

# Constraints

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CONSTRAINT	DESCRIPTION
UNIQUE	Only allows unique values in the column
NOT NULL	Does not allow null values in the column
DEFAULT	Populates all new records with a default value if no other value is specified

# Syntax – UNIQUE

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```
CREATE TABLE table_name  
(COLUMN DATATYPE UNIQUE);
```

```
ALTER TABLE table_name  
ADD CONSTRAINT constraint_name UNIQUE (COL1,COL2..COLN);
```

```
ALTER TABLE table_name  
DROP CONSTRAINT constraint_name;
```

# Syntax – NOT NULL

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```
CREATE TABLE table_name  
(COLUMN DATATYPE NOT NULL);
```

```
ALTER TABLE table_name  
MODIFY column_name DATATYPE NOT NULL;
```

```
ALTER TABLE table_name  
MODIFY column_name DATATYPE NULL;
```

# Syntax – DEFAULT

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```
CREATE TABLE table_name  
(COLUMN DATATYPE DEFAULT default_value);
```

```
ALTER TABLE table_name  
MODIFY column_name DEFAULT default_value;
```

```
ALTER TABLE table_name  
ALTER COLUMN column_name DROP DEFAULT;
```

# FACT and DIMENSION Tables

- FACT tables contain measurements, metrics and factual information
- DIMENSION tables contain descriptive attributes

## FACT

ORDER_ITEMS
ORDER_ID
LINE_ITEM_ID
PRODUCT_ID
UNIT_PRICE
QUANTITY

## DIMENSION

ORDERS
ORDER_ID
ORDER_DATETIME
CUSTOMER_ID
ORDER_STATUS
STORE_ID

CUSTOMERS
CUSTOMER_ID
FULL_NAME
EMAIL_ADDRESS

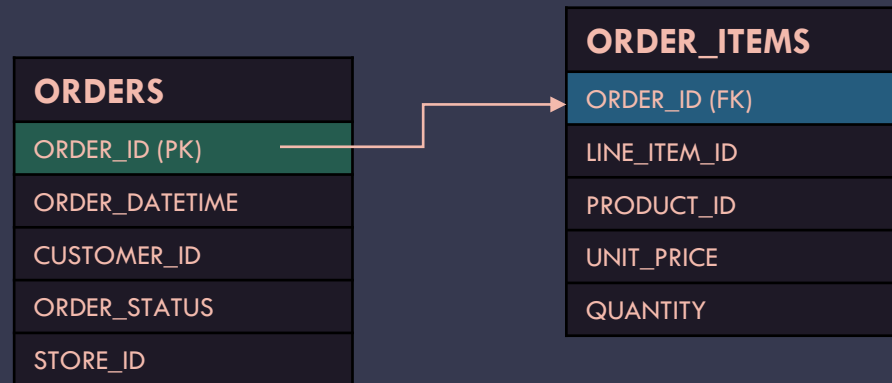
PRODUCTS
PRODUCT_ID
PRODUCT_NAME
UNIT_PRICE
PRODUCT_DETAILS
PRODUCT_IMAGE
IMAGE_MIME_TYPE
IMAGE_FILENAME
IMAGE_CHARSET
IMAGE_LAST_UPDATED

STORES
STORE_ID
STORE_NAME
WEB_ADDRESS
PHYSICAL_ADDRESS
LATITUDE
LONGITUDE
LOGO
LOGO_MIME_TYPE
LOGO_FILENAME
LOGO_CHARSET
LOGO_LAST_UPDATED

# Primary Key and Foreign Key Constraints

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- A PRIMARY KEY must contain unique values for each record and can not contain any null values
- A FOREIGN KEY links to a PRIMARY KEY of another table and forms an association



# Primary Key and Foreign Key Syntax

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## PRIMARY KEY

```
CREATE TABLE "TABLE_NAME" (  
    COLUMN_1 datatype,  
    COLUMN_2 datatype,  
    COLUMN_N datatype,  
    PRIMARY KEY (COLUMN_1)  
);
```

```
ALTER TABLE "TABLE_NAME"  
ADD CONSTRAINT PK_NAME PRIMARY  
KEY (COLUMN_1);
```

## FOREIGN KEY

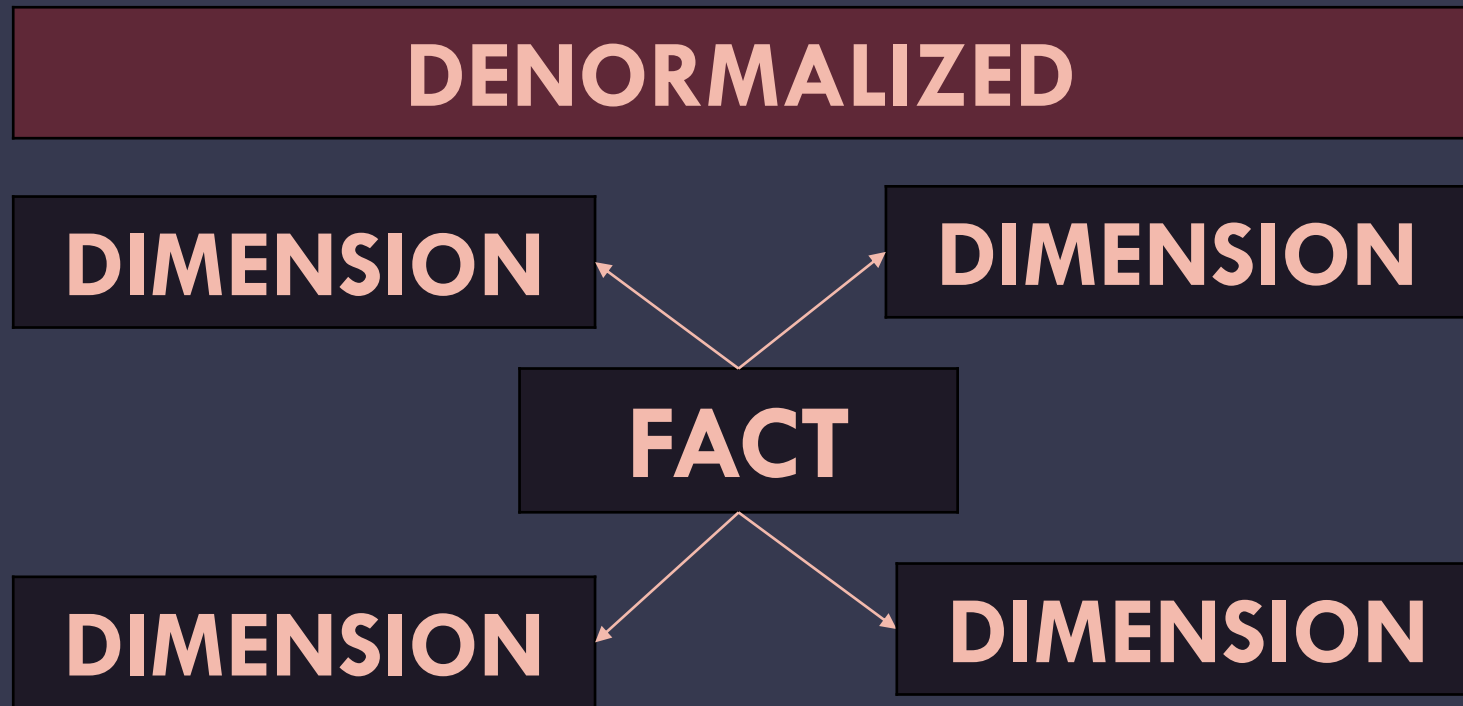
```
CREATE TABLE "TABLE_NAME" (  
    COLUMN_1 datatype,  
    COLUMN_2 datatype,  
    COLUMN_N datatype,  
    FOREIGN KEY (COLUMN_1) REFERENCES "TABLE_NAME"(COLUMN_1)  
);
```

```
ALTER TABLE "TABLE_NAME"  
ADD CONSTRAINT FK_NAME  
FOREIGN KEY (COLUMN_1) REFERENCES TABLE_1(COLUMN_1);
```

```
ALTER TABLE "TABLE_NAME"  
DROP CONSTRAINT "CONSTRAINT_NAME";
```

# STAR Relational Schema

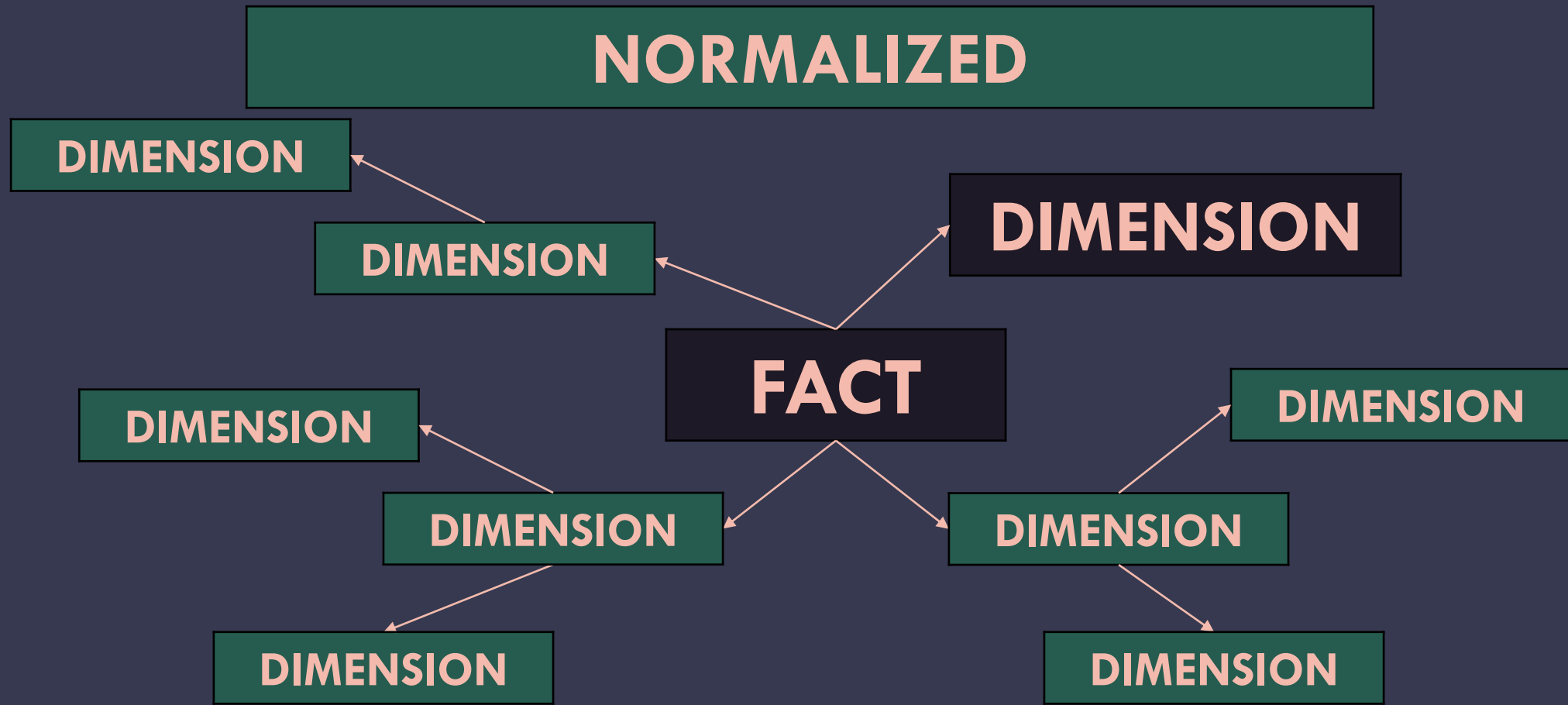
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# SNOWFLAKE Relational Schema

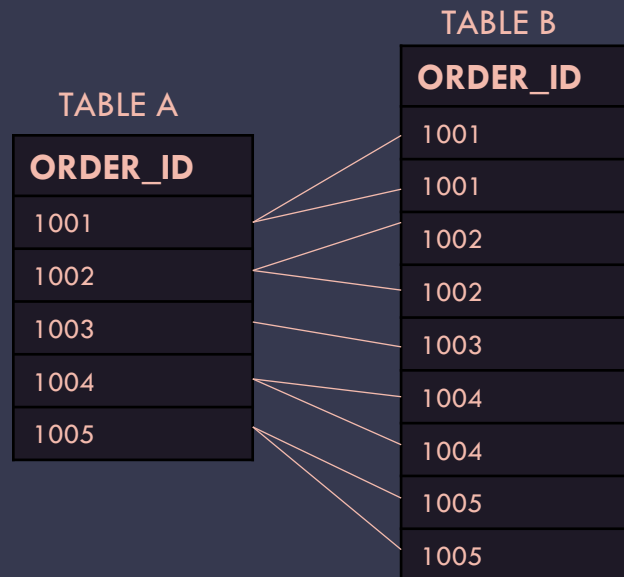
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# One to Many / One to One / Many to Many

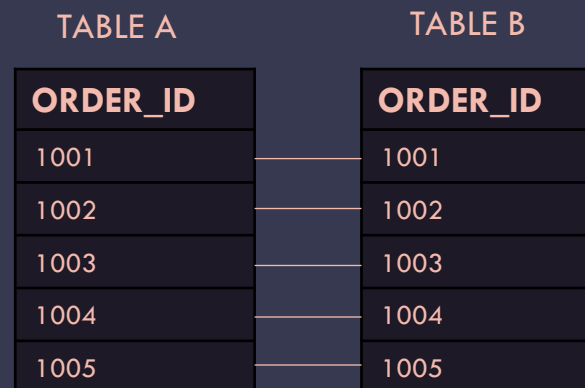
## One to Many

- One record in a table can be associated with one or more records in another table



## One to One

- One record in a table can be associated with one record in another table



## Many to Many

- One or more record in a table can be associated with one record in another table

