stambia
Innovative Solutions

Appendices -
Additional exercises

Add08 Pivot On Activity

Pivot on activity - 1/6

Context

- You have to pivot a source activity table with one column per day of the month to insert data towards a target table when activity code is not null

HSQL_Datamart/sa | Limit Rows: 100 | PUBLIC

```
select * from ACT_PIVOT.ACTIVITY
```

Source Table

1 [select * from ACT_PIVO...] | Messages

EMP_NO	ACT_MONTH	ACT_YEAR	CODE_ID01	CODE_ID02	CODE_ID03	CODE_ID04	CODE_ID05	CODE_ID06	CODE_ID07	CODE_ID08	CODE_ID09	CODE_ID10	CODE_ID11	CODE_ID12	CODE_ID13
1	3	2017	<null>	<null>	<null>	CO	<null>	AB	<null>	<null>	<null>	<null>	<null>	<null>	<null>
2	3	2017	AB	<null>	MA	<null>	<null>	<null>	CO	<null>	<null>	<null>	<null>	<null>	<null>
3	3	2017	<null>	AB	<null>	<null>	MA	<null>	<null>	CO	CO	CO	<null>	<null>	<null>

HSQL_Datamart/sa

```
select * from ACT_PIVOT.DETAILLED_ACT
```

Target Table

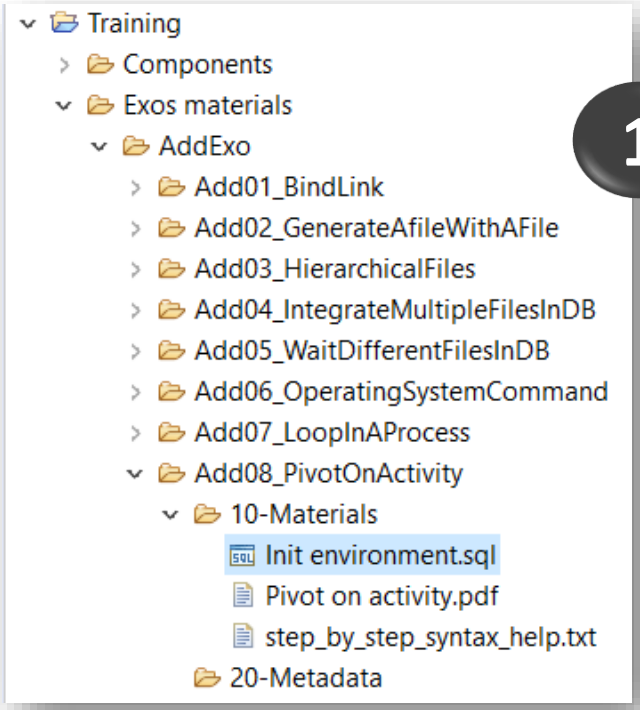
1 [select * from ACT_PIVO...] | Messages

EMP_NO	ACTIVITY_DATE	FIRSTNAME	LASTNAME	ACTIVITY_CODE
1	2017-03-04 00:00:00:000	John	SMITH	CO
1	2017-03-06 00:00:00:000	John	SMITH	AB
2	2017-03-01 00:00:00:000	Joe	KELLY	AB
2	2017-03-03 00:00:00:000	Joe	KELLY	MA
2	2017-03-07 00:00:00:000	Joe	KELLY	CO
3	2017-03-02 00:00:00:000	Melinda	PALMER	AB
3	2017-03-05 00:00:00:000	Melinda	PALMER	MA
3	2017-03-08 00:00:00:000	Melinda	PALMER	CO
3	2017-03-09 00:00:00:000	Melinda	PALMER	CO
3	2017-03-10 00:00:00:000	Melinda	PALMER	CO

NEED HELP? Training/Exos materials/AddExo/Add08_.../step_by_step_syntax_help.txt

Pivot on activity - 2/6

- 1 - Execute the SQL file (Init environment.sql) on DATAMART connection to create the required schema, tables and insert data



