

Database System – S221

Assignment 1 Report

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Class: CC05

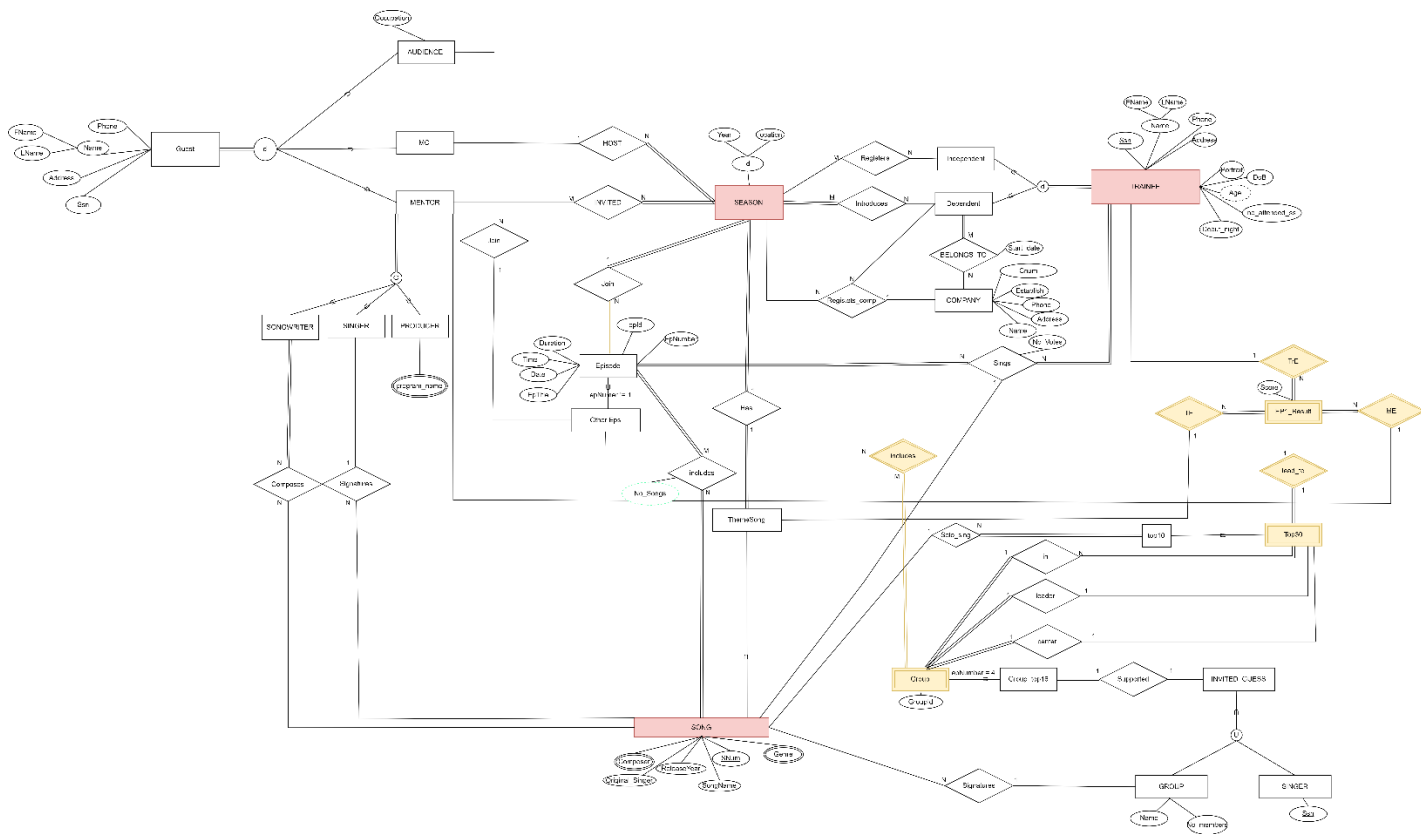
Group No.: 2

- 1- Lê Châu Công Thành (2052256)
- 2- Ngô Quang Huy (2052106)
- 3- Nguyễn Hồng Quân (2052248)
- 4- Trần Quang Thiện (2053455)

