Video_Games Project

The Steps Of Project

- Download Data From Kaggle As Csv File
- ETL (Extract , Transform , Load)
- 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

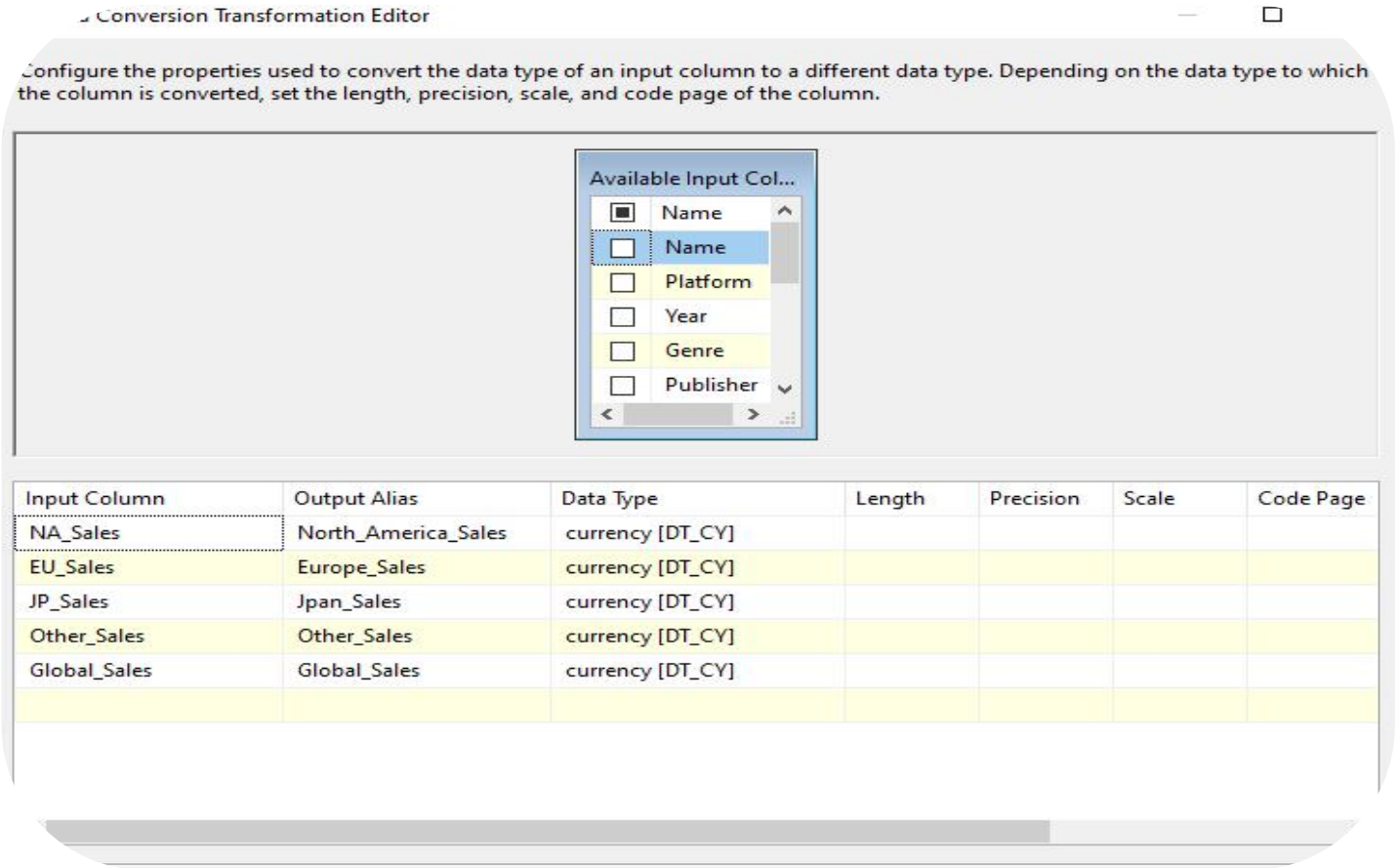
1.ETL

- 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:

