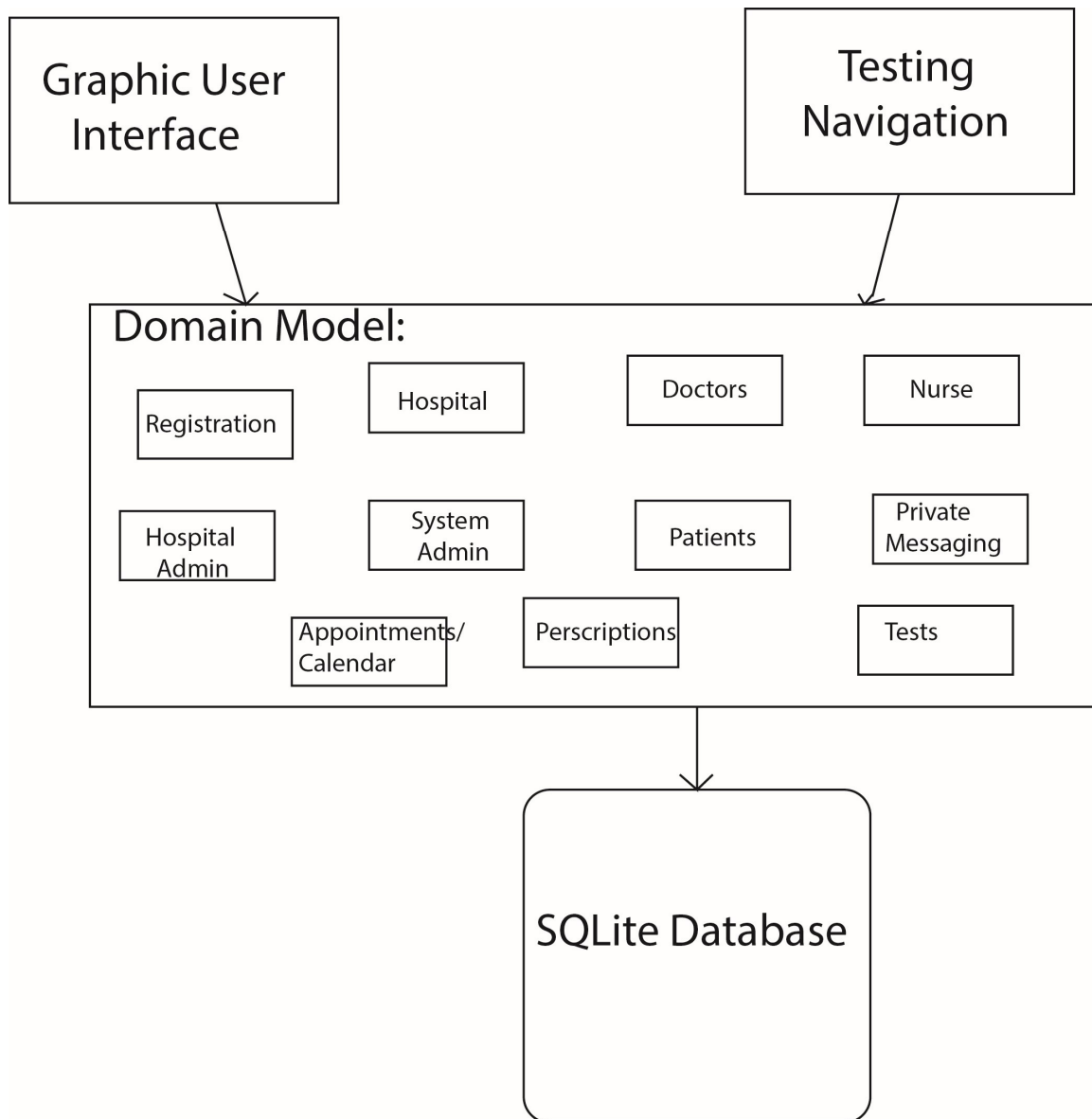


Product Design

Team D Section 12 yourSuperCoolName

<i>Revision Number</i>	<i>Revision Date</i>	<i>Summary of Changes</i>	<i>Author(s)</i>
0.1	09/19/2016	Initial creation of the design.	Ryan Connors, Juasheem Sulton, Trevor Powers, Kyle Ki, Wenxuan Zhou
.2	10/4/2016	Revisions of the design to more correctly represent Release 1	Ryan Connors, Juasheem Sulton, Trevor Powers, Kyle Ki, Wenxuan Zhou
2.0	10/12/2016	Revisions to document include updating it to reflect the changes in R2	Ryan Connors, Juasheem Sulton, Trevor Powers, Kyle Ki, Wenxuan Zhou

Architectural Model**Components and Functions**

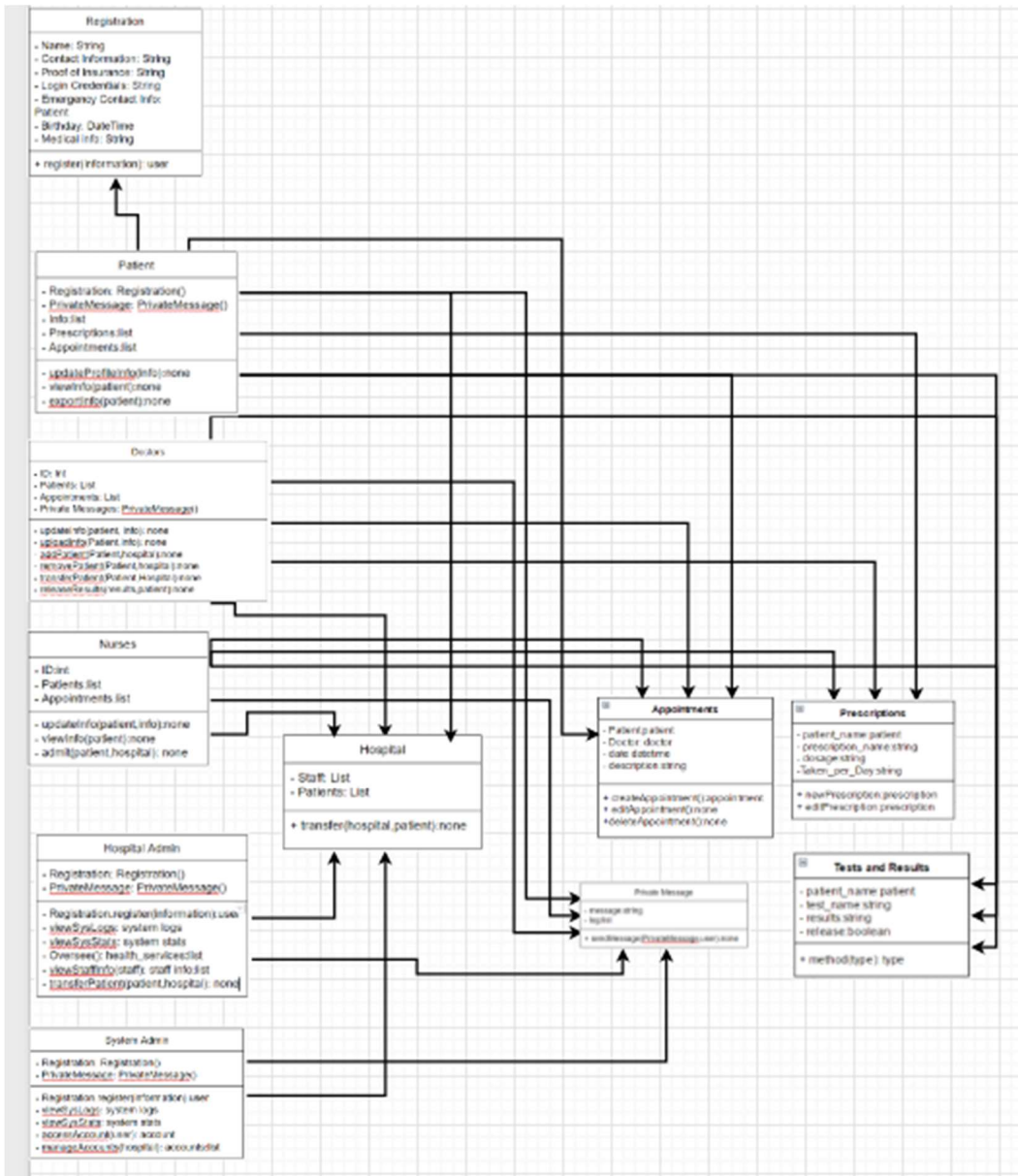
*This section contains outdated information from an earlier stage of development. Changes to this section will accompany the planning stage for R2

Registration	<p>Component State:</p> <ul style="list-style-type: none"> • Maintains all the basic registration information. Additional information will be included when this class is inherited. <ul style="list-style-type: none"> ○ Name ○ Personal contact information ○ Proof of insurance ○ Unique login credentials ○ Basic medical profile information ○ Choice of preferred hospital and emergency contact information (linked to another patient if they are already in the system). <p>Component Behavior:</p> <ul style="list-style-type: none"> • Provides method for new patients to register in the system. • Saves all registrant's information
Hospital	<p>Component State:</p> <ul style="list-style-type: none"> • Maintains all the information about a hospital including its staff and patients. <p>Component Behavior:</p> <ul style="list-style-type: none"> • Provides a method for transferring patients between hospitals • Provides a method for admitting patients • Provides a method for discharging patients
Doctors	<p>Component State:</p> <ul style="list-style-type: none"> • Maintains doctor's information <ul style="list-style-type: none"> ○ Doctor I.D. ○ Patients ○ Appointments ○ Private Messages • Inherit from Private Message
Nurses	<p>Component State:</p> <ul style="list-style-type: none"> • Maintain nurse's Information <ul style="list-style-type: none"> ○ Nurse I.D. ○ Patients ○ Appointments • Inherits from Private Message
Hospital Admin	<p>Component State:</p> <ul style="list-style-type: none"> • Inherits from Registration • Inherits from Private Message
System Admin	<p>Component State:</p> <ul style="list-style-type: none"> • Inherits from Registration • Inherits from Private Message
Patients	<p>Component State:</p> <ul style="list-style-type: none"> • Inherits from Registration • Inherits from Private Message • Contains but doesn't affect medical information • Prescriptions • Appointments
Private Message	<p>Component State:</p> <ul style="list-style-type: none"> • Maintains the private messages between doctors, nurses, and administrators. <p>Component Behavior:</p> <ul style="list-style-type: none"> • Provides a method for sending a private message of limited length to a

	specific individual.
Appointment Calendar	<p>Component State:</p> <ul style="list-style-type: none"> Includes a patient and a doctor Reads the appointment information between the patient and a doctor <p>Component Behavior:</p> <ul style="list-style-type: none"> Gathers the different appointments scheduled for the specific doctor and displays them in a calendar view.
Prescriptions	<p>Component State:</p> <ul style="list-style-type: none"> Includes a patient. Maintains the prescription name, dosage, and amount taken per day. <p>Component Behavior:</p> <ul style="list-style-type: none"> Provides a method for creating a new prescription. Provides a method for editing an existing prescription.
Test and Results	<p>Component State:</p> <ul style="list-style-type: none"> Includes a patient. Maintains the test name and results. <p>Component Behavior:</p> <ul style="list-style-type: none"> Provides a method for creating a new test. Provides a method for adding the results to a test. Provides a method for editing an existing test and result. Provides a method for releasing the results to the patient.
Appointments	<p>Component State:</p> <ul style="list-style-type: none"> Includes a patient and a doctor. Maintains the date of the appointment and a description. <p>Component Behavior:</p> <ul style="list-style-type: none"> Provides a method for creating a new appointment. Provides a method for editing or deleting an existing appointment.
Logging	<p>Component State:</p> <ul style="list-style-type: none"> Maintains an activity log with a proper log including date, time, user, and action. <p>Component Behavior:</p> <ul style="list-style-type: none"> Automatically logs an activity when a user performs an action
Statistics	<p>Component State:</p> <ul style="list-style-type: none"> Maintains statistics for the hospital which include: <ul style="list-style-type: none"> number of patients visiting the hospital average number of visits per patient average length of stay (from admission to discharge) most common reasons for being admitted to the hospital prescription statistics <p>Component Behavior:</p> <ul style="list-style-type: none"> Provides a method for viewing the statistics

Class Diagram(s)