1

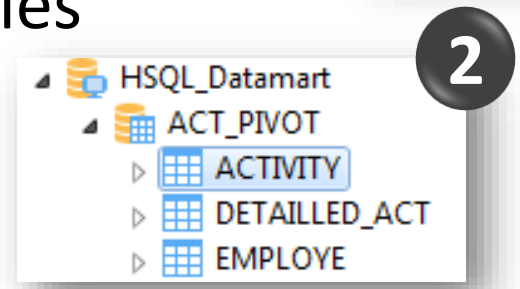
Init environment.sql

HSQL_Datamart (_diCCQLRIEeqc_rJGdBuQ-g)/sa | Limit Rows: 100 | PUBLIC

```
CREATE SCHEMA ACT_PIVOT;
CREATE TABLE ACT_PIVOT.ACTIVITY (
    EMP_NO INTEGER NOT NULL,ACT_MONTH INT NOT NULL,ACT_YEAR INT NOT NULL,
    CODE_ID01 CHAR(2),CODE_ID02 CHAR(2),CODE_ID03 CHAR(2),CODE_ID04 CHAR(2),
    CODE_ID05 CHAR(2),CODE_ID06 CHAR(2),CODE_ID07 CHAR(2),CODE_ID08 CHAR(2),
    CODE_ID09 CHAR(2),CODE_ID10 CHAR(2),CODE_ID11 CHAR(2),CODE_ID12 CHAR(2),
    CODE_ID13 CHAR(2),CODE_ID14 CHAR(2),CODE_ID15 CHAR(2),CODE_ID16 CHAR(2),
    CODE_ID17 CHAR(2),CODE_ID18 CHAR(2),CODE_ID19 CHAR(2),CODE_ID20 CHAR(2),
    CODE_ID21 CHAR(2),CODE_ID22 CHAR(2),CODE_ID23 CHAR(2),CODE_ID24 CHAR(2),
    CODE_ID25 CHAR(2),CODE_ID26 CHAR(2),CODE_ID27 CHAR(2),CODE_ID28 CHAR(2),
    CODE_ID29 CHAR(2),CODE_ID30 CHAR(2),CODE_ID31 CHAR(2),
    CONSTRAINT PK_ACTIVITY PRIMARY KEY (EMP_NO,ACT_MONTH,ACT_YEAR));
CREATE TABLE ACT_PIVOT.EMPLOYE (
    EMP_NO INT NOT NULL,EMP_FIRST_NAME VARCHAR(50),EMP_LAST_NAME VARCHAR(50),
    CONSTRAINT PK_EMPLOYE PRIMARY KEY (EMP_NO));
CREATE TABLE ACT_PIVOT.DETAILLED_ACT (
    EMP_NO INTEGER NOT NULL,ACTIVITY_DATE TIMESTAMP NOT NULL,
    FIRSTNAME VARCHAR(100),LASTNAME VARCHAR(100),ACTIVITY_CODE CHAR(2) NOT NULL,
    CONSTRAINT PK_DETAILLED_ACT PRIMARY KEY (EMP_NO,ACTIVITY_DATE));

INSERT INTO ACT_PIVOT.EMPLOYE VALUES (1,'John','SMITH');
INSERT INTO ACT_PIVOT.EMPLOYE VALUES (2,'Joe','KELLY');
INSERT INTO ACT_PIVOT.EMPLOYE VALUES (3,'Melinda','PALMER');
```

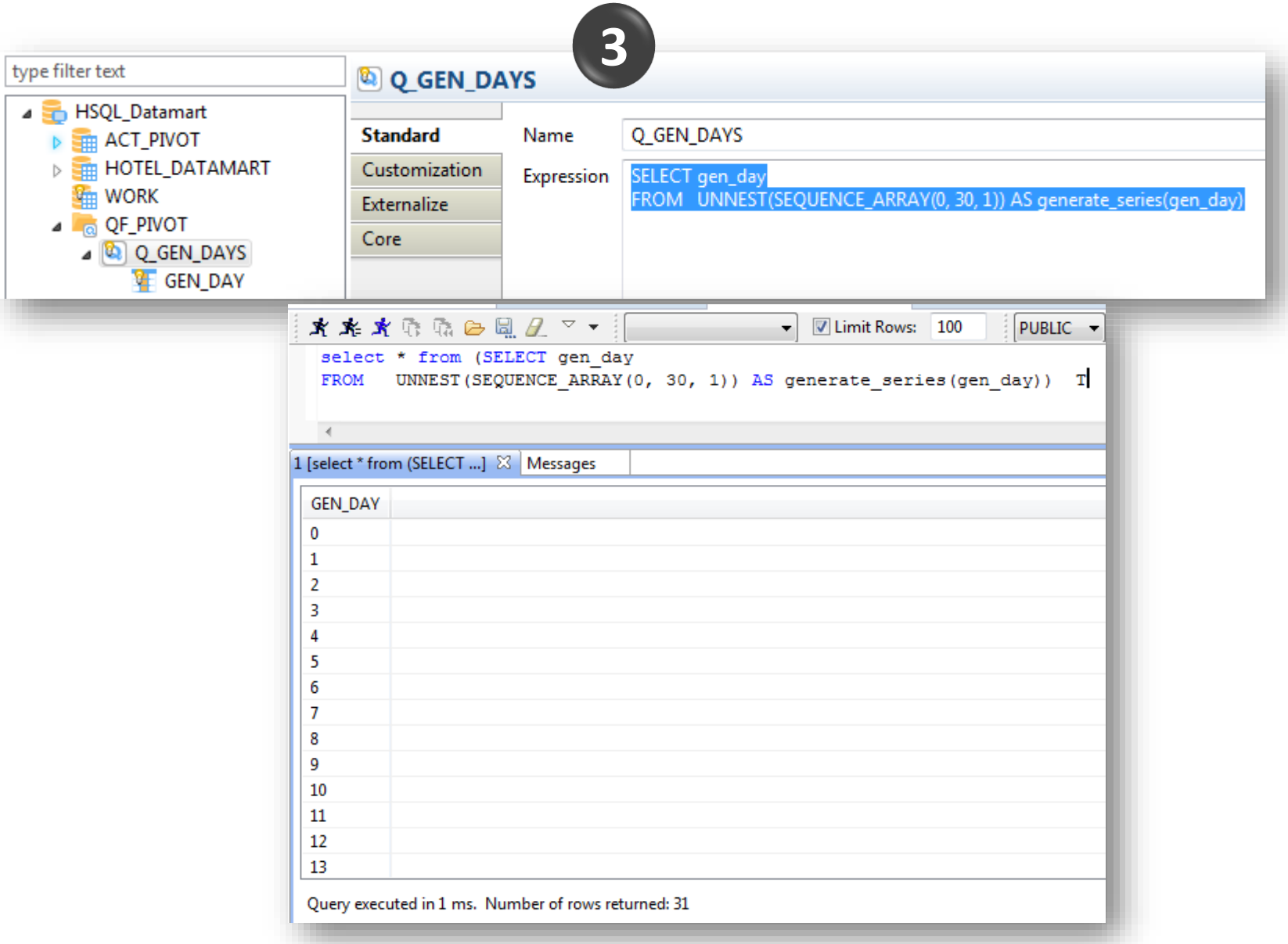
- 2 - Reverse the schema and the 3 tables



