1. INITIAL PROJECT DESCRIPTION

We are going to create a database which use is going to be directly related to aliments. The goal of our database is to provide a determined patient with a diet following its main characteristics (age, height, weight) Therefore, we will need a group of nutritionists. They are the ones who will be in charge of the development of the diets. We will storage data for aliments mainly, and we will use this data in order to create new diets for our patients in the nutritional center.

We will use a relational database, a type of database that stores and provides access to data points that are related to one another.

In order to generate data for our database, we will use csv files for some of our tables. For the rest of the tables, we will try to generate data automatically with the tools we will see in class (Python)

1. RDBMS deployment

In the schema of our database, we will have the following tables: Food, Patient, Nutritionist, Diet and List\_Of\_Food. One Diet will consist of different kinds of Food, a Diet will be created by a Nutritionist (although a Nutrionist can create more than one) and a Nutritionist will take care of one or more Patients. The table List\_Of\_Food is created as a consequence of the relation between Diet and Food (a relation M:N creates a new table including the primary keys of both tables included in the relation)

Firstly, we have introduced the table Food, which has the food ID as the primary key. The rest of columns of the table are related with information such as the energy in kcal and KJ that provides the food, the quantity of Protein and Fiber in food in every 100 grams…

Then the table to register the information about the Patient has been created and fulfilled with relevant information about it in order to organize the new diet. It also stores the current diet that the person is following and the intolerances, information that can be quite useful in order to design a new diet.

The table of the Nutritionist is created also with an ID as the primary key. It also contains information about the name of the nutritionist and the specialty that he or she has (obesity, for example)

For the diets we have another table. As an identifier, we have and ID for the diet (primary key) Also, a description and a Creator are columns for this table. The Description will contain the different steps to follow in order to do the diet.

The data which has been introduced in the table Food has been obtained by a csv file in https://www.fao.org/infoods/infoods/tablas-y-bases-de-datos/es/

Querys

· Food with more than 20 grams of protein: SELECT Food.Name FROM Food WHERE Food.Protein > 20;

· All the names of patients treated by the doctor Pablo Moreno Garcia-Espina:

* SELECT Patient.Name

FROM Patient JOIN Nutritionist ON Patient.Doctor = Nutritionist.nutritionist

WHERE Nutritionist.FullName = 'Pablo Moreno Garcia-Espina';

Esta consulta a mi no me devuelve valores y si debería, no se cual es el problema. Hay que cambiar el nombre del atributo idNutricionist por idNutritionist

· Description of the diets created by the doctor Susana Rocio Fernandez Giaccomassi

* SELECT Diet.Description

FROM Diet JOIN Nutritionist ON Diet.Creator = Nutritionist.idNutritionist

WHERE Nutritionist.FullName = 'Susana Rocio Fernandez Giaccomassi';

· Obtain the description and the name of their creator of all diets with more than 10 foods:

* SELECT Description as 'Diets with more than ten foods' , FullName as 'Creator'

FROM Diet JOIN Nutritionist ON Creator = idNutritionist

WHERE idDiet IN (

SELECT idDiet

FROM ListOfFood

GROUP BY idDiet

HAVING COUNT(\*) > 10

);

· Get the names and protein content of foods that have more protein than the average protein of all foods:

* SELECT Name, Protein

FROM Food

WHERE Protein > (

SELECT AVG(Protein)

FROM Food

);

Falta alguna consulta simple usando solo WHERE