*An updated Class Diagram will be included in the planning for R2

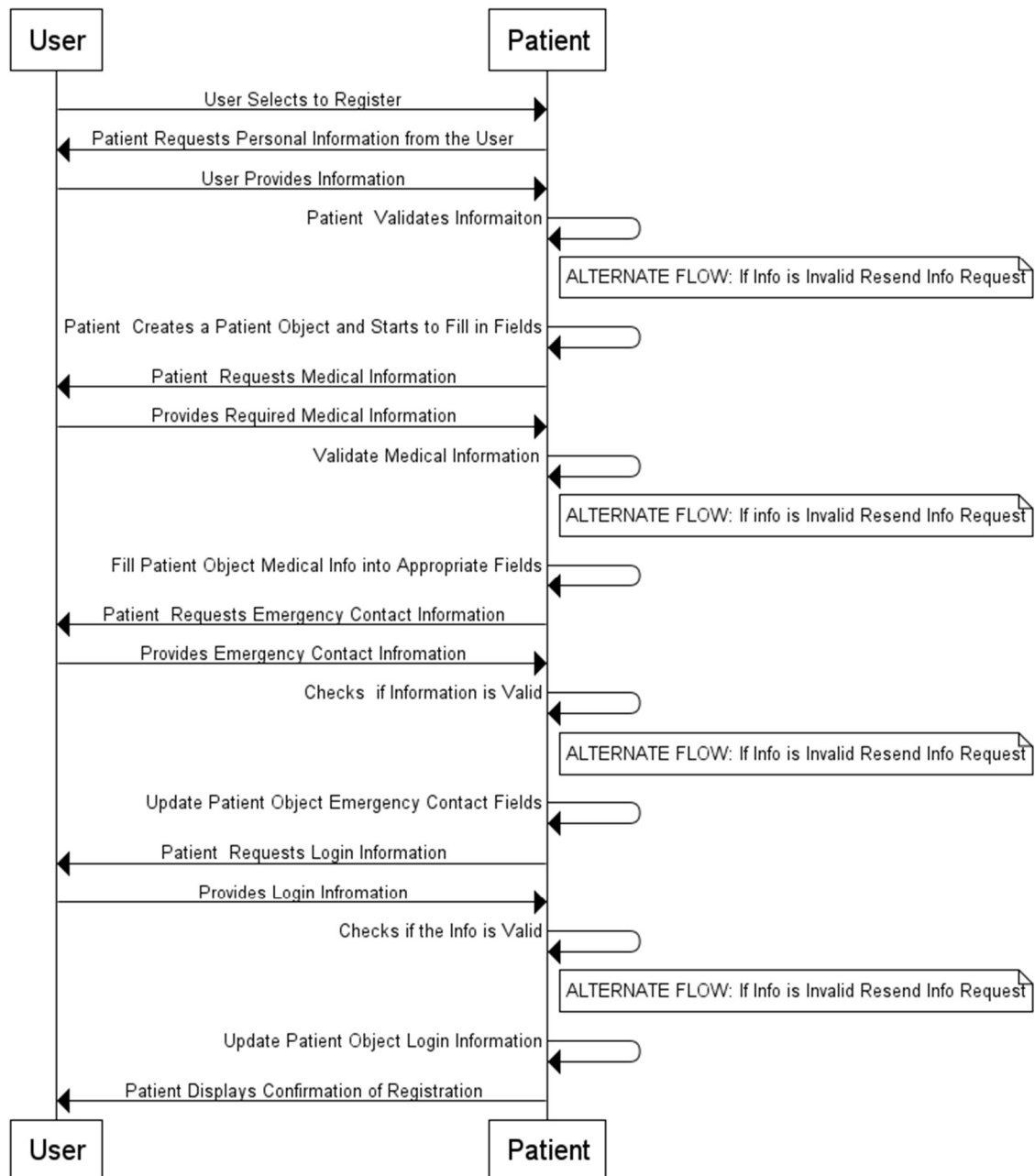


For better detail go to: https://drive.google.com/a/g.rit.edu/file/d/0B_I-bPPzdVONUW9RaVM3WINhREU/view?usp=sharing
(Open with draw.io)

Sequence Diagram(s)

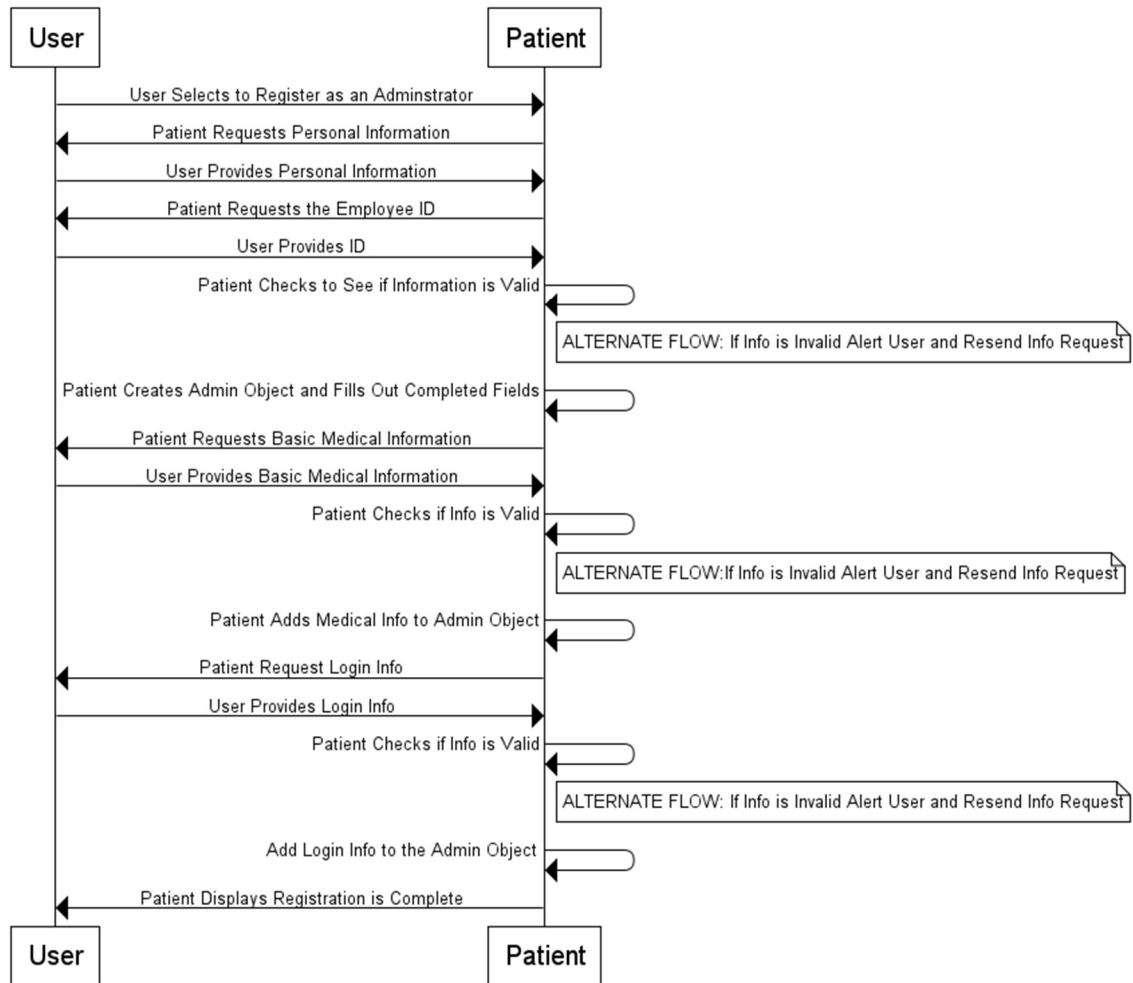
*Although the principles will remain mostly the same, they will be updated to give a clearer picture of what the system itself is doing

