

Databases Foundations I

Season 2024-I

Partial Project Definition

Eng. Carlos Andrés Sierra, M.Sc.
Computer Engineering
Universidad Distrital Francisco José de Caldas

Remember, here you had been hired as a database designer team member. You have been working on a project of relational databases and you have been asked to deliver a partial document with some specifications described as follows:

1. Write the description of your project. Define the *stakeholders*, business model, tools to use, anything you consider relevant.
2. Make the list of user stories related to your project, this is your project scope definition.
Hint: You can use the user stories template

As a <role>, I want <action>, so what <purpose>.

3. Create the conceptual model of your project. So, you have to define the entities, attributes, and relationships, among others, in order to get *Data Structured ER Diagram*.

*Hint: You can use the **ontology** process with 10 steps to get the final draw.*

4. Write all the relational algebra queries you think will be useful in your project.
Hint: Go through each entity, relation, anything you think could need the final users, for example, filters to search data in the User Interface.

5. Search for data in the web in order to figure out free data sources to populate any of your entities. If it is not available, you must write an strategy to generate a *dummy database* to test your queries.

*Hint: You can use the **faker** library in Python to generate data. Documentation [here](#)*

In addition, you must start to write a draft of both an IEEE formatted paper and a poster to explain your project and how it adds value to the company.

Deadline: April 9th, 2024, 16:00

Carlos Andrés Sierra, Computer Engineer, M.Sc. on Computer Engineering, Titular Professor at Universidad Distrital Francisco José de Caldas.

Any comment or concern related to this document could be send to Carlos A. Sierra at e-mail: cavirguezs@udistrital.edu.co