

Video game database

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Abstract

Given the growing influence of video games and the likelihood that video games will be the focus of an increasing amount of research, we suggest that a comprehensive information resource game database could be of significant value to both player and publisher. The database will provide the latest game information, game strategies including news, guides and tips. Besides, the latest News will be updated automatically from social media.

Keywords: Video game, Database, String API scratch

1.Introduction

Since the 1980s, video games have become an increasingly important part of the entertainment industry, and whether they are also a form of art is a matter of dispute.¹

With the growth of the market of video game, the development teams became more and more huge. Typically, a video game console development team can range in sizes of anywhere from 5 to 50 people, with some teams exceeding 100.²

In this case, we create a video game database for both development team and video game player. On the one hand, this database including game information and review which can provide a feedback to publisher. On the other hand, video game player can easily choose game from given information and have better game

experience from given guide and tips.

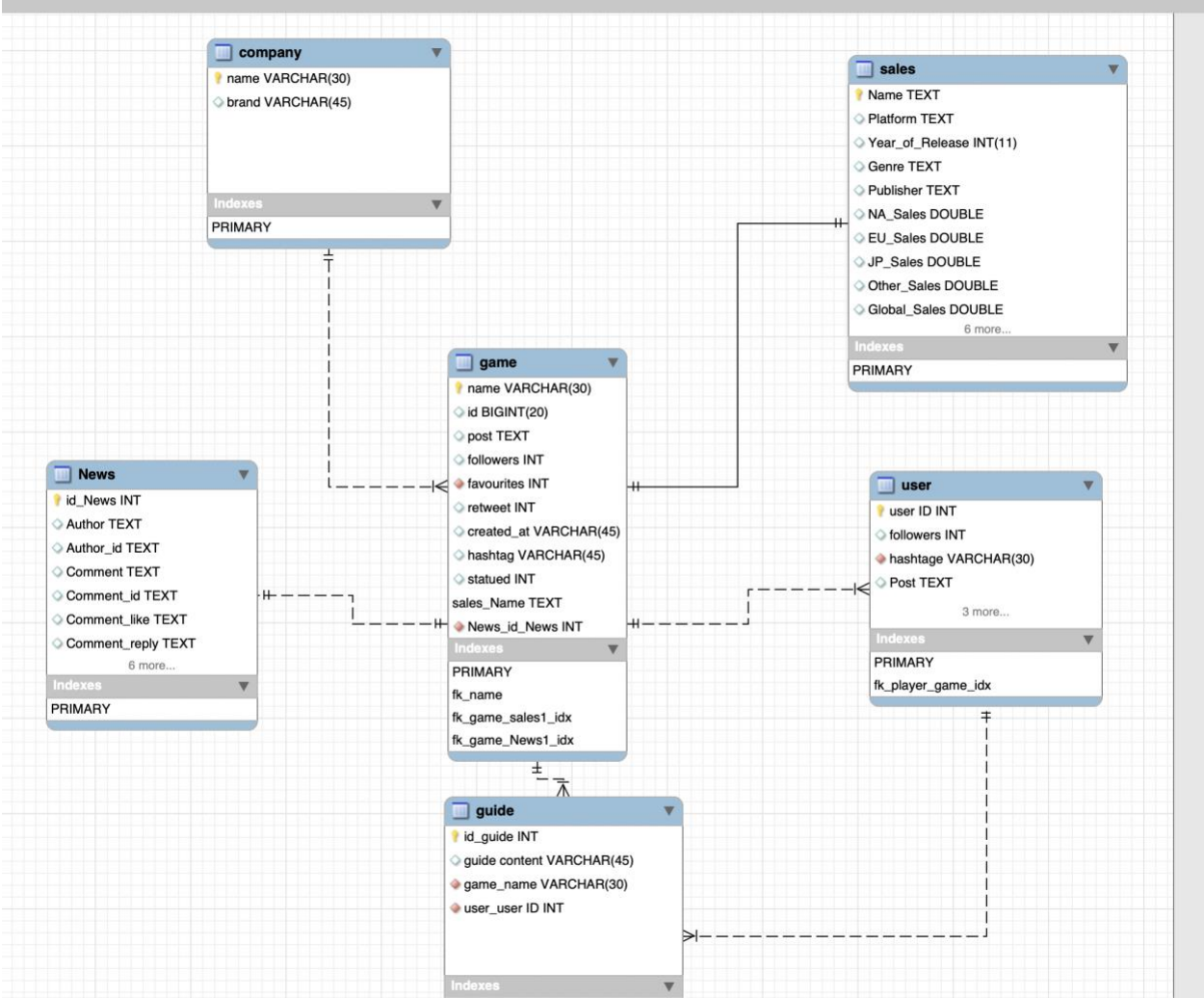


Figure 1 ER diagram

In order to create review table, we collected video game data from Kaggle, rating from Twitter and Facebook. After that, we jointed these data to adapt to our needs. In below Figure 2, our dataset has more than 16,000 pieces of data.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1		Name	Platform	Year_of_R	Genre	Publisher	NA_playe	EU_player	JP_player	Other_pla	Global_pl	Critic_Sco	Critic_Cou	User_Scor	User_Cou	Develope	Rating
2	1	Wii Sports	Wii	2006	Sports	Nintendo	41.36	28.96	3.77	8.45	82.53	76	51	8	322	Nintendo	E
3	2	Super Mar	NES	1985	Platform	Nintendo	29.08	3.58	6.81	0.77	40.24	NA	NA	NA			
4	3	Mario Kart	Wii	2008	Racing	Nintendo	15.68	12.76	3.79	3.29	35.52	82	73	8.3	709	Nintendo	E
5	4	Wii Sports	Wii	2009	Sports	Nintendo	15.61	10.93	3.28	2.95	32.77	80	73	8	192	Nintendo	E
6	5	Pokemon	GB	1996	Role-Play	Nintendo	11.27	8.89	10.22	1	31.37	NA	NA		NA		
7	6	Tetris	GB	1989	Puzzle	Nintendo	23.2	2.26	4.22	0.58	30.26	NA	NA		NA		
8	7	New Supe	DS	2006	Platform	Nintendo	11.28	9.14	6.5	2.88	29.8	89	65	8.5	431	Nintendo	E
9	8	Wii Play	Wii	2006	Misc	Nintendo	13.96	9.18	2.93	2.84	28.92	58	41	6.6	129	Nintendo	E
10	9	New Supe	Wii	2009	Platform	Nintendo	14.44	6.94	4.7	2.24	28.32	87	80	8.4	594	Nintendo	E
11	10	Duck Hunt	NES	1984	Shooter	Nintendo	26.93	0.63	0.28	0.47	28.31	NA	NA		NA		

Figure 2 review table database

We also scratch data from Twitter and Facebook to create News, Guide and Tips table. In below Figure 3, our dataset has more than 400 pieces of data.

id	name	post	followers	created_at	retweet	favourites	statuses	hashtag
