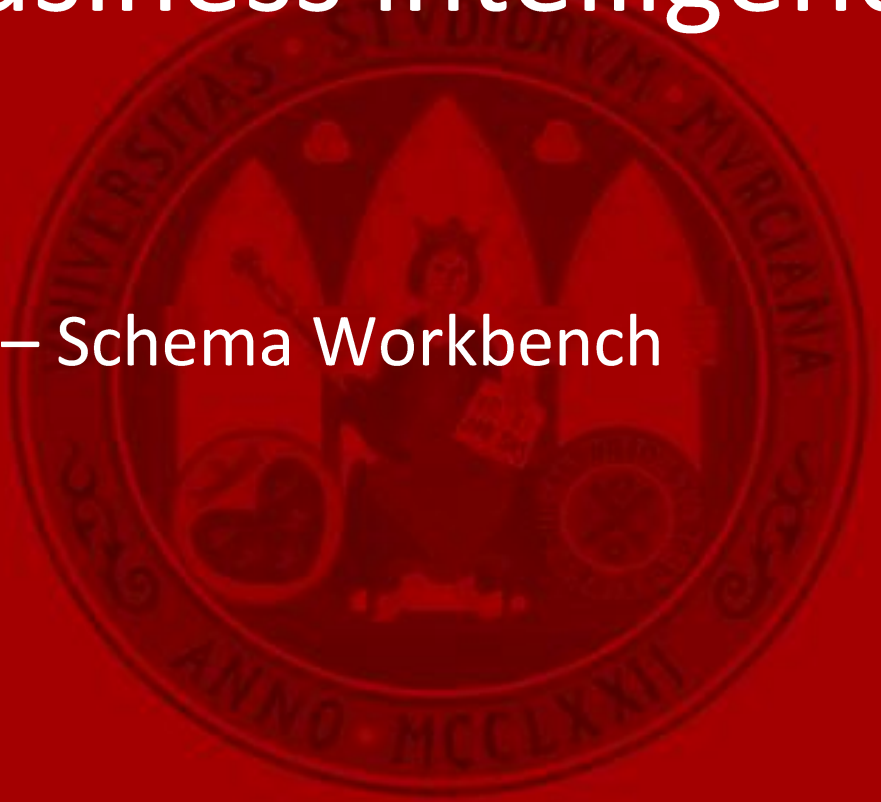
Business intelligence

Tutorial 2 – Schema Workbench

Extended



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Extensions

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1. Time -> Month label
2. Dimension Usage
3. Calculated Member
4. Degenerated Dimension
5. Role Playing Dimension
6. Snowflake Dimension
7. Bridge Dimension NOTE: NOT SUPPORTED BY MONDRIAN

Set up

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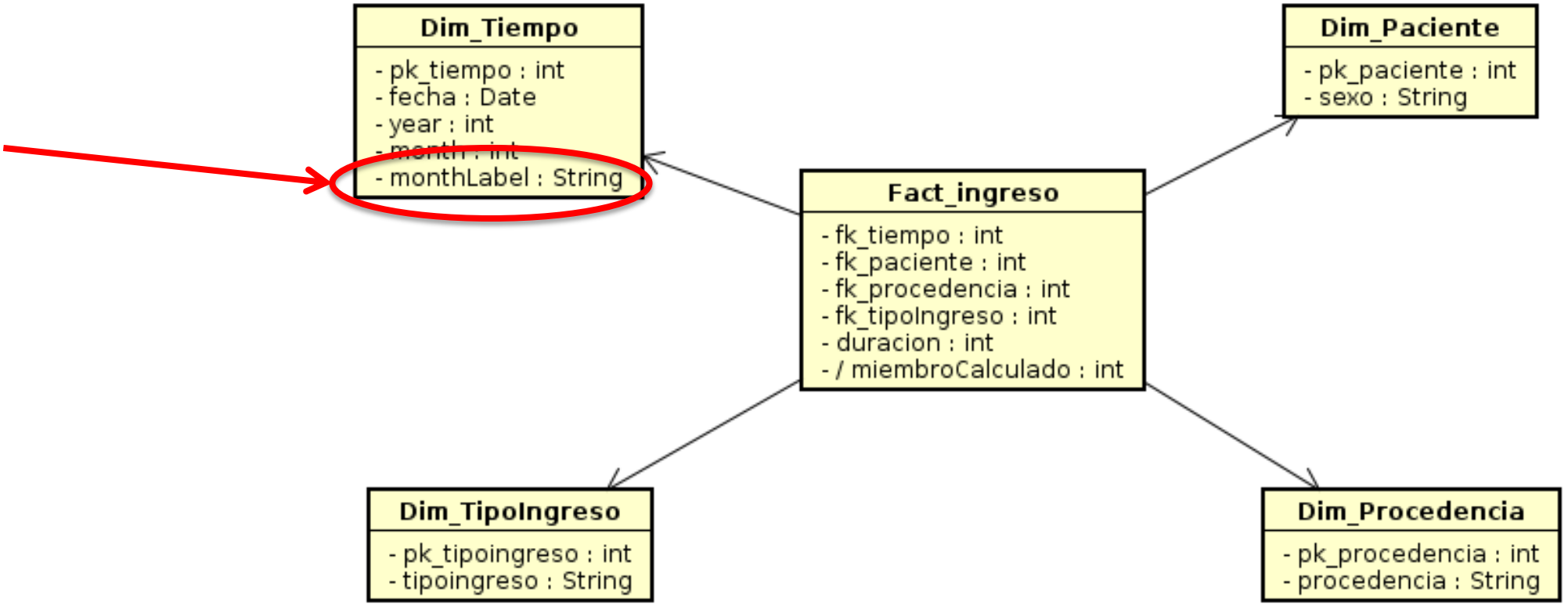
- Create a new connection to Database “tut2”
  - As in tutorial 1 we connected to “tut1”
- IP: given
- Port: given
- User: given
- Pw: given

1. Month Label



1. Month Label

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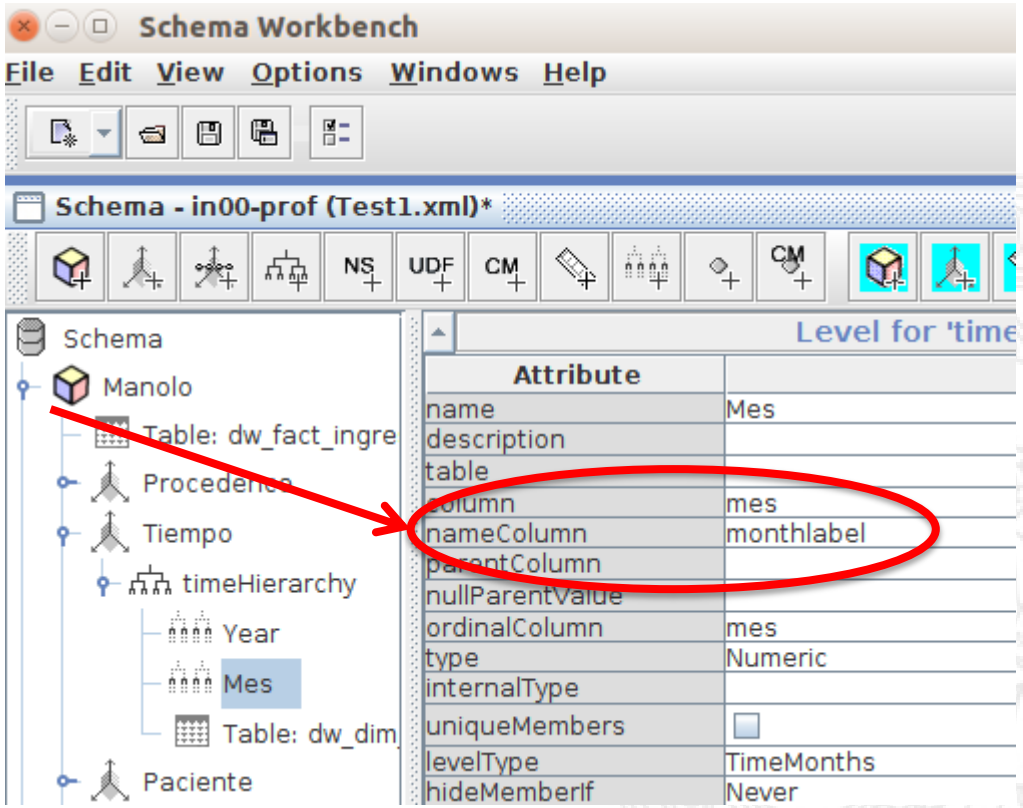
- Go to Month Level in TimeDimension
- Edit “nameColumn”
- Select “monthLabel” column from database



