Higher School of Economy
Ivan Pavlovich
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SQL Home Work 2

Databases Theory

Task description

Create a database to store information about the shows watched by users of an Internet portal. Set external key constraints and populate the database:

Three series with number of seasons (must be implemented check - greater than 0), whether it is complete, title and year of first episode (restriction - greater than 1990), country of production. Use an integer identifier as the PK.

Three users. Write their names and gender. Use an integer identifier as the PK.

Information about the interest in the series. One entry should link to the user and the series they are watching and keep track of its new episodes. Add five entries.

If any user decides to stop using the website (deleted his account), the information about watching the series by this user should be automatically deleted. (Think about the type of data deletion)

Primary keys must contain the minimum required number of attributes

The naming pattern for the database is DM1_<year>_s2hw_<your student number>

Prepare the report as a single .docx file with the following contents:

Data within the serials table;
Error message after entering a series entry with a negative number of seasons;
A database diagram showing tables with columns, their types, and FK constraints.
Upload the report to the education platform.

Correct data in the series news tracking table (2 points)

Correct relationships are present in the chart (4 points)

A limitation is indicated in the work or a screenshot is made with an error when entering incorrect data (4 points)

1. Creating the tables. Let's segregate data in 3 tables:

1.1 **series** - all uploaded series available for watching. Let's set unique keys as {series_id|season_id|episode_id}

series_id	season_id	episode_id	on_going	tittle	release_date	country
123	1	1	0	Witcher	2019-12-20	US
123	1	2	0	Witcher	2019-12-20	US
123	1	3	0	Witcher	2019-12-20	US
123	1	4	0	Witcher	2019-12-20	US
123	1	5	0	Witcher	2019-12-20	US
123	1	6	0	Witcher	2019-12-20	US
123	1	7	0	Witcher	2019-12-20	US
123	1	8	0	Witcher	2019-12-20	US
123	2	1	0	Witcher	2021-12-17	US
123	2	2	0	Witcher	2021-12-17	US
123	2	3	0	Witcher	2021-12-17	US
123	2	4	0	Witcher	2021-12-17	US
123	2	5	0	Witcher	2021-12-17	US
123	2	6	0	Witcher	2021-12-17	US
123	2	7	0	Witcher	2021-12-17	US
123	2	8	0	Witcher	2021-12-17	US

1.2 **users** - all created accounts. Unique keys : {uid}

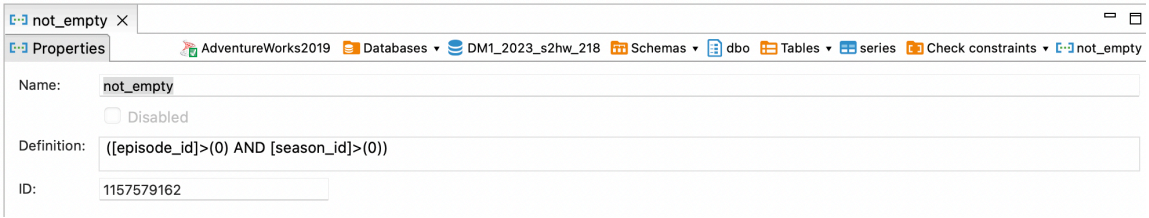
uid	user_name	sex
17823	IvanP	Male
17824	ElonM	Male
17825	EmilyR	Female

1.3 **server_1** - all of the user's actions. Unique keys : {uid |series_id|season_id|episode_id}

uid	series_id	season_id	episode_id
17823	123	2	4
17823	123	2	5
17823	123	2	6
17823	123	2	7
17824	123	1	1
17824	123	1	2
17823	123	2	8
17825	123	2	7
17825	123	2	8
17824	123	1	3
17824	123	1	4
17824	123	1	5

2. Making the constraints and testing.

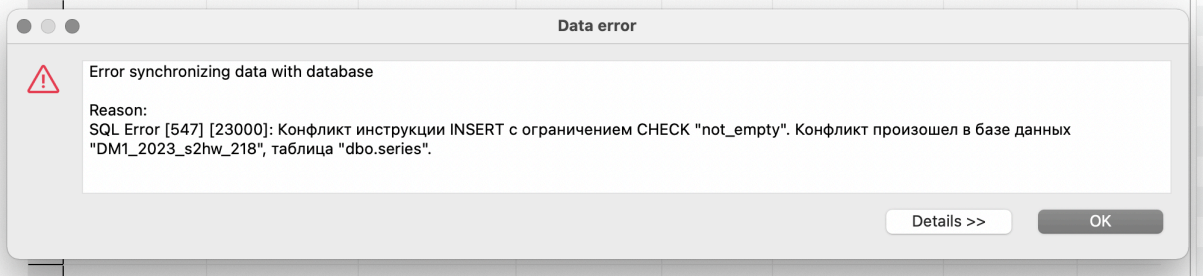
2.1 Attributes season_id and episode_id must be filled with natural numbers only.



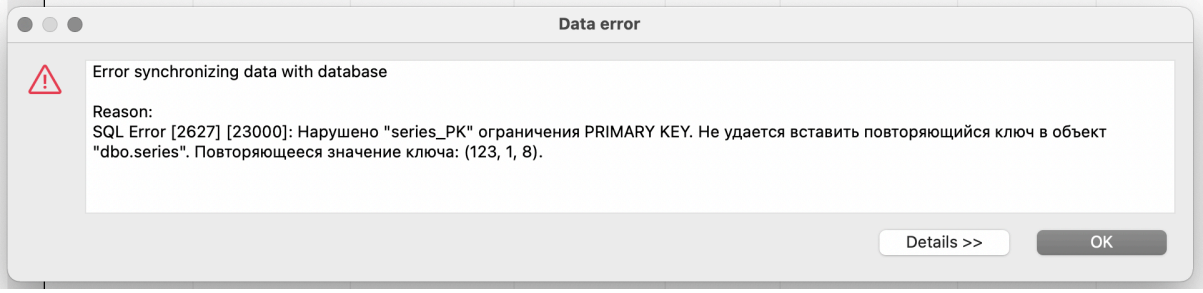
2.2 The value of release_date attribute must be later than 1990.

2.3 Tests

13	123	2	5	0	Witcher	2021-12-17	US
14	123	2	6	0	Witcher	2021-12-17	US
15	123	2	7	0	Witcher	2021-12-17	US
16	123	2	8	0	Witcher	2021-12-17	US
17	123	-1	8	0	Witcher	2021-12-17	US



12	123	2	4	0	Witcher	2021-12-17	US
13	123	2	5	0	Witcher	2021-12-17	US
14	123	2	6	0	Witcher	2021-12-17	US
15	123	2	7	0	Witcher	2021-12-17	US
16	123	2	8	0	Witcher	2021-12-17	US
17	123	1	8	0	Witcher	1985-12-23	US



3. ER diagram