The below groups are responsible for:

I. Business Scenario

II. ER Model

III. Conversion to Relational Model

IV. Normalization

V. Creating the Database Schema with MS SQL

VI. Connect with python

VII. Prepare queries and provide the associated SQL statements.

Detais:

1. Identification of the information needs - what information would help solve the problem or allow one to take advantage of the opportunity.
2. Initial list of entities (tables) that have been identified (between 8-25)
3. Do systems Analysis (take the requirements from the "users" and draw an Entity Relationship diagram.
4. The E-R Diagram should then be shown to me for approval before proceeding. Students may use a specific E-R modeling tool such as MS Visio, for showing E-R models.
5. Logical and Physical Modeling (Given the E-R diagram and sets of attributes for each entity, the next step is to convert the E-R model into a relational model and go through the process of normalization. This step will require the group to list all of the functional dependencies.
6. The normalized relations should be approved by me before proceeding.
7. Database Implementation (Groups should then implement the database tables from the normalized set of relations created in the previous step. For each normalized relation, write a SQL CREATE TABLE statement. Write separate ALTER TABLE statements to add PRIMARY KEY and FOREIGN KEY constraints to the tables. Data should be supplied for each table by writing SQL INSERT statements. The amount of data should be such that the need for a database is clear. In other words, provide enough examples to demonstrate why a database was required in the first place. (at least 6 tuples)
8. Connect with python
9. Prepare at least 25 queries about the system and provide the associated SQL statements and a description of what the queries are used to show the answer.
10. Show everything in Jupiter notebook.

Project Milestones

Midterm:14.12.2020 - 19.12.2020

Last session: 23.01.2021

You should present your work:

November 16, 2020: Systems Analysis and E-R Model completed

December 7, 2020: Logical Modeling and Normalization

December 28, 2020: Physical Database Implementation (using SQL) completed

January 11, 2021: Final Project

Find your projets at the below: