stambia
Innovative Solutions

Appendices - Additional exercises

Add13 Greatest and least pivot

Greatest and least pivot - 1/9

- The Objective is to pivot and select worst and best sells of a source table to generate a file with the worst and best sells and sellers
  - The source tables contains the daily sell result of 4 salesman, Alice, Clara, John and Henry, with one column per personal results
  - At a day several salesmen can be the best or the worst

RESULT_DATE	RESULT_SALESMAN1	RESULT_SALESMAN2	RESULT_SALESMAN3	RESULT_SALESMAN4
2021-01-01 00:00:00:000	42	30	32	39
2021-01-02 00:00:00:000	16	21	1	20
2021-01-03 00:00:00:000	44	48	7	14
2021-01-04 00:00:00:000	24	21	33	22
2021-01-05 00:00:00:000	28	18	44	4
2021-01-06 00:00:00:000	31	32	27	13
2021-01-07 00:00:00:000	35	28	36	5
2021-01-08 00:00:00:000	4	23	27	46
2021-01-09 00:00:00:000	22	19	19	35
2021-01-10 00:00:00:000	44	25	15	20
2021-01-11 00:00:00:000	13	6	33	18
2021-01-12 00:00:00:000	23	43	25	36
2021-01-13 00:00:00:000	45	15	35	26
2021-01-14 00:00:00:000	3	30	21	34
2021-01-15 00:00:00:000	27	18	44	28
2021-01-16 00:00:00:000	9	0	40	44
2021-01-17 00:00:00:000	44	42	25	32
2021-01-18 00:00:00:000	44	15	0	4
2021-01-19 00:00:00:000	28	41	41	35

result_date	best_seller	worst_seller	best_sell	worst_sell
2021-01-01	Henry	John	42	30
2021-01-02	John	Clara	21	1
2021-01-03	John	Clara	48	7
2021-01-04	Clara	John	33	21
2021-01-05	Clara	Alice	44	4
2021-01-06	John	Alice	32	13
2021-01-07	Clara	Alice	36	5
2021-01-08	Alice	Henry	46	4
2021-01-09	Alice	Clara,John	35	19
2021-01-10	Henry	Clara	44	15
2021-01-11	Clara	John	33	6
2021-01-12	John	Henry	43	23
2021-01-13	Henry	John	45	15
2021-01-14	Alice	Henry	34	3
2021-01-15	Clara	John	44	18
2021-01-16	Alice	John	44	0
2021-01-17	Henry	Clara	44	25
2021-01-18	Henry	Clara	44	0
2021-01-19	Clara,John	Henry	41	28

ID_SALESMAN	NM_SALESMAN
1	Henry
2	John
3	Clara
4	Alice

several salesmen can be the best or the worst

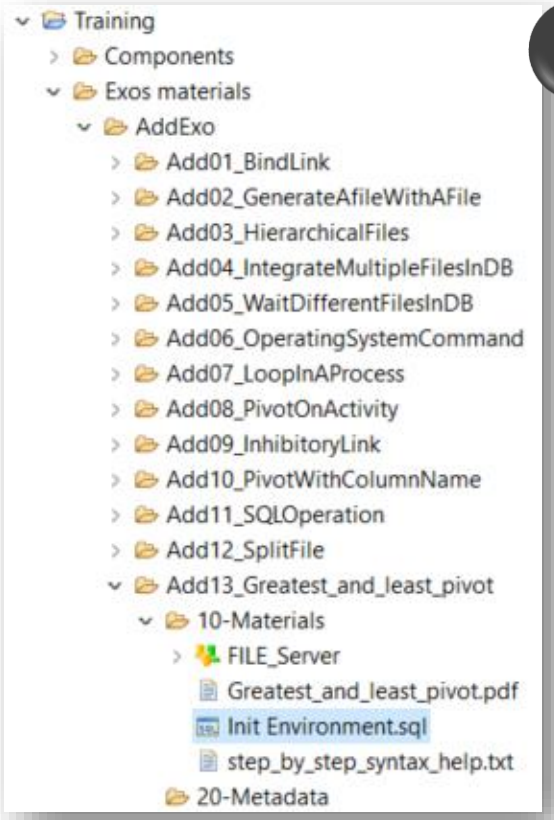
In case of several salesmen with the best or the worst, a list of salesmen must be built

NEED HELP?