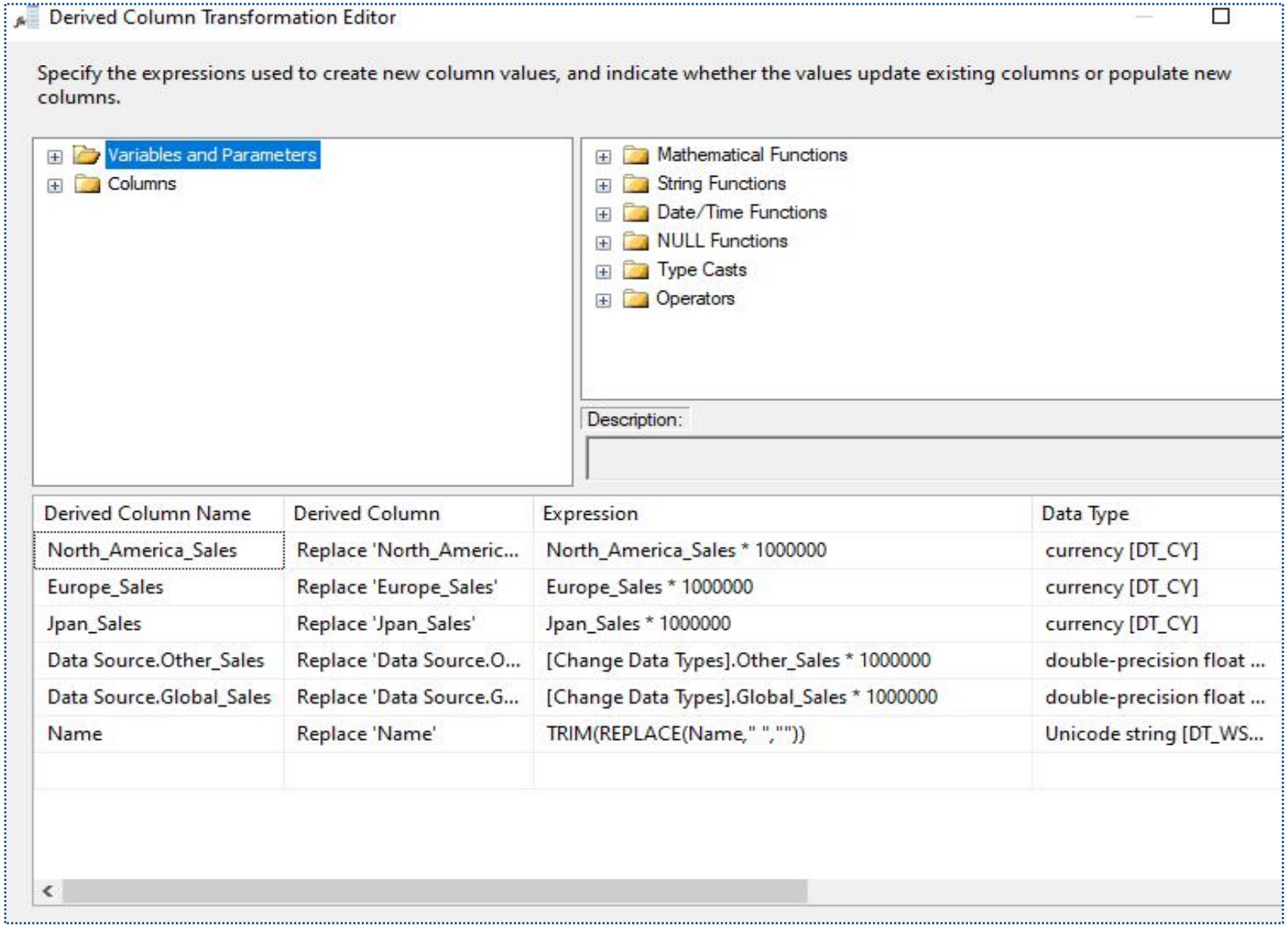
  https://github.com/yusfmhmd8/Video_Games/tree/main/Etl