1. Patient Registration



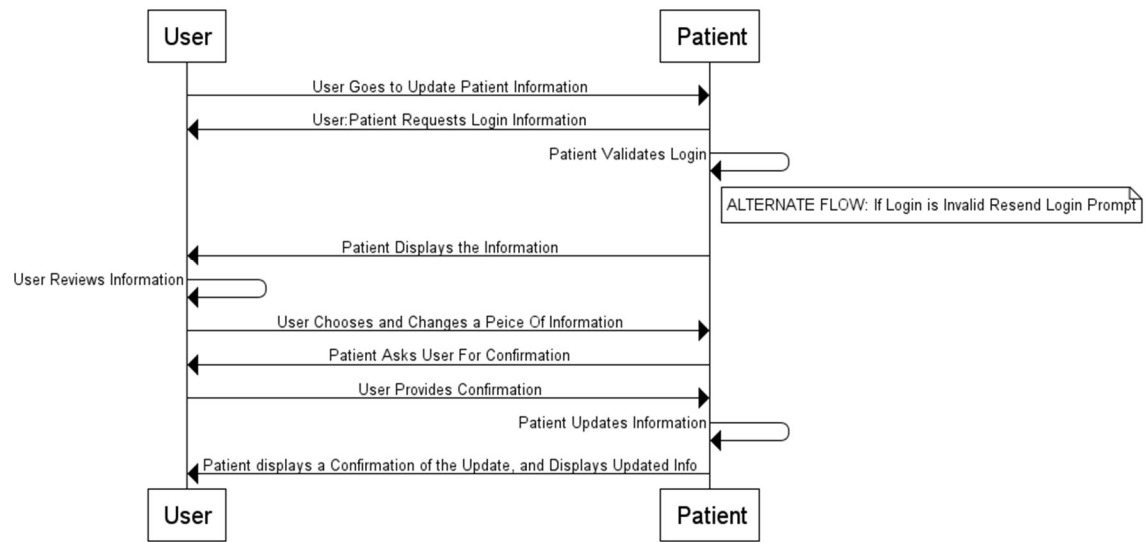
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2. Administrator Registration



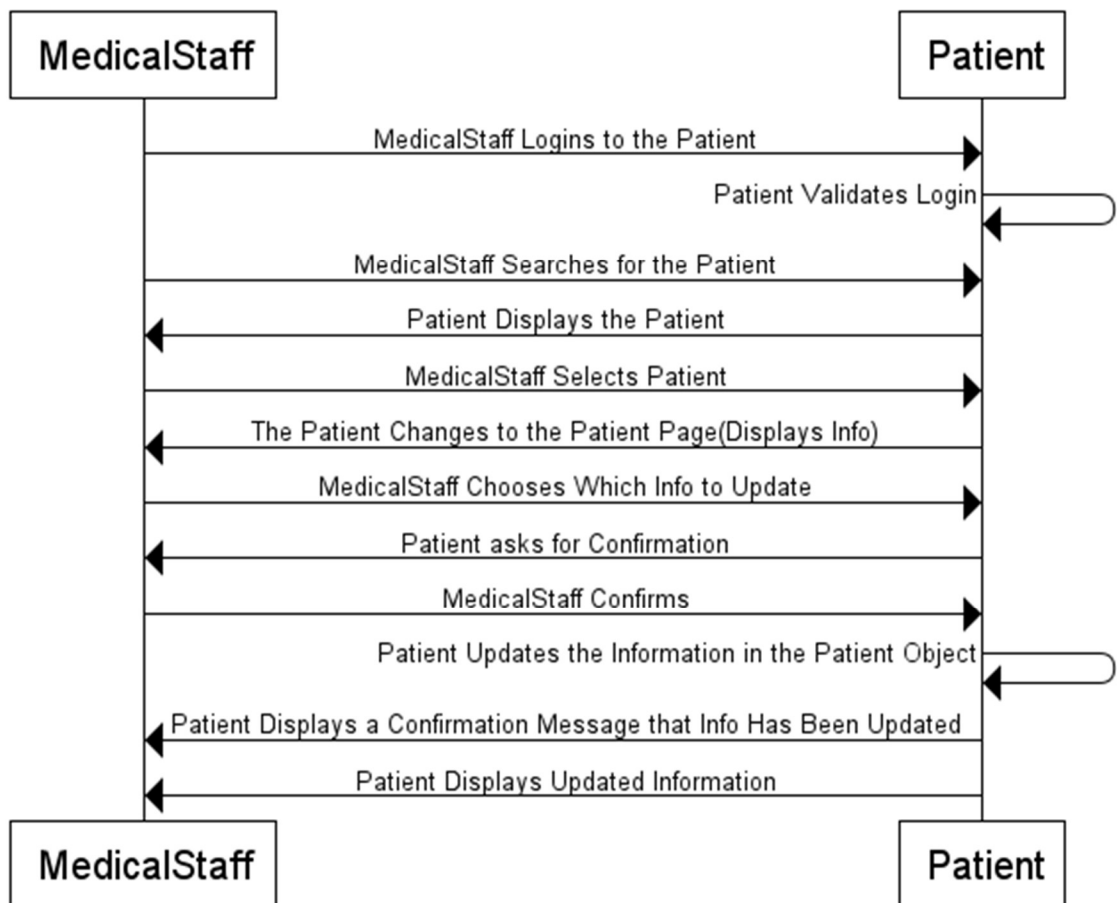
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3. Update Patient Information