Training/Exos materials/AddExo/Add13_.../step_by_step_syntax_help.txt

Greatest and least pivot - 2/9

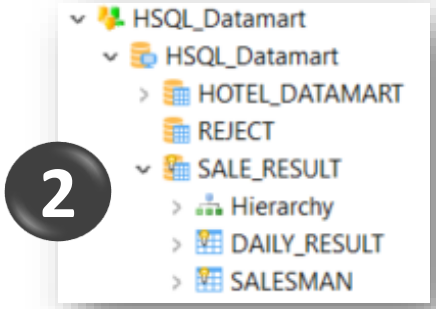
- 1 - Execute the SQL file (Init Environment.sql) on DATAMART connection to create the required schema and tables



1

```
OP SCHEMA SALE_RESULT IF EXISTS CASCADE;
ATE SCHEMA SALE_RESULT;
EATE TABLE SALE_RESULT.DAILY_RESULT (
result_date  TIMESTAMP NOT NULL,
result_salesman1 INTEGER,
result_salesman2 INTEGER,
result_salesman3 INTEGER,
result_salesman4 INTEGER,
CONSTRAINT   pk_daily_result PRIMARY KEY (result_date));
INSERT INTO  SALE_RESULT.DAILY_RESULT
SELECT TO_TIMESTAMP(LPAD(gen_days,2,'0')+'/01/'+YEAR(current_timestamp) ,'DD/MM/YYYY') AS result_date,
       CAST(rand()*50 AS INTEGER) AS result_salesman1,
       CAST(rand()*50 AS INTEGER) AS result_salesman2,
       CAST(rand()*50 AS INTEGER) AS result_salesman3,
       CAST(rand()*50 AS INTEGER) AS result_salesman4
FROM   UNNEST(SEQUENCE_ARRAY(1, 31, 1)) AS generate_series(gen_days);
CREATE TABLE SALE_RESULT.SALESMAN (
ID_SALESMAN INTEGER NOT NULL,
NM_SALESMAN VARCHAR(100),
CONSTRAINT PK_SALESMAN PRIMARY KEY (ID_SALESMAN));
INSERT INTO  SALE_RESULT.SALESMAN VALUES (1,'Henry'),(2,'John'),(3,'Clara'),(4,'Alice');
```

