CECS 323 HOMEWORK: SUBKEYS

OBJECTIVE: Learn how to identify, then refactor subkeys in a table design.

INTRODUCTION: Your customer hands you the following sample data:

Compositions

title	composer	nationality	yearOfBirth
Symphony #9	Beethoven	German	1770
Violin Concerto	Beethoven	German	1770
Violin Concerto	Brahms	German	1841
Symphony #9	Shostakovich	Russian	1906
Clarinet Concerto	Mozart, W.A.	German	1756
Symphony #9	Dvorak	Czech	1841

They give you the following business rules about this data:

- Each composition has one and only one composer.
- The composer name is unique.

PROCEDURE:

- Create a relation scheme diagram of this data as it stands.
- Diagram the functional dependencies between the various columns in the table.
- Based on that, redesign the data into a new UML class model that no longer has any subkeys.
- Forward engineer the new UML class diagram to a relation scheme diagram.
- Write the SQL to build the necessary tables, complete with primary key and referential integrity constraints.
- Write the SQL to populate the tables with the data in the above table.

WHAT TO TURN IN:

- Functional dependency diagram
- New UML model
- New Relation Scheme diagram
- SQL to construct the tables
- SQL to populate the tables
- Your team's filled out collaboration document. You can find a template for that here.