

Seminar 2

Data Storage Paradigms, IV1351

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I Introduction

In this seminar we had to translate the conceptual model from seminar 1 into a physical and logical model with enough aspects to create a database. But we also had to make an SQL script that would create the database tables and columns and as well make a scrip which would add data to the database.

The task was done together with Sushil KC.

2 Literature Study

Things that were learned and applied to this seminar was mostly from the prerecorded lessons. The model itself was like seminar one main difference here was the primary key and foreign key part. Other differences were that we now wanted to show and use types which was not recommended in the first seminar. Naming conventions were different and instead of saying entities it is now called a table.

3 Method

The first method was just to add all the entities from seminar one into this task by creating tables. next part was to create columns for each attribute that was either 0...1 or 1...1. it was then time to create new tables for the old attributes that was either 0...* or 1...* which in my case was phone number and email. We then added types to all the columns which mostly consisted of varchar which was used because you could set a constant length of char. Later it was time to add the keyword unique and not null. In Aastha which was the program that was used the keyword unique could be added in two ways either with a comment or with typing it next to the name. I choose next to the name, but there were problems doing so when exporting to SQL because it doesn't work with spaces, so I added an underscore instead. the surrogate keys were a big step here we had to decided which entities were strong enough to be given the primary key and which to only be given the foreign key. In this case the person was the most important entity because without person we neither have a student or instructor which is needed for the school to function. After we gave a primary key to person it was time to discuss whether student was meaningful on its own or not. When it came too many to many relations, we implemented the cross-reference for phone number and email but also scheduled timeslots.

4 Result

As mentioned in the method and introduction section the creation of the logical and physical model was based on the prerecorded videos and the old conceptual model the differences were to change naming conventions and giving a type to all the attributes which is referred to as columns. The strongest entity was person and student in this case person was the first to be given the primary key then student was strong enough to have its own primary key and instructor as well. Lesson is using inheritance to connect with group, individual and ensembles.

Git link: <https://github.com/sebgro98/IV1351>

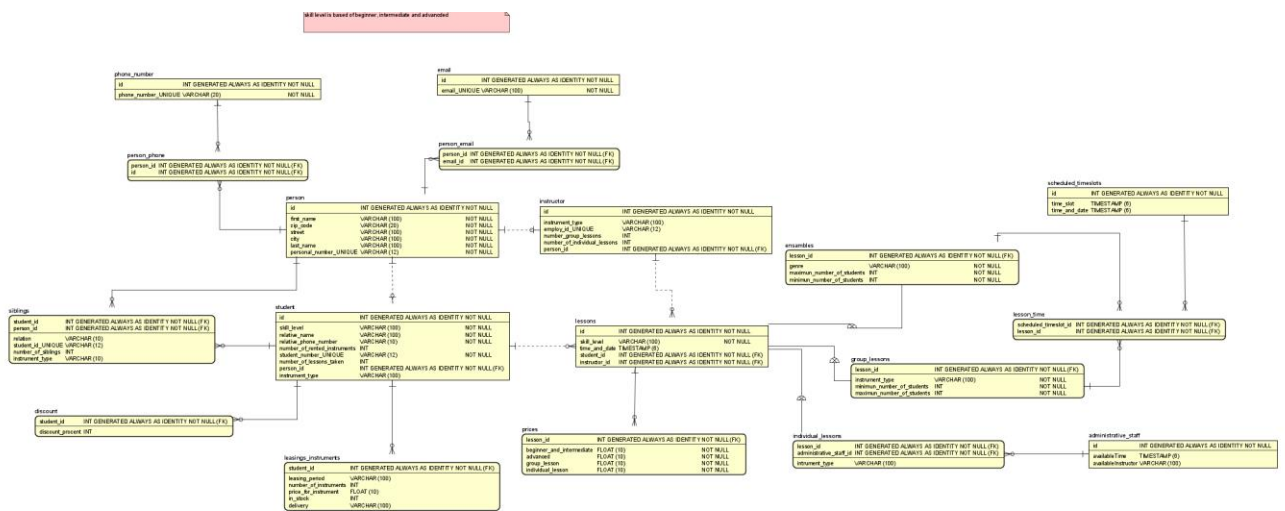


Figure 1: Illustrates the logical and physical model.

5 Discussion

When building this model, the naming conventions were supposed to be different from the last model we build, and it has been followed as instructed from the lectures. The crow foot notion has been followed the only difference here from the last seminar is that it was okay to have many to many relations but in this case, we have tried to get rid of that and only have 1 to 0...*.

In the last feedback that was given there were some unnecessary entities that were deleted and added and not added as tables. The columns that are used in the model are all necessary and the ones needed to store the data. The NOT NULL and UNIQUE have been used but UNIQUE have been added a different way to avoid errors in the SQL import. Keys that were used have followed the rules it might be in some cases where it would have been better to maybe have the foreign key as primary instead of creating its own primary key but that's up for discussion. All the relations that were used in this model was also used in the last seminar the only difference here was to add three new relations because we had many to many relations which was not recommended the ones added was for the phone and email and scheduled timeslots.