BLG317E – DATABASE SYSTEMS

2019-2020 FALL EXTRA–1

TAKE-HOME EXAM

The take-home exam assignment is to develop a web application for the USDA food database using the Python programming language, the Flask web framework, and the SQLite database. *Using object-relational mappers like SQLAlchemy or any abstraction* layer *over the SQL language is not allowed.*

This is an individual assignment, not a group assignment. Every student must submit the source code for their project and a report to the Ninova system. Projects must be hosted on the GitHub site (https://github.com/) in order for instructors to evaluate the progress.

Instructions

Create a **private** repository on GitHub and invite the user "uyaritu" (not "uyar"). If you do not receive a reply in two days after sending your invitation, inquire by e-mail to uyar@itu.edu.tr.

Create the USDA food database as an SQLite file. You can use this project for this stage: https://github.com/alyssaq/usda-sqlite. Examine the data.

Implement the following milestones (all relevant data must be dynamically taken from the database).

1. MILESTONE 1: Create the following pages:
    1. A page that lists all food groups where every food group will be a link to a page for that group.
    2. A page for each food group that contains a table where every row displays the short description and nutrition values (nitrogen, protein, fat, calorie) for each food in that group.
2. MILESTONE 2: Create pages for viewing and editing an existing food. The user has to be able to view and change the food group, short and long descriptions, manufacturer and scientific name of the food.
3. MILESTONE 3: Add nutrition and weight details to the food viewing page (editing not necessary).
4. MILESTONE 4: Improve the visual design of your pages.

You have to implement these milestones **in the given order** and the end of every milestone must be marked with a note in the commit log, as in "COMPLETE MILESTONE 1". You are allowed to make changes to pages and codes from previous milestones; but you are not allowed to skip over operations to continue with subsequent milestones and get back to skipped parts later.