Product Requirements

Team: 201601-09-SWEN-261-TEAM-C-The_Brogrammers

Revision Number	***Revision Date***	***Summary of Changes***	***Author(s)***
0.1	09/04/2016	Updates to all sections	John Judge Eric Tiano Hrishikesh Moholkar Derek Schwartz
0.2	10/02/2016	Updates to Use Case Diagram and Feature Requirements based on feedback from 0.1	John Judge Eric Tiano Hrishikesh Moholkar Derek Schwartz
0.3	10/02/2016	Updates to the usecase diagram, to the stakeholders, and to the used technologies	John Judge Eric Tiano Hrishikesh Moholkar Derek Schwartz
0.4	11/06/2016	Updated Feature Requirement Section to show what features were moved up from R2 release to R2 Beta Release	John Judge

Brief problem statement

We are tasked with the creation of an application to simplify healthcare within the United States. This application, called HealthNet, will enable hospitals to more easily manage their employees and patients. The main goal of this system is to simplify healthcare through the ease of use for all users (Hospital Administrators, Doctors, Nurses, and Patients).

Once released, hospitals will be able to manage day-to-day work and keep statistical data that will help them to improve their services. Patients will also benefit from this system through the ease of signing up. Patients will be able to move freely between different hospitals and doctors and have their information follow them.

HealthNet will emphasis ease of use, straightforward navigation, and communication between all parts of the . HealthNet will simplify the healthcare field with communication between parties and data aggregation.

Stakeholders

HAccelerator Board of Directors – This group will oversee the entire project. They will provide any necessary funds through the completion of the project. This group simply wants the project to be completed and is not necessarily interested in the finer details of the project.

HAccelerator Product Owner – The Owner has a vision of what HealthNet will look like once finished. They work with the Board of Directors to facilitate the funding the project will need. They also relay all the requirements to the Software Engineering Team. The Owner has the final say on all decisions and features of HealthNet.

Software Engineering Team – The Software Engineering Team is responsible for building the Owner's vision of HealthNet. They will handle the planning, design, implementation, testing, and release of the software.

Beta Testing Team – The Beta Testing Team is responsible for testing early releases of software and relaying any bugs found or concerns to the Software Engineering Team. Upon release of the HealthNet they will conduct acceptance testing and provide feedback to the Software Engineering Team.

End Users - The patients and employees of the hospitals that use HealthNet will benefit from all the software's features

Users profile

User profiles:

1. Hospital Administrators - Hospital administrators would have permissions that allow them to read and edit all employee data, and read patient personal data. They will also be able to create new patient accounts.Their familiarity with planning software similar to ours will be high, though they will likely lack setup, implementation, and maintenance knowledge.
2. Doctors - Doctors will have permissions that prevent them from reading or writing to employee information (except perhaps with a few exceptions, like updating personal contact information) and other non-patient related information, but allows them to read and write to any bit of their patient's data. Because we don't know if the doctors in this hospital currently have access to a similar system (though, this would make an excellent question for the HAccelerator Product Owner), we can not assume any prior knowledge on operating similar systems.
3. Nurses - Nurses will have permissions that allow them to read patient medical information and write to patient personal information. Nurses can create new patient accounts.
4. Patients - Patients will have permissions that allow them to read all of their own information, but preventing them from inputting anything but their own personal information into the system

The target user must:

- Have basic experience using computers and browsing the internet. Has filled out online forms or surveys and may have purchased or sold a product.
- Have a computer with access to the internet
- Have an interest in improving their health by using an online way of interacting with their hospital
- Be willing to share information such as home address and contact information as well as more personal information such as medical history

System requirements

This project will be source controlled at the highest level by SVN. It will be run on Django using python, sqlite, and will be compatible with the latest browsers.

While this program will need to be able to be accessed from the internet, demos and deployment for this phase will take place within the RIT Software Engineering network. The target platforms must be documented and understood from the client browser's perspective as well as the server’s perspective. Versions or software dependencies, programming language, and hardware specifications must be captured and confirmed with the customer before proceeding.