112145806411095808	Eyhze	Je viens d'accomplir le haut fait [Guide de Battl...	7	Thu Apr 25 16:56:52 +0000 2019	0	12	857	{{.text.: .Warcraft.}}
1121446893425430528	Meraki22	Just in case you missed it! Darkmoon Faire: Qui...	416	Thu Apr 25 16:12:29 +0000 2019	1	5425	4038	{{.text.: .DarkmoonFaire.}, {.text.: .Warcraft.}}
1121385703240294400	Volkatz	RT @BreaklipFR: Le progress de Battle for Aze...	141	Thu Apr 25 12:09:20 +0000 2019	2	8578	4318	{{.text.: .WorldofWarcraft.}}
1121370231295889409	Warcraft_RU	Празднование Сады чудес пролонгаерс! Y...	34274	Thu Apr 25 11:07:51 +0000 2019	4	11	4657	{}
1121351503451754496	Veille Jeux Vidéo	World of Warcraft : Guide des quêtes pour récu...	814	Thu Apr 25 09:53:26 +0000 2019	0	0	61899	{}
1121347780591669248	WoW is Classic	Do you want to learn Tailoring in Classic WoW ?...	55	Thu Apr 25 09:38:39 +0000 2019	0	1	61	{}
1121347286162911232	WoW is Classic FR	Vous comptez devenir Couturier à WoW Classic...	207	Thu Apr 25 09:36:41 +0000 2019	0	3	51	{}
1121329246146707456	Breaklip	Le progress de Battle for Azeroth pour le Creu...	2345	Thu Apr 25 08:25:00 +0000 2019	2	2	5169	{{.text.: .WorldofWarcraft.}}
1121322741611859974	Shneeki_TV	This morning consists of coffee, wrestling Ikea f...	6	Thu Apr 25 07:59:09 +0000 2019	0	4	20	{}
112128858584209153	FTWitachi	THE "ELEVENTH HOUR" GAMING SHOW...	1202	Thu Apr 25 05:43:26 +0000 2019	0	16856	54152	{}
1121163035152912384	Techtelegraph	World of Warcraft: Battle for Azeroth Allied Race...	12	Wed Apr 24 21:24:32 +0000 2019	0	0	1110	{}
1121097315769622528	BombardBlade	Publishing our next World of Warcraft: Classic P...	19	Wed Apr 24 17:03:23 +0000 2019	0	90	95	{}
1120771457179631616	Katia	RT @BreaklipFR: La version mythique du Creuset...	16	Tue Apr 23 19:28:32 +0000 2019	1	6264	5960	{{.text.: .BattleForAzeroth.}}
1120761121198284806	Breaklip	La version mythique du Creuset des Tempêtes...	2345	Tue Apr 23 18:47:28 +0000 2019	1	3	5169	{{.text.: .BattleForAzeroth.}}
1120716670782382081	Deltrex	RT @wowisclassic_Fr: WoW Classic arrive bien...	13	Tue Apr 23 15:50:50 +0000 2019	16	2252	2266	{}
1120637312948424709	MMO-SankarDE	👉 Ostern ist zwar vorbei, aber in World of #...	941	Tue Apr 23 10:35:30 +0000 2019	0	13	3506	{{.text.: .Warcraft.}}
1120615606309609477	Battman	RT @Vanioon: Dieses Jahr mit ein paar neuen...	479	Tue Apr 23 09:09:15 +0000 2019	3	318952	61010	{}
1120613607060930560	Abby 🇺🇦, Mo...	RT @Vanioon: Dieses Jahr mit ein paar neuen...	161	Tue Apr 23 09:01:18 +0000 2019	3	12934	6942	{}
1120609624477057029	DonBaron	RT @Vanioon: Dieses Jahr mit ein paar neuen...	75	Tue Apr 23 08:45:29 +0000 2019	3	18417	5243	{}
1120540124218044416	PlayerAuctions	This WoW Engineering guide covers a chunk, in...	6689	Tue Apr 23 04:09:18 +0000 2019	0	821	4722	{}
1120466689215410178	Mementh	RT @WarcraftSecrets: Luckily for us, Levantus i...	429	Mon Apr 22 23:17:30 +0000 2019	2	25734	844691	{}
1120461722119278594	thewayitis35	RT @WarcraftSecrets: Luckily for us, Levantus i...	673	Mon Apr 22 22:57:46 +0000 2019	2	40176	31638	{}

