CS310 Project Peer Assessment

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Group Peer Assessment

Group: Course Selection System Project

The Course Selection System Project is a comprehensive solution aimed at assisting students in creating personalized course schedules while addressing complex constraints like prerequisites and time conflicts. This system leverages advanced database management techniques and algorithms to optimize the course selection process. Below is an evaluation of the project based on its strengths, weaknesses, and areas for improvement.

Strengths:

The project excels in several areas that highlight the group's technical expertise and innovative thinking.

One notable strength is the **comprehensive database design**, which efficiently organizes courses, prerequisites, anti-requisites, and graduation requirements. This demonstrates a strong grasp of database concepts and effective schema design. Additionally, the implementation of **topological sorting algorithms** for resolving course dependencies showcases the group's ability to apply theoretical knowledge to solve real-world problems.

Another standout feature is the system's focus on addressing practical challenges in academic scheduling. By generating conflict-free course schedules tailored to individual needs, the project adds significant value to students' academic planning. Moreover, the combination of Python for logic and SQL for data handling reflects thoughtful integration of programming tools for performance optimization.

Further, the collaborative nature of the work is evident. Each team member contributed meaningfully to various aspects of the project, from database design to algorithm implementation and report writing. This reflects strong teamwork and communication within the group.

Weaknesses:

While the project demonstrates great potential, there are areas where it could be improved. For instance:

- **Incomplete Time Conflict Handling:** The absence of integrated time conflict checking in the long-term planning feature limits its usability.
- **User Interface Design:** The current UI, while functional, lacks visual appeal and intuitive navigation, which could hinder user engagement.
- **Limited Major Support:** At present, the system is tailored for mathematics and computer science majors, restricting its applicability for students in other disciplines.

- **Reliance on Manual Input:** Due to privacy constraints, users must manually input completed courses. This dependency may deter users who expect more automation.

- **Error Handling:** Robust mechanisms to guide users during data entry or when encountering scheduling issues are currently underdeveloped.

General Comments:

The group's effort to create a system that addresses both short-term and long-term academic planning is commendable. By integrating advanced algorithms with a well-structured database, they have laid a strong foundation for future development. However, there is room for enhancement.

Moving forward, the project could benefit from:

- **Real-Time Updates:** Incorporating real-time synchronization with institutional databases like DKUHub could improve the system's relevance and accuracy.

- **Enhanced Usability:** Focusing on a more user-friendly interface with intuitive navigation and visual appeal will make the system more accessible.

- **Expanded Coverage:** Including support for a broader range of majors and accommodating diverse user needs will significantly increase its utility.

- **Predictive Features:** Adding analytics to predict course demand or recommend schedules based on historical data could elevate the system's functionality.

Remarks:

Overall, the Course Selection System Project is a great initiative that tackles a significant challenge faced by students. The group's technical proficiency and collaborative spirit shine through in this project. With targeted improvements in usability, scalability, and automation, this system has the potential to set a new standard for academic scheduling tools. It is a commendable effort that reflects both the group's hard work and the practical application of their database knowledge.