Video_Games Project

- Download Data From Kaggle As Csv File
- ETL (Extrat , Transform , Data)
- Data Anlysis
- Data Visualization

Dwonload Data From Kaggle as CSV File

You can view the data through the following link:

https://www.kaggle.com/datasets/gregorut/videogamesales

- After Getting and reviewing the data

- There are many problems which are as follows :

  – Some rows contain special characters such as , " (

  – Data types are not clear

  – The sales value is not clear, as it represents values in millions

- You can view SSIS Backages through the following link:

  https://github.com/yusfmhmd8/Video_Games/tree/main/Etl

1. Change Data Type For Column

2. Making Transformation On Data

Derived Column Transformation Editor

Specify the expressions used to create new column values, and indicate whether the values update existing columns or populate new columns.

- ⊞ 📁 Variables and Parameters
- ⊞ 📁 Columns

- ⊞ 📁 Mathematical Functions
- ⊞ 📁 String Functions
- ⊞ 📁 Date/Time Functions
- ⊞ 📁 NULL Functions
- ⊞ 📁 Type Casts
- ⊞ 📁 Operators

Description:

| Derived Column Name	Derived Column	Expression	Data Type
North_America_Sales	Replace 'North_Americ...	North_America_Sales * 1000000	currency [DT_CY]
Europe_Sales	Replace 'Europe_Sales'	Europe_Sales * 1000000	currency [DT_CY]
Jpan_Sales	Replace 'Jpan_Sales'	Jpan_Sales * 1000000	currency [DT_CY]
Data Source.Other_Sales	Replace 'Data Source.O...	[Change Data Types].Other_Sales * 1000000	double-precision float ...
Data Source.Global_Sales	Replace 'Data Source.G...	[Change Data Types].Global_Sales * 1000000	double-precision float ...
Name	Replace 'Name'	TRIM(REPLACE(Name," ",""))	Unicode string [DT_WS...

3. Loading Data From Excel To Sql Server
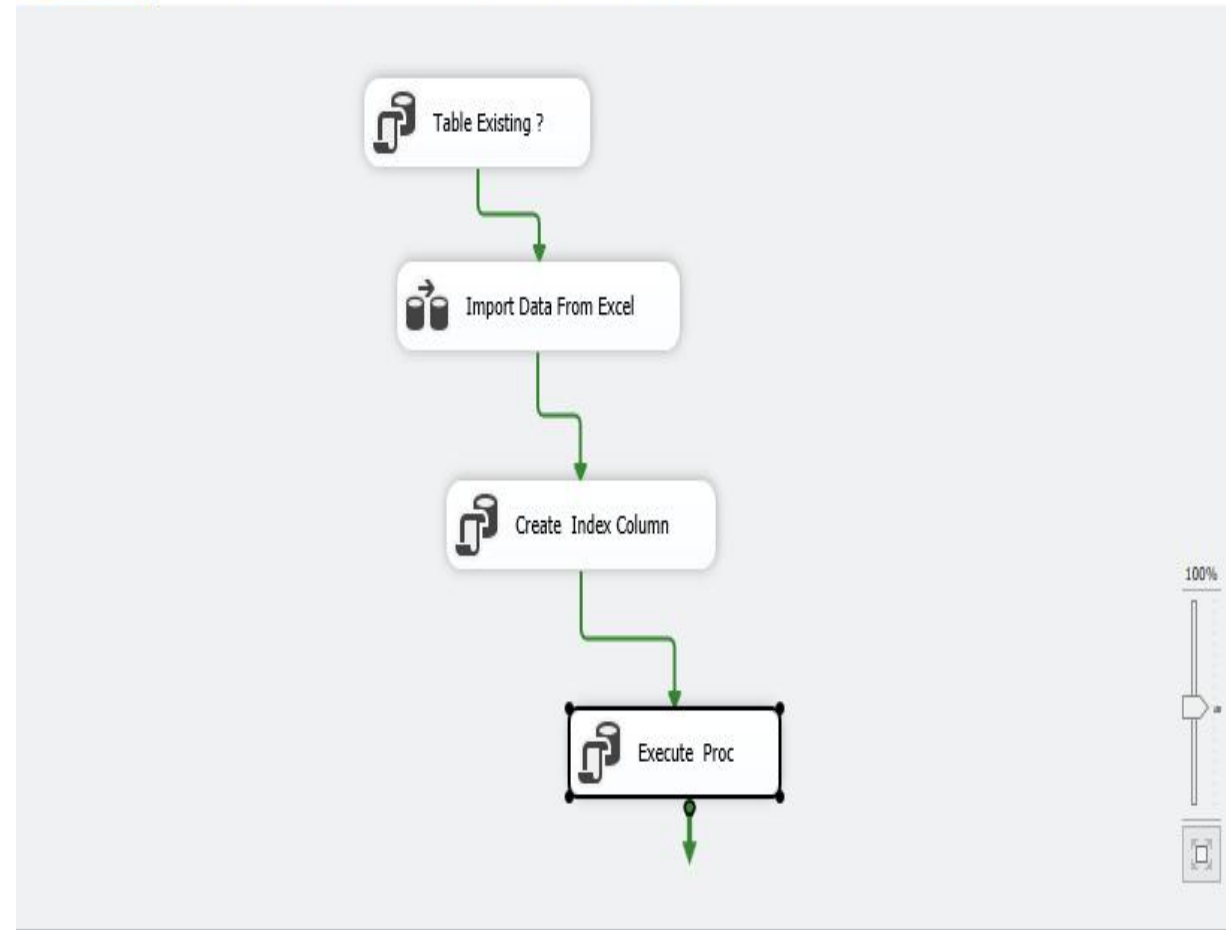
- Remvoe (year) From Column Name
- Update Year NULL To NA
- Remove Columns Not Used After Make ETL by SSIS
- Rename Columns
- Make View Form Fact Table (video_games)

  1. Add Decade column for knowing the decade for each year

  2. Add Sales_Cases Column For following up sales

  3. Making Casting as Descimel For Columns (North_America_Sales , Europe_Sales ,Jpan_Sales,Other_sales

- You can view SQL Code through the following link:
  - https://github.com/yusfmhmd8/Video_Games/blob/main/ETL_Using_SQL.sql

You can Download The data through the following link:

https://github.com/yusfmhmd8/Video_Games/tree/main/Data_After_Transformation_Cleaining

1. Using SQL Queries

2. Using Sql Srever Analysis Service (SSAS)

3. Using MDX Language

- After cleaning the data,
- Then the Step of analyzing the data using SQL Query

```sql
-- Total Sales Per Genere for Sales Cases

select isnull(v.genre, 'Total') as Genre ,
sum (case when  v.sales_cases ='High Sales' then global_sales end)   as High_Sales,
sum (case when  v.sales_cases ='Medium Sales' then global_sales end)   As Medium_Sales,
sum (case when  v.sales_cases ='Low Sales' then global_sales end)  as Low_Sales,
sum(global_sales) Total_Sales
from v_video_games v
group by rollup( v.genre )
order by Total_Sales desc
```

- You can view SQL Analysis Through the following link:

https://github.com/yusfmhmd8/Video_Games/blob/main/SQL_Analysis.sql

- You can view SSAS Through the following link:

  https://github.com/yusfmhmd8/Video_Games/tree/main/Video_Games_Analysis

- You can view SQL Analysis Through the following link:
  - https://github.com/yusfmhmd8/Video_Games/blob/main/Ana lysis%20Using_MDX.mdx

```
-- Report For Display Global Sales per Genre Per dacde

select   {[Measures].[Global Sales] *
          [v Video Games].[Decade].allmembers}
    on  0,
order( ({[v Video Games].[Genre].allmembers}),
    [Measures].[Global Sales]  ,
    desc) on rows
FROM  [video_games]
```

1 . Using Sql Server Reporting Service (SSRS)

2 . Power BI

- After Making Analysis On Data By Using Sql and Making Cube By

  SSAS Then Display data in the form of reports By using SSRS Tool
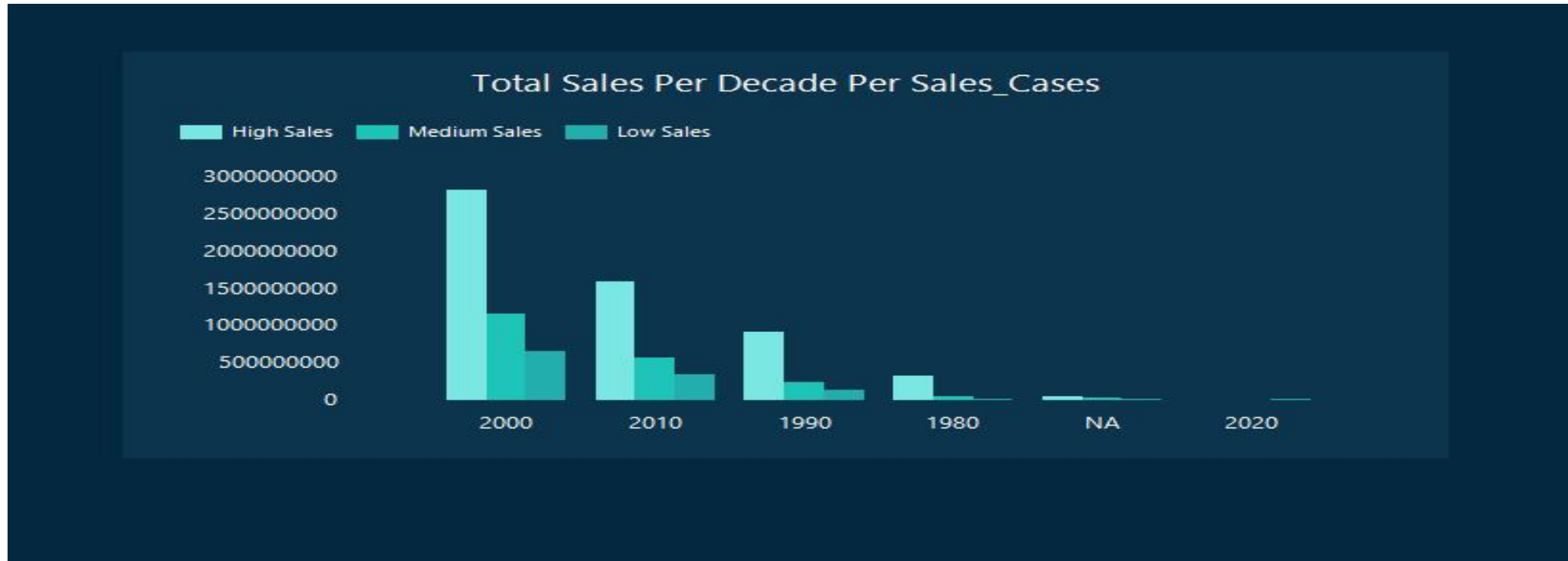
- You can view SSRS   Through the following links:

  https://github.com/yusfmhmd8/Video_Games/tree/main/Video_Games/SSRS
  https://github.com/yusfmhmd8/Video_Games/tree/main/Video_Games

3.2 Power BI

1. ETL Using Power Query

2. Data Analysis Use Dax

3. Data Visualization Using Power BI Desktop

3.2.1 ETL Using Power Query

- I have done the previous Steps using a Power BI Tool, and from these Steps:

- ETL => Claening And Transformation Data By Using Power Query Tool

- You can view and Dwonload .pbix Through the following link:
  - https://github.com/yusfmhmd8/Video_Games/tree/main/Power_BI

- In This Step Maknig Analysis , Clarify Insights And necessary measures are made By using DAX language

    – You can view and Dwonload .pbix Through the following link:

        - https://github.com/yusfmhmd8/Video_Games/tree/main/Power_BI

- The last Step is presenting the data in a clear and interactive Way in a suitable dashboard format to understand the data and make the appropriate decision
– You can view Interactive Dashboard Through the following link:
    – https://www.novypro.com/project/videogames-power-bi

Main Dashboard

Details