1.1 Using SSIS Tool For ETL

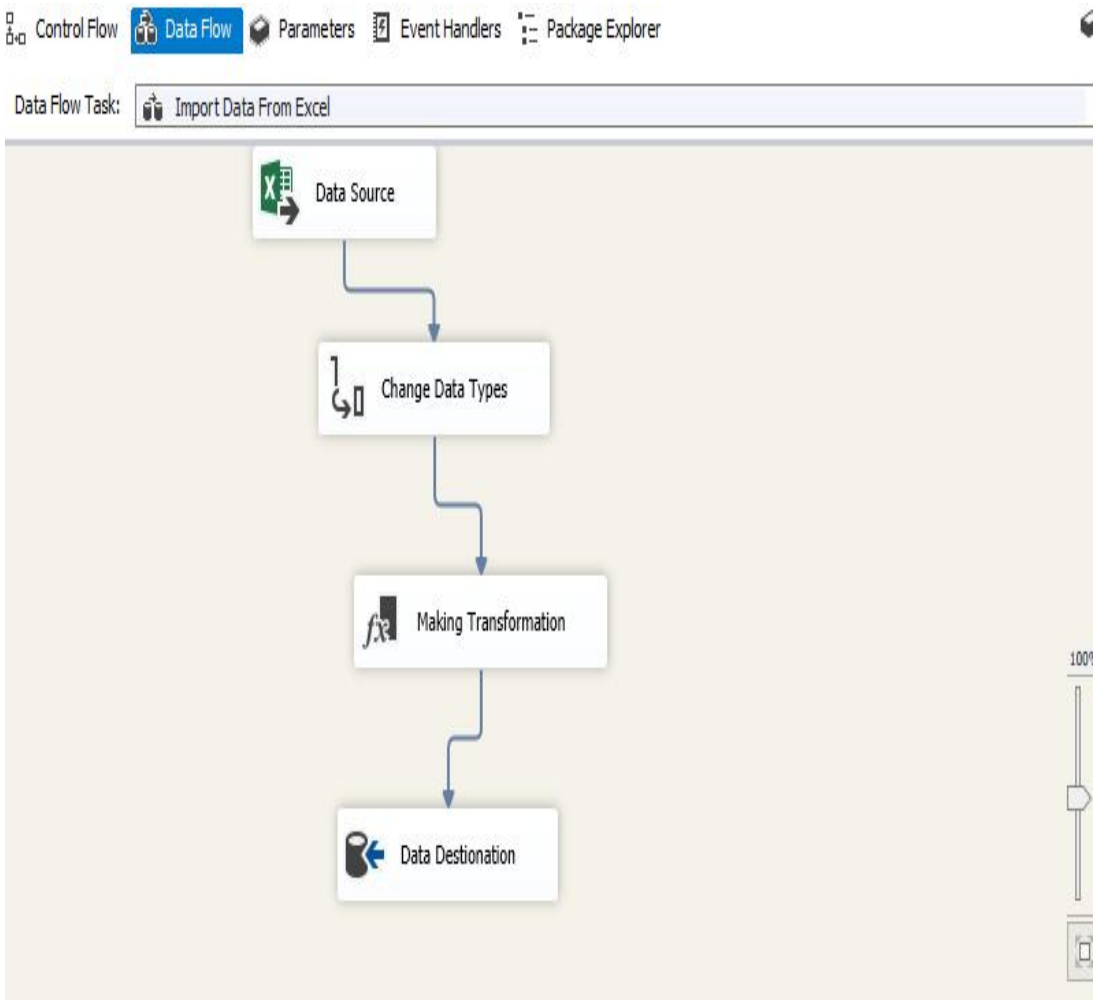
1. Change Data Type For Column

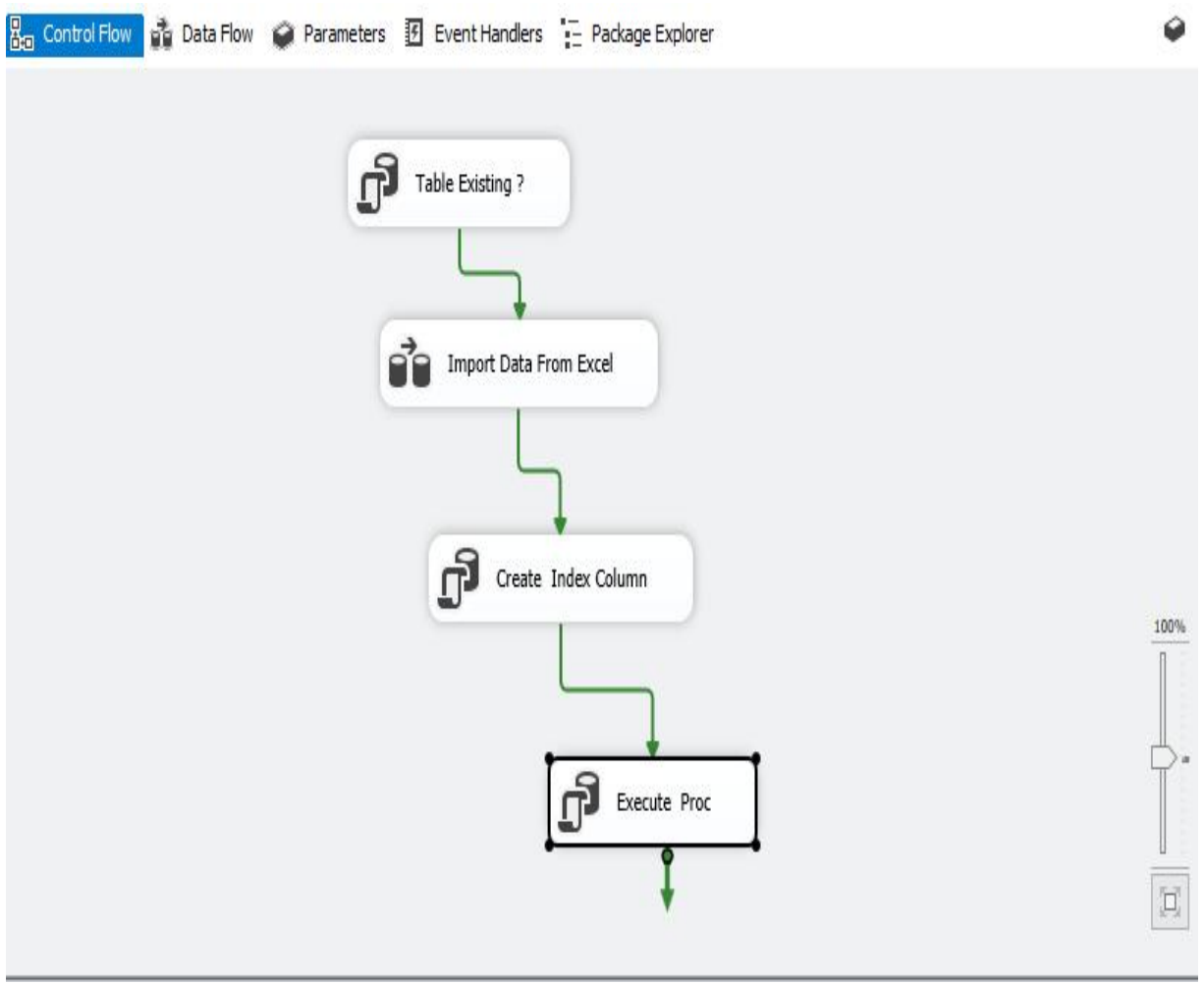


2. Making Transformation On Data



3. Loading Data From Excel To Sql Server





