Guidelines for DBMS Project assignment

The Project is to implement a real world example (excluding the ones covered in class and in online sessions).

Note that database concepts of design and implementation are emphasized here.
GUI or front end is of your choice; it is totally optional and no credit/marks is allotted for the same. If you desire to work on this, suggest you finish up the DBMS part first as per evaluation criteria and then work on other things.

At the end of the project you need to submit all the documents, SQL statements, outputs etc. and a project report (comprising of all the details).
Please complete this activity at the earliest. Evaluation of the project will be during the **last week of May** (Schedule for the same will be sent)
Once the project is done you are hereby informed to upload the documents in a folder with your SRN as name in the following drive link specified.

https://drive.google.com/drive/folders/1qAvW0YhSCJoqRsiq8TwGvHwHKxLvVdl-?usp=sharing

Project Implementation Evaluation	**Marks**
Identifying functional dependencies	2
Identifying keys of the relations based on FDs	2
Normalization	2
Testing for lossless join property	2
Creating the tables including check constraints	2
Creating referential integrity constraints	2
Creating a trigger	2
Writing complex SQL retrieval queries	2
Viva (Topics covered in unit 3)	2
Viva (Topics covered in unit 4)	2
Total	**20**

- Students need to implement the project and communicate the completion status to their teacher for scheduling the demonstration.
- Scope of the project is to implement a real world example (excluding the ones covered in class and in online sessions)
- Students need to demonstrate the implementation to their respective teacher online via *zoom/hangout*. If the student is unable to demonstrate online, the teacher will suggest an alternate approach.
- The teacher will schedule the demonstration during the last week of May.
- Students need to upload documents created for submitting just like their previous assignments.
- Evaluation will be completed before June 1st, 2020.

Helpful tips to go about doing this project:

Step 1: Requirements and Design:
Select a Miniworld/Universe of Discourse/domain.
Write down the requirements from User's perspective.
Do a quick Conceptual Model. (ER Diagram). (Make sure you have at least 6-8 base tables.)
(**Note:** Go through the text book example-Company database to write the details)
Step 2: Schema, Functional Dependencies and Normalization. (8 Marks)
Develop a Schema.
Identify FDs, Keys.
Normalize your tables.
Test for lossless join property.
Step 3: Create the database - DDL & DML Statements (6 Marks)
Create the tables. (Include some check/referential integrity constraints)
Insert some sample data (about 20 rows per table)
Write some simple SQL queries to understand the data.
Identify and write some complex SQL queries. (Involving nested/aggregate SQL)
Step 4: Database Stored Procedure/Trigger (2 Marks)
Identify a semantic constraint. (If none exists, then write a trigger to perform audit trail)
Write a trigger for the above.
Step 5: Documentation (a single report having all the details) and Final Assessment/Viva. (4 Marks)

Report writing details

Create a chapter with sub sections for each of the steps (from step 1 to step 4).