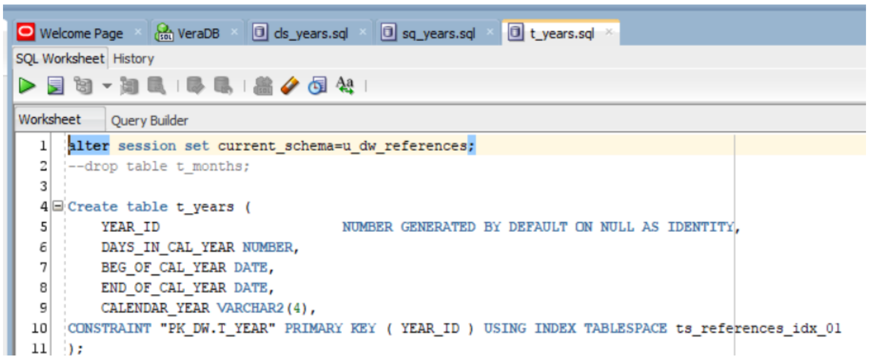
	DAYS_IN_CAL_YEAR	BEG_OF_CAL_YEAR	END_OF_CAL_YEAR	CALENDAR_YEAR
1	364	01-JAN-22	31-DEC-22	2022
2	364	01-JAN-22	31-DEC-22	2022
3	364	01-JAN-22	31-DEC-22	2022
4	364	01-JAN-22	31-DEC-22	2022
5	364	01-JAN-22	31-DEC-22	2022
6	364	01-JAN-22	31-DEC-22	2022
7	364	01-JAN-22	31-DEC-22	2022
8	364	01-JAN-22	31-DEC-22	2022
9	364	01-JAN-22	31-DEC-22	2022
10	364	01-JAN-22	31-DEC-22	2022
11	364	01-JAN-22	31-DEC-22	2022
12	364	01-JAN-22	31-DEC-22	2022

- sq



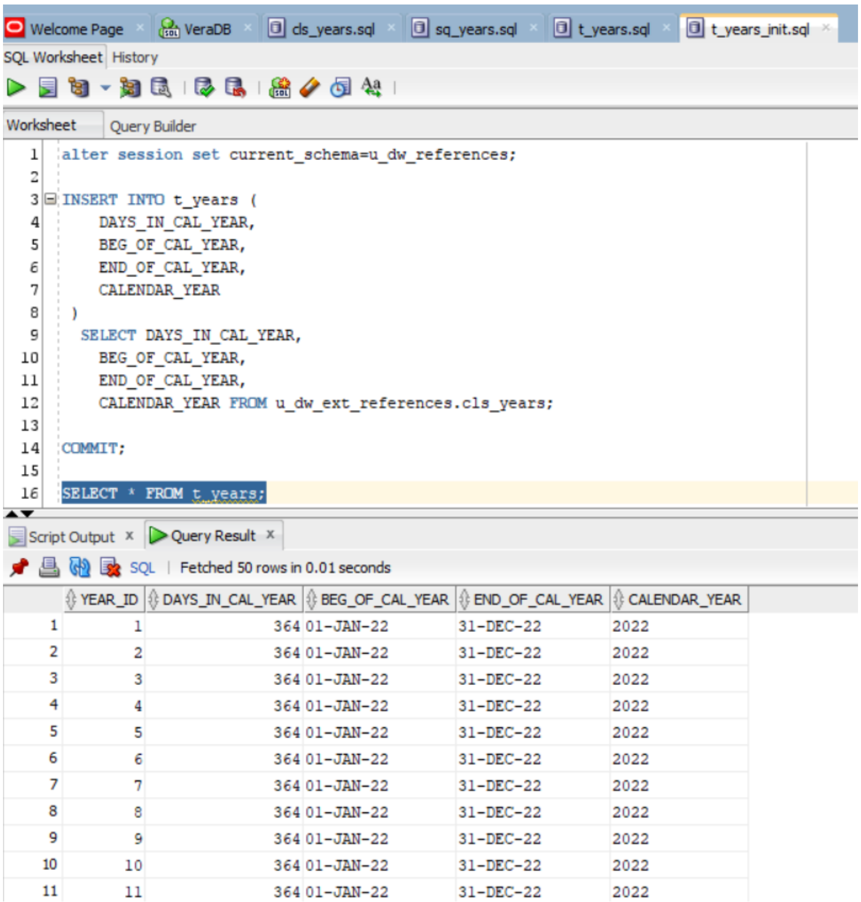
```
--drop sequence u_dw_references.sq_quarter_id;

alter session set current_schema=u_dw_references;

create sequence u_dw_references.sq_year_id start with 1;

grant SELECT on u_dw_references.sq_year_id to u_dw_ext_references;