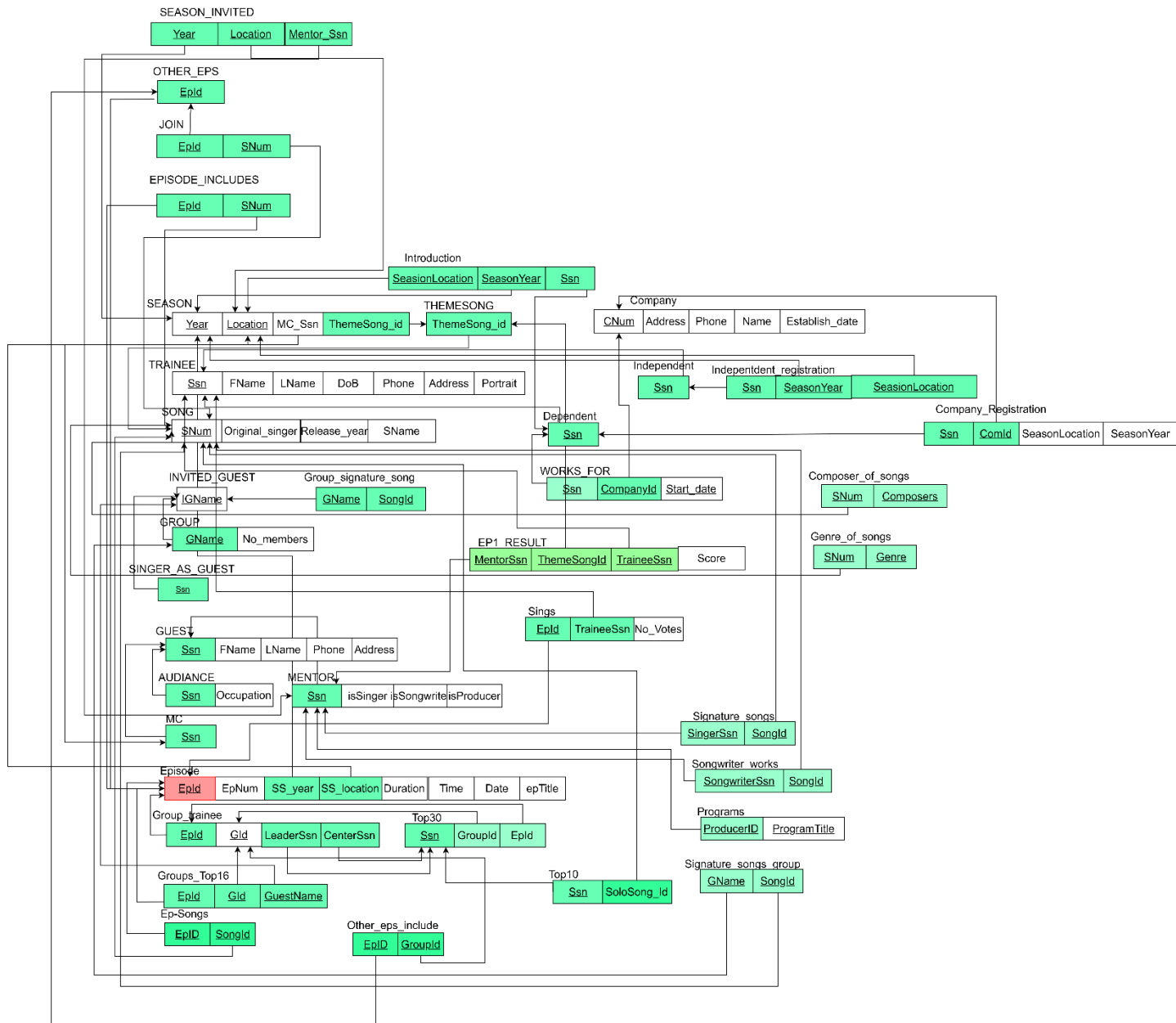
1. EERD

Assumption:

- SSNs are keys for all entity in which it is of attributes.
- When people joins studio audience, they must vote for a trainee.
- Mentors and singers must not vote for any trainee.
- Group name and SSNs are keys for group and singers who are invited in episode 4.



2. Relational database schema



3. Constraints not shown in (E)ER diagram

- Schema-based constraints:
 - The age of a trainee must be greater than 18 years old and less than 25 years old.
 - Trainees can participate at most 3 seasons.
 - There are 5 episodes in a season of the show.
 - If a trainee joins a debut night, he or she can't register for next season.
- Application-based constraints (Business rules):
 - The prerequisites to enter the next episode:
 - Top 30 trainees with the highest average score enter to the next stage.
 - Top 20 trainees with the highest votes enter to the next stage.
 - Top 10 trainees with the highest votes enter to the final episode.
 - 5 trainees with the highest votes will debut in a group.
 - The number of trainees in each group is either four or five.
 - There are 6 songs divided into 3 professional directions.
 - 2 trainees with fewest votes of each losing group will be eliminated.