**Data Modelling**

We need to use fields from **dimension tables** when building a visual because they provide context and meaningful categories for the data in the fact table.

The **fact table** maintains one to many relations with all the dimension tables.

Every row in a fact table is associated with its dimension table rows with a foreign key reference.

**Star schema**

dim\_date (date) -------> fact\_sales\_monthly (date) (one to many)

dim\_date (date) -------> fact\_forecast\_monthly (date) (one to many)

dim\_date (date) -------> fact\_actuals\_estimates (date) (one to many)

dim\_date (date) -------> post\_invoice\_deductions (date) (one to many)

dim\_customer (customer\_code) 🡪 fact\_sales\_monthly (customer\_code) (one to many)

dim\_customer (customer\_code) 🡪 fact\_forecast\_monthly (customer\_code) (1 to \*)

dim\_customer (customer\_code) 🡪 fact\_actuals\_estimates (customer\_code) (1 to \*)

dim\_customer (customer\_code) 🡪 post\_invoice\_deductions (customer\_code) (1 to \*)

dim\_product (product\_code) 🡪 fact\_sales\_monthly (product\_code) (one to many)

dim\_product (product\_code) 🡪 fact\_forecast\_monthly (product\_code) (1 to \*)

dim\_product (product\_code) 🡪 fact\_actuals\_estimates (product\_code) (1 to \*)

dim\_product (product\_code) 🡪 post\_invoice\_deductions (product\_code) (1 to \*)

dim\_product (product\_code) 🡪 manufacturing\_cost (product\_code) (1 to \*)

dim\_market (market) 🡪 dim\_customer (market) (1 to \*) (made a **snowflake schema)**

dim\_market (market) 🡪 freight\_cost (market) (1 to \*)

dim\_date (fiscal\_year) -> freight\_cost (fiscal\_year) (many to many) not recommended

we will have to create an extra table where we have fiscal\_year one time.

To create a new table in powerBI , go to modelling tab 🡪 select ‘New table’ and give the formula:

fiscal\_year\_table = ALLNOBLANKROW(dim\_date[fiscal\_year])

it will fetch unique and excludes blank rows and save it in table 2018 to 2023

fiscal\_year\_table (fiscal\_year) -> dim\_date (fiscal\_year) (1 to \*) (a **snowflake schema**)

fiscal\_year\_table (fiscal\_year) -> freight\_cost (fiscal\_year) ) (1 to \*)

fiscal\_year\_table (fiscal\_year) -> manufacturing\_cost (cost\_year) ) (1 to \*)