```

- t



```
alter session set current_schema=u_dw_references;
--drop table t_months;

Create table t_years (
    YEAR_ID                          NUMBER GENERATED BY DEFAULT ON NULL AS IDENTITY,
    DAYS_IN_CAL_YEAR NUMBER,
    BEG_OF_CAL_YEAR DATE,
    END_OF_CAL_YEAR DATE,
    CALENDAR_YEAR VARCHAR2(4),
CONSTRAINT "PK_DW.T_YEAR" PRIMARY KEY ( YEAR_ID ) USING INDEX TABLESPACE ts_references_idx_01
);
```

- t_init

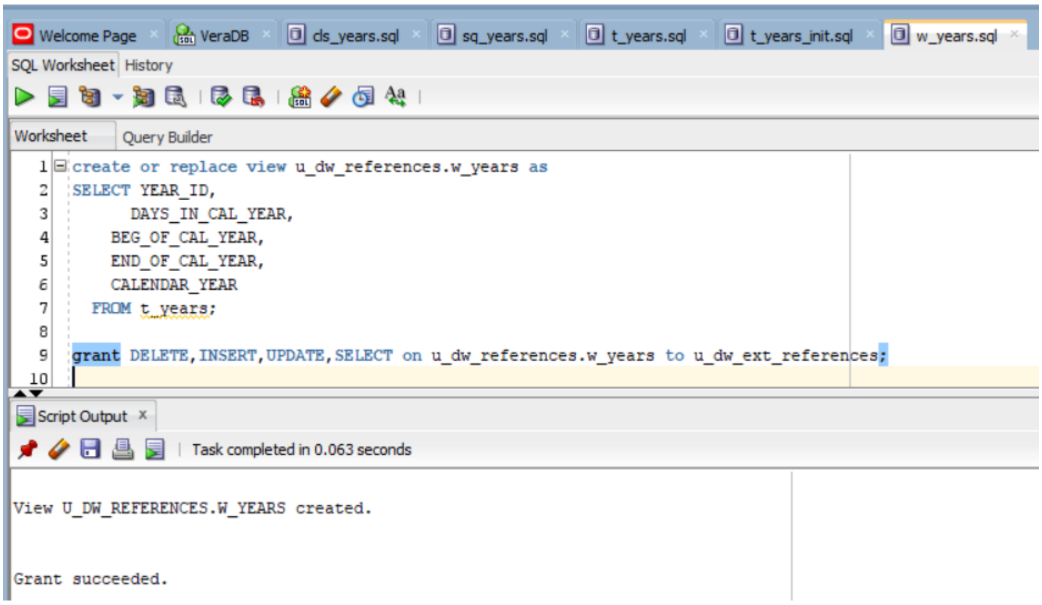


```
alter session set current_schema=u_dw_references;

INSERT INTO t_years (
    DAYS_IN_CAL_YEAR,
    BEG_OF_CAL_YEAR,
    END_OF_CAL_YEAR,
    CALENDAR_YEAR
 )
  SELECT DAYS_IN_CAL_YEAR,
    BEG_OF_CAL_YEAR,
    END_OF_CAL_YEAR,
    CALENDAR_YEAR FROM u_dw_ext_references.cls_years;

COMMIT;

SELECT * FROM t_years;
```

Fetched 50 rows in 0.01 seconds

	YEAR_ID	DAYS_IN_CAL_YEAR	BEG_OF_CAL_YEAR	END_OF_CAL_YEAR	CALENDAR_YEAR
1	1	364	01-JAN-22	31-DEC-22	2022
2	2	364	01-JAN-22	31-DEC-22	2022
3	3	364	01-JAN-22	31-DEC-22	2022
4	4	364	01-JAN-22	31-DEC-22	2022
5	5	364	01-JAN-22	31-DEC-22	2022
6	6	364	01-JAN-22	31-DEC-22	2022
7	7	364	01-JAN-22	31-DEC-22	2022
8	8	364	01-JAN-22	31-DEC-22	2022
9	9	364	01-JAN-22	31-DEC-22	2022
10	10	364	01-JAN-22	31-DEC-22	2022
11	11	364	01-JAN-22	31-DEC-22	2022