2. Dimension Usage

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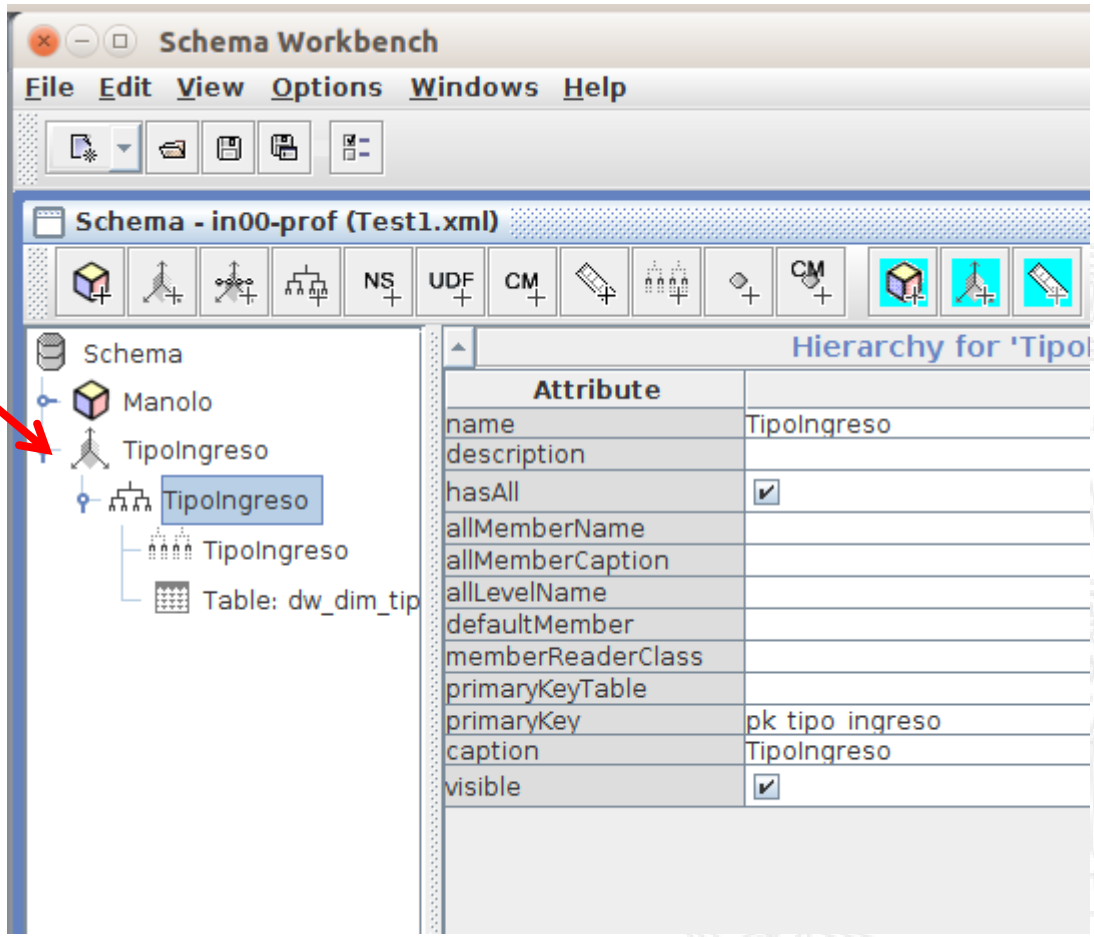
- New dimension at the same schema (xml) level as the cube
  - Not inside the cube
  - Define table with pk
  - Define level



2. Dimension Usage

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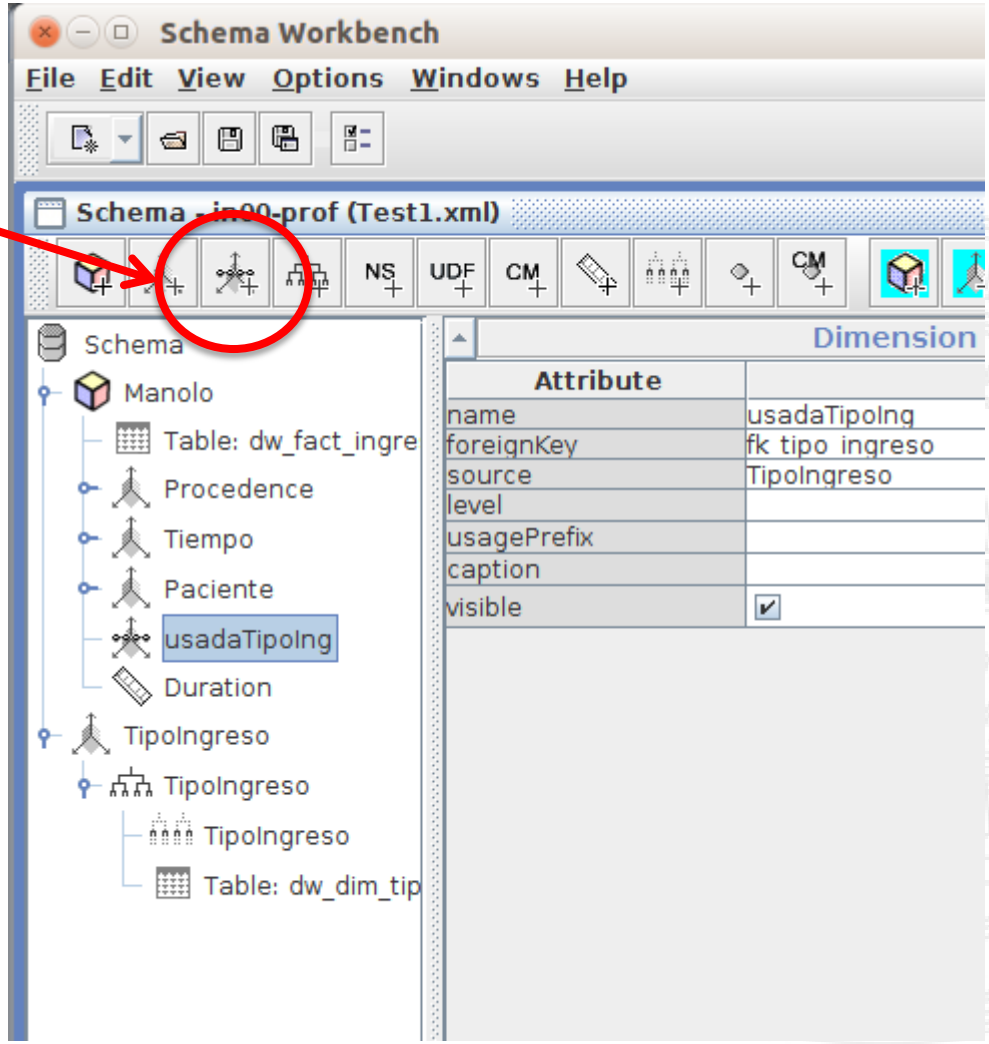
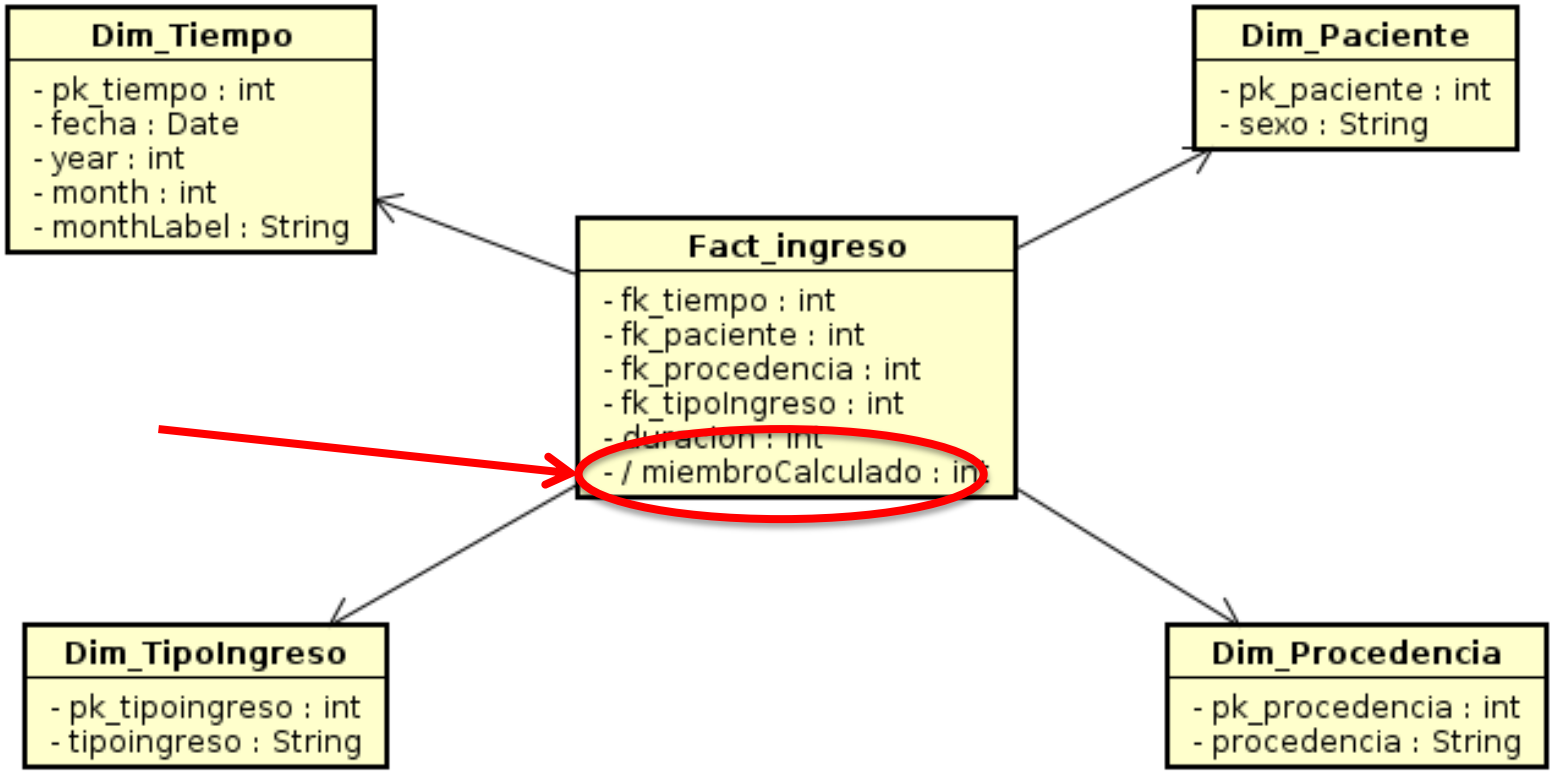
- In the Cube
  - Add Dimension Usage
  - Select “Source”
  - Select foreignKey



3. Calculated Member



3. Calculated Member

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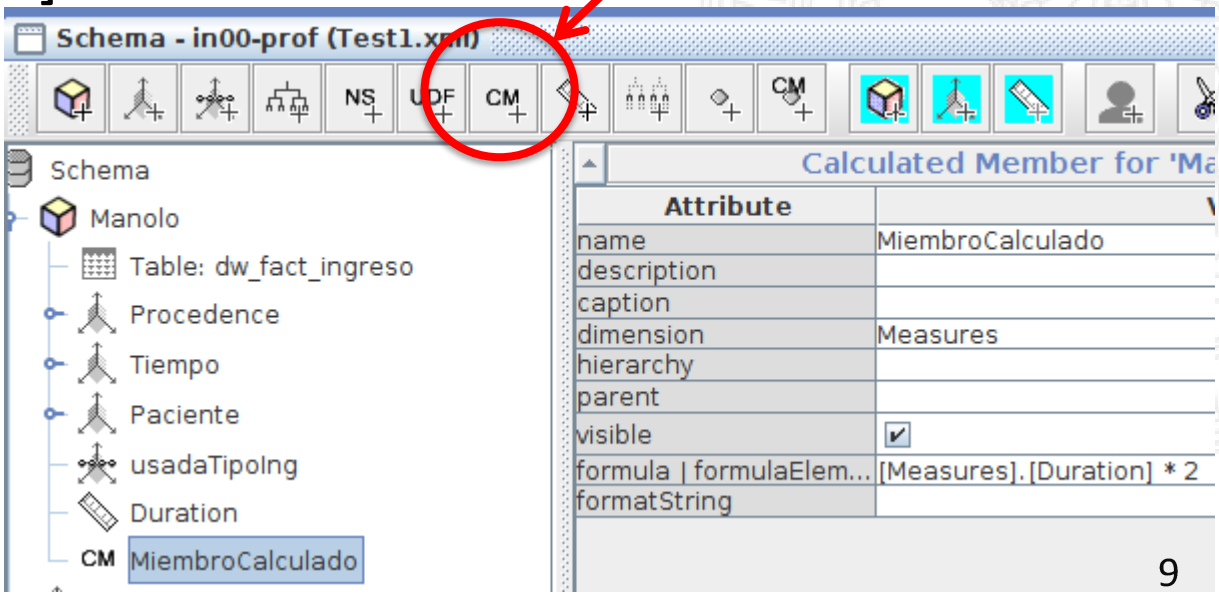
- In the Cube -> Add Calculated Member
- Set Name
- Set Dimension and Hierarchy if needed
  - Dimension: “Measures”
- Set MDX expression (you will learn it later)
  - [Measures].[Duration] * 2



4. Degenerated Dimension

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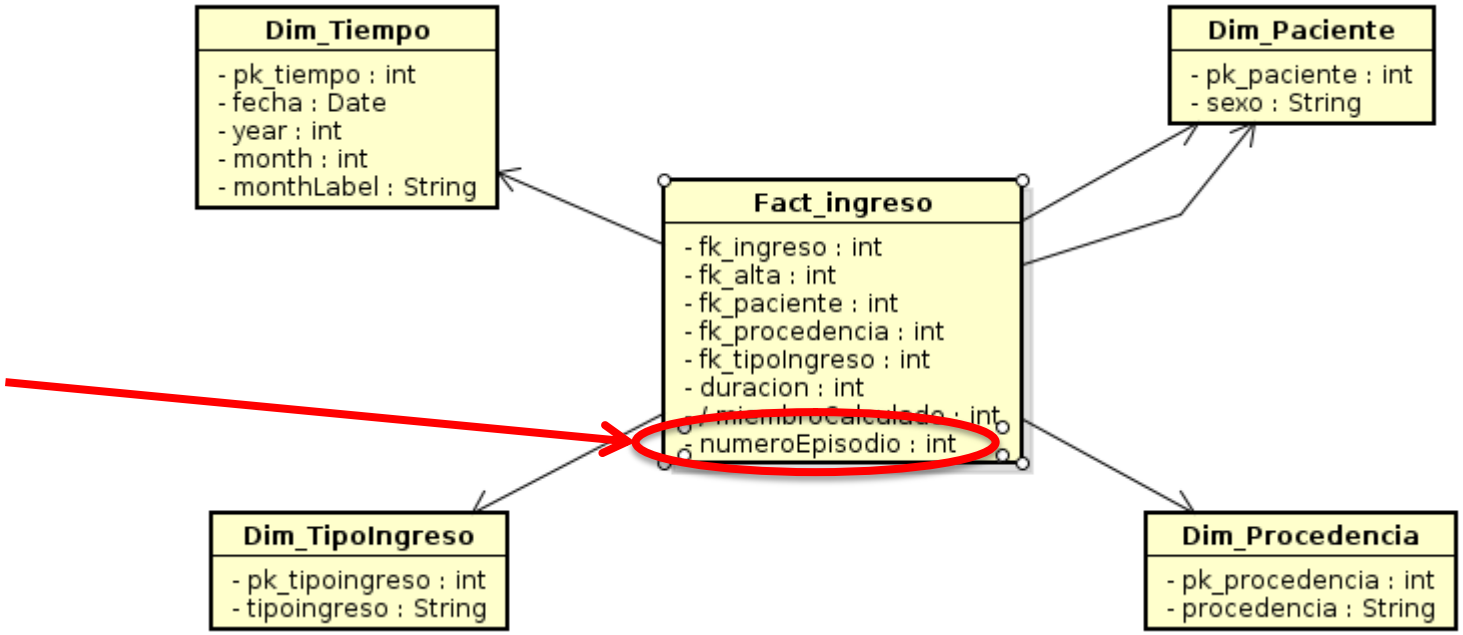
- Added Episode Number as Measure



4. Degenerated Dimension

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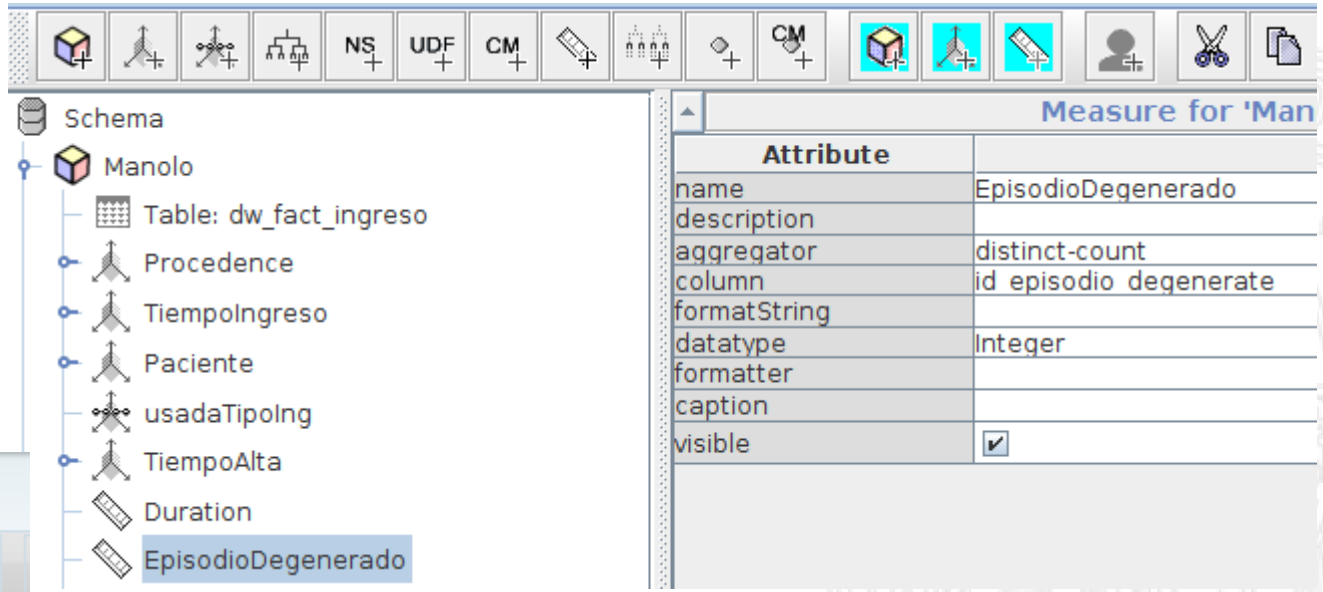
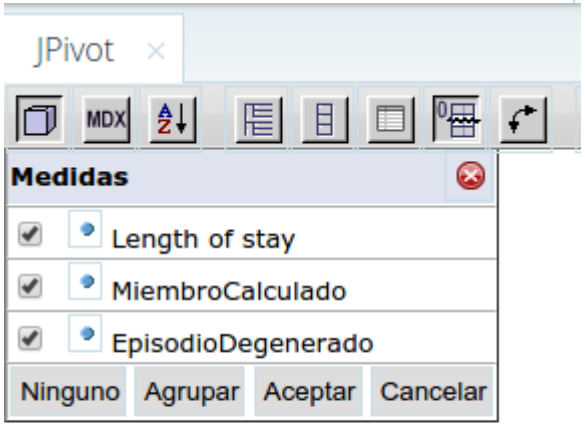
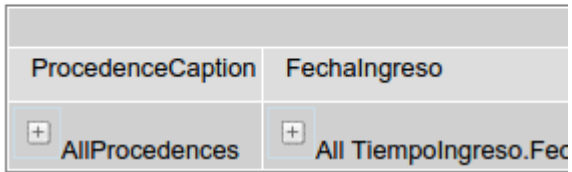
- Added Episode Number as Measure
- Aggregator: Distinct count







Show measure: How many distinct patients?