2

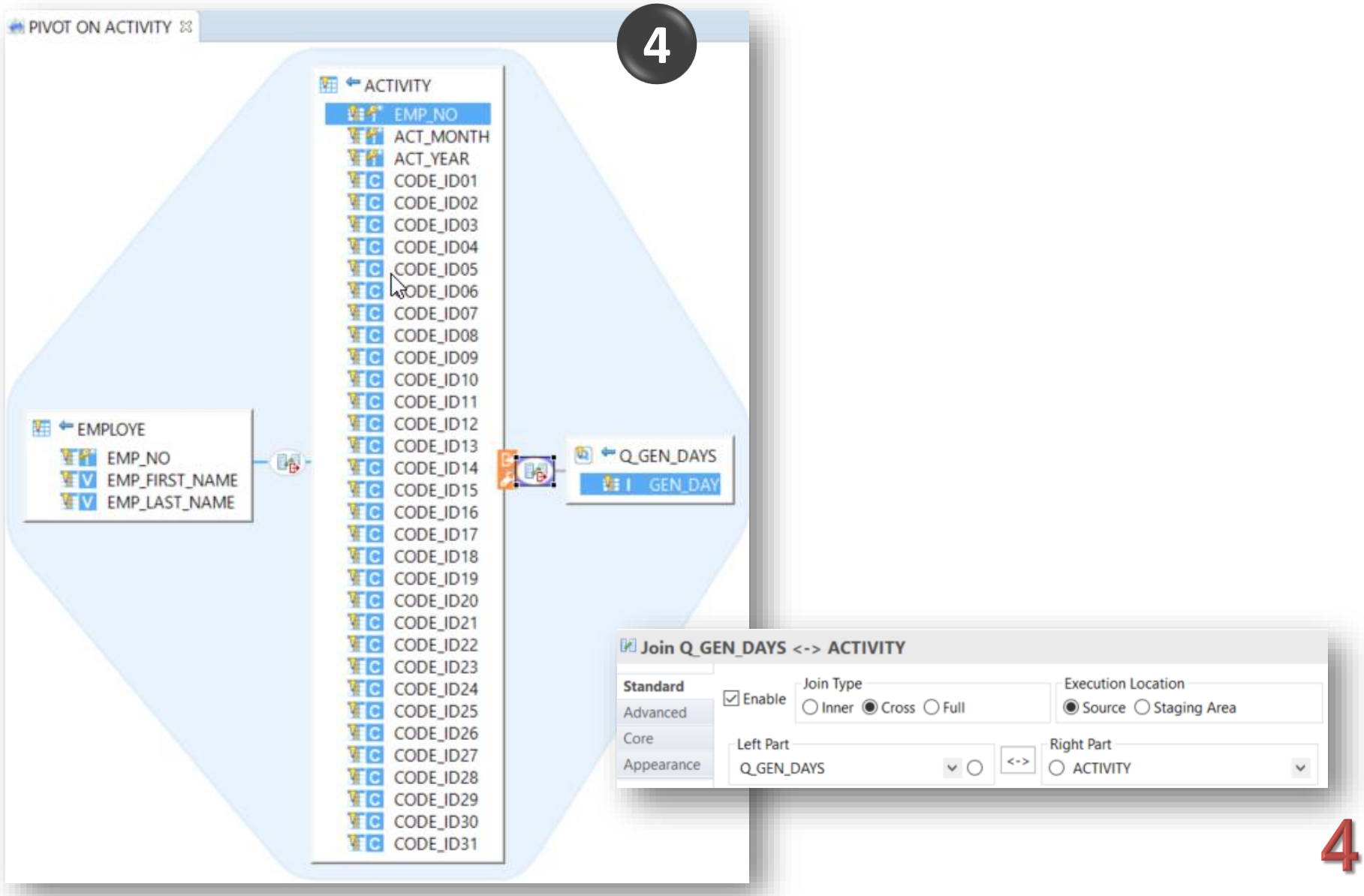
Pivot on activity - 3/6

- 3 - Create a query on Datamart connection, save it and reverse the column : this query will generate 31 numbers between 0 and 30