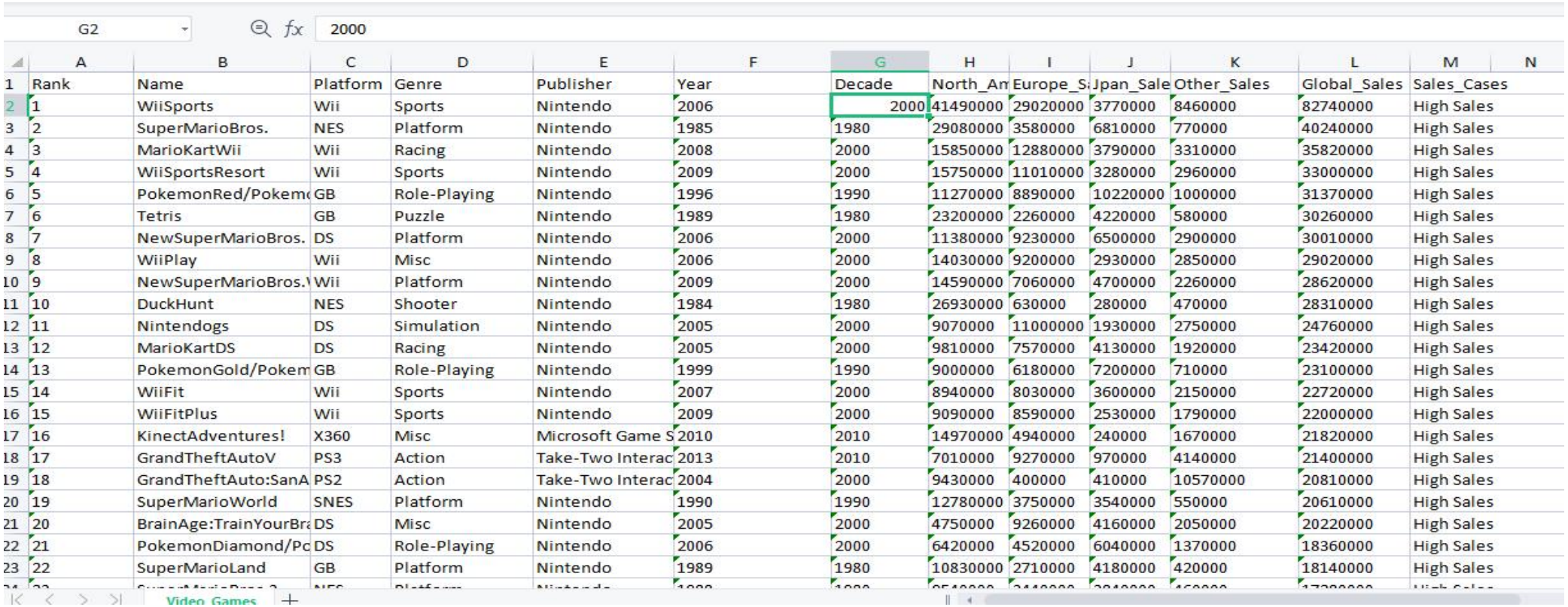
1.2. Using Sql Queries For ETl

- 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

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



G2 | fx | 2000

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Rank	Name	Platform	Genre	Publisher	Year	Decade	North_An	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/Pokemo	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:TrainYourBra	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	

Video Games

2. Data Analysis

1. Using SQL Queries

2. Using Sql Srever 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

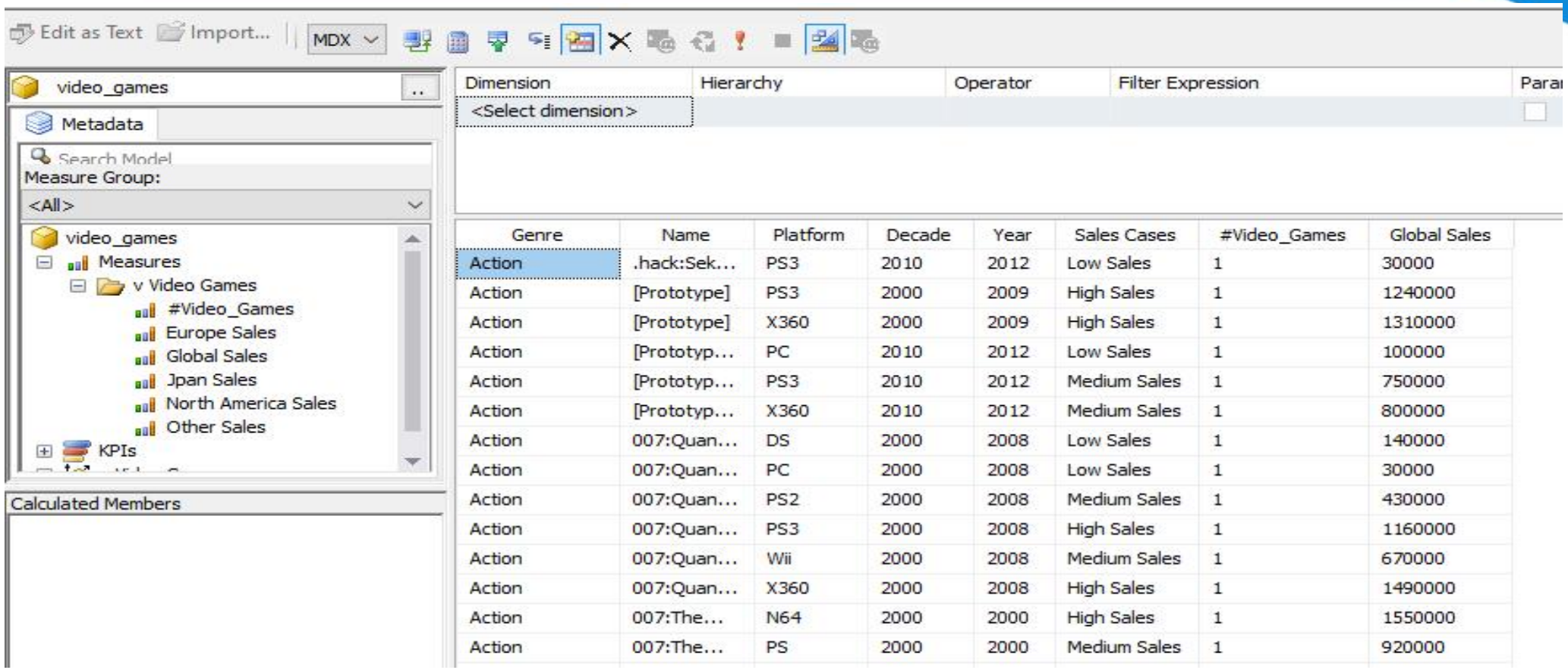
```sql
-- Total Sales Per Genere for Sales Cases

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

2.2 Sql Srever Analysis Service (SSAS)



- 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

