Intro. To Software Engineering Project 2b

Group 7 Members.

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INTRODUCTION

In computing, a database is an organized collection of data stored and accessed electronically. Small databases can be stored on a file system, while large databases are hosted on computer clusters or cloud storage. The design of databases spans formal techniques and practical considerations including data modeling, efficient data representation and storage, query languages, security and privacy of sensitive data, and distributed computing issues including supporting concurrent access and fault tolerance.

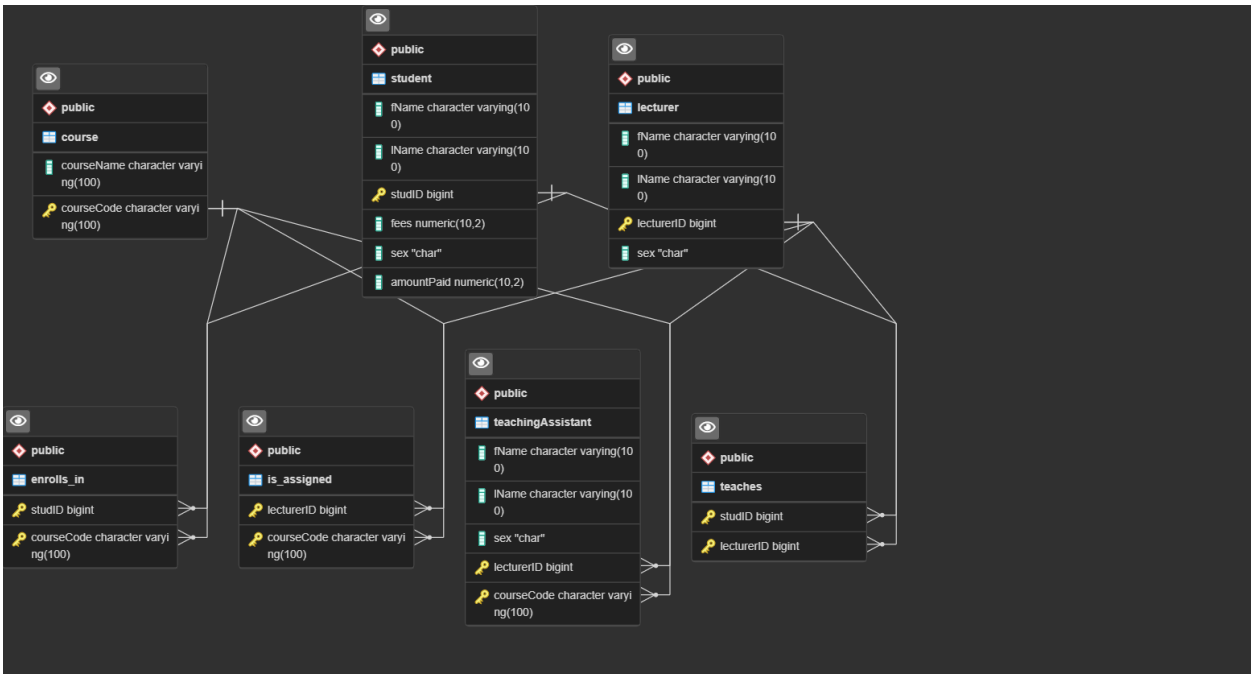
AIM OF PROJECT: The core aim of this project is to create a database for a school management system software. The database seeks to store details of students, lecturers, courses, and teaching assistants.

METHODOLOGY AND RESULTS

First of all, the purpose of our database was determined as stated above. Here, we wrote down the purpose of our database, how we expect to use it, and who will use it.

Next, we found and organized the required information for the creation of our database. We also considered the types of data or information we might want to produce from our database. We also interviewed lecturers, students, and other staff members for their own ideas on what the database should do and how that could be achieved.

Moreover, we translated all these valuable pieces of information into an ER diagram taking into cognizance the relationships between various entities in our relational database.



We then moved on to divide the information on the ER diagrams into tables of rows and columns. All primary keys were specified accordingly. Relationships between tables were also made and resolved or converted to address issues of inconsistencies in data storage. We populated the various tables with the sample data on the CPEN students of the Department of Computer Engineering, UG. Sample queries were done to ensure that our database was working perfectly.

CONCLUSION

In conclusion, a database provides many functionalities and easy access to data, improved security, data recovery, and a host of other advantages over the file system of storage.