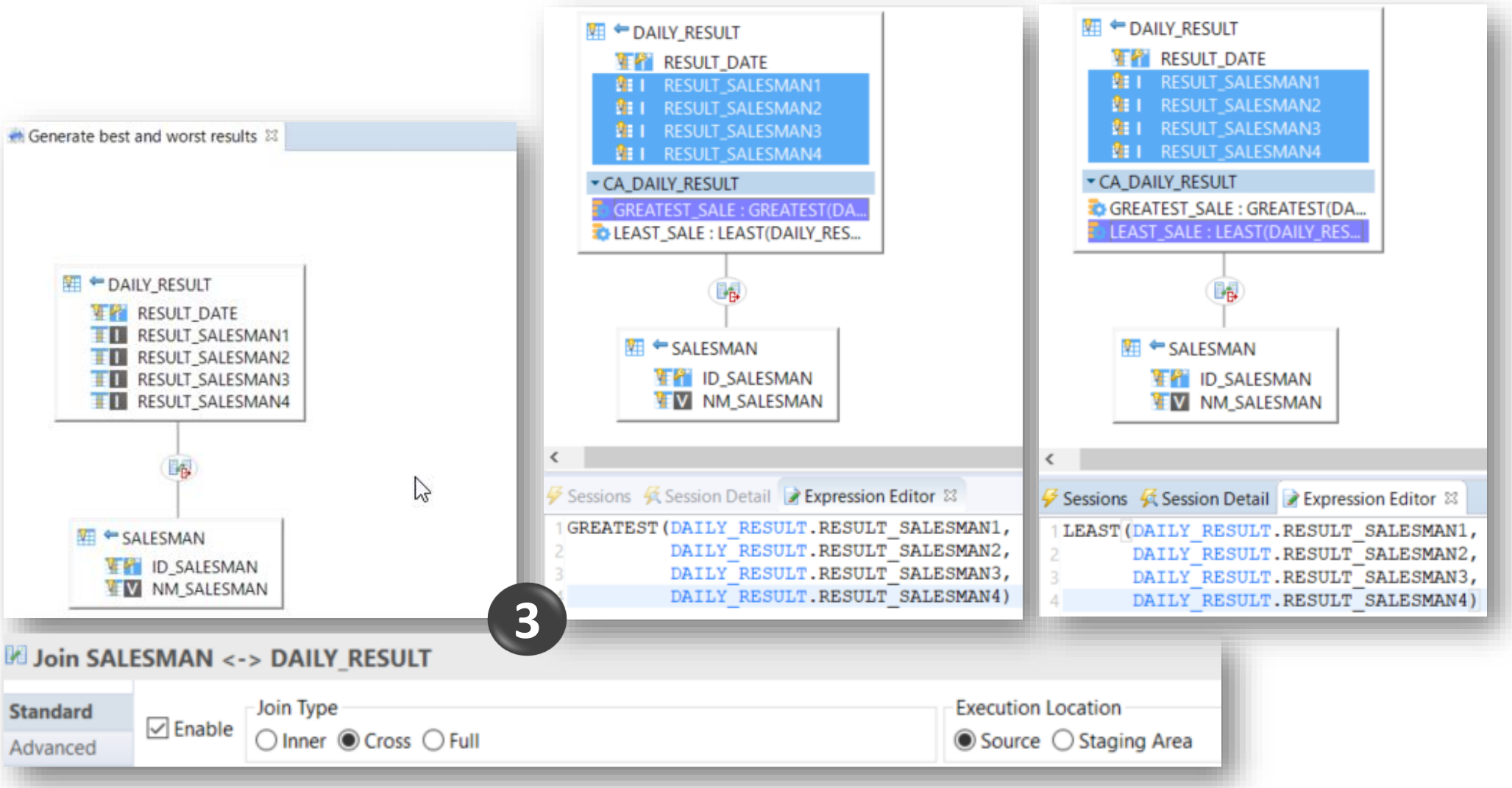
- 2 - Reverse the schema and the tables



2

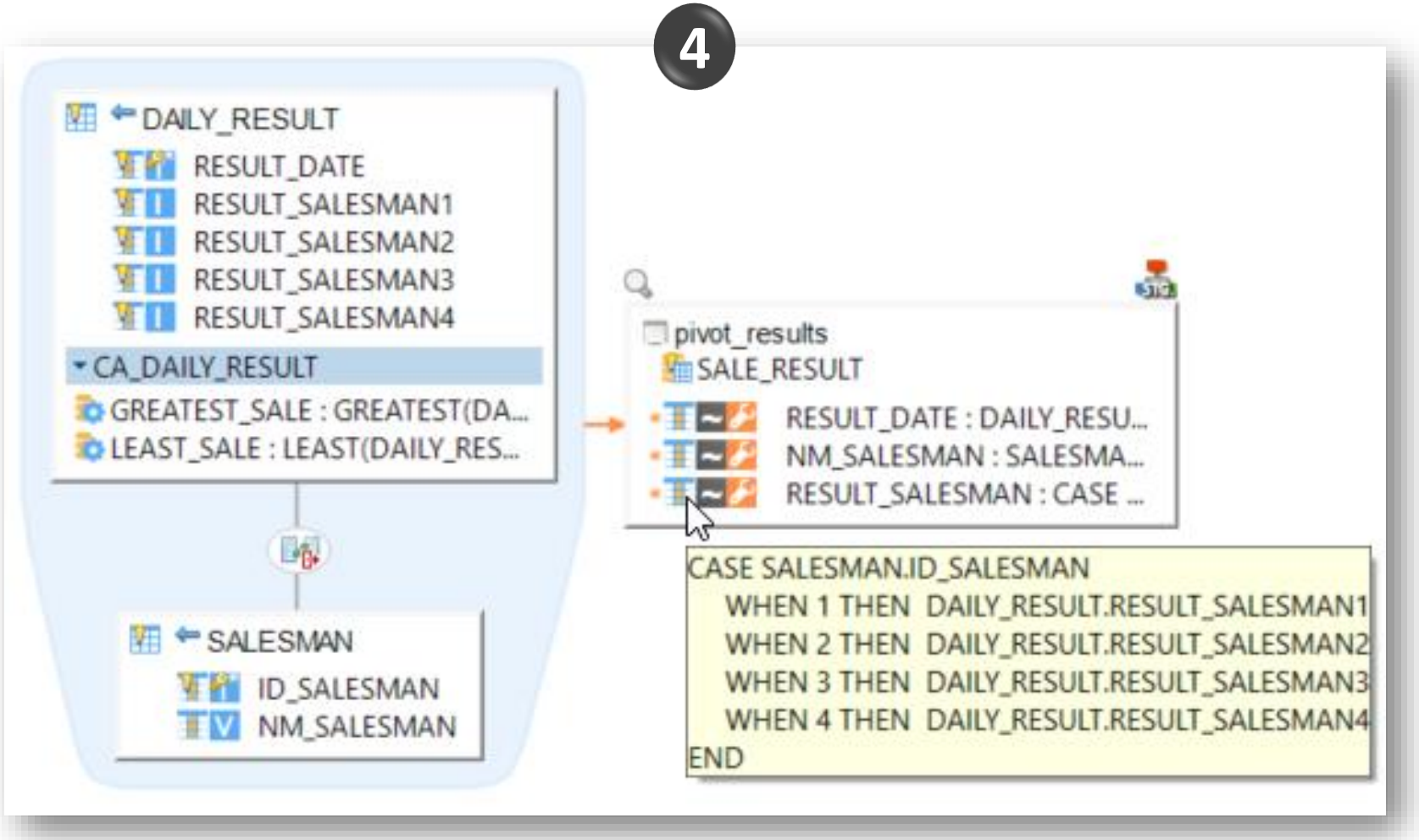
Greatest and least pivot - 3/9

- 3 – Create a mapping
  - Drag & drop the two tables and use a CROSS JOIN to link them
  - Create two computed fields on DAILY_RESULT table



