compulsory 2

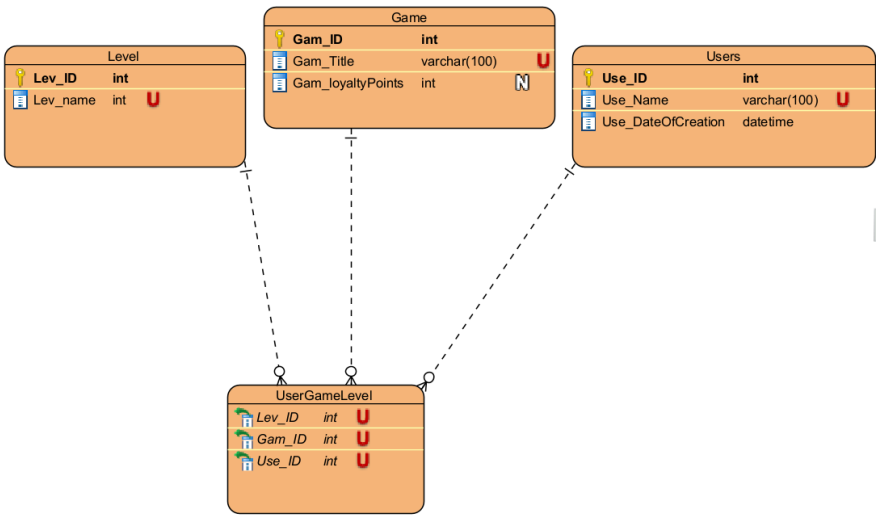
Nytt forsøk

- Forfall 20. okt. av 23.59
- Poeng 0
- Må leveres en tekstboks eller en filopplasting
- Tilgjengelig etter 2. okt. i 0:00

Database Creation comp2-3.sql (https://inn.instructure.com/courses/18140/files/2140499?wrap=1) (https://inn.instructure.com/courses/18140/files/2140499/download?download_frd=1)

Database Population comp2-4.sql (https://inn.instructure.com/courses/18140/files/2140501?wrap=1) (https://inn.instructure.com/courses/18140/files/2140501/download?download_frd=1)

Project Goal: The aim of Compulsory 2 is to enhance the game database created in Compulsory 1. The structure has been slightly improved, and the code for database creation and data population is included in the attachments.



Delivery: Students must submit the updated database in either **.bak** or **.sql** (https://www.youtube.com/watch?v=XLzV_gagkZc)

Important :

1- Ensure that your **.bak** database can be restored by doing a test in your machine.

2- Solutions that are efficient and lightweight will be highly appreciated. (Groups of up to 3 or 4 students are allowed.)

Projects:

Business Requirements

Part I: Loyalty Scheme The business team wants to introduce a loyalty program to retain and reward players based on their gaming activity. The proposed points system is as follows:

- Earn 100 points per month if a user completes at least one level in three different games.
- Earn 200 points each time a user starts playing a new game.
- Earn 300 points for completing a game (Number of levels that a game can have and a minimum time necessary to accomplish a level should be defined).
- Lose 100 points if a user does not complete any level or start a new game for two consecutive months.

Tasks:

1. Propose necessary modifications to the database schema to support these loyalty program rules. Explanation : It's important to add some tables and column to fit the requirement, however, keep in mind that this system is in use, so you are not allowed to delete any exisgting table or columns
2. Write the required triggers, stored procedures, or views to implement these requirements.Explanation: The buisness requirement need to be driven by some SQL technologies, either SP, Triggers, Views or/and transactions (if you want) so you need to develp the necessary tool to answer their need.

Part II: Multiplayer and Social Features The business team also wants to introduce multiplayer games. Not all games will support this mode, and each game will have a defined maximum number of players for multiplayer mode. Additionally, they want to allow players to form groups of friends, with no limit on group size. However, a player can belong to a maximum of three friend groups.

Example:

Let assume we have game1, game2 and game3. and Player1, player2, player3. and player4

Game1 doesn't allow Multiplayer mode, Game2 allows the multiplayer mode with maximum 3 players at the same session, while game3 allows 5 players at the same session.

Player1 Player2 and Player3 can form a player group called **FriendGroup1**.

However, Player4 cannot join **FriendGroup1** since he belongs to 3 game groups. (The maximum is 3)

It asked to modiy the scheme to allow that grouping, and develop the necessary codes that allow adding player to existing group or add a new groups.

Tasks:

1. Propose the necessary modifications to the database schema to support multiplayer games and friend groups.
2. Write the triggers, stored procedures, or views required to implement these features.

Fraud Detection

- To ensure fair play and prevent cheating, propose a new structure (tables, columns, and/or views) to detect and handle these types of fraud:

1. **Suspect Fraud (Speedrun Detection):** Flag users as "suspected of fraud" if they complete a level faster than the defined minimum time (T) for that game and level. This should be visible in a view, ready for the business team to review.

Explanation: It's asked to develop a view to see all potential frauders regarding that rule.

1. **Robot Detection (Simultaneous Play):** Detect and flag users who are playing more than one multiplayer game simultaneously

Explanation: You are asked to detect if a player has played more than one multiplayer game at the same time. You need to provide the necessary modification on the scheme and codes.

Good luck

Riad

En vurderingsveiledning		
Kriterier	**Vurderinger**	
Description of criteria Pass / not pass	**pass**	**No results**