DEVELOPMENT OF A DATABASE FOR THE FITIA GYM: STRUCTURE, PROCESSES AND INFORMATION EXTRACTION

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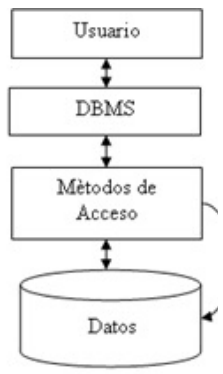
INTRODUCTION

In the dynamic environment of gym management, an efficient database is crucial to optimize operations and improve user experience.

Therefore in this project we are going to Develop a SQL database for Fitia Gym, using advanced techniques such as triggers, stored procedures, nested selects and views.

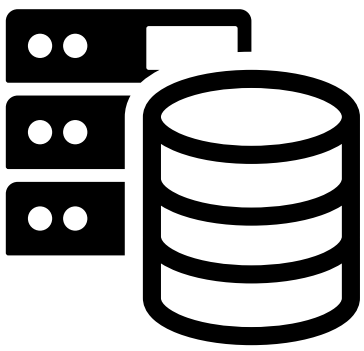
METHODOLOGY

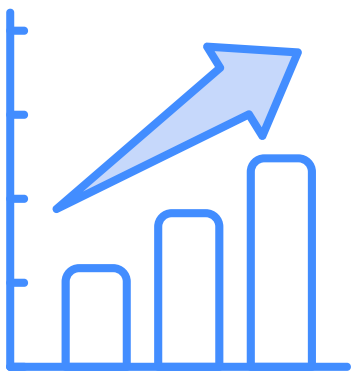
To develop a management system for a sports club, the main entities such as members, coaches, activities and payments are first identified. Then a Database is designed, including an entity-relationship model and tables with relationships and restrictions. Subsequently, it is implemented in SQL, creating tables and relationship definitions, and applying triggers, stored procedures and views. Finally, the system is optimized through indexing and performance and security tests are carried out.



RESULTS

The results section reveals a notable advance in the performance of the system, evidenced by substantial improvements in the speed and efficiency of the queries performed. In addition, ease of maintenance has been enhanced thanks to a modular structure and the implementation of stored procedures, which has significantly simplified maintenance tasks. Regarding the scalability and security of the system, a flexible design stands out that allows it to adapt to future expansions, along with solid security measures that guarantee the protection of data and the integrity of the system in general.





In the case of the results, we obtain that using a database structure that in this case was selected in order to improve the system of a gym is correct since it improves and optimizes it in the best way using various tools in the case. of computer techniques

PROJECTION

It is crucial to thoroughly examine discrepancies in the gym project database structure to identify potential areas for improvement and avoid errors. This detailed analysis may reveal particular features in the database structure that could point to inconsistencies or limitations in the current design. By studying these discrepancies in depth, you can discover patterns or trends that suggest potential problems, such as data duplication, lack of referential integrity, or the need for query performance optimization. Identifying and addressing these issues early is critical to ensuring the reliability and effectiveness of the gym's database system, which will ultimately contribute to smoother and more efficient management of club

CONCLUSIÓN

The main conclusion highlights that the database created has transformed the administration of the Fitia gym, increasing both its operational efficiency and the overall user experience. As for future lines of research, the integration of artificial intelligence and predictive analysis is proposed to further enhance the functionality of the system. In addition, the development of additional modules is proposed to facilitate reservations and monitoring the progress of members, with the aim of continuing to improve the services offered by the gym and remain at the forefront in terms of technology and customer satisfaction.

REFERENCES

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