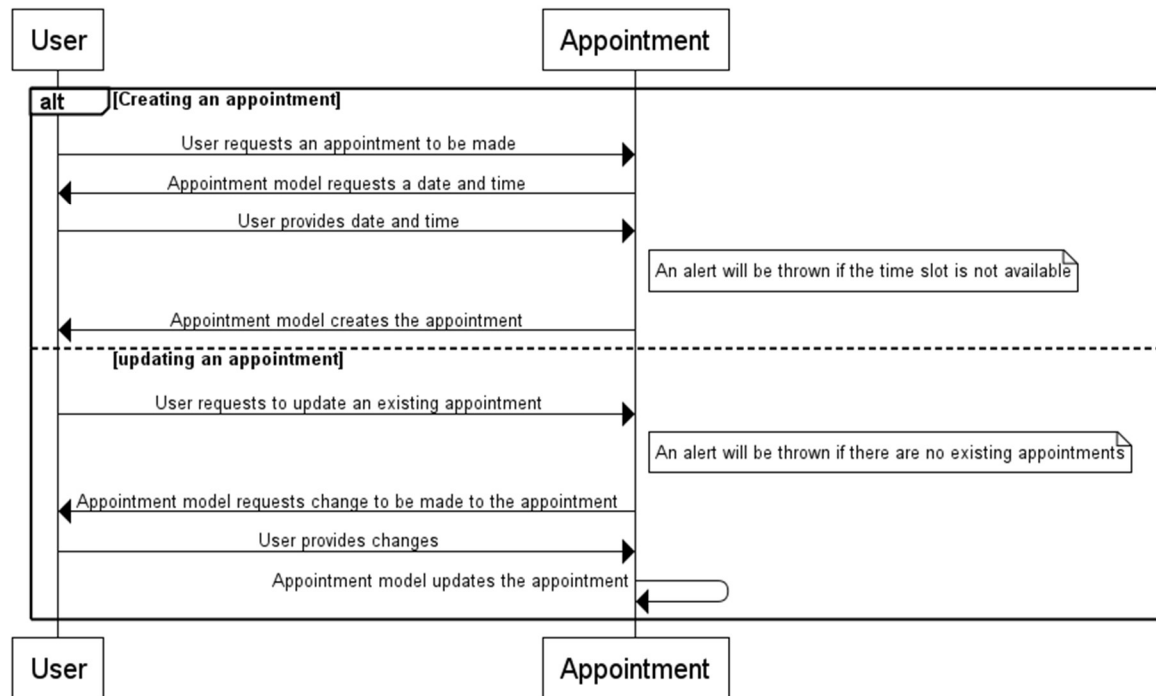
www.websequencediagrams.com

4. Update Patient Medical Information



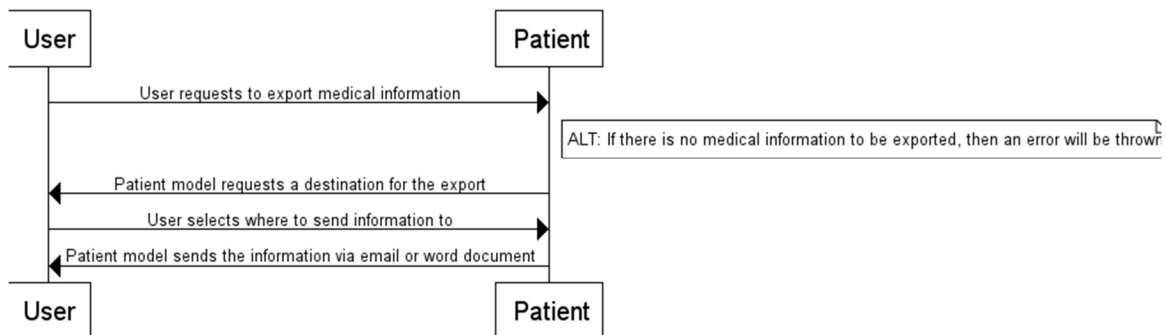
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6. Create or Update Patient Appointment



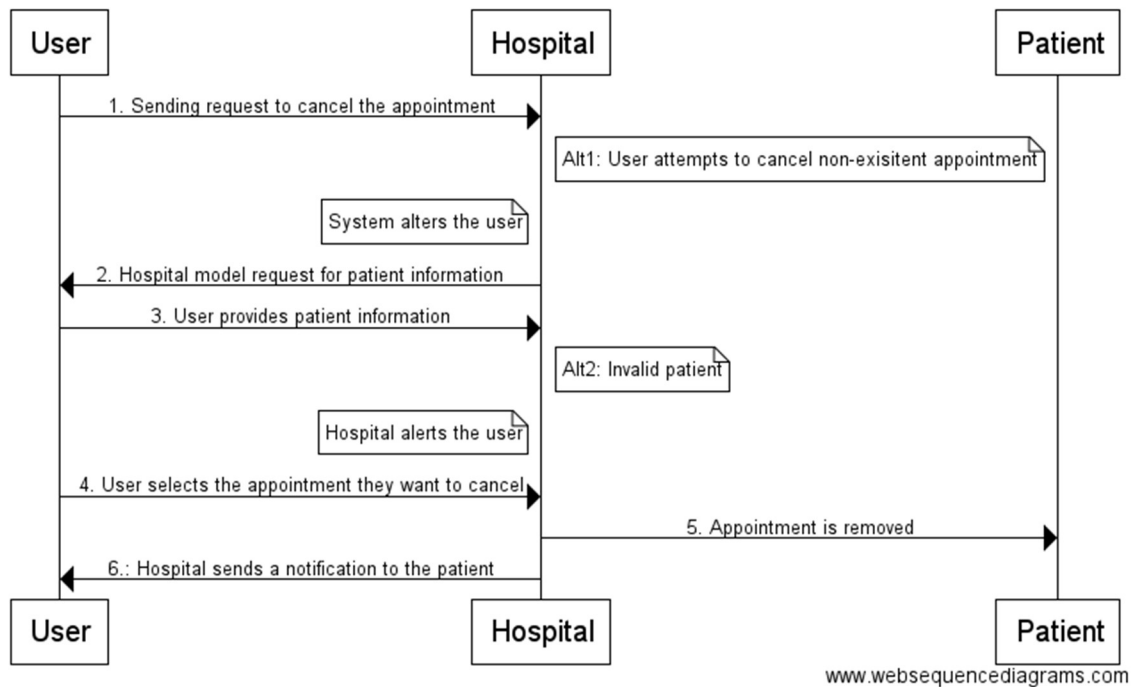
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5. Export Information

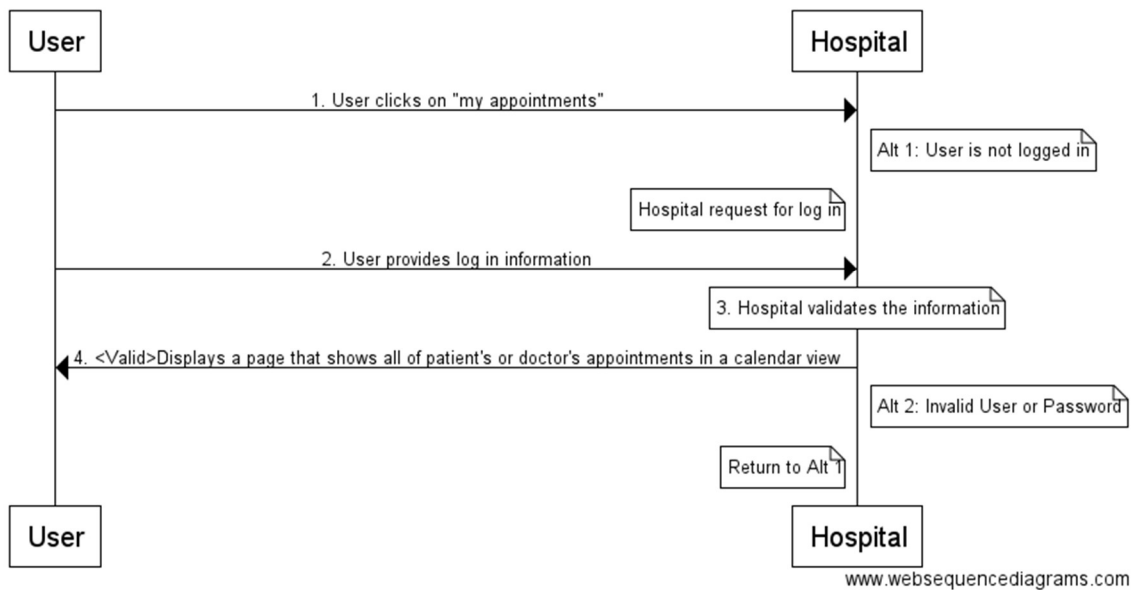


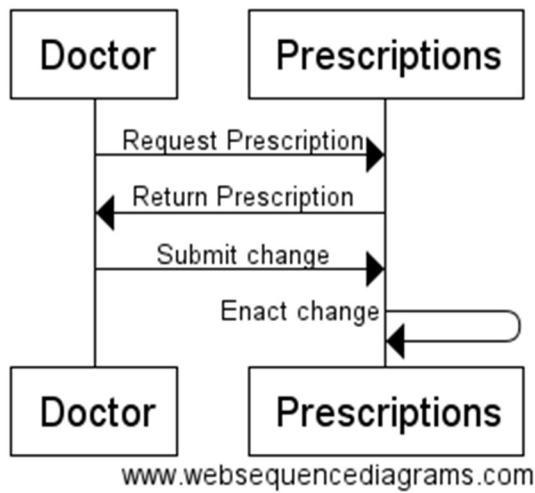
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7. Canceling Patient Appointment Sequence



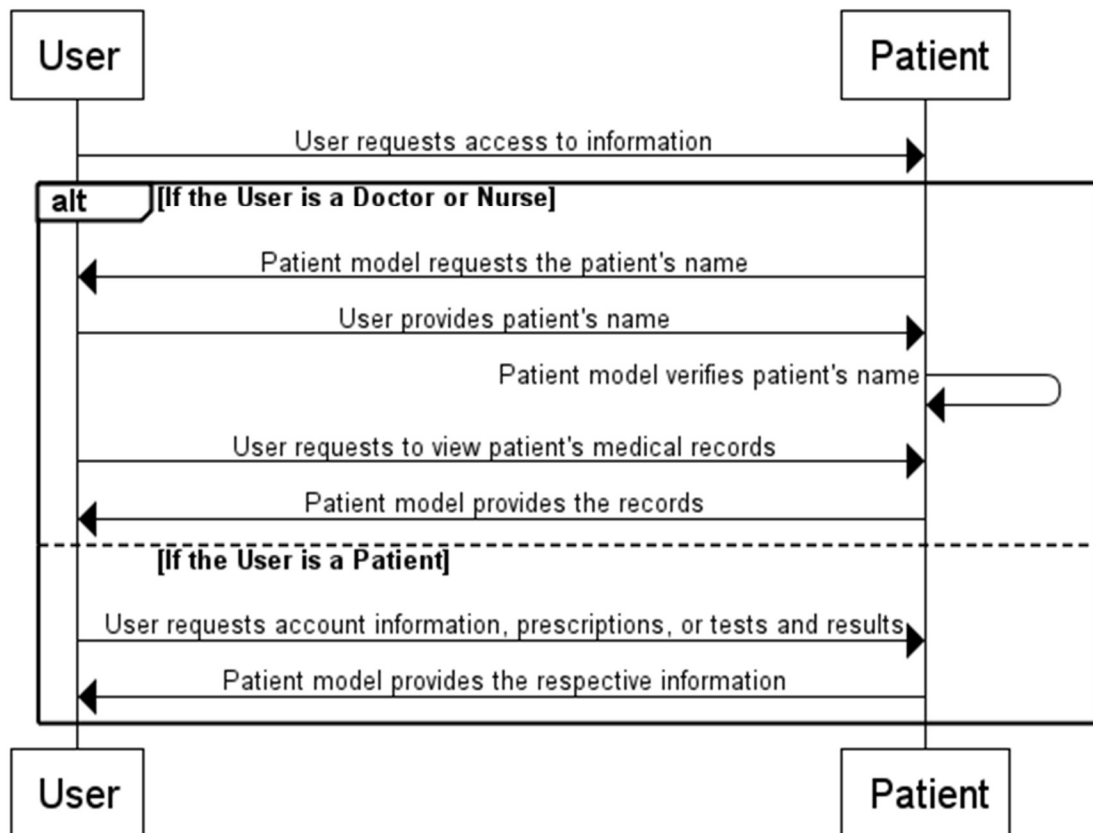
8. Appointment Calendar Sequence



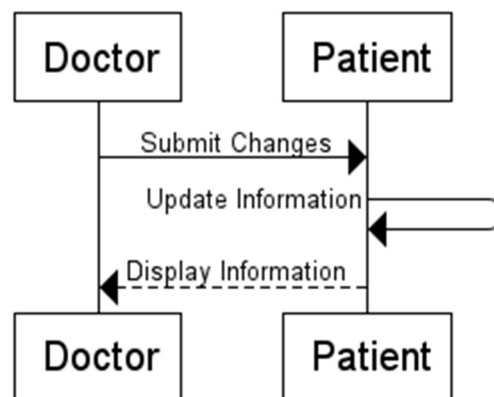


9.