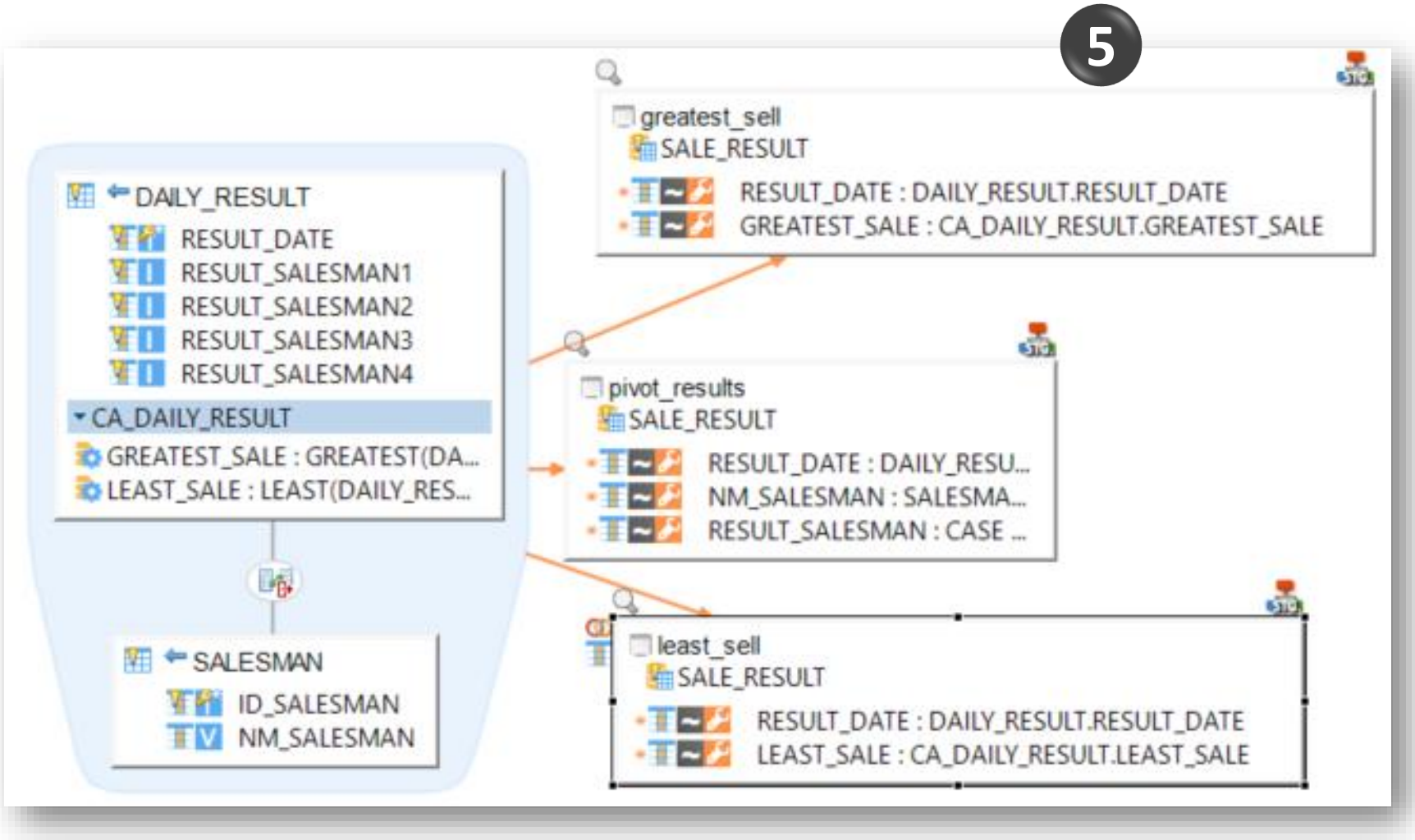
Greatest and least pivot - 4/9

- 4 - Create a stage using SALE_RESULT schema
  - Define the expressions of the 3 fields