Feature requirements (user stories)

No.	User Story Name	Description	Release
1	Patient Registration	**Users** sign up to become a **Patient** by providing their personal contact **information**, **proof** of **insurance** and unique login **credentials**. Additionally, a **patient** should provide the **system** with some basic medical profile **information**, a **choice** of preferred hospital and emergency contact **information** (linked to another **patient** if **they** are already in the **system**).	R1
2	Administrator Registration	Doctors, Nurses, and Administrators will be **added** to the system by other administrators. All information for **creating** these new accounts will be done through an administrator account.	R2 BETA
3	Update Patient Profile Information	Patients can **update** their profile information.	R1
4	Update Patient Medical Information	Doctors and Nurses can **update** patient medical information.	R2 BETA
5	Export Information	Patients will be able to **export** their information and their test results from the system with relevant privacy warnings.	R2
6	Create or Update Patient Appointment	Patients, doctors and **nurses** can create or update an **appointment** with a **doctor** and at one of the **doctor**’s available **locations**.	R1

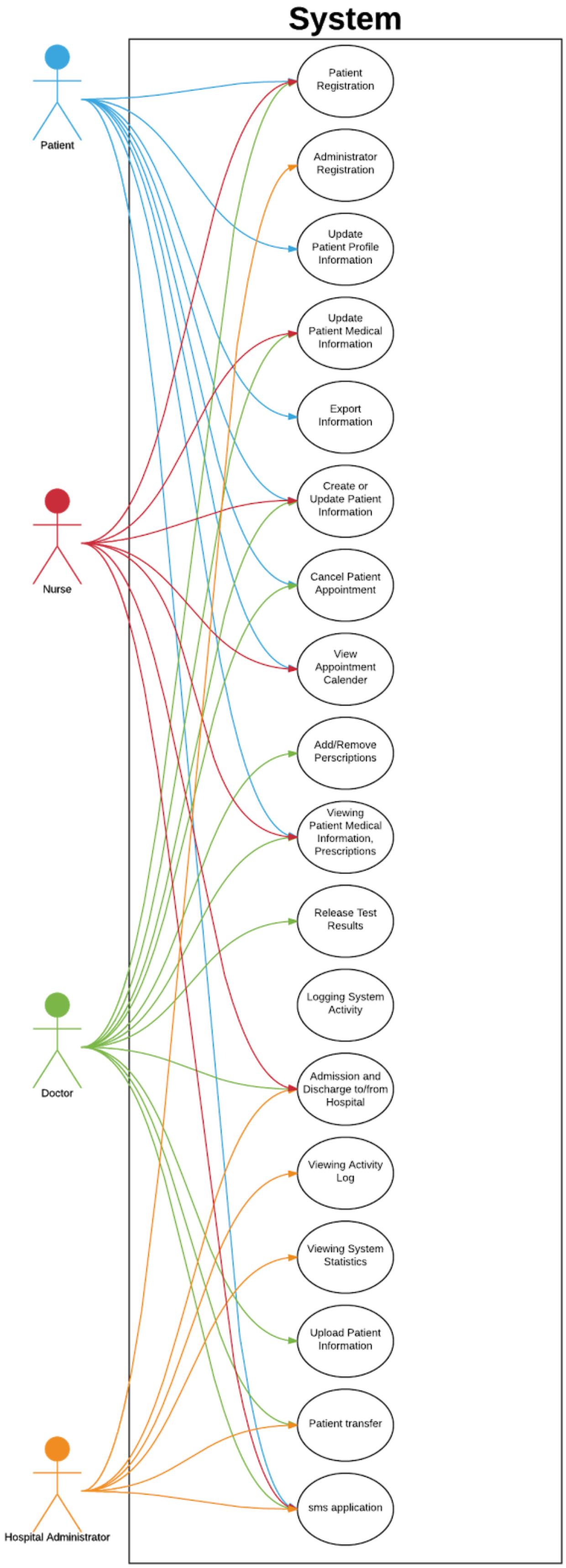
		If the **patient** or **doctor** already has an **appointment** at the **time** selected, then the system will not allow for the appointment.	
7	Cancel Patient Appointment	Patients can cancel their existing appointments. Doctors can cancel their existing appointments. Nurses cannot cancel (only modify) existing appointments.	**R1**
8	Appointment Calendar	Doctors and patients will easily be able to view all of their appointments in a calendar view. Nurses will be able to see all appointments for the day and week between Patients and Doctors.	**R1**
9	Add/Remove Prescriptions	Doctors can add or remove a prescription to a patient record. Nurses can view the prescriptions of patients belonging to the same hospital. Patients can view their prescriptions from their account.	**R2** **BETA**
10	Viewing Patient Medical Information, Prescriptions and Tests and Results	Doctors can view all medical information for any patient in the system (regardless of Hospital). Nurses can only view patient medical information in the hospital they work for. Patients can view their tests (pending or completed) and view the corresponding results for those tests that have been released by the doctor. Prescriptions and other non-sensitive information is viewable by the patient without a need for doctor's release.	**R2**
11	Release Test Results	Doctors (within the patient's hospital) can, upon evaluating a patient's test results, release them for view by that patient.	**R2**