Figure 3 data from social media

2. Code with Documentation

<https://github.com/8572104505/6210final>

3. Results

Our database satisfied Third Normal Form requirement:

- Each table has a primary key: minimal set of attributes which can uniquely identify a record.
- The values in each column of a table are atomic (No multi-value attributes allowed).
- There are no repeating groups: two columns do not store similar information in the same table.
- No partial dependencies.
- No calculated data.
- Eliminate fields that do not directly depend on the primary key; that is no transitive dependencies.

Our database can support these required questions:

- What are people saying about me (somebody)?
- How viral are my posts?
- What posts are likely to be interesting to me?
- What posts are like mine?
- What users post like me?

- vi. Who should I be following?
- vii. What topics are trending in my domain?
- viii. What keywords/ hashtags should I add to my post?
- ix. Should I follow somebody back?

The detail of code and output is shown in Portfolio.

The database can tag the social media data and we also create table for Synonyms, Mis-spellings and Semantic information.

```
1 • update tag set tag = '#videogame'
2 where id = '1119279501102522369'
```

Figure 4 code of insert tag

We implement string API scratch function, which will send a request to twitter and feedback if the user has an update.

```
In [1]: from tweepy import Stream
        from tweepy import OAuthHandler
        from tweepy.streaming import StreamListener
        import time

In [2]: import json
        CONSUMER_KEY = "40M3D2d9haFTmWiHUOqO3Wx7p"
        CONSUMER_SECRET = "FYdSd8Jcr5OmwQclQ1qlQwPLTwbVw3fX8Z35igJfqzmzLZp8d3"
        OAUTH_TOKEN = "1103068796036759552-iNLmsLjgYBODHZ1RcZBdsHG7g3d5wt"
        OAUTH_TOKEN_SECRET = "STv0EL4lsyamXzIYy6CZRE2wmml3toKuXQd5QDIV6nKtZ"
        auth = OAuthHandler(CONSUMER_KEY, CONSUMER_SECRET)
        auth.set_access_token(OAUTH_TOKEN, OAUTH_TOKEN_SECRET)

In [3]: class StdOutListener(StreamListener):

        def __init__(self, api=None):
            super(StdOutListener, self).__init__()
            self.num_tweets = 0

        def on_status(self, status):
            record = {'news': status.text, 'Created At': status.created_at}
            print(record)
            self.num_tweets += 1
            if self.num_tweets < 5:
                print(record)
                return (True)
            else:
                return (False)
        def on_error(self, status):
            print("error" )

In [4]: stream = Stream(auth, StdOutListener())

In [5]: def news(n):
        while True:
            print(stream.filter(track=["videogame"]))
            time.sleep(n)

In [*]: news(5)

{'news': 'RT @Rampage_GS: Pirates are coming! 🏴‍☠️🌊\nRemember in 3 weeks we release beta version of "Dream Ball" tell us your opinion and stay tuned!\nTa...', 'Created At': datetime.datetime(2019, 4, 26, 14, 54, 35)}
{'news': 'RT @Rampage_GS: Pirates are coming! 🏴‍☠️🌊\nRemember in 3 weeks we release beta version of "Dream Ball" tell us your opinion and stay tuned!\nTa...', 'Created At': datetime.datetime(2019, 4, 26, 14, 54, 35)}
```

Figure 5 code of string API function

4. Discussion

In closing, the main idea of the project is to provide comprehensive information resource for those who are interested in video game. This integrated database is more intuitive and convenient to display the data might interest users. The database provides kinds of query function to collect data. String API scratch function ensure the database updated automatically.

References

1. Wikipedia contributors. (2019, April 24). Video game. In *Wikipedia, The Free Encyclopedia*. Retrieved 00:01, April 26, 2019, from https://en.wikipedia.org/w/index.php?title=Video_game&oldid=893933899

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