5. Role Playing Dimension

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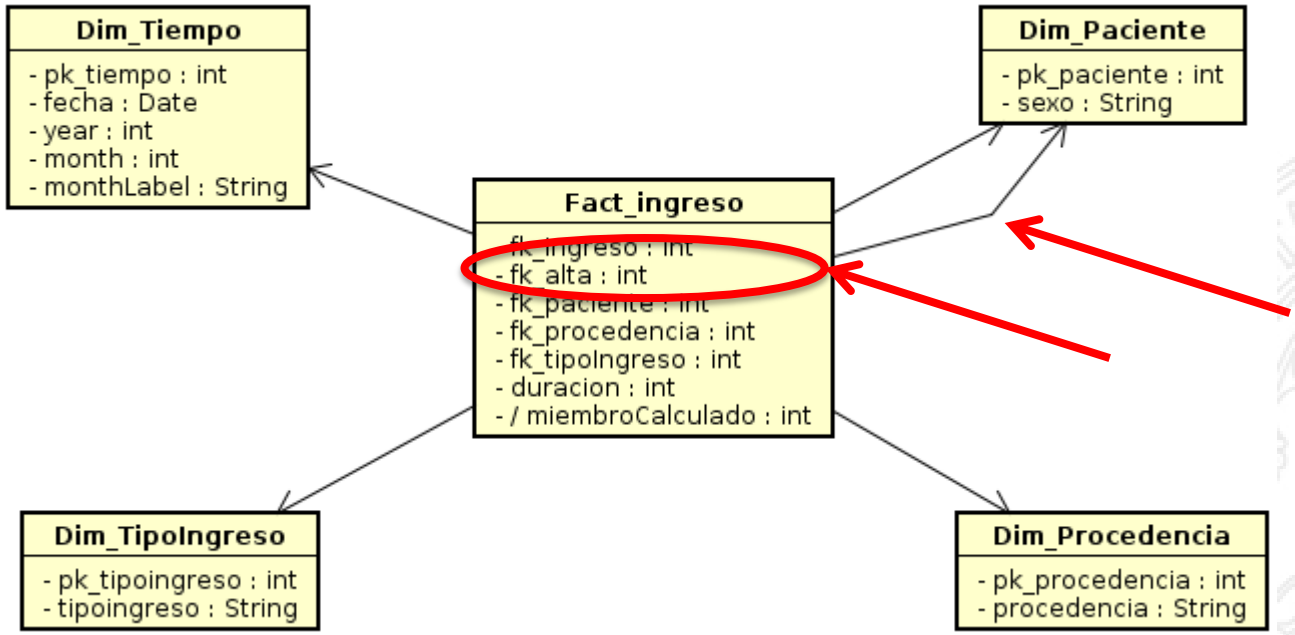
- Only add a new dimension



5. Role Playing Dimension

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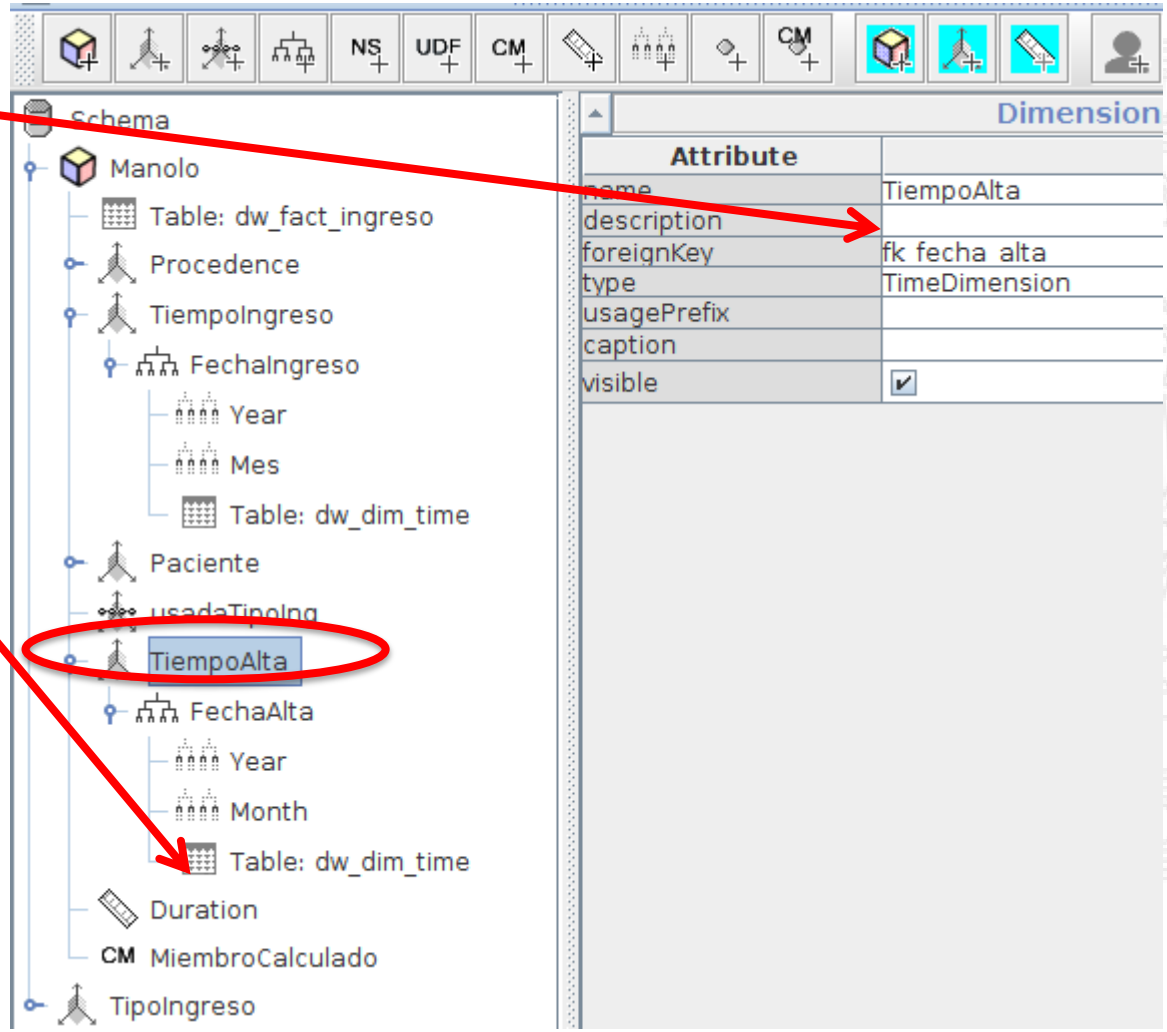
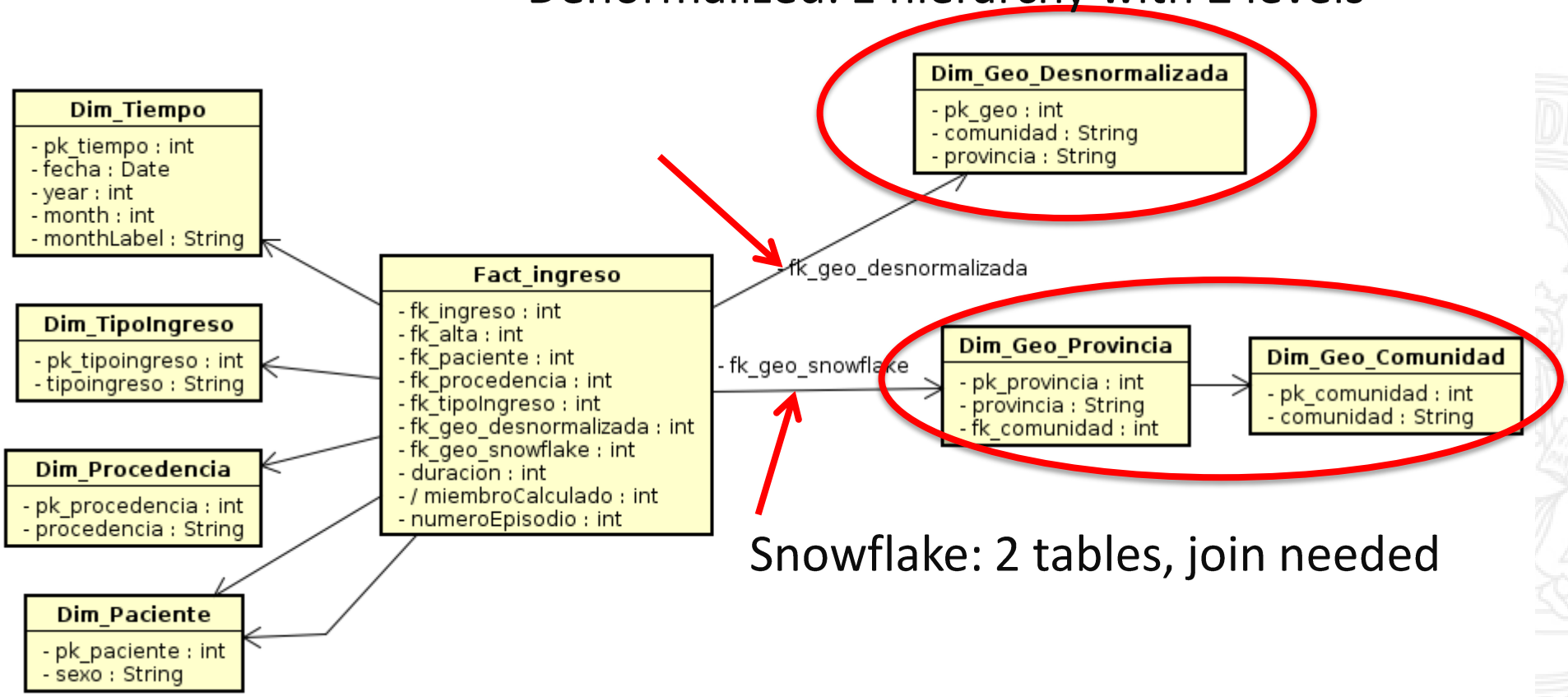
- Only add a new dimension
- Exactly as before with
  - New foreign key
  - Same table