		Comments may be added to the specific test result for view by the patient.	
12	Logging System Activity	For security, many actions in the system will be logged for review at a later date. Some examples of actions to be logged include but are not limited to updating of a Patient's information, viewing of a Patients information/records, and transfers of a Patient from one hospital to another.	**R1**
13	Admission and Discharge to/from Hospital	Doctors and Nurses can admit a patient to the hospital for an extended stay (reasons could be: emergency, observation, surgery, etc.). These are typically unexpected visits but can result from a decision made after a scheduled appointment. This event is recorded by the system. Doctors are the only ones to approve a patient's discharge from the Hospital. This event is recorded by the system.	**R2**
14	Viewing Activity Log	Administrators will be able to view the logs of all system activity for a given time-frame at their hospital. Some examples of this might be: - breakdown of the viewing activity of patient records or by system user - most common system activities (or by user) Other important and informative statistics yet to be determined.	**R1**
15	Viewing System Statistics	<u>Administrators</u> will be able to **view** compiled statistics for a given time-frame at their <u>hospital</u>. Some examples of this might be: - number of <u>patients</u> 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	**R2**

		- prescription statistics Other important and informative statistics yet to be determined.	
16	Patient Transfer	Patient can be transferred between hospitals. **Transfers** can be carried out by either administrators or by doctors (ones who are at the receiving hospital).	**R2**
17	Upload Patient Information	Doctors will be able to **upload** the results of a patient's tests if needed. Doctors will be able to upload images such as those used in X-Rays to update a patient's record. Uploads are considered as updates to a patient's medical information.	**R2**
18	Send Private Message	Doctors, nurses, patients and administrators can send private messages of limited length via the system.	**R2** **BETA**

Note: difference between "specialist" and "family doctor" (maybe not significant)

Use case context diagram


System
Patient
Nurse
Doctor
Hospital Administrator
Patient Registration
Administrator Registration
Update Patient Profile Information
Update Patient Medical Information
Export Information
Create or Update Patient Information
Cancel Patient Appointment
View Appointment Calender
Add/Remove Perscriptions
Viewing Patient Medical Information, Prescriptions
Release Test Results
Logging System Activity
Admission and Discharge to/from Hospital
Viewing Activity Log
Viewing System Statistics
Upload Patient Information
Patient transfer
sms application

Use case description

Use Case Number:	***UC-XX (Replace XX with a number)***
Use Case Name:	***Enter the name of Use Case***
Overview:	***Describe the purpose of the Use Case and give a 1-2 line description. This could be the same as the description provided for the user story.***
Actor(s):	***List all actors that participate in this Use Case.***
Pre-condition(s):	***Enter the condition that must be true when the main flow is completed.***
Scenario Flow:	***Main (success) Flow: Steps should be numbered.***
Alternate Flows:	***Alternate Flows: Include the post condition for each alternate flow if different from the main flow.***
Post Condition:	***Enter the condition that must be true when the main flow is completed.***

Sample Use Case (modify as needed):

Use Case Number:	***UC-01***
Use Case Name:	***Registration***
Overview:	***Registrant shall provide personal, medical, and emergency contact information to the System upon registering and becoming a Patient.***
Actor(s):	***Registrant***
Pre-condition(s):	***- System has been setup and configured.*** ***- System is running and open for registrations.*** ***- Registrant has accessed website via URL***
Scenario Flow:	***Main (success) Flow:*** 1. ***Registrant selects option to register*** 2. ***System requests <u>personal</u> information***

