PROJECT: WHEN WAS THE GOLDEN ERA OF VIDEO GAMES?

Video games are big business: the global gaming market is projected to be worth more than $300 billion by 2027 according to Mordor Intelligence. With so much money at stake, the major game publishers are hugely incentivized to create the next big hit. But are games getting better, or has the golden age of video games already passed?

In this project, you'll analyze video game critic and user scores as well as sales data for the top 400 video games released since 1977. You'll search for a golden age of video games by identifying release years that users and critics liked best, and you'll explore the business side of gaming by looking at game sales data.

Your search will involve joining datasets and comparing results with set theory. You'll also filter, group, and order data. Make sure you brush up on these skills before trying this project! The database contains two tables. Each table has been limited to 400 rows for this project, but you can find the complete dataset with over 13,000 games on Kaggle.

`game_sales` **table**

Column	Definition	Data Type
name	Name of the video game	`varchar`
platform	Gaming platform	`varchar`
publisher	Game publisher	`varchar`
developer	Game developer	`varchar`
games_sold	Number of copies sold (millions)	`float`
year	Release year	`int`

`reviews` **table**

Column	Definition	Data Type
name	Name of the video game	`varchar`
critic_score	Critic score according to Metacritic	`float`
user_score	User score according to Metacritic	`float`

`users_avg_year_rating` **table**

Column	Definition	Data Type
year	Release year of the games reviewed	`int`
num_games	Number of games released that year	`int`
avg_user_score	Average score of all the games ratings for the year	`float`

`critics_avg_year_rating` **table**

Column	Definition	Data Type
year	Release year of the games reviewed	`int`
num_games	Number of games released that year	`int`
avg_critic_score	Average score of all the games ratings for the year	`float`

Projects Data DataFrame as best_selling_games

```
-- best_selling_games
SELECT *
FROM game_sales
ORDER BY games_sold DESC
LIMIT 10
```

i	name	p…	publisher	developer	gam…
0	Wii Sports for Wii	Wii	Nintendo	Nintendo EAD	82.9
1	Super Mario Bros. for NES	NES	Nintendo	Nintendo EAD	40.24
2	Counter-Strike: Global Offensive for PC	PC	Valve	Valve Corporation	40
3	Mario Kart Wii for Wii	Wii	Nintendo	Nintendo EAD	37.32
4	PLAYERUNKNOWN'S BATTLEGROUNDS for PC	PC	PUBG Corporation	PUBG Corporation	36.6
5	Minecraft for PC	PC	Mojang	Mojang AB	33.15
6	Wii Sports Resort for Wii	Wii	Nintendo	Nintendo EAD	33.13
7	Pokemon Red / Green / Blue Version for GB	GB	Nintendo	Game Freak	31.38
8	New Super Mario Bros. for DS	DS	Nintendo	Nintendo EAD	30.8
9	New Super Mario Bros. Wii for Wii	Wii	Nintendo	Nintendo EAD	30.3

Rows: 10 Expand

Projects Data DataFrame as critics_top_ten_years

```
-- critics_top_ten_years
SELECT
    g.year,
    COUNT(g.name) AS num_games,
    ROUND(AVG(r.critic_score),2) AS  avg_critic_score
FROM game_sales AS g
LEFT JOIN reviews AS r
USING(name)
GROUP BY g.year
HAVING(COUNT(g.name)>=7)
ORDER BY avg_critic_score DESC
LIMIT 10;
```

	n…	avg_critic_s…
0	1998	10	9.32
1	2004	11	9.03
2	2002	9	8.99
3	1999	11	8.93
4	2001	14	8.82
5	2011	26	8.76
6	2016	14	8.67
7	2013	22	8.66
8	2008	20	8.63
9	2017	14	8.62

Rows: 10 Expand

Projects Data DataFrame as g

```
-- golden_years
SELECT
    year,
    c.num_games,
    avg_critic_score,
    avg_user_score,
(avg_critic_score-avg_user_score) AS diff
FROM critics_avg_year_rating AS C
INNER JOIN users_avg_year_rating AS U
USING(year)
WHERE avg_critic_score>9
    OR avg_user_score>9
ORDER BY year ;
```

	year	n...	avg_critic_s...	avg_use...	
0	1997	8	7.93	9.5	-1.57
1	1998	10	9.32	9.4	-0.08
2	2004	11	9.03	8.55	0.48
3	2008	20	8.63	9.03	-0.4
4	2009	20	8.55	9.18	-0.63
5	2010	23	8.41	9.24	-0.83

Rows: 6 Expand