6. Snowflake vs Denormalized Dimension

Denormalized: 1 hierarchy with 2 levels



Snowflake: 2 tables, join needed

6. Snowflake Dimension

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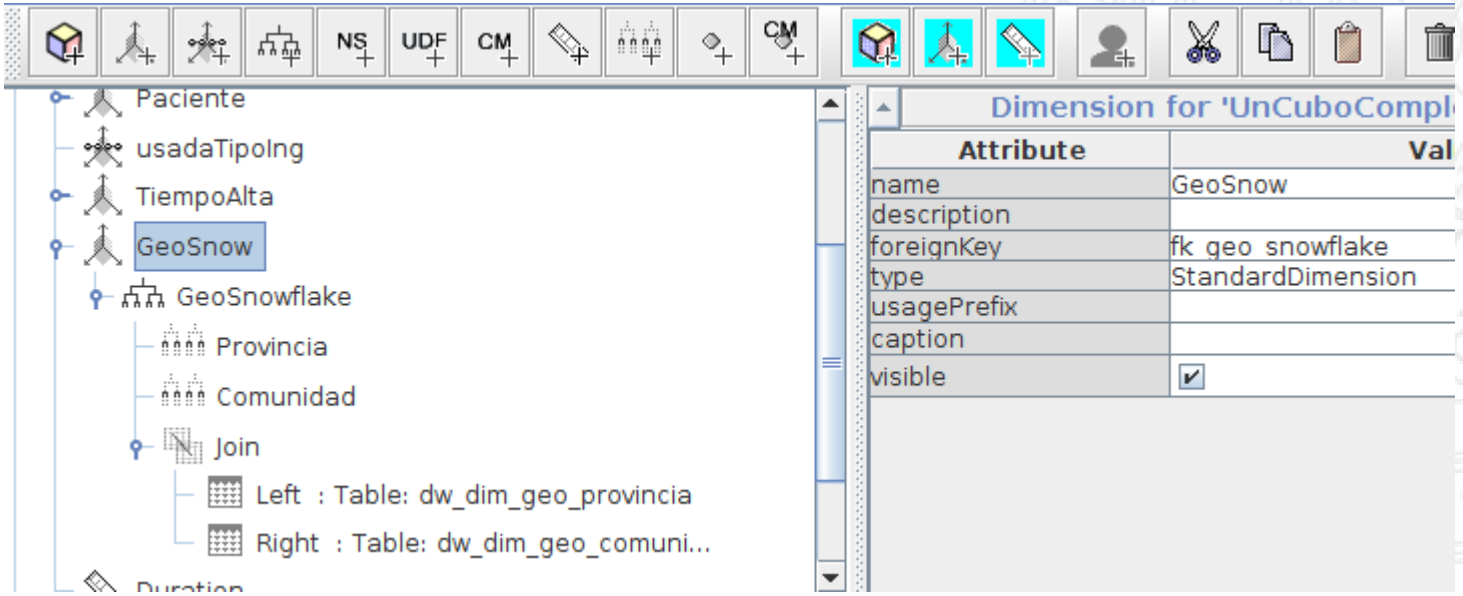
- Define Dimension as previously
  - Foreign key: fk_geo_snowflake
  - StandardDimension
- Hierarchy -> **Add JOIN** (instead of table)



6. Snowflake Dimension

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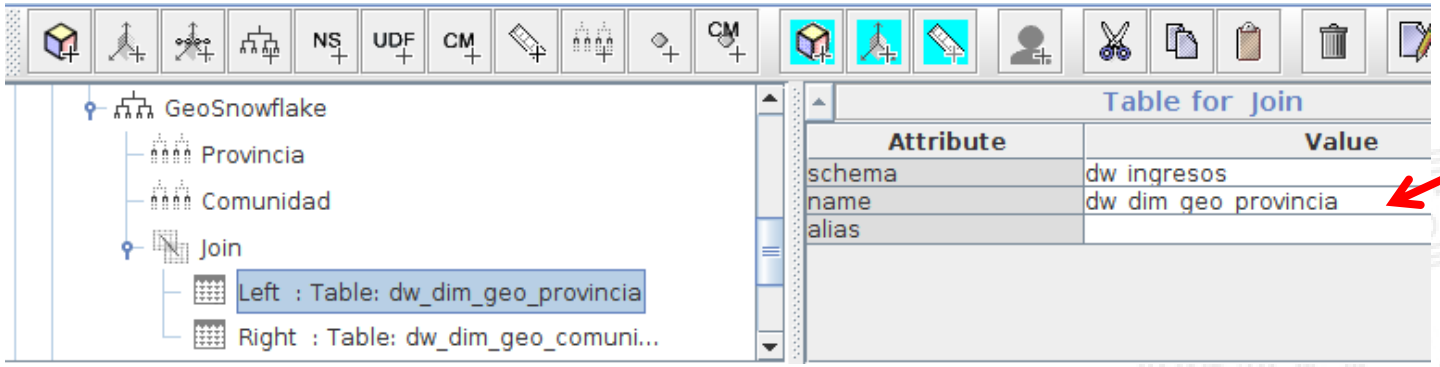
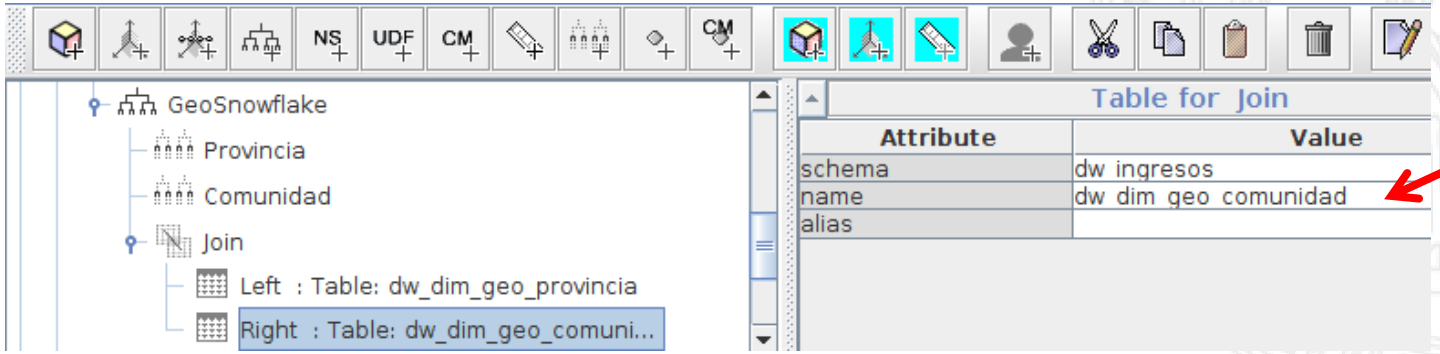
- Left Table: dw_dim_geo_provincia



- Righ Table: dw_dim_geo_comunidad



6. Snowflake Dimension

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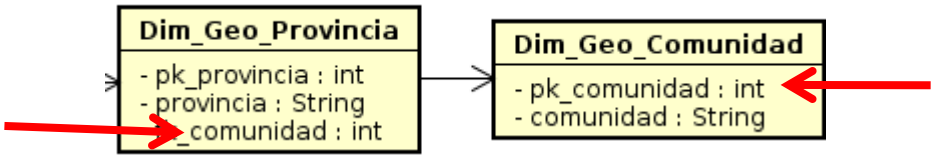
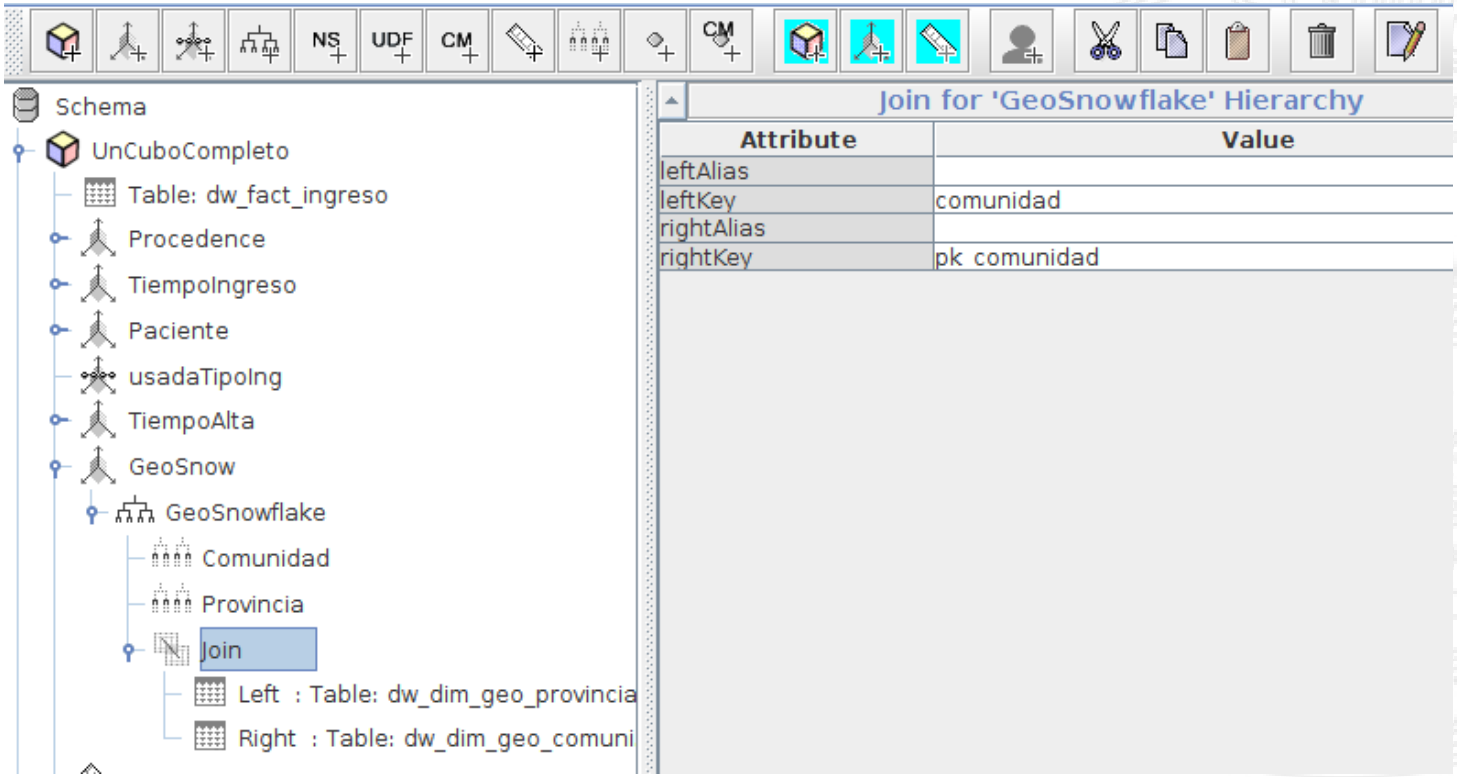
- Define keys for the JOIN on both tables





6. Snowflake Dimension

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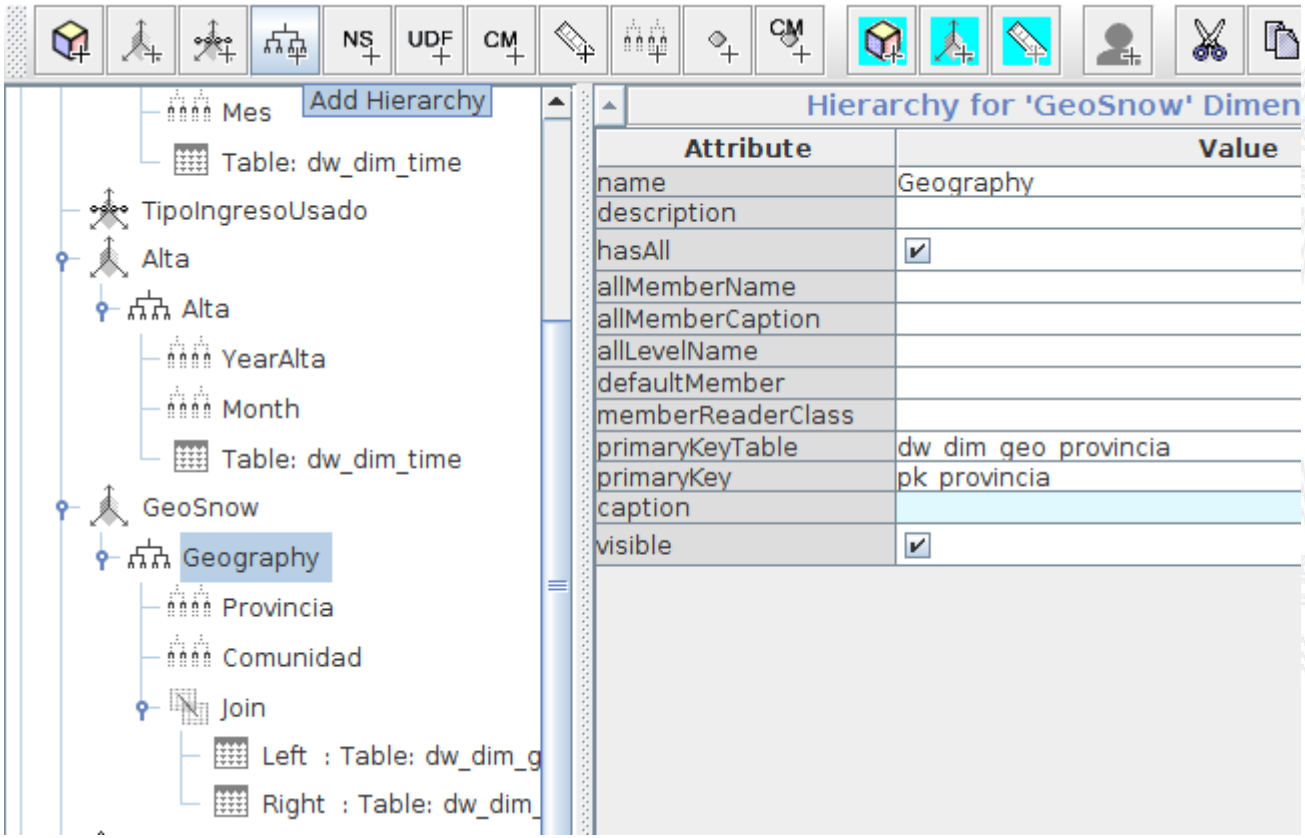
- Define which table holds the primary key
- Define the primary key



