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Database Management

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Hospital Data management system database project proposal

For my database project, I have chosen a hospital management database. My goal is to create a hospital management system desktop application that is efficient and easy for anyone to use. Hospitals often use paper to keep track of their records, and this is a very slow and expensive process to maintain. By implementing an application that does all this, I would save the hospital time and money, that they could use to make their hospital better and potentially save more lives.

My desktop application will be built using java fx in intellij for the front and, and mysql for the backend. I do not have much experience in java fx and making desktop applications, so it will be a challenge for me to make this application. I believe I will learn a lot from this process. My application will be able to add, delete and update patient information for a hospital. It will also be able to print records of information in the database and search for results by various criteria given a specific identifier. Lastly it will generate reports to a csv or excel file. My application will also make use of transactions (commit & rollback), enforce referential integrality (Constraints), and include database views and indexes.

My database will consist of a patient table that all the basic information of a patient, it also has foreign keys of doctor’s id, treatment id, and room id. There will also be tables for doctor, treatment, staff, room, disease, department, medicine, and hospital. I am thinking of adding a billing system in, but as of right now I am leaving it out.

My potential problems might be making sure I can make the data all update when new data is added, updated, and deleted. Also, figuring out how data will be entered and what data will be user input and what will be generated. I will solve these problems by continuously trying different ways until my program works to the way I want it to work. I will research the most efficient way to input data and make the data properly update when I run each part of my application. I believe I will learn a lot in this process, and it should be very interesting learning how the hospital management system fully works and implementing one.

My relational schema is as shown in the diagram below.