	3. ***Registrant provided personal information.*** 4. ***System verifies required information is provided.*** ● ***If information is invalid System displays message. Return to Step 2*** 5. ***System requests basic medical information*** 6. ***Registrant provides medical information*** 7. ***System verifies required information is provided.*** ● ***If information is invalid System displays message. Return to Step 5*** 8. ***System requests emergency contact information*** 9. ***Registrant provides emergency contact information*** 10. ***System verifies required information is provided*** ○ ***If information is invalid System displays message. Return to Step 8*** 11. ***System requests login information*** 12. ***Registrant provides login information*** 13. ***System verifies required information is provided*** ○ ***If information is invalid System displays message. Return to Step 11*** 14. ***System displays confirmation of registration***
Alternate Flows:	***Alternate Flow #1: After Step 2 in success scenario System will display the option to Cancel the registration process. The following steps would occur:*** 1. ***Registrant selects option to cancel during registration*** 2. ***System requests confirmation to cancel*** 3. ***Registrant confirms intent*** 4. ***System returns to main screen*** ***Alternate Flow #2: The emergency contact information is an existing user in the system. After step 10 the following steps would occur:*** 1. ***Registrant selects option to select an emergency contact from the system***

	2. ***System displays a search bar for the Registrant to input the user’s name*** 3. ***Registrant inputs the user’s name and presses enter*** 4. ***System returns a list of users with matching names*** 5. ***Registrant chooses intended user*** 6. ***System sets that user as an emergency contact***
Post Condition:	***Registrant did not complete registration. System does not store Registrant's information.***

Use Case Number:	UC-02
Use Case Name:	Administrator Registration
Overview:	This use case is used to discover what requirements are implied by an administrator’s ability to register employees. Doctors, Nurses, and Administrators will be added to the system by other administrators. All information for creating these new accounts will be done through an administrator account.
Actor(s):	Administrator
Pre-condition(s):	The user has already registered an Administrator account
Scenario Flow:	***Main (success) Flow:*** 1. User **logs in** 2. User chooses to **make** an account 3. System presents user with account type options (Administrator, Doctor, Nurse, Patient) 4. User **chooses** the type of **account** (one of the first three 5. System **requests** Employee’s personal information 6. User inputs personal information 7. System requests Employee’s professional information 8. User inputs professional information 9. System stores information
Alternate Flows:	***Alternate Flow:*** 6. User exits the account creation process, realizing they lack some necessary information 7. System returns user to main page

	Post Condition: no change in system
Post Condition:	Now exists a new employee accoun*t*

Use Case Number:	UC-03
Use Case Name:	Update Patient Profile Information
Overview:	This use case is used to discover what requirements are implied by a patient's ability to update their information. Patients can update their profile information.
Actor(s):	Patient
Pre-conditio n(s):	A patient account exists for the user
Scenario Flow:	***Main (success) Flow:*** 1. User logs in 2. User chooses to view personal information 3. System presents user with their personal information 4. User chooses to edit given information 5. System presents the user with the fields they may edit 6. User edits field of choice 7. User chooses to save changes 8. System stores changes to the account
Alternate Flows:	***Alternate Flow:*** 6. User decides to exit the editing process, and does so 7. System returns user to main page Post Condition: no change in system
Post Condition:	User's personal information now differs from its earlier state

Use Case Number:	UC-04

Use Case Name:	Update Patient Medical Information
Overview:	This use case is used to discover what requirements are implied by an employee's ability to edit a patient's medical information Doctors and Nurses can update patient medical information.
Actor(s):	Doctor or Nurse
Pre-condition(s):	A Doctor or Nurse account exists for the user
Scenario Flow:	***Main (success) Flow:*** 1. User logs in 2. User chooses to view patients 3. System presents user with a patient list 4. User selects a patient 5. System presents User with that patient's information 6. User chooses to edit the patient's medical information 7. System presents user with the fields they may edit 8. User selects a field to edit 9. User saves changes 10. System stores changes made to account
Alternate Flows:	***Alternate Flow:*** 6. User chooses to exit this patient view, realizing they chose the incorrect patient 7. System returns user to the patient list 8. User selects proper patient 9. User is returned to step 5 in the Main flow
Post Condition:	Chosen patient's medical information now differs from its earlier stat