10. Viewing Patient Medical Information, Prescriptions, and Tests and Results.

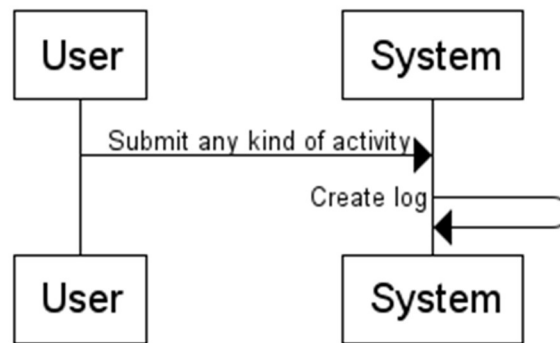


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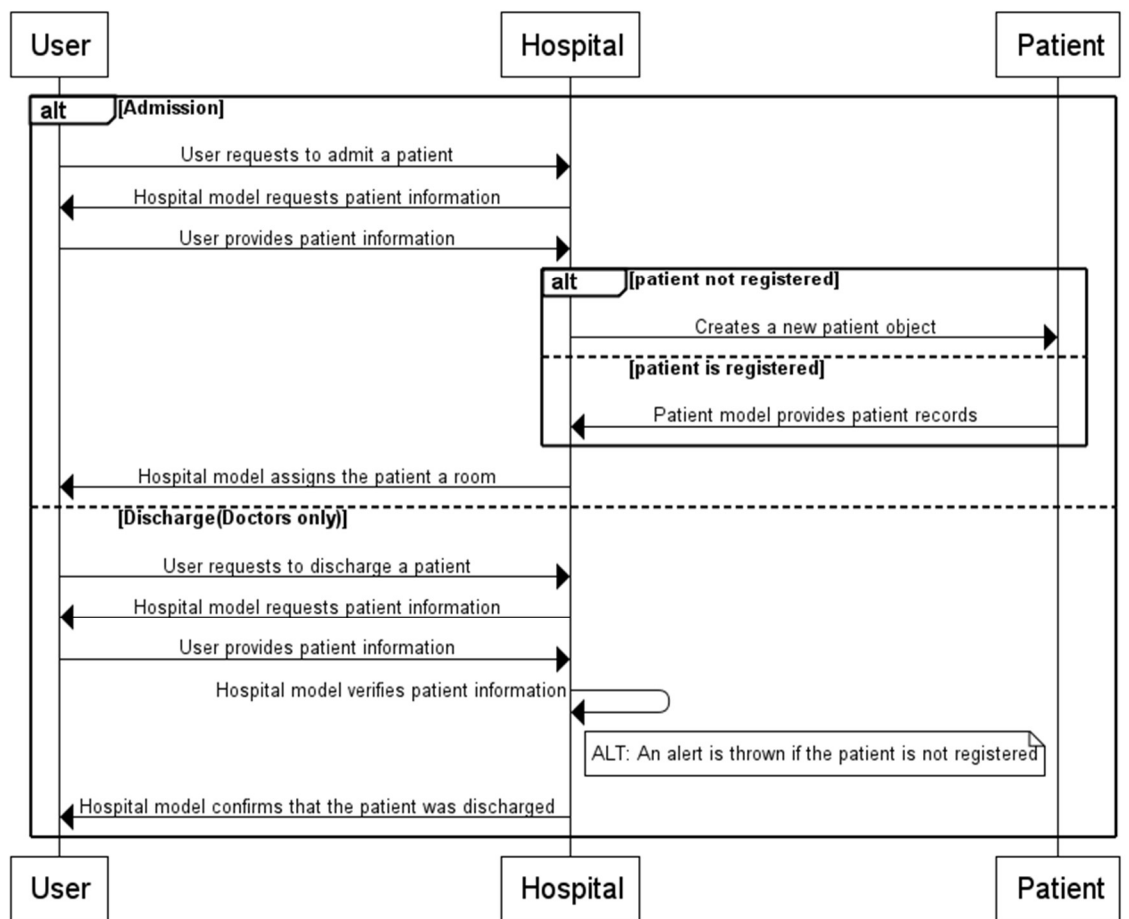
11.



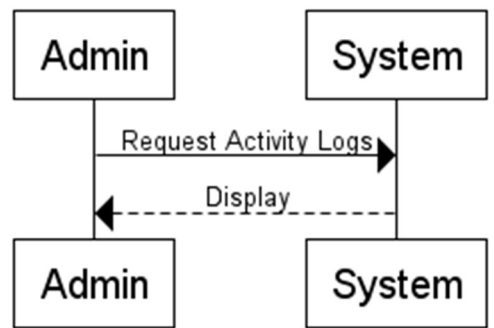
12.

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13. Admission and Discharge

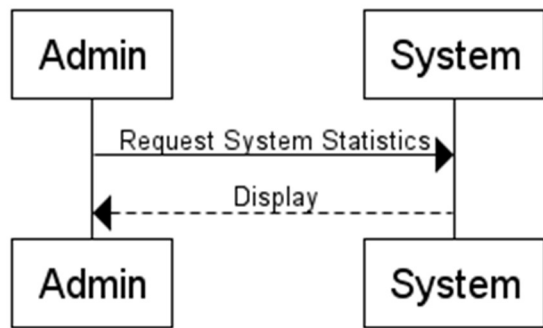


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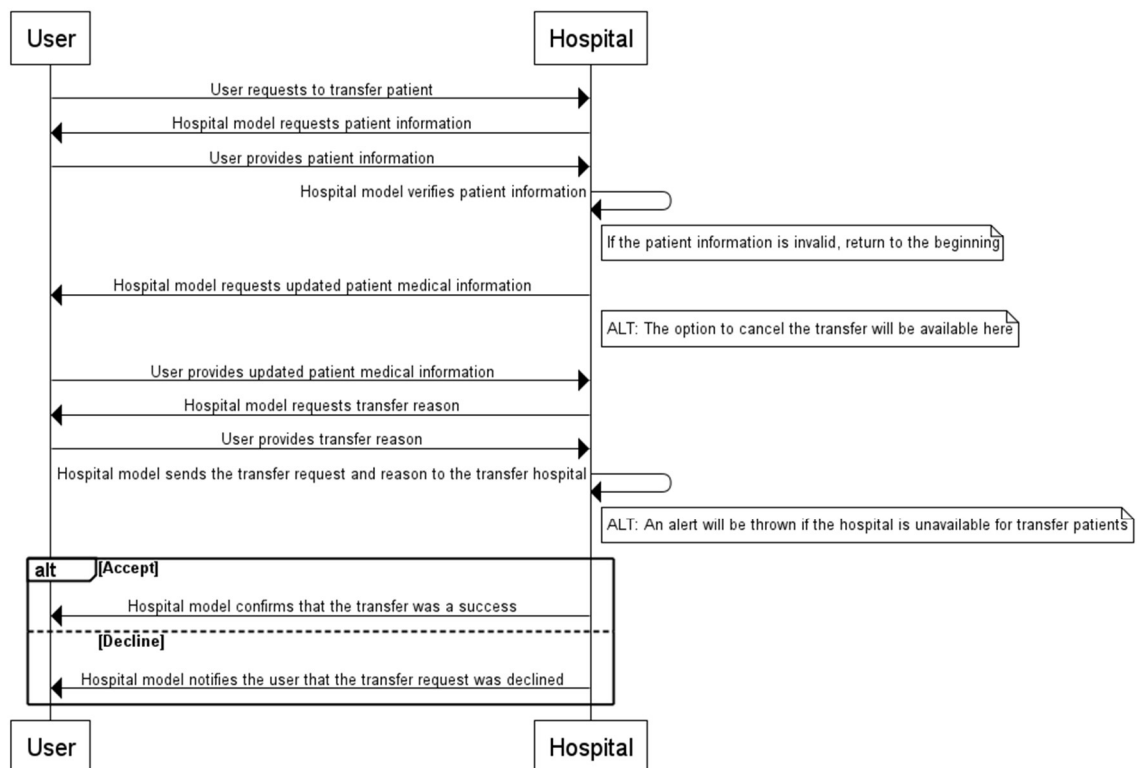
14.



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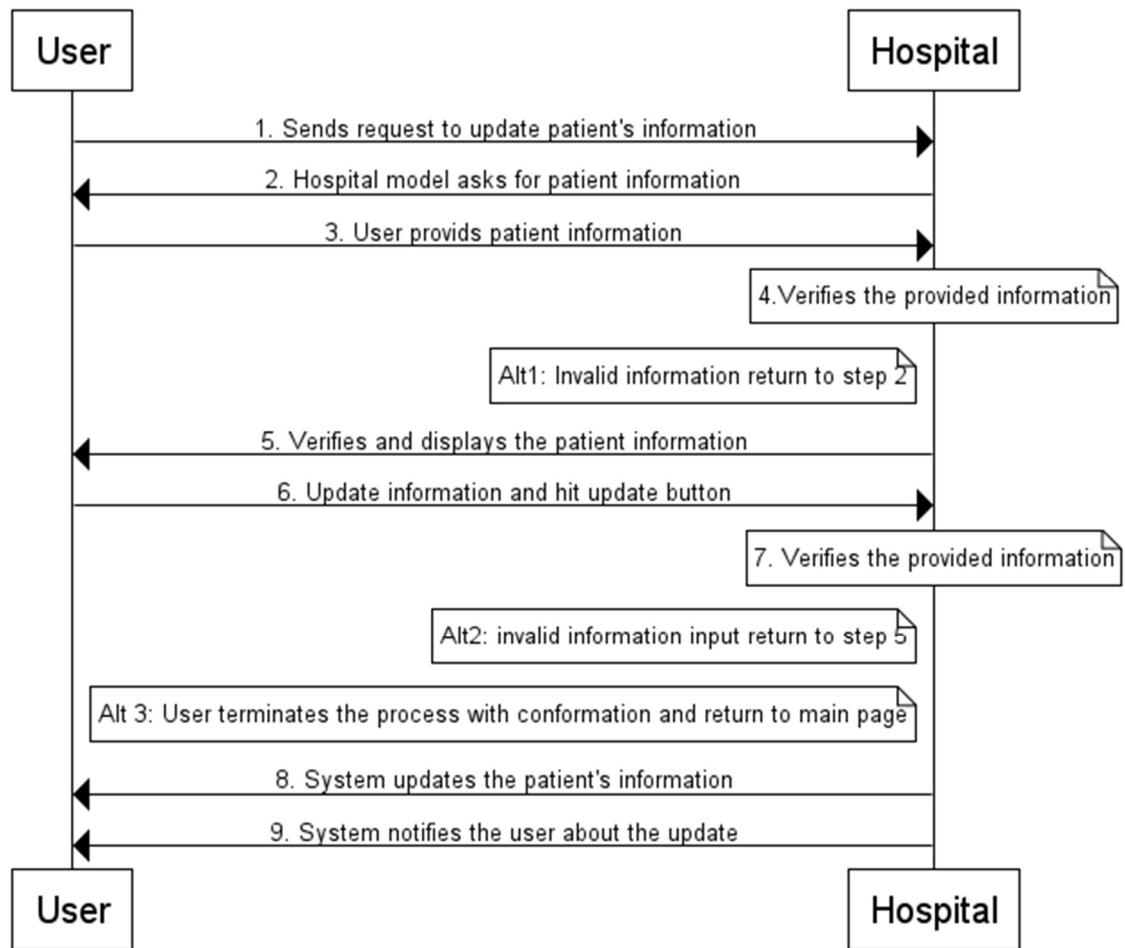
15.

16. Patient Transfer

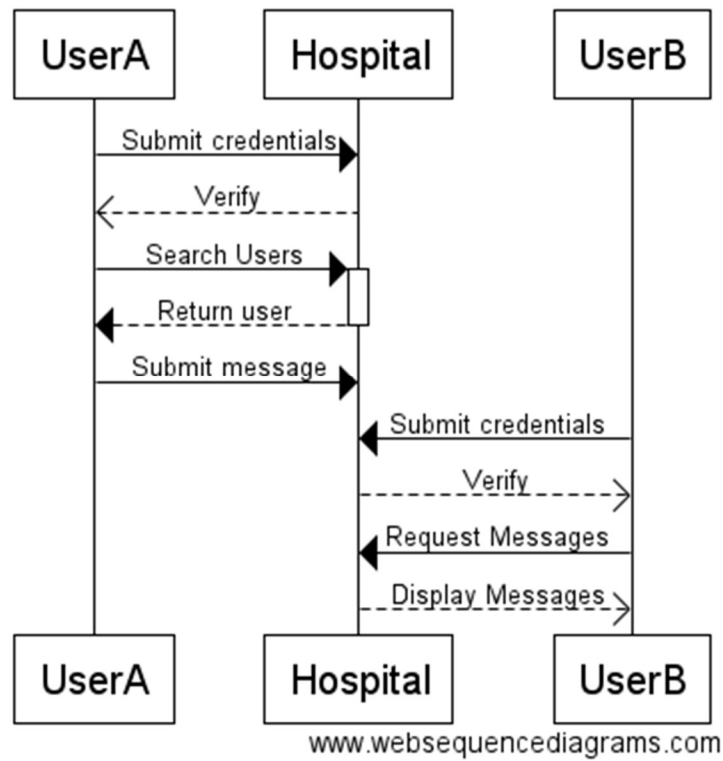


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17.Update Patient Information Sequence



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18.

Design Rationale

The design of Health Net is meant to be modular, to encourage ease of development and minimize coupling and maximize cohesion, and have an user friendly UI that would be intuitive to even the least tech savvy people. Although the original design did not fully realize these goals, the design that was ultimately used in release 1 comes much closer to these goals.

In development for R1, functionality was placed in the forefront. Our goal was to deliver functional code that would meet the requirements of our customers, and lay the groundwork for the UI that would come in R2. The emphasis placed on functionality has helped us to keep in line of our goal to have a modular program that allows for quick development and rapid changes to either meet new requirements, or edit old ones. Keeping modularity allows easy development or changes to the code base. For that purpose, we focused on laying down foundations and fine tuning the basic structure of our program. We focused on establishing how our models would change the data inside of themselves and how the user would interface with that.

The plan for R2, as it always has been, is to polish the features we have(make them more robust) as well as add the remaining functional requirements that we have, and produce a UI that encourages ease of use. We have used the majority of R1 to establish the basics of what we would need to refine in R2. For R2, we are going to be working on a lot of front end functionality.