



Stores Sales Project Overview

The Project enhances data quality and analysis through EXCEL, SSMS, SSIS, and POWER BI, facilitating informed decision-making with comprehensive dashboards.

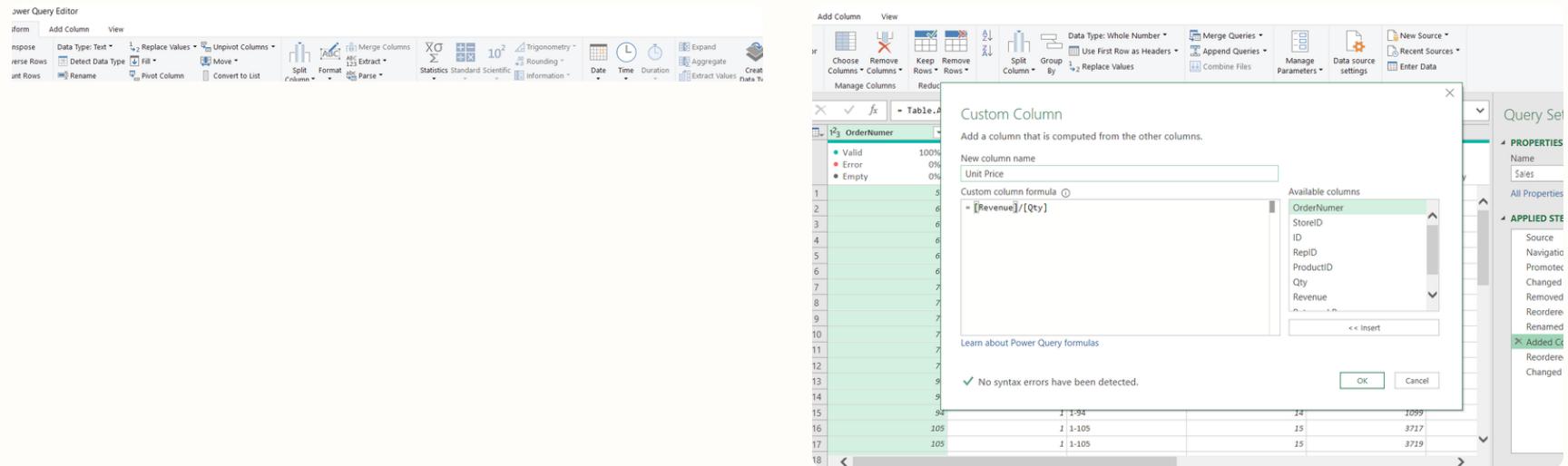


by **Mostafa Atef Fahmi**

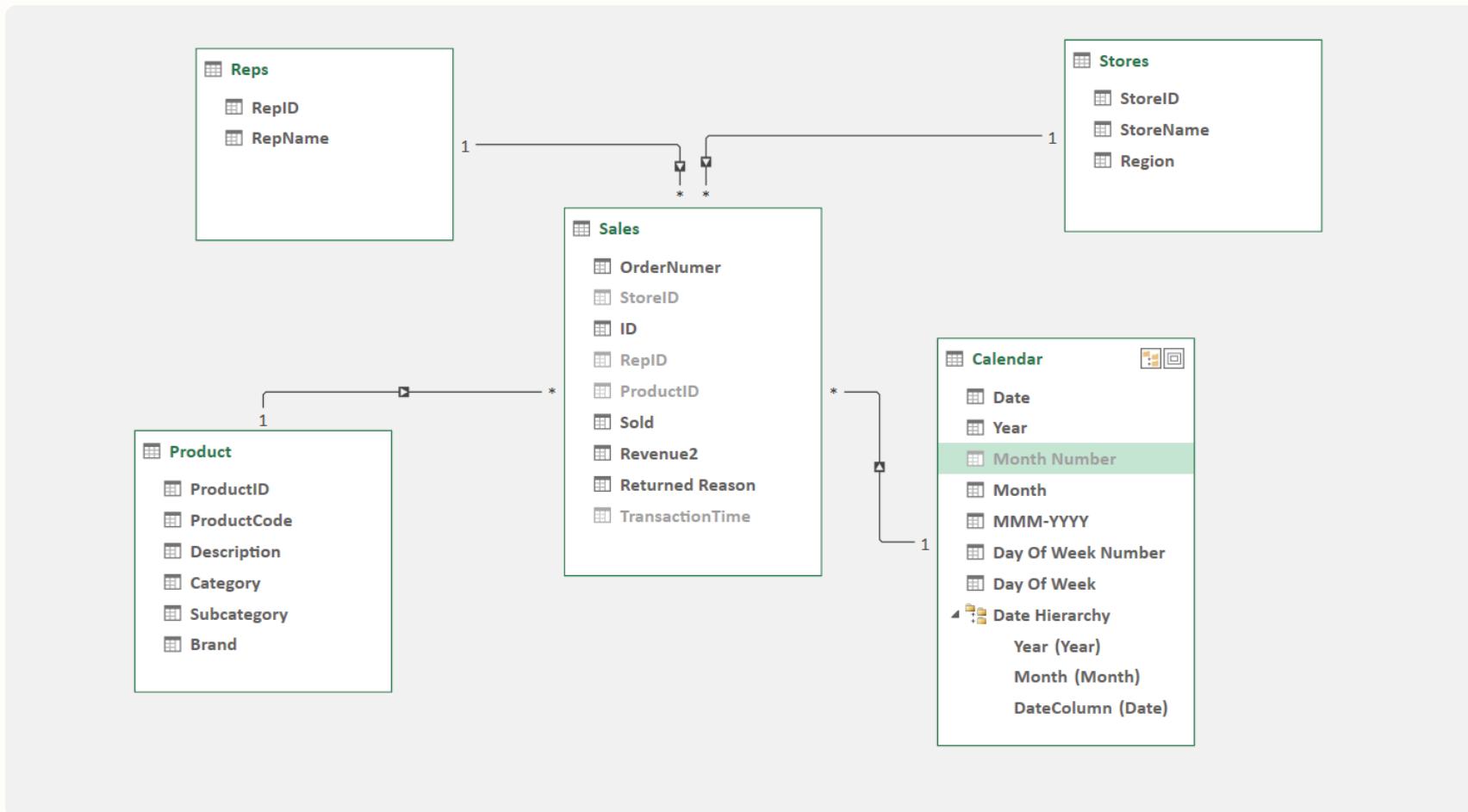
EXCEL

Cleaning, Transformation, Modeling, and Analyzing

Cleaning & Transformation



Modeling





SSMS

(SQL SERVER MANAGEMENT STUDIO)

Defining Data Mart Tables & Constraints

Creating Dimensions & Fact Tables

```
06_fact_sales.sql...HDAVGP6\mosta (75)  02_dim_product.sq...AVGP6\mosta (74)  X

-- TABLE CREATION

-- Drop dim_product and fact_sales relationship

if exists (select * from sys.foreign_keys
           where name = 'fk_fact_sales_dim_product'
           and parent_object_id = object_id('fact_sales'))
alter table fact_sales drop constraint fk_fact_sales_dim_product
;

-- Drop and Create dim_product

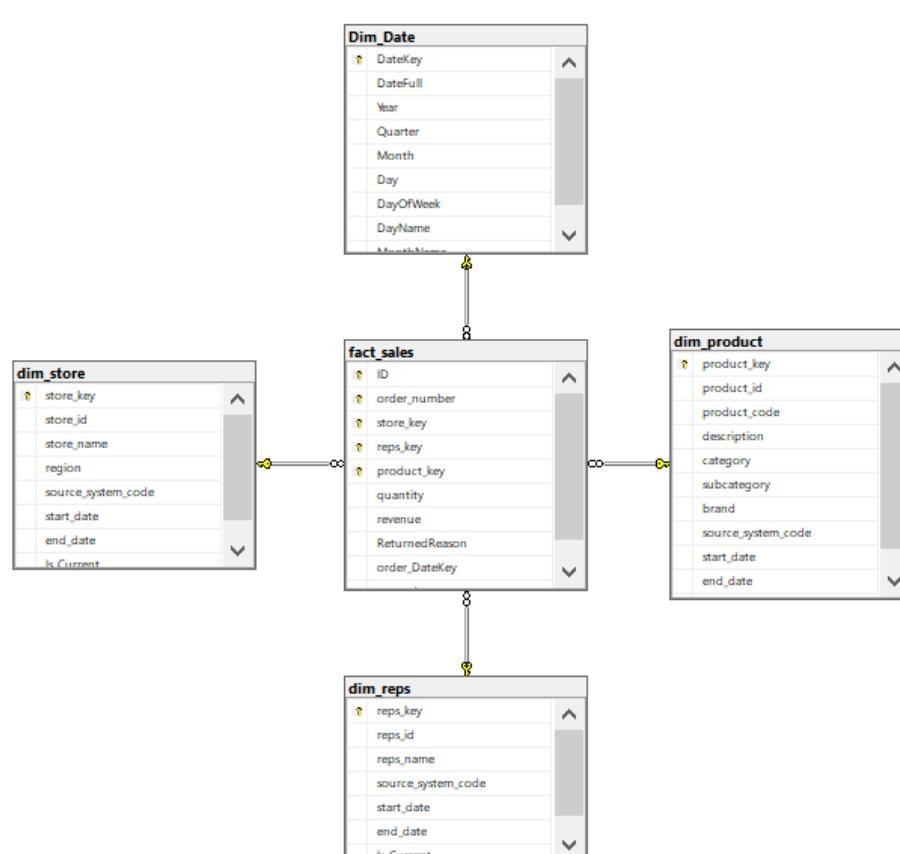
if exists (select * from sys.objects
           where name = 'dim_product'
           and type = 'U')
Drop Table dim_product
;
go
Create Table dim_product
(
    product_key int not null identity(1,1),--surrogate key
    product_id int not null, --alternate key - business key
    product_name nvarchar(50) not null,
    product_description nvarchar(400) null,
    product_subcategory nvarchar(50),
    product_category nvarchar(50),
    color nvarchar(15),
    model_name nvarchar(50),
    reorder_point smallint,
    standard_cost money,
    list_price money,
    unit_cost money,
    tax_amount money,
    freight money,
    extended_sales money,
    extended_cost money,
    created_at datetime not null default(getdate())
);

-- TABLE CREATION

-- Drop and Create fact_sales

if exists (select * from sys.objects
           where name = 'fact_sales'
           and type = 'U')
Drop Table fact_sales
;
go
Create Table fact_sales
(
    order_id nvarchar(50) not null,
    line_number int not null,
    product_key int not null,
    customer_key int not null,
    territory_key int not null,
    order_DateKey int,
    quantity int,
    unit_price money,
    unit_cost money,
    tax_amount money,
    freight money,
    extended_sales money,
    extended_cost money,
    created_at datetime not null default(getdate())
);

-- Defining The Relationships
constraint pk_fact_sales
    primary key (order_id,line_number),
constraint fk_fact_sales_dim_product
    foreign key (product_key)
        references dim_product(product_key),
constraint fk_fact_sales_dim_store
    foreign key (store_key)
        references dim_store(store_key),
constraint fk_fact_sales_dim_reps
    foreign key (reps_key)
        references dim_reps(reps_key),
constraint fk_fact_sales_customer
    foreign key (customer_key)
        references dim_customer(customer_key),
constraint fk_fact_sales_territory
    foreign key (territory_key)
        references dim_territory(territory_key),
constraint fk_fact_sales_order
    foreign key (order_DateKey)
        references dim_date(order_DateKey),
constraint fk_fact_sales_revenue
    foreign key (revenue)
        references dim_revenue(revenue),
constraint fk_fact_sales_returnedReason
    foreign key (ReturnedReason)
        references dim_revenue(ReturnedReason),
constraint fk_fact_sales_orderNumber
    foreign key (order_number)
        references dim_orderNumber(order_number),
constraint fk_fact_sales_lineNumber
    foreign key (line_number)
        references dim_lineNumber(line_number),
constraint fk_fact_sales_reps
    foreign key (reps_key)
        references dim_reps(reps_key),
constraint fk_fact_sales_dim_product
    foreign key (product_key)
        references dim_product(product_key),
constraint fk_fact_sales_dim_store
    foreign key (store_key)
        references dim_store(store_key),
constraint fk_fact_sales_dim_reps
    foreign key (reps_key)
        references dim_reps(reps_key),
constraint fk_fact_sales_dim_revenue
    foreign key (revenue)
        references dim_revenue(revenue),
constraint fk_fact_sales_dim_orderNumber
    foreign key (order_number)
        references dim_orderNumber(order_number),
constraint fk_fact_sales_dim_lineNumber
    foreign key (line_number)
        references dim_lineNumber(line_number)
```





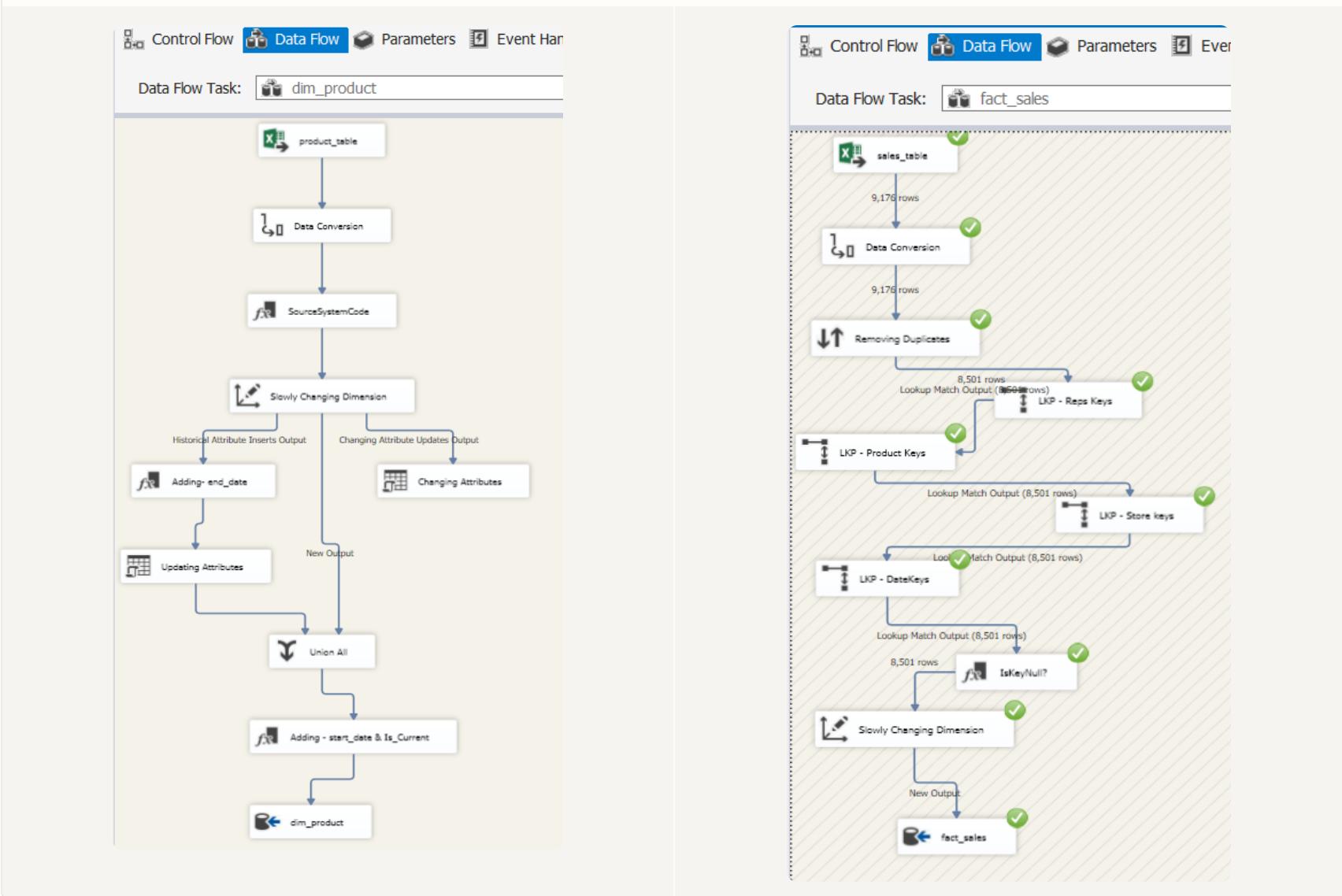
SSIS

(SQL SERVER INTEGRATION SERVICE)

ETL Pipelines Implementation

Packages

Product Package





POWER BI

Dashboard/Report

Stores Overview Dashboard