Use Case Number:	UC-05
Use Case Name:	Export Information
Overview:	This use case is used to discover what requirements are implied by a patient's ability to export their medical information

	Patients will be able to export their information and their test results from the system with relevant privacy warnings.
Actor(s):	Patient
Pre-condition(s):	A patient account exists for the user, medical information has been entered for the user
Scenario Flow:	***Main (success) Flow:*** 1. User logs in 2. User chooses to view medical information 3. System presents user with their medical information 4. User chooses to export given information 5. System provides the user with a privacy warning 6. The user elects to continue 7. System provides user with a preview of the export format 8. User chooses to continue with the export 9. System prompts the user for an address to send export to 10. User enters an Email address 11. System send a file with the exported information the the chosen address
Alternate Flows:	***Alternate Flow 1:*** 6. User decides not to export information 7. System returns user to the page with their medical information Post Condition: no change in system ***Alternate Flow 2:*** 11. The given email address fails to validate 12. The system informs the user there must be a mistake in the address they have given 13. User is returned to step 10 on the main flow
Post Condition:	User's medical information is sent to an email address of the user's choosing

Use Case Number:	UC-06

Use Case Name:	Create or Update Patient Appointment
Overview:	Patients, doctors and nurses can create or update an appointment with a doctor and at one of the doctor's available locations. If the patient or doctor already has an appointment at the time selected, then the system will not allow for the appointment.
Actor(s):	Patient, Doctor, and Nurses
Pre-condition(s):	● The user making the appointment and/or the patient has an account ● The patient's personal information has been entered
Scenario Flow:	Main (success) Flow: 1. User making the appointment logs into their account 2. User choses to create an appointment 3. System requests the user for the doctor, time, date, and location they prefer 4. User enters their preferred doctor, time, date, and location 5. System checks if the doctor, time, date, and location is available 6. System stores appointment information 7. System sends a notification to the patient confirming the details of the appointment 8. System sends a notification to the doctor with the appointment information 9. System returns to main screen
Alternate Flows:	Alternate Flow #1: After Step 9 in success scenario a user attempts to change some detail of the appointment 1. User selects to view a future appointment 2. User chooses to change the details of the appointment 3. User enters their preferred doctor, time, date, and location 4. System checks if the doctor, time, date, and location is available 5. System stores appointment information 6. System sends a notification to the patient confirming the details of the appointment 7. System sends a notification to the doctor with the appointment information 8. System returns to main screen Alternate Flow #2: After Step 5 in success flow some detail about the user's requested appointment is unavailable 1. System sends notification to user stating that the appointment is not available

	2. System requests user to change details of the appointment to make the appointment possible 3. User changes the details of the appointment to make the appointment available 4. System checks if the doctor, time, date, and location is available 5. System stores appointment information 6. System sends a notification to the patient confirming the details of the appointment 7. System sends a notification to the doctor with the appointment information 8. System returns to main screen
Post Condition:	The system stores the appointment details. The Doctor and Patient are both notified of the appointment.

Use Case Number:	UC-07
Use Case Name:	Cancel Patient Appointment
Overview:	Patients can cancel their existing appointments. Doctors can cancel their existing appointments. Nurses cannot cancel (only modify) existing appointments.
Actor(s):	Patient and Doctor
Pre-condition(s):	● A future appointment is saved in the system ● System is running and open for registrations. ● User has accessed webs
Scenario Flow:	Main (success) Flow: 1. User logs into account 2. User selects to view a future appointment 3. User chooses to change the details of the appointment 4. User selects to delete the appointment 5. System asks the user if they are sure they want to cancel the appointment 6. User selects they are sure 7. System removes the appointment

	8. System confirms to the user the appointment has been canceled 9. System returns to main screen 10. System notifies doctor and patient that the appointment has been canceled
Alternate Flows:	Alternate Flow #1: After Step 5 in success scenario user chooses that they do not want to cancel appointment 1. System returns to appointment details page
Post Condition:	The appointment is canceled and both the Doctor and Patient are notified