6. Snowflake Dimension

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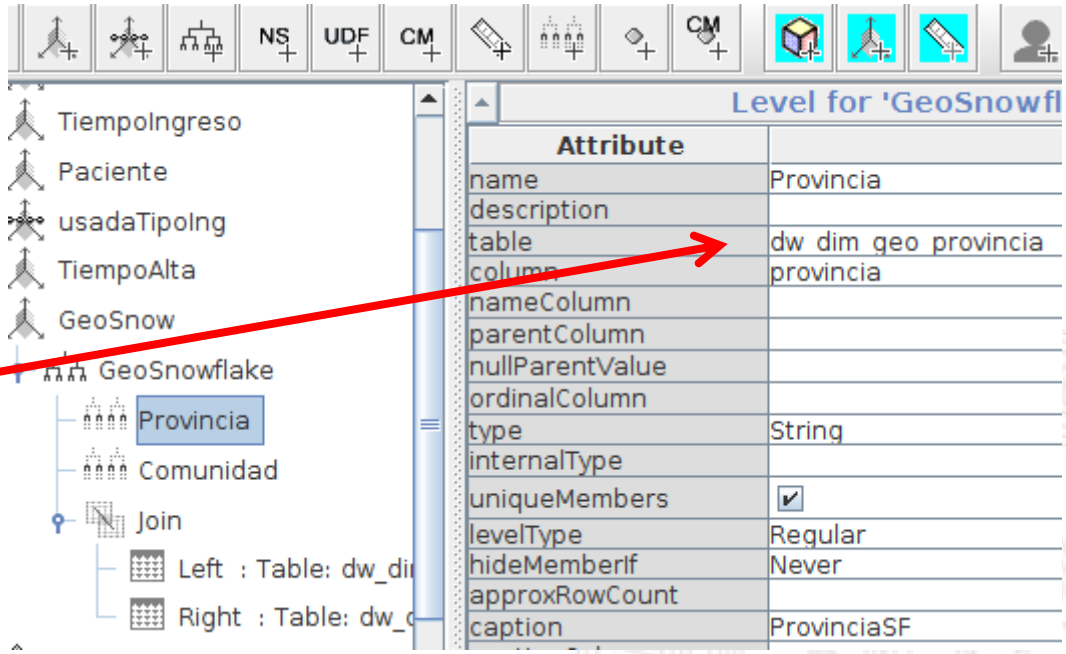
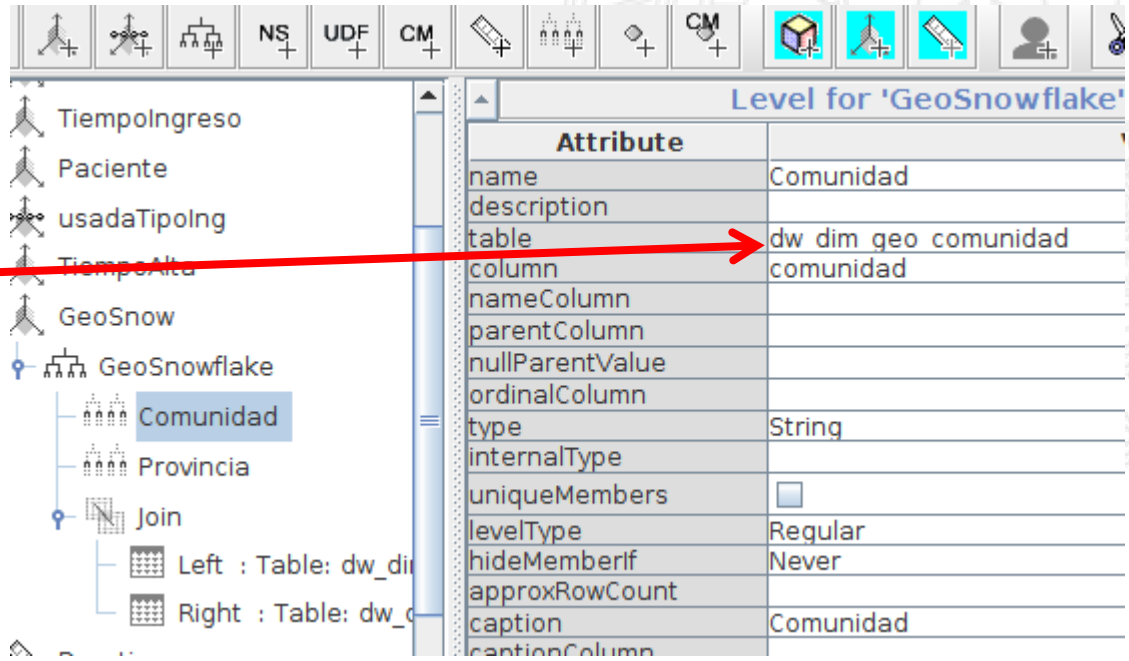
- Define levels “Provincia” and “Comunidad”
  - Table -> dw_dim_geo_provincia
  - Column: provincia
  - Table -> dw_dim_geo_comunidad
  - Column: comunidad





6. Snowflake Dimension

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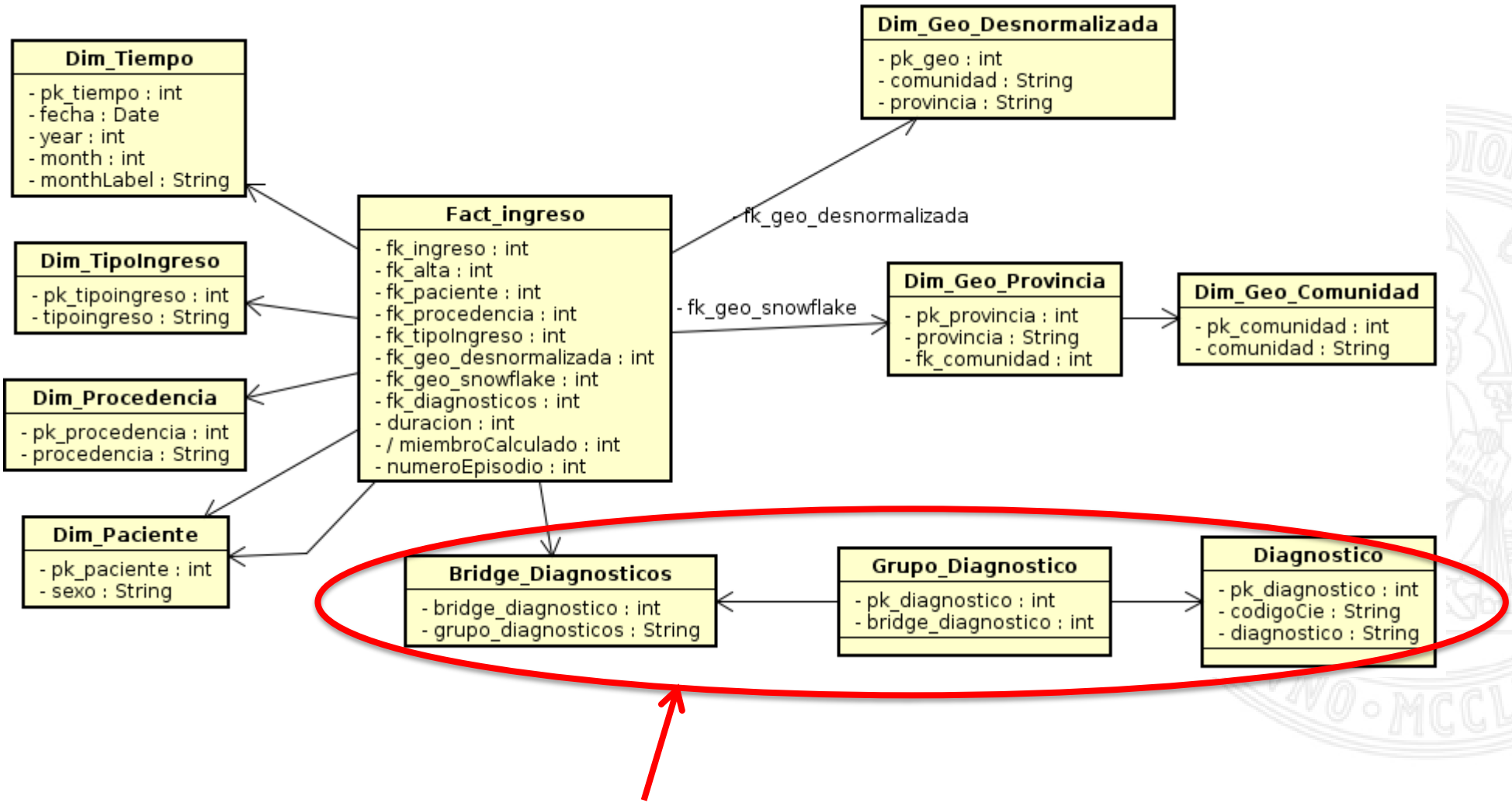
- Change order if needed

		Medidas		
Sexo	GeoSnowflake	Length of stay	MiembroCalculado	EpisodioDegenerado
All Paciente.Sexos	All GeoSnow.GeoSnowflakes	7,262	14,525	327
	Andalucia	6,689	13,378	163
	Granada	6,273	12,545	59
	Huelva	6,547	13,093	68
	Sevilla	7,25	14,5	66
	Extremadura	7,882	15,764	113
	Badajoz	9,5	19	57
	Caceres	6,338	12,677	63
	Galicia	7,241	14,481	184
	Madrid	9,371	18,743	33
	Murcia	6,406	12,812	30

7. Bridge Dimension



Vista con las 3 tablas de la M-x-N

7. Bridge Dimension

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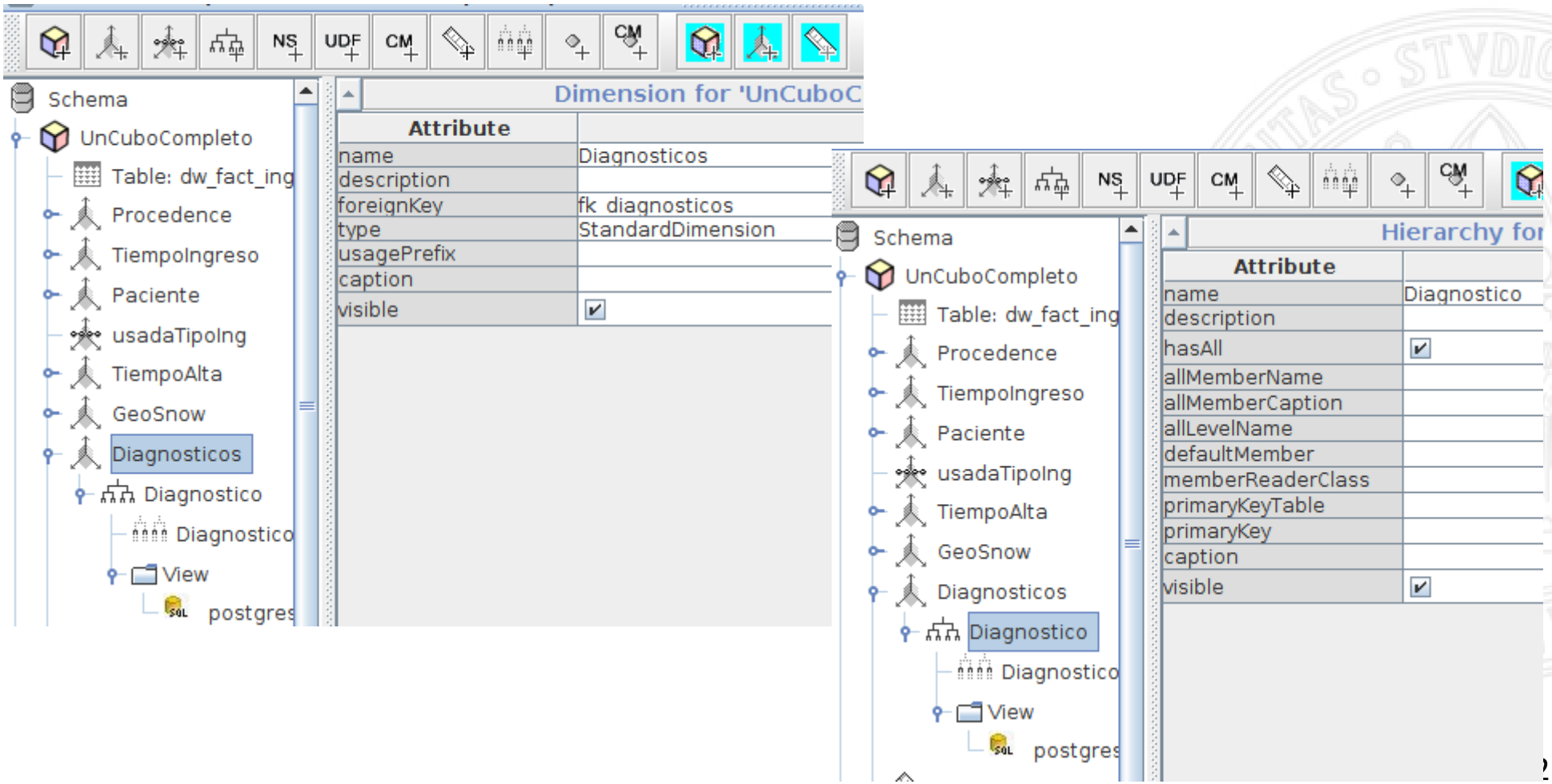
- Create Dimension as usual
- Create Hierarchy: Do not define “primaryKey”



