***CIS 422 Assignment 4***

Now is the time to polish up and prove your database skills. I want you to write the following system without using any data controls! In other words, you must develop all database pieces from the code level.

You are writing a scheduling system for a group of doctors. All of the doctors have their patients call the same office phone number for an appointment, so your system needs to accommodate all 3 of the doctors.

Here is the current doctor information that impacts your system:

Dr. Ray Stantz is in the office MWF from 10 – 2 and can see up to 7 patients each day

Dr. Henry Jones, Jr. is in the office MWR from 8 – 1 and can see up to 8 patients each day

Dr. Emmett Brown is in the office MTRF from 11 – 4 and can see up to 9 patients each day

When a patient calls, the patient’s phone number is used as a unique ID. If the patient does not exist in the system, he or she will be asked for basic information that is directly entered into the system (phone number, name, health insurance). No two patients may have the same phone number.

Once the patient information has been located/added, the patient may make an appointment from the following choices: doctor preference, day/time preference or next available appointment preference. Depending on the severity of the problem, which will be collected and stored in the appointment database, the receptionist assigns either a 30 minute or 45 minute appointment. All appointments must start either 00, 15, 30 or 45 minutes after the hour.

As appointments are made, the system needs to show available slots for the next week (and one week only, so assume you can schedule for M through F of next week). Patients can also call and drop or change appointments. You should be able to print a weekly schedule of appointments for all three of the doctors.

Obviously you will need to persist this information in a database. Your solution will dynamically create the database, all tables and insert some basic records into the system. In addition, I will be providing a feed file based on a common format that we will talk about so that I can start the system with a known set of records and then do some adding, changing and deleting of appointments.

We will discuss this more in class…

Start this assignment today and build it incrementally. Get the basic database working first, then handle adding, deleting and changing. It doesn’t matter if you want to make this project GUI based or not. I will be delivering all data to your program via files.

Here is a sample file layout:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| P | Joe Smith | 123-4567 | BCBS |  |  |
| A | 123-6789 | A | D Stantz | 30 |  |
| A | 123-7890 | A | T T 14:00 | 45 |  |
| A | 145-7891 | A | N | 30 |  |
| A | 123-6789 | D | W 12:00 |  |  |
| A | 123-6789 | C | W 12:00 | T W 13:30 | 30 |
| A | 173-1500 | C | M 12:00 | D Jones | 45 |
| A | 201-1173 | C | M 12:00 | N | 30 |

Column 1: P = patient, A = app

If P, then

Column 2: customer name

Column 3: phone number

Column 4: insurance carrier

If A (and adding), then

Column 2: lookup key

Column 3: A

Column 4: appointment preference ~~ D = doctor preference, T = date/time preference, N = next available appointment preference

Column 5: appointment length

If A (and deleting), then

Column 2: lookup key

Column 3: D

Column 4: existing appointment date/time to delete

If A (and changing), then

Column 2: lookup key

Column 3: C

Column 4: existing appointment date/time to change

Column 5: new appointment preference criteria

Column 6: appointment length

The file is tab delimited with CR/LF line terminators.

Start this assignment today and build it incrementally. Get the basic database working first, then start adding functionality and the reporting pieces. Have fun, good luck and be prepared to work hard and learn a lot! Don’t wait just because I’ve given you a large chunk of time – this program will bury you if you don’t get going!! You have been warned!!!!

Upload your project to Canvas and in class turn in a hard copy of your program cover sheet, source code and screenshots taken of the execution of your program.