CS 457/CS 557 – Database Software Design

Final project

The aim of the final project is to realize an application where the concepts seen in the course Database Software Design are used. This application can be a database management System, mobile application, or Web in Java or PHP. This project can be done by up to three students. Each group of students must provide a final report (up to eight pages) about the project they developed. However, the following instructions must be taken into consideration:

1. The final report must specify the contribution of each member of the group. For example, who was charged for the design, programming, and how you were efficient for the development of this application. Namely, the role of each member of the group must be mentioned.
2. In addition, the report must contain the cost in time for each stage to development this project, for example for design, programming, and maintenance if it is available.
3. The used modeling method must be justified and to explain why this method is well suited for this project.
4. Please mention the kind of problems that you faced this during the realization of this project, and how you solved them. The final report must be in the format of the final project template word that I provided you. The project and the final report must be submitted no later than the 15^{th} of April, 2024.

Each of the following is a large project can be done by a group of up to four students. ***Please a pdf report and a .zip file that contains the source code.***

Project description

Our database project aims to revolutionize the management of restaurant menus by offering a comprehensive system that caters to both the operational needs of the establishment and the preferences of the customers. At the core of the system lies a robust menu management module, where every aspect of the restaurant's offerings is meticulously stored, including item names, descriptions, prices, and a detailed inventory of ingredients. This centralized repository ensures that staff can efficiently update, modify, and maintain the menu in real-time. Moreover, our system introduces a groundbreaking feature: customizable meal options. Customers will have unprecedented control over their dining experience, with the ability to tailor their orders to their exact specifications. They can easily add, remove, or substitute ingredients, specify cooking preferences, or provide special instructions, all through a user-friendly interface. This customization capability not only enhances customer satisfaction but also empowers individuals with dietary restrictions or specific culinary preferences to enjoy the restaurant's offerings with ease. Seamless order processing is facilitated through integration with user authentication and profiles, allowing for personalized meal selection and order tracking. Behind the scenes, the system ensures smooth inventory management by tracking ingredient levels in real-time and generating alerts when supplies run low, thereby optimizing kitchen operations. Furthermore, the system provides valuable insights into customer preferences and trends through comprehensive reporting and analytics functionalities. Feedback and reviews from customers contribute to continuous improvement, fostering a culture of excellence within the restaurant. With mobile compatibility and scalable architecture, our restaurant menu management system is poised to elevate the dining experience, drive operational efficiency, and set new standards in the hospitality industry.