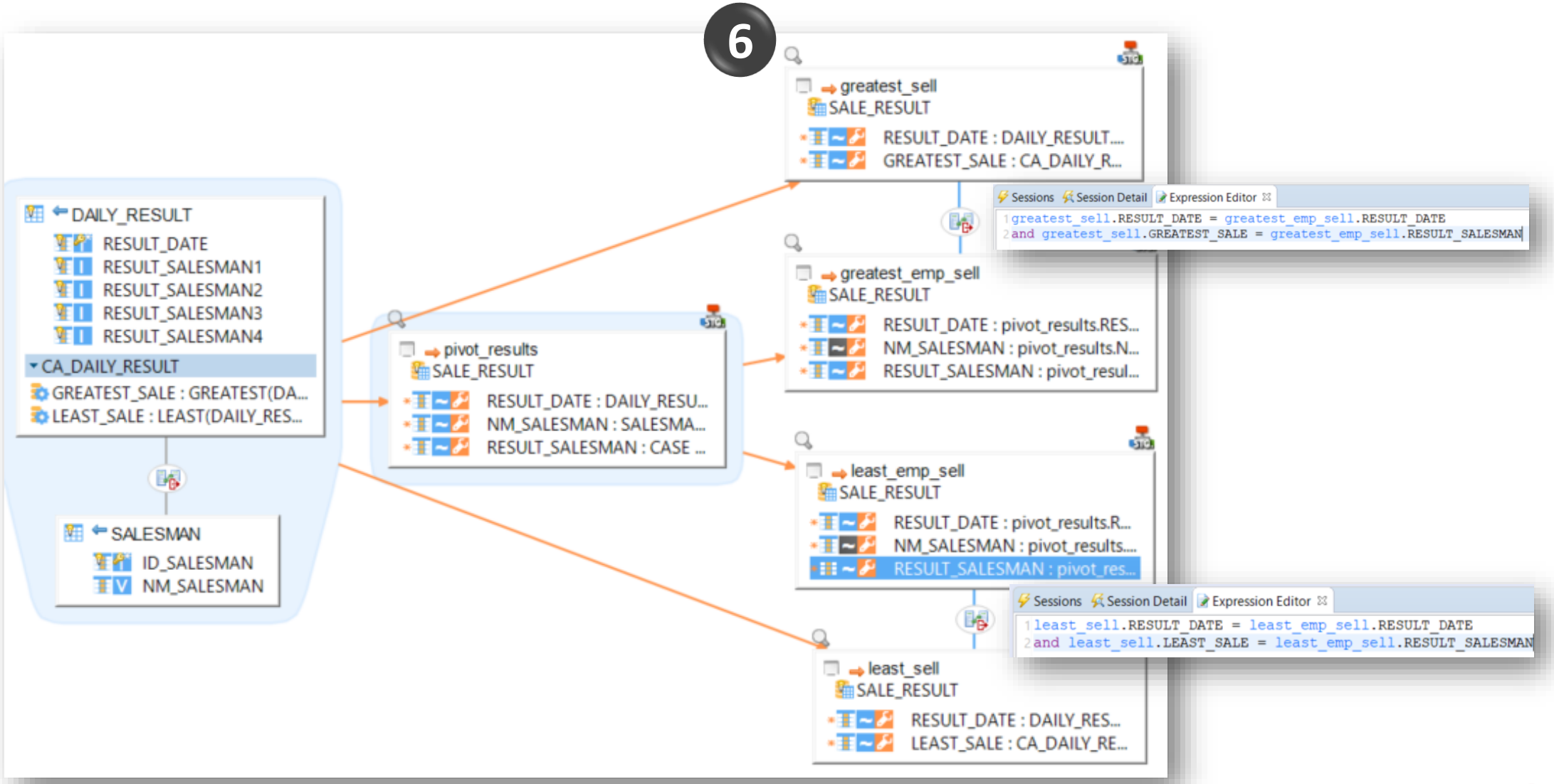
Greatest and least pivot - 5/9

- 5 - Create 2 new stages using SALE_RESULT schema
  - One for the best sell and one for the worst sell of each day



