**Title: MediDB**

Description:

This project is intended to model and implement the Admit/Discharge/Transfer

functions of a medical database. We will create an Entity Relationship

Diagram of the necessary entities and then implement a database that can

store those entities correctly. If possible, we will also implement a small

Database Management System in the form of a transaction processor that can

process delimited strings of data and store them in this database as well.

Medical Databases must track the admission of all patients, as well as their

location within the hospital, and their eventual discharge. Each patient will

have their information stored in the database. Each admission will start a

new visit which will have an admit date, time and admitting employee. During

that visit, The patient can only have one location, though that location can

change any number of times. There is no need to keep track of the room change

history. At the end of their visit they will be discharged, and the visit

will be updated with a discharge date, time, and discharging employee.

In order to do this, our database must maintain a list of hospitals, a list of

locations within each hospital, and a list of employees and which hospitals

they work at. It must be able to maintain a list of patients, and a list of

visits for those patients. Each hospital must have a name, physical address,

mailing address, billing address, billing phone number, patient care phone

number, and human resources phone number. Each Location within a hospital

must have a name, and optionally may include a ward (or location group)

identifier. Each Employee must have a name, a mailing address, a contact

phone number, and optionally may have a title, hourly wage, salary, and

regular hours. Each patient must have a name, a Date of Birth, a sex, a

height and weight, and optionally an ethnicity, mailing address, and contact

phone number. Each visit must have a patient, admit date and time and

employee, location, and discharge time and date and employee.

The Database will be implemented via MySQL

Any DBMS we implement will be written in C#

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**Business rules for MediDb**

One database can service many hospitals

each hospital can have many locations

each hospital can have many location groups

each location group can have many locations from ONLY the same hospital

one hospital can service many patients

one patient can have been serviced by many hospitals

when a patient is serviced by a hospital, it creates a visit

a visit can have only one location at a time

each hospital can have many employees

each visit must retain the employee who admitted the patient, with date and time

each visit must retain the employee who discharged the patient, with date and time

each visit must retain the current location within the hospital

each visit will generate one bill

each bill will generate a line item indicating the length of time a patient spent in a particular location

one patient can have many bills

one patient can have many history records

each visit will generate one history record upon discharge

the patient history record will not use any foreign keys in order to preserve history

the bill will not use any foreign keys in order to preserve history

**Business Requirements for MediDB**

Each Hospital must a name, physical address, mailing address, billing address, billing phone number, patient care phone number, and human resources phone number.

Each location must have a name, cost per hour

Each location may have a phone number/extension, a group/ward identifier

Each location group must have a name

Each patient must a name, a Date of Birth, a sex, a height and weight

Each patient may have an ethnicity, mailing address, contact phone number, Social security number

Each visit must have a patient, admit date and time and employee, location, and discharge time and date and employee

Each visit may have diagnosis codes, treatment notes, patient care notes

Each employee must have a name, mailing address, contact phone number

Each employee may have a title, hourly wage, salary, and regular hours

each history record will retain the admit date and time and discharge date and time,

each history record will retain the patients demographics (age, weight, height, etc) at the time of admit