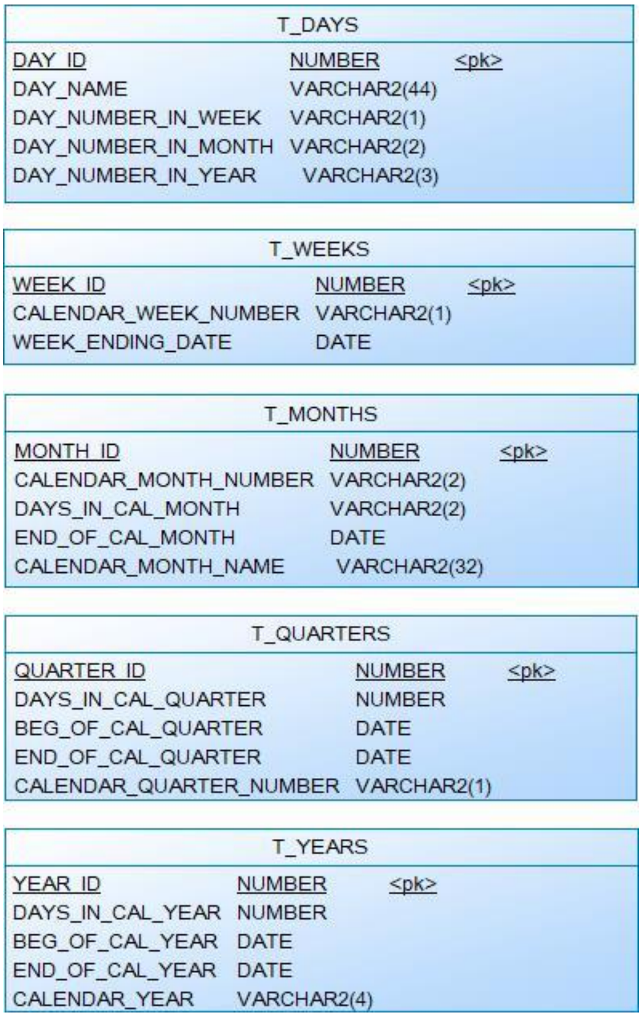
- w



```sql
create or replace view u_dw_references.w_years as
SELECT YEAR_ID,
      DAYS_IN_CAL_YEAR,
    BEG_OF_CAL_YEAR,
    END_OF_CAL_YEAR,
    CALENDAR_YEAR
  FROM t_years;

grant DELETE,INSERT,UPDATE,SELECT on u_dw_references.w_years to u_dw_ext_references;
```

```
View U_DW_REFERENCES.W_YEARS created.


Grant succeeded.
```

Physical Diagram:



T_DAYS		
DAY_ID	NUMBER	<pk>
DAY_NAME	VARCHAR2(44)	
DAY_NUMBER_IN_WEEK	VARCHAR2(1)	
DAY_NUMBER_IN_MONTH	VARCHAR2(2)	
DAY_NUMBER_IN_YEAR	VARCHAR2(3)	

T_WEEKS		
WEEK_ID	NUMBER	<pk>
CALENDAR_WEEK_NUMBER	VARCHAR2(1)	
WEEK_ENDING_DATE	DATE	

T_MONTHS		
MONTH_ID	NUMBER	<pk>
CALENDAR_MONTH_NUMBER	VARCHAR2(2)	
DAYS_IN_CAL_MONTH	VARCHAR2(2)	
END_OF_CAL_MONTH	DATE	
CALENDAR_MONTH_NAME	VARCHAR2(32)	

T_QUARTERS		
QUARTER_ID	NUMBER	<pk>
DAYS_IN_CAL_QUARTER	NUMBER	
BEG_OF_CAL_QUARTER	DATE	
END_OF_CAL_QUARTER	DATE	
CALENDAR_QUARTER_NUMBER	VARCHAR2(1)	

T_YEARS		
YEAR_ID	NUMBER	<pk>
DAYS_IN_CAL_YEAR	NUMBER	
BEG_OF_CAL_YEAR	DATE	
END_OF_CAL_YEAR	DATE	
CALENDAR_YEAR	VARCHAR2(4)	