Greatest and least pivot - 6/9

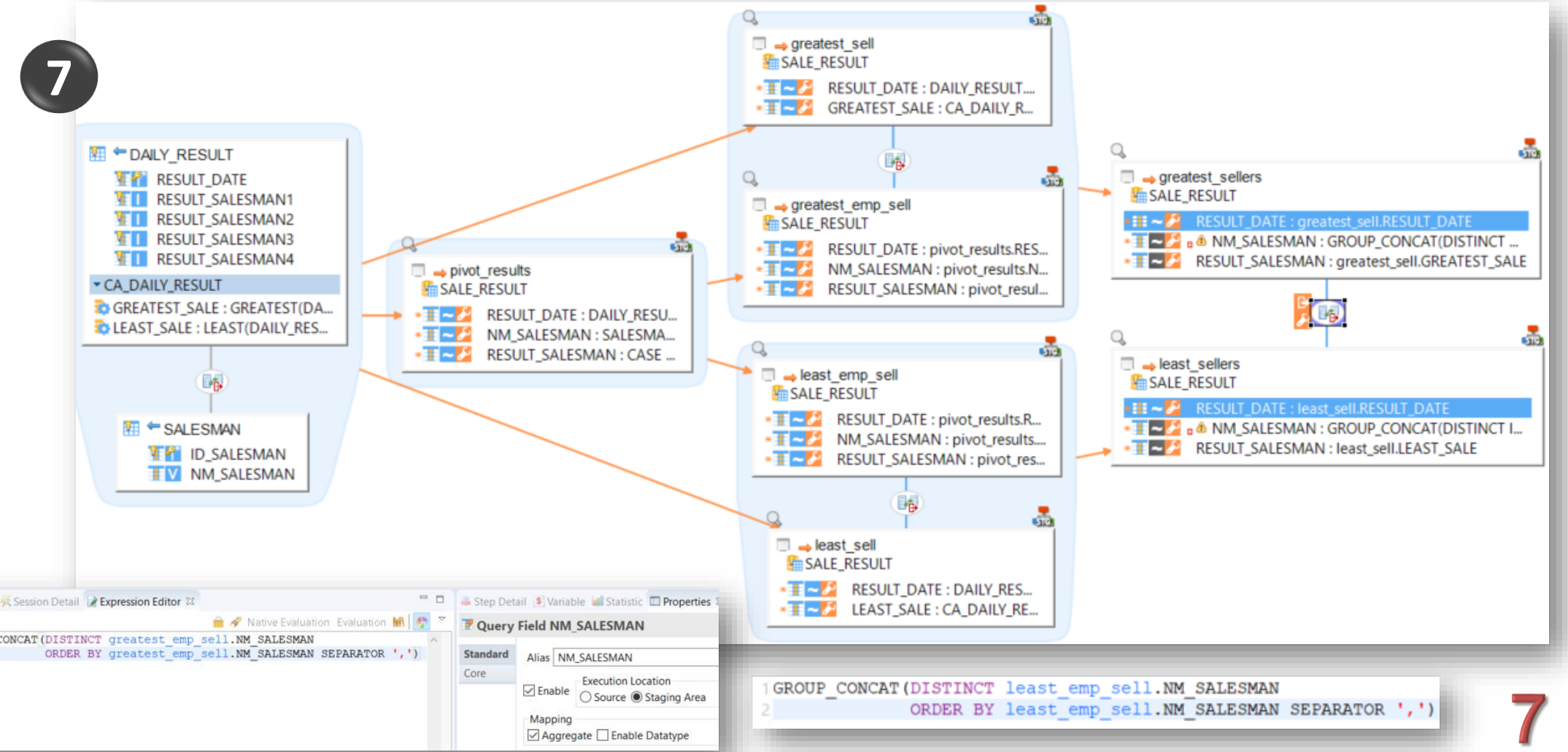
- 6 - Create 2 new stages with the same columns as stg_employe_res stage
  - Join them with the two stages of the previous slide



