Database Design:

Key

|  |  |  |
| --- | --- | --- |
| Primary Key | Foreign Key | Login Credential |

Tables:

patient

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| patient\_id | Name | Age | Gender | Address | Insurance | username | pw hash | pw salt |

doctor

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| doctor\_id | Name | Specialty | Pager # | username | pw hash | pw salt |

nurse

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| nurse\_id | Name | Specialty | Pager # | username | pw hash | pw salt |

general\_practice\_visit

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| visit\_id | patient\_id | doctor\_id | 2.a | 2.b | 2.c | 2.d | 2.e | 2.f | 2.g | date |

lab\_order

|  |  |  |  |
| --- | --- | --- | --- |
| lab\_order\_id | Visit ID# | Lab (Hema-, radio-, etc) | Test Name |

prescription

|  |  |  |  |
| --- | --- | --- | --- |
| prescription\_id | Visit ID# | Med Type (Injection/oral) | Medication Name |

nursing\_record

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| nursing\_record\_id | nurse\_id | visit\_id | Comments | lab\_order\_id | prescription\_id |

(can be null) (can be null)

One patient can have many general practice visits.

One doctor can have many general practice visits.

One nurse can have many nursing records.

One general practice visit can have many lab orders.

One general practice visit can have many prescriptions.

One general practice visit can have many nursing records.

One lab order can have one nursing record.

One prescription can have one nursing record.

Program Design:

Several different “Views” are required.

1. Login View
   1. Select role(patient/doctor/nurse)
   2. Enter login credentials, OR choose to register a new user.
2. Registration View
   1. Enter new user information for your selected user type.
   2. May be slightly different for patient/doctor/nurse - do we need different views, or can the form fields be modified on the fly?
3. Patient View
   1. Select a doctor from a combobox, and request an appointment with them on a certain date. (Creates a new general\_practice\_visit entry)
4. Doctor view
   1. Choose from list of patients (prioritize patients who made an appointment w/ you) to open the GP visit for.
   2. View patient history (past history could be a dropdown menu of “history” entries from past visits)
   3. Enter information about this visit.
   4. Create Prescriptions and Lab Orders for this visit.
5. Nurse view
   1. Choose from list of patients.
   2. View patient’s past visits and open prescriptions and lab orders for patient.
   3. Create nursing record (select visit + prescription + lab order, add comments).

Each of these views can be implemented as its own subclass of JPanel, and then slotted into the overall program.

Maybe a CardLayout could be used to switch between views?