7. Bridge Dimension

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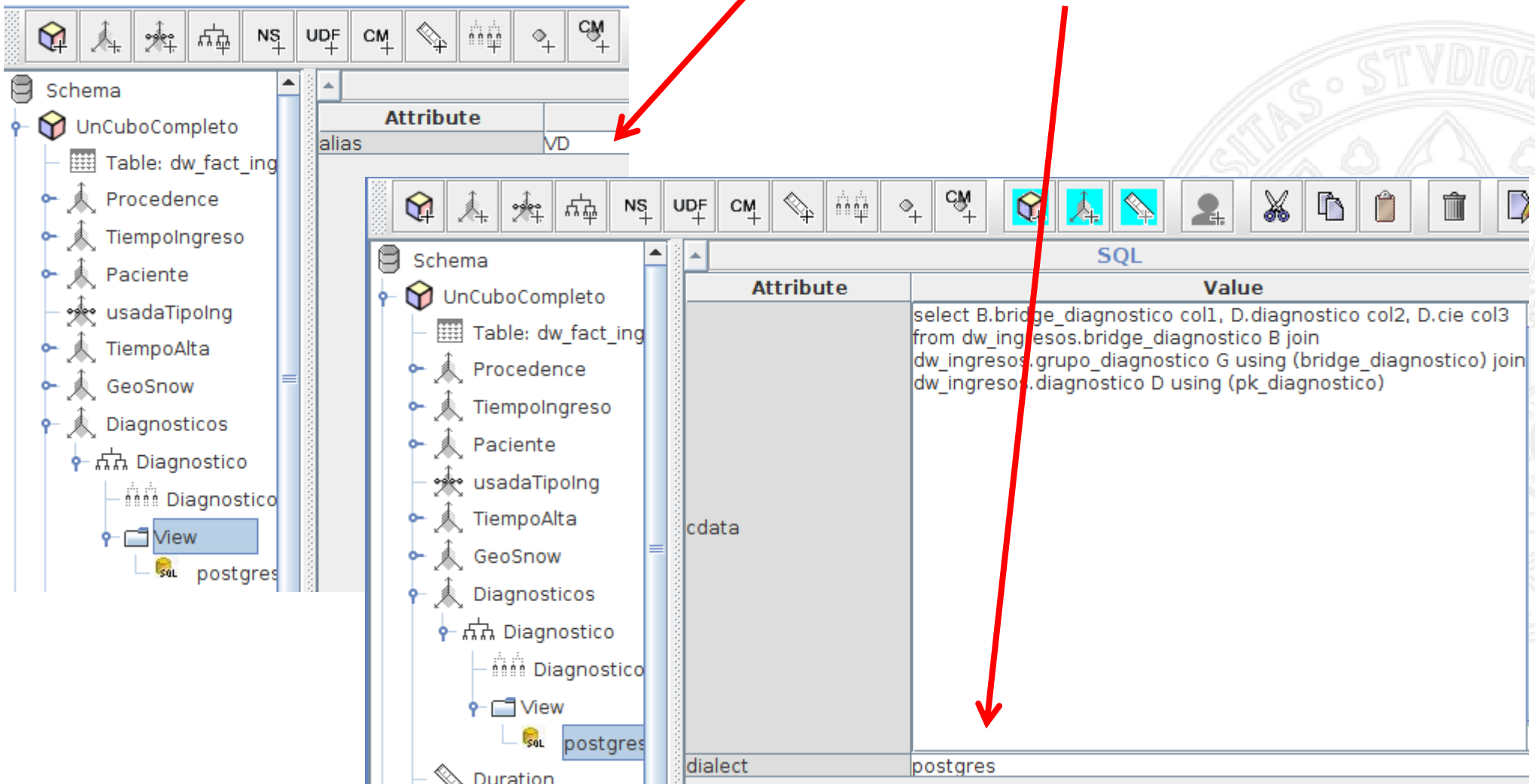
- Hierarchy -> Add View with an Alias
- Define the view with column Alias, dialect Postgres



7. Bridge Dimension

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- QUERY FOR THE VIEW:

```
SELECT B.bridge_diagnostico col1, D.diagnostico col2, D.cie col3
FROM dw_ingresos.bridge_diagnostico B
    JOIN dw_ingresos.grupo_diagnostico G USING (bridge_diagnostico)
    JOIN dw_ingresosdiagnostico D USING (pk_diagnostico)
```

- NOTES:
  - DO NOT USE “;”,
  - DO NOT USE “AS” FOR ALIAS

7. Bridge Dimension

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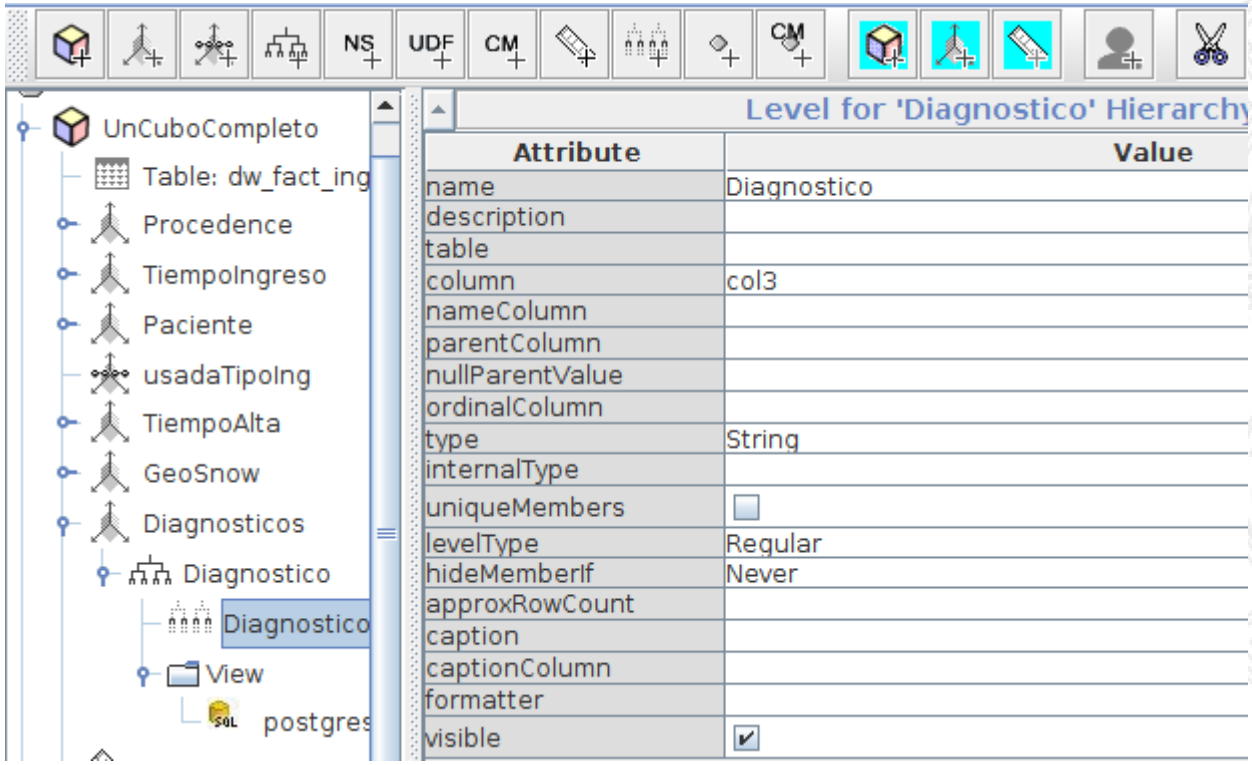
- Hierarchy -> Add Level
  - Table must be blank. Manual Edit if needed.