Greatest and least pivot - 7/9

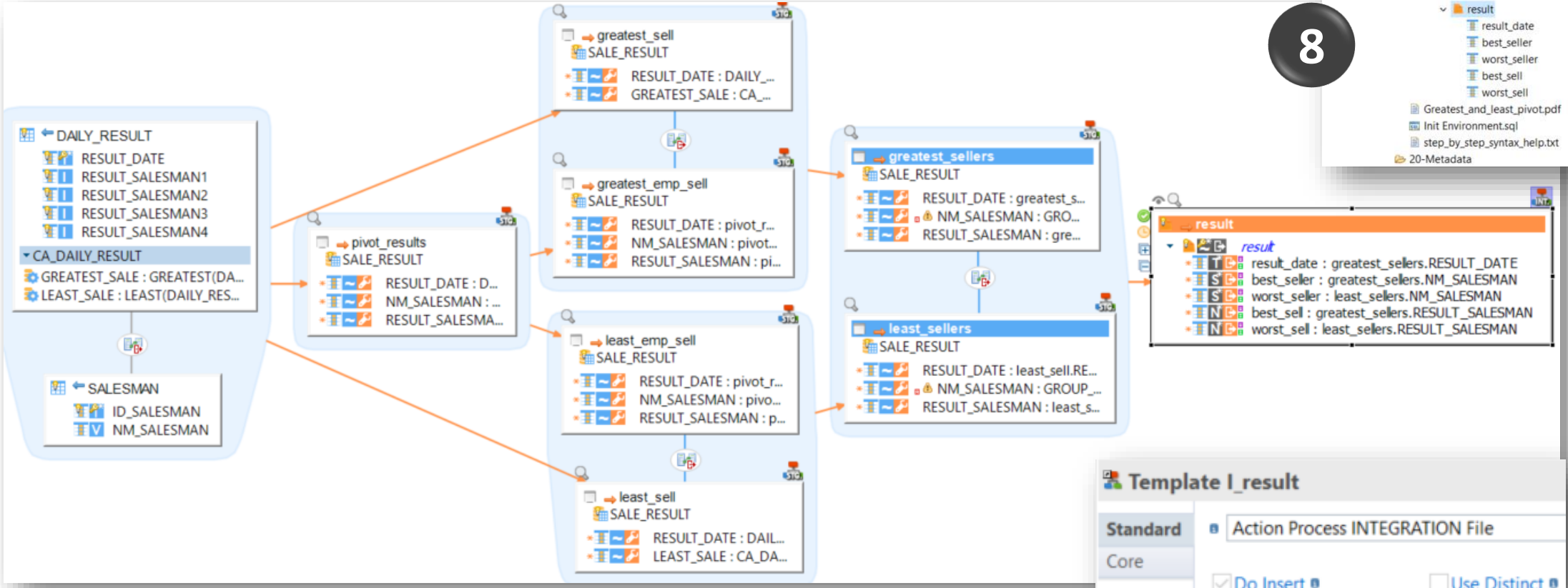
7 - Create 2 new stages using SALE_RESULT schema

