CIS 344 Final Project: Hospital's Portal
Professor: Yanilda Peralta Ramos, Deadline: 12-14-23 & 12-19-23

Project Description: Finalize the web platform for Hospital Staff to manage hospital services using a Python and MySQL based application. Your task involves completing and enhancing the functionality of the provided starter code to ensure seamless hospital operations.

Guidelines:

1. **Starter Code**: Access the starter Python code from the provided GitHub link. This code serves as the foundation for connecting to the MySQL server and managing hospital data.
2. **Database Integration**: Enhance the **`Database`** class within the Python code to interact effectively with the MySQL server, facilitating hospital operations like patient management, appointment scheduling, and patient discharge.
3. **Report Creation**: Prepare a detailed report explaining the code structure, functionalities, and the rationale behind your implementation.
4. **Code and Report Submission**: Upload the updated source code (including the SQL script file) and the report in PDF format to a public GitHub repository. Submit the GitHub link on Blackboard.
5. **Presentation**: Present your project via Zoom, showcasing the functionalities and code of the Hospital Portal platform.

Starter Code: https://github.com/synac1/CIS344/tree/main/Fall23

MySQL To-do List (40 points):

1. (5 points) Create and use a MySQL database named **`hospital_portal.`**
2. (5 points) Develop a **`patients`** table with attributes:
    1. **`patient_id`** (int, not null, unique, auto_increment, primary key)
    2. **`patient_name`** (varchar(45), not null)
    3. **`age`** (int, not null)
    4. **`admission_date`** (date)
    5. **`discharge_date`** (date)
3. (5 points) Construct an **`Appointments`** table with attributes, remember to assign the foreign keys:
    1. **`appointment_id`** (int, not null, unique, auto_increment, primary key)
    2. **`patient_id`** (int, not null)
    3. **`doctor_id`** (int, not null)
    4. **`appointment_date`** (date, not null**)**
    5. **`appointment_time`** (decimal, not null)
4. (5 points) Insert sample data into the **`patients`** table, at least 3 entries.

    Example entry: ("Maria Jozef", 67, "2023/10/01", "2023/10/07")

5. (5 points) Develop stored procedures for appointment scheduling.
6. (5 points) Develop stored procedures for discharging patients.
7. (5 points) Create a table for doctors, provide the necessary fields, and populate it.
8. (5 points) Create a view containing the join of doctors, appointments, and patients.

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Python MySQL Integration (30 Points) + Extra (30 points):

1. (10 Points) Modify **`portalDatabase.py`** with appropriate MySQL server credentials.

    a) Test the application by running **`portalServer.py`**. Access the web platform at **`localhost:8000/`** and ensure that you can view all patients.

2. (20 Points) Implement the **`addPatient`**, **`scheduleAppointment`**, **`viewAppointments`**, and **`dischargePatient`** methods in **`portalDatabase.py`**, adhering to MySQL best practices.
    a) Validate each functionality through the web platform.

3. Additional tasks (30 bonus points): Implement and integrate features like: **`updatePatientDetails`**, **`viewAllDoctors`**, **`viewRecords`**(Display the view containing all tables).

Publishing (15 points):

1. Compose a comprehensive report detailing your code implementation and functionality.
2. Upload your source code and report to GitHub and submit the repository link on Blackboard.
3. Include screenshots and additional resources in the report's appendix.

Live Presentation via Zoom (15 points):

- Present your completed project, highlighting key features, code functionalities, and the rationale behind your implementation choices.