```
-- 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]
```

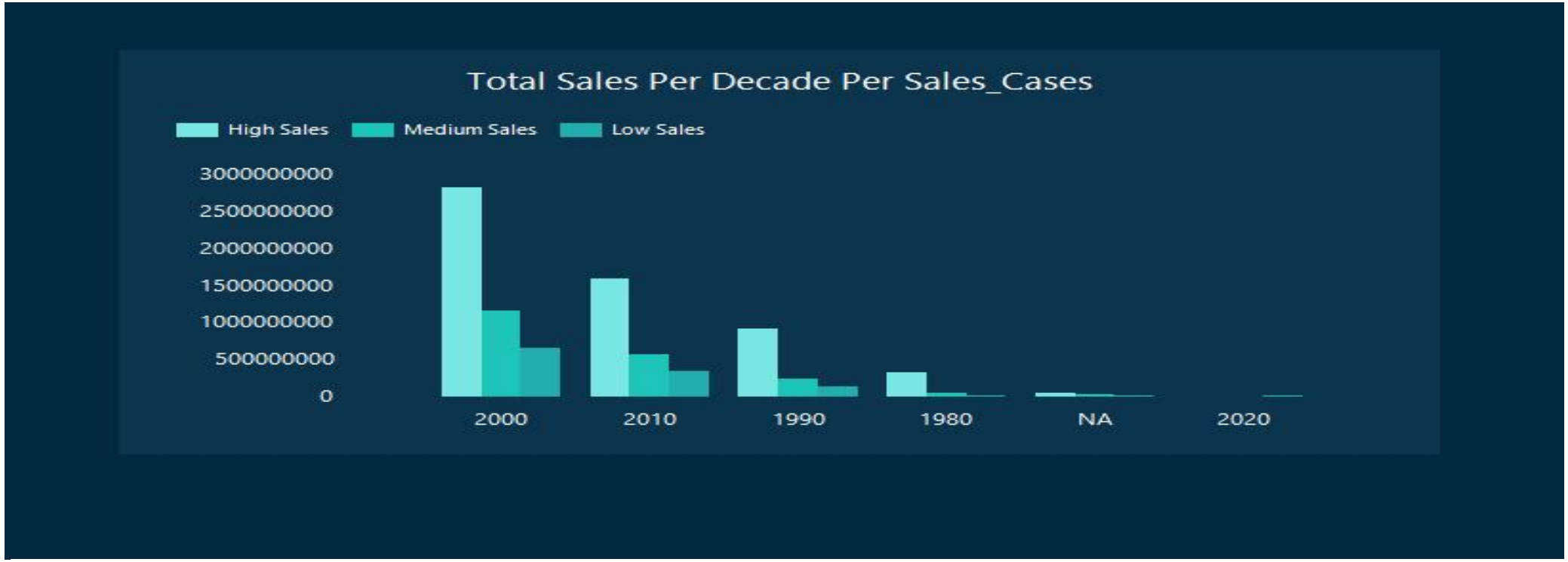
3.Data Visualization

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

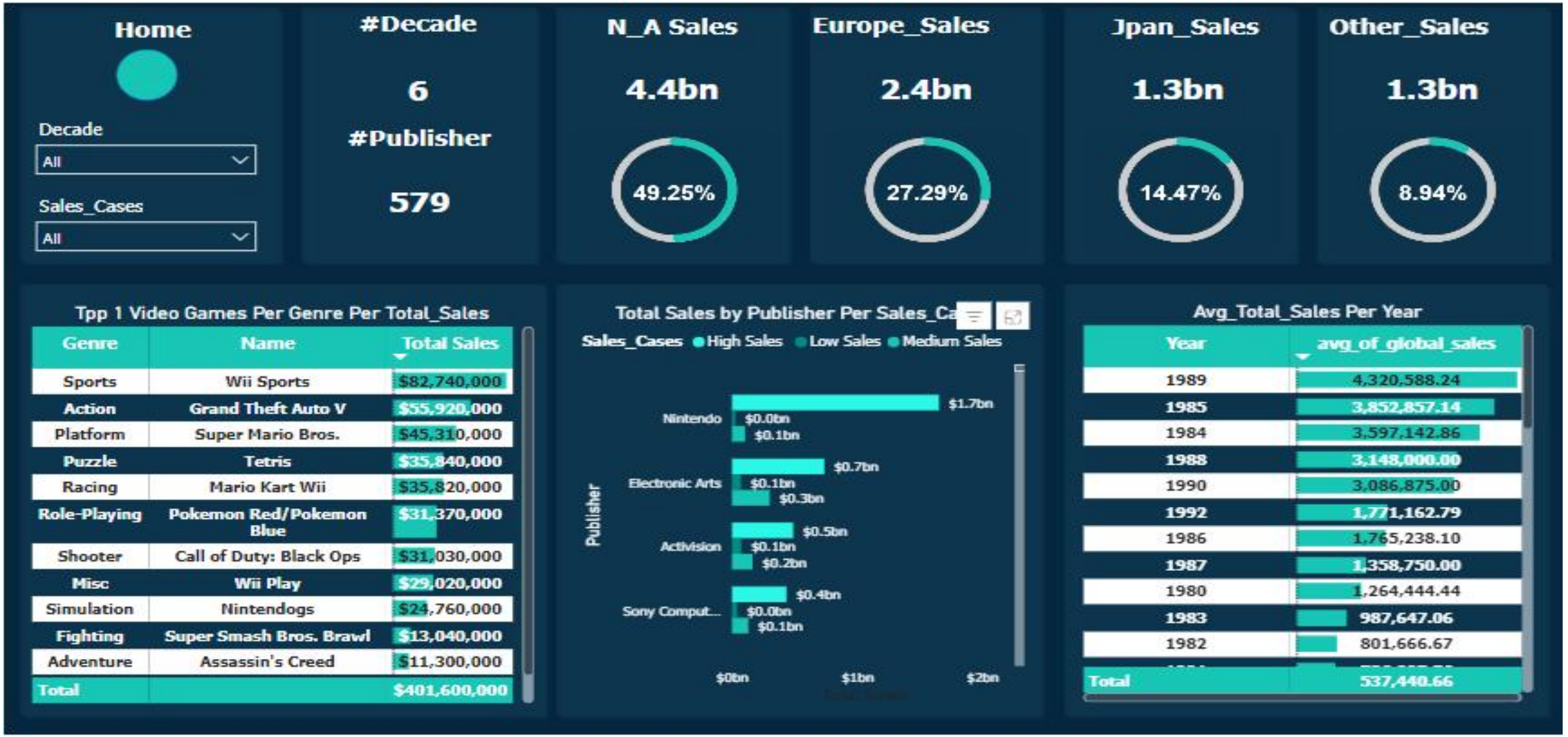
- In This Step Maknig Analysis ， Clarify Insights And necessary measures are made By using DAX language
  - You can view and Dwonload .pbix Through the following link:
    - https://github.com/yusfmhmd8/Video_Games/tree/main/Power_BI

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


Home
Decade
All
Sales_Cases
All
#Decade
6
#Publisher
579
N_A Sales
4.4bn
49.25%
Europe_Sales
2.4bn
27.29%
Jpan_Sales
1.3bn
14.47%
Other_Sales
1.3bn
8.94%
Tpp 1 Video Games Per Genre Per Total_Sales
Genre | Name | Total Sales
Sports | Wii Sports | $82,740,000
Action | Grand Theft Auto V | $55,920,000
Platform | Super Mario Bros. | $45,310,000
Puzzle | Tetris | $35,840,000
Racing | Mario Kart Wii | $35,820,000
Role-Playing | Pokemon Red/Pokemon Blue | $31,370,000
Shooter | Call of Duty: Black Ops | $31,030,000
Misc | Wii Play | $29,020,000
Simulation | Nintendogs | $24,760,000
Fighting | Super Smash Bros. Brawl | $13,040,000
Adventure | Assassin's Creed | $11,300,000
Total | | $401,600,000
Total Sales by Publisher Per Sales_Ca
Sales_Cases High Sales Low Sales Medium Sales
Publisher
Nintendo $1.7bn $0.0bn $0.1bn
Electronic Arts $0.7bn $0.1bn $0.3bn
Activision $0.5bn $0.1bn $0.2bn
Sony Comput... $0.4bn $0.0bn $0.1bn
$0bn $1bn $2bn
Avg_Total_Sales Per Year
Year | avg_of_global_sales
1989 | 4,320,588.24
1985 | 3,852,857.14
1984 | 3,597,142.86
1988 | 3,148,000.00
1990 | 3,086,875.00
1992 | 1,771,162.79
1986 | 1,765,238.10
1987 | 1,358,750.00
1980 | 1,264,444.44
1983 | 987,647.06
1982 | 801,666.67
Total | 537,440.66