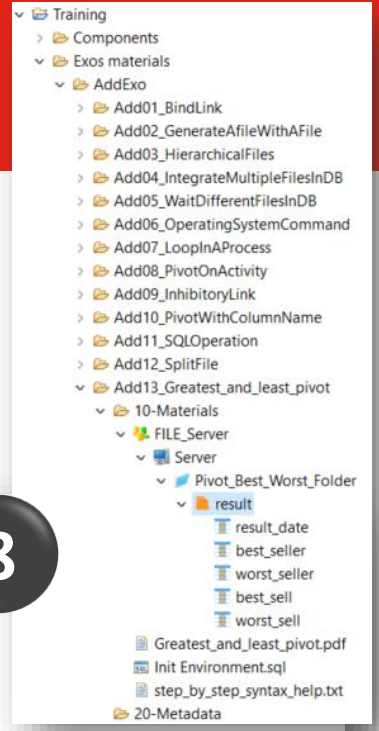
- A aggregation must be done, using GROUP_CONCAT to concatenate greatest/least list of sellers with the same value
- Create a join on the date between those two new stages



Greatest and least pivot - 8/9

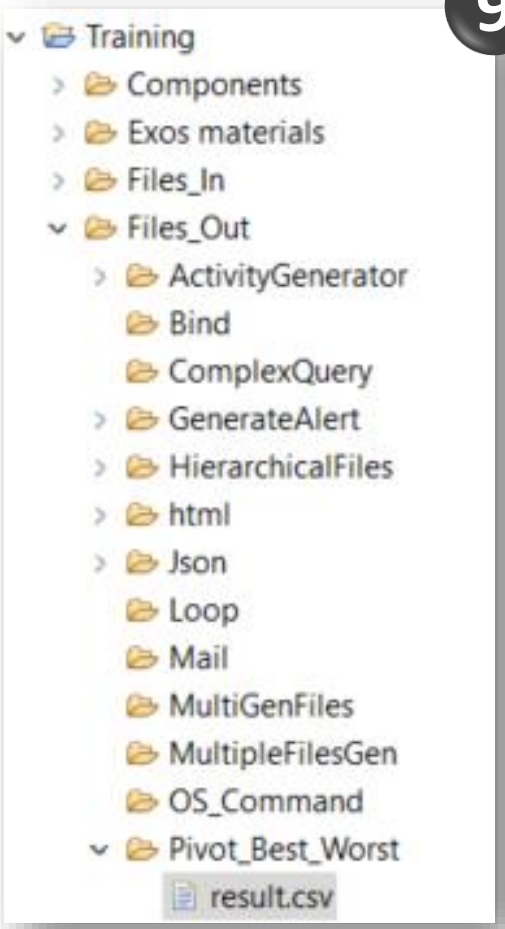
- 8 – Map to generate the result file





Greatest and least pivot - 9/9

- 9 – The result file :



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2021-01-05	Clara	Alice	44	4
2021-01-06	John	Alice	32	13
2021-01-07	Clara	Alice	36	5
2021-01-08	Alice	Henry	46	4
2021-01-09	Alice	**Clara,John**	35	19
2021-01-10	Henry	Clara	44	15
2021-01-11	Clara	John	33	6
2021-01-12	John	Henry	43	23
2021-01-13	Henry	John	45	15
2021-01-14	Alice	Henry	34	3
2021-01-15	Clara	John	44	18
2021-01-16	Alice	John	44	0
2021-01-17	Henry	Clara	44	25
2021-01-18	Henry	Clara	44	0
2021-01-19	**Clara,John**	Henry	41	28
2021-01-20	Henry	John	47	1
2021-01-21	John	Alice	41	1
2021-01-22	Henry	Alice	44	7
2021-01-23	Alice	Henry	49	20
2021-01-24	John	Alice	35	4
2021-01-25	Alice	Henry	49	17
2021-01-26	Alice	John	47	9
2021-01-27	Henry	John	39	17
2021-01-28	Clara	Henry	33	9
2021-01-29	Alice	John	44	0
2021-01-30	Clara	John	48	2
2021-01-31	Clara	Alice	45	13