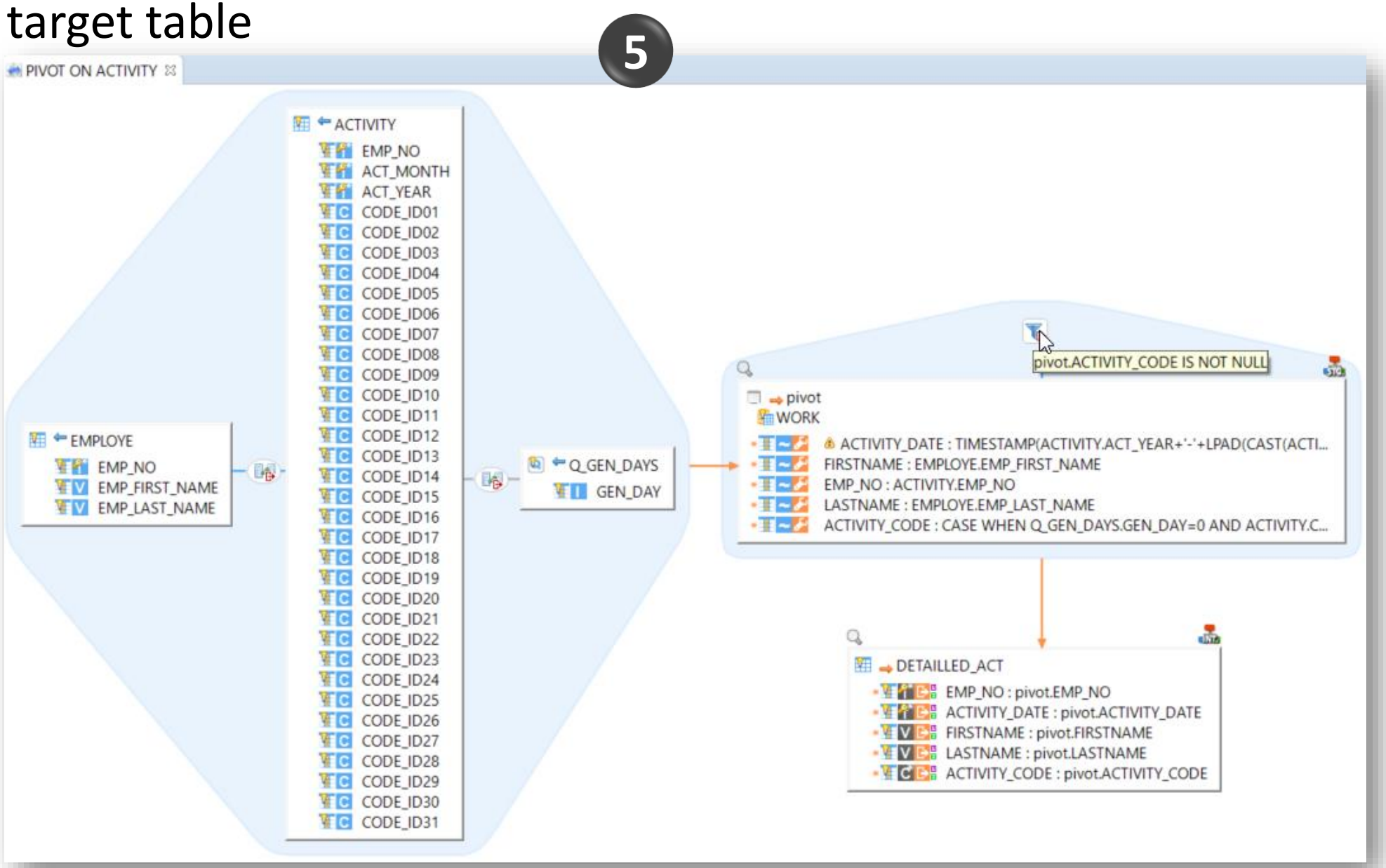
Pivot on activity - 4/6

- 4 - Create a mapping with ACTIVITY, EMPLOYE and the Query. The join between ACTIVITY and Q_GEN_DAYS is a **cross join**



Pivot on activity - 5/6

- 5 - Drag & drop a schema to create a stage with a filter and the target table



Pivot on activity - 6/6

- Once executed, the mapping has loaded the target table as required: