

The image features a large blue speech bubble shape on a white background. A solid grey rectangle is positioned on the left side of the slide. The text 'Video_Games Project' is centered within the blue area in a white, sans-serif font.

Video_Games Project

The Steps Of Project

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

Download Data From Kaggle as CSV File

You can view the data through the following link:

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

1.ETL

- 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](https://github.com/yusfmhmd8/Video_Games/tree/main/Etl)

1.1 Using SSIS Tool For ETL

1. Change Data Type For Column

Conversion Transformation Editor

Configure the properties used to convert the data type of an input column to a different data type. Depending on the data type to which the column is converted, set the length, precision, scale, and code page of the column.

Available Input Col...

- ☒ Name
- ☐ Name
- ☐ Platform
- ☐ Year
- ☐ Genre
- ☐ Publisher

Input Column	Output Alias	Data Type	Length	Precision	Scale	Code Page
NA_Sales	North_America_Sales	currency [DT_CY]				
EU_Sales	Europe_Sales	currency [DT_CY]				
JP_Sales	Jpan_Sales	currency [DT_CY]				
Other_Sales	Other_Sales	currency [DT_CY]				
Global_Sales	Global_Sales	currency [DT_CY]				

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...

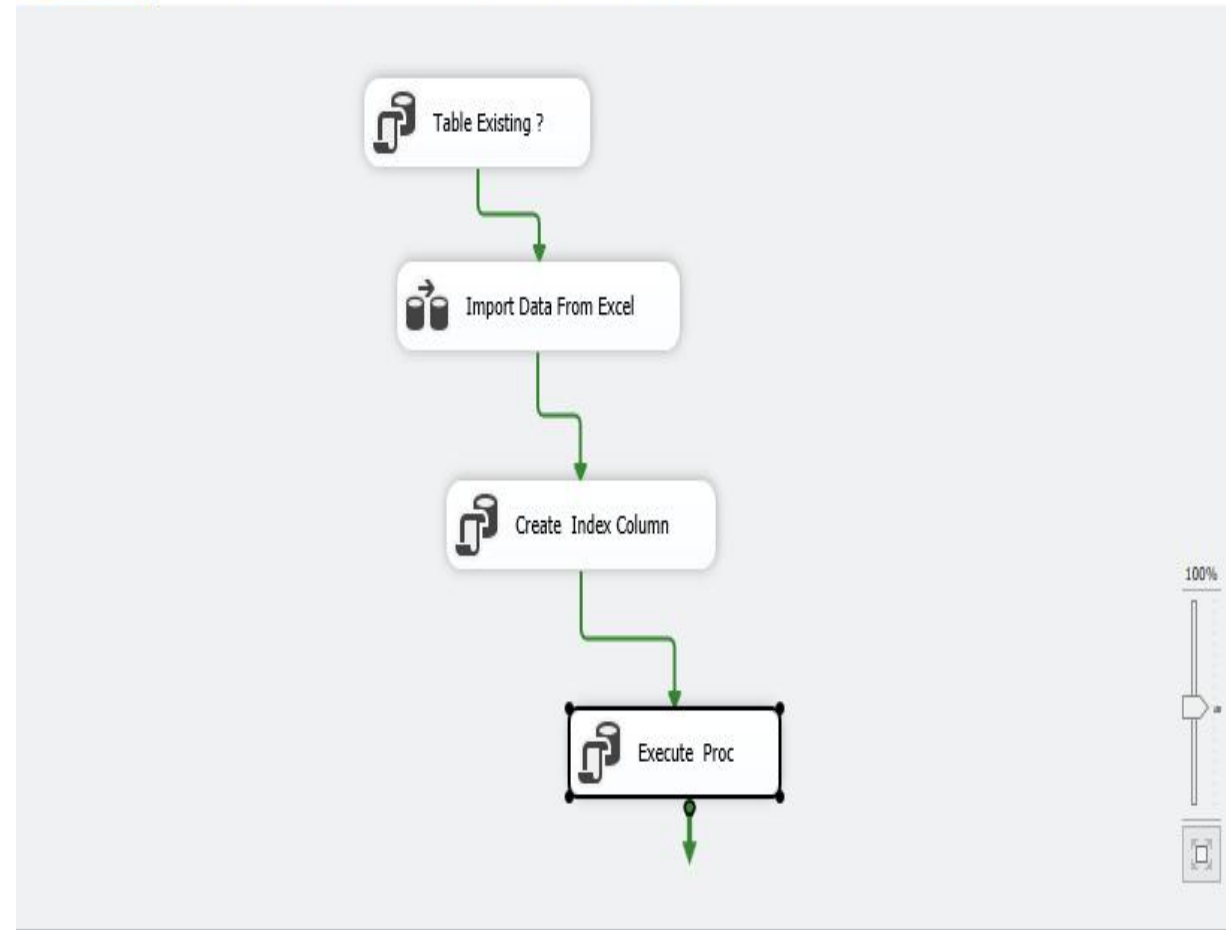
3. Loading Data From Excel To Sql Server

Control Flow Data Flow Parameters Event Handlers Package Explorer

Data Flow Task: Import Data From Excel



Control Flow Data Flow Parameters Event Handlers Package Explorer



1.2. Using Sql Queries For ETL

- Remove (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

Dwonload Data After Making ETL

You can Download The data through the following link:

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

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Rank	Name	Platform	Genre	Publisher	Year	Decade	North_Am	Europe_S	Jpan_Sale	Other_Sales	Global_Sales	Sales_Cases	
2	1	WiiSports	Wii	Sports	Nintendo	2006	2000	41490000	29020000	3770000	8460000	82740000	High Sales	
3	2	SuperMarioBros.	NES	Platform	Nintendo	1985	1980	29080000	3580000	6810000	770000	40240000	High Sales	
4	3	MarioKartWii	Wii	Racing	Nintendo	2008	2000	15850000	12880000	3790000	3310000	35820000	High Sales	
5	4	WiiSportsResort	Wii	Sports	Nintendo	2009	2000	15750000	11010000	3280000	2960000	33000000	High Sales	
6	5	PokemonRed/Pokem	GB	Role-Playing	Nintendo	1996	1990	11270000	8890000	10220000	1000000	31370000	High Sales	
7	6	Tetris	GB	Puzzle	Nintendo	1989	1980	23200000	2260000	4220000	580000	30260000	High Sales	
8	7	NewSuperMarioBros.	DS	Platform	Nintendo	2006	2000	11380000	9230000	6500000	2900000	30010000	High Sales	
9	8	WiiPlay	Wii	Misc	Nintendo	2006	2000	14030000	9200000	2930000	2850000	29020000	High Sales	
10	9	NewSuperMarioBros.	Wii	Platform	Nintendo	2009	2000	14590000	7060000	4700000	2260000	28620000	High Sales	
11	10	DuckHunt	NES	Shooter	Nintendo	1984	1980	26930000	630000	280000	470000	28310000	High Sales	
12	11	Nintendogs	DS	Simulation	Nintendo	2005	2000	9070000	11000000	1930000	2750000	24760000	High Sales	
13	12	MarioKartDS	DS	Racing	Nintendo	2005	2000	9810000	7570000	4130000	1920000	23420000	High Sales	
14	13	PokemonGold/Pokem	GB	Role-Playing	Nintendo	1999	1990	9000000	6180000	7200000	710000	23100000	High Sales	
15	14	WiiFit	Wii	Sports	Nintendo	2007	2000	8940000	8030000	3600000	2150000	22720000	High Sales	
16	15	WiiFitPlus	Wii	Sports	Nintendo	2009	2000	9090000	8590000	2530000	1790000	22000000	High Sales	
17	16	KinectAdventures!	X360	Misc	Microsoft Game S	2010	2010	14970000	4940000	240000	1670000	21820000	High Sales	
18	17	GrandTheftAutoV	PS3	Action	Take-Two Interac	2013	2010	7010000	9270000	970000	4140000	21400000	High Sales	
19	18	GrandTheftAuto:SanA	PS2	Action	Take-Two Interac	2004	2000	9430000	400000	410000	10570000	20810000	High Sales	
20	19	SuperMarioWorld	SNES	Platform	Nintendo	1990	1990	12780000	3750000	3540000	550000	20610000	High Sales	
21	20	BrainAge:TrainYourBr	DS	Misc	Nintendo	2005	2000	4750000	9260000	4160000	2050000	20220000	High Sales	
22	21	PokemonDiamond/Pc	DS	Role-Playing	Nintendo	2006	2000	6420000	4520000	6040000	1370000	18360000	High Sales	
23	22	SuperMarioLand	GB	Platform	Nintendo	1989	1980	10830000	2710000	4180000	420000	18140000	High Sales	
24	23	SuperMarioBros 2	NES	Platform	Nintendo	1988	1980	8540000	3440000	3840000	450000	17380000	High Sales	

2. Data Analysis

1. Using SQL Queries
2. Using Sql Server Analysis Service (SSAS)
3. Using MDX Language

2.1 Sql Queries In Analysis

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

```
-- Total Sales Per Genre 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

2.2 Sql Server Analysis Service (SSAS)

The screenshot shows the SQL Server Analysis Services (SSAS) interface. On the left, the 'video_games' cube is selected, and the 'Measures' list includes '#Video_Games', 'Europe Sales', 'Global Sales', 'Japan Sales', 'North America Sales', and 'Other Sales'. The main area displays a table with the following data:

Genre	Name	Platform	Decade	Year	Sales Cases	#Video_Games	Global Sales
Action	.hack:Sek...	PS3	2010	2012	Low Sales	1	30000
Action	[Prototype]	PS3	2000	2009	High Sales	1	1240000
Action	[Prototype]	X360	2000	2009	High Sales	1	1310000
Action	[Prototyp...	PC	2010	2012	Low Sales	1	100000
Action	[Prototyp...	PS3	2010	2012	Medium Sales	1	750000
Action	[Prototyp...	X360	2010	2012	Medium Sales	1	800000
Action	007:Quan...	DS	2000	2008	Low Sales	1	140000
Action	007:Quan...	PC	2000	2008	Low Sales	1	30000
Action	007:Quan...	PS2	2000	2008	Medium Sales	1	430000
Action	007:Quan...	PS3	2000	2008	High Sales	1	1160000
Action	007:Quan...	Wii	2000	2008	Medium Sales	1	670000
Action	007:Quan...	X360	2000	2008	High Sales	1	1490000
Action	007:The...	N64	2000	2000	High Sales	1	1550000
Action	007:The...	PS	2000	2000	Medium Sales	1	920000

- You can view SSAS Through the following link:

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

2.2 Using MDX Language In Analysis

- You can view SQL Analysis Through the following link:
 - [https://github.com/yusfmhmd8/Video_Games/blob/main/Analysis%20Using MDX.mdx](https://github.com/yusfmhmd8/Video_Games/blob/main/Analysis%20Using%20MDX.mdx)

-- Report For Display Global Sales per Genre Per decade

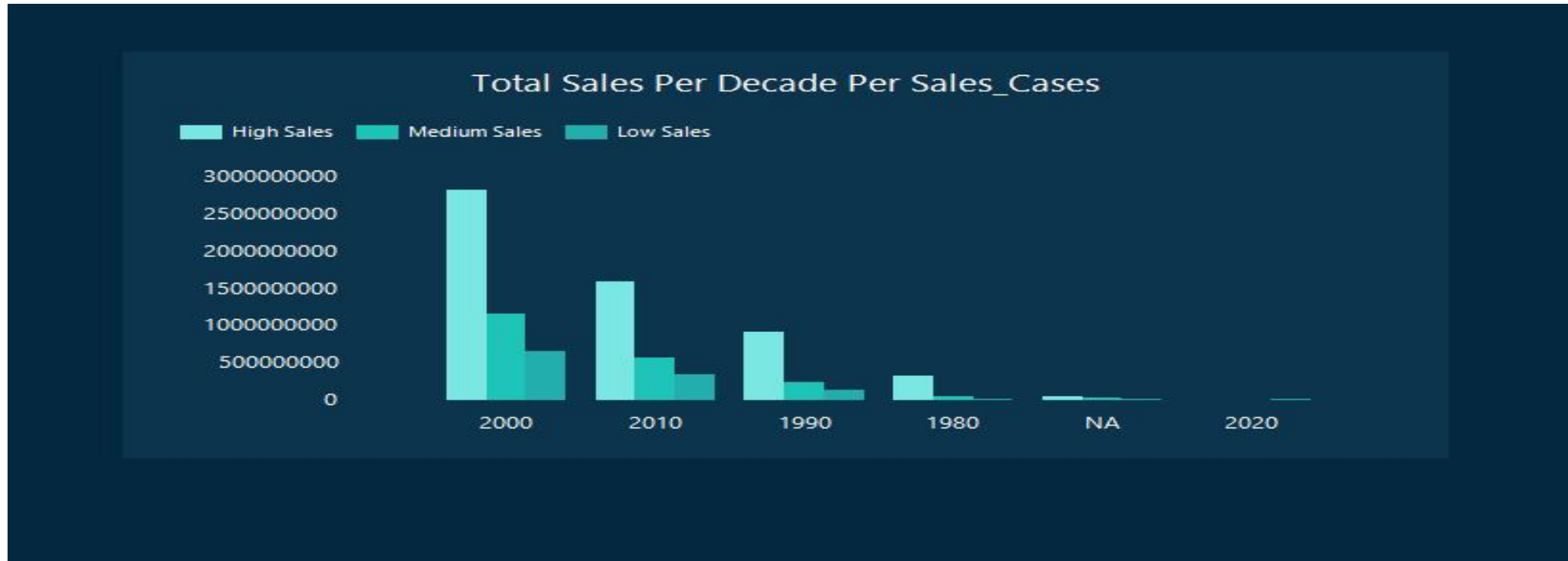
```
select {[Measures].[Global Sales] *  
        [v Video Games].[Decade].allmembers}  
on 0,  
order( ({[v Video Games].[Genre].allmembers}),  
        [Measures].[Global Sales] ,  
        desc) on rows  
FROM [video_games]
```

3.Data Visualization

- 1 . Using Sql Server Reporting Service (SSRS)
- 2 . Power BI

3.1 SSRS

- 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

3.2.2 Data Analysis By Using DAX

- In This Step Making Analysis , Clarify Insights And necessary measures are made By using DAX language
 - You can view and Download .pbix Through the following link:
 - https://github.com/yusfmhmd8/Video_Games/tree/main/Power_BI

Data Visualization In 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