Use Case Number:	UC-08
Use Case Name:	Appointment Calendar
Overview:	Doctors and patients will easily be able to view all of their appointments in a calendar view. Nurses will be able to see all appointments for the day and week between Patients and Doctors.
Actor(s):	Doctors, Patients, and Nurses
Pre-condition(s):	Appointments have been made in the system
Scenario Flow:	Main (success) Flow: 1. The Patient or Doctor selects to view future appointments from the main page 2. The system moves the user to a page showing a calendar with all future appointments in it 3. The user can then select to view the details about a future appointment or return to the previous page
Alternate Flows:	Alternate Flow #1: If a nurse chooses to view future appointments the following steps would occur: 1. The Nurse selects to view future appointments from the main page 2. The system moves the user to a page requesting the Nurse to choose between a weekly or daily view 3. The user selects either weekly or daily view

	4. The system moves the user to a page displaying a calendar of appointments in the user's prefered view 5. The user can then select to view the details about a future appointment or return to the previous page
Post Condition:	The user can view details about future appointments or return to a previous page

Use Case Number:	UC-09
Use Case Name:	Add/Remove Prescriptions
Overview:	Doctors can add or remove a prescription to a patient record. Nurses can view the prescriptions of patients belonging to the same hospital. Patients can view their prescriptions from their account.
Actor(s):	Doctor, Nurses, and Patients
Pre-condition(s):	The patient has had an appointment and is prescribed medicine by a doctor
Scenario Flow:	Main (success) Flow (Doctor): 1. The doctor chooses to view a patient's record 2. The system requests the patient's name 3. The user enters the desired patient's name 4. The system moves the user to a page displaying the patient's information 5. If the user can choose to add or remove prescriptions to the record 6. The system saves any changes 7. The user then has the option to return to the main page or continue to change the patient's record
Alternate Flows:	Alternate Flow #1: (Patient) 1. The patient chooses to view their record 2. The system moves the user to a page displaying their record 3. The user then has the option to return to the main page or stay on the current page

	Alternate Flow #2: (Nurse) 1. The nurse chooses to view a patient’s record 2. The system asks the user for the patient’s name 3. The user enters the desired patient's name 4. The system checks to see if the patient is a patient as the same hospital as the nurse. If the patient is, the flow continues. If not, the system displays an error message and returns to step 3 5. The system moves the user to a page displaying the patient’s record 6. The user then has the option to return to the main page or stay on the current page
Post Condition:	Any changes to the patient’s record are saved

Use Case Number:	UC-10
Use Case Name:	Viewing Patient Medical Information, Prescriptions and Tests and Results
Overview:	Doctors can view all medical information for any patient in the system (regardless of Hospital). Nurses can only view patient medical information in the hospital they work for. Patients can view their tests (pending or completed) and view the corresponding results for those tests that have been released by the doctor. Prescriptions and other non-sensitive information is viewable by the patient without a need for doctor’s release.
Actor(s):	Doctors, Nurses, Patients.
Pre-conditio n(s):	Patient has a preexisting account within the system and user looking for medical information is already logged in
Scenario Flow:	***Main (success) Flow:*** 10. The doctor chooses to view a patient’s record 11. The system requests the patient’s name 12. The user enters the desired patient's name 13. The system moves the user to a page displaying the patient's information 14. If the user can choose to add or remove prescriptions to the record 15. The system saves any changes

	16. The user then has the option to return to the main page or continue to change the patient's record
Alternate Flows:	***Alternate Flow:*** Alternate Flow #1: (Patient) 4. The patient chooses to view their record 5. The system moves the user to a page displaying their record 6. The user then has the option to return to the main page or stay on the current page Alternate Flow #2: (Nurse) 7. The nurse chooses to view a patient's record 8. The system asks the user for the patient's name 9. The user enters the desired patient's name 10. The system checks to see if the patient is a patient as the same hospital as the nurse. If the patient is, the flow continues. If not, the system displays an error message and returns to step 3 11. The system moves the user to a page displaying the patient's record 12. The user then has the option to return to the main page or stay on the current page
Post Condition:	System logs any changes made and tracks user activity

Use Case Number:	UC-11
Use Case Name:	Release Test Results
Overview:	Doctors (within the patient's hospital) can, upon evaluating a patient's test results, release them for view by that patient. Comments may be added to the specific test result for viewing by the patient.
Actor(s):	Doctors, Patients.
Pre-conditio n(s):	Patient has a preexisting account within the system and has had test conducted
Scenario Flow:	***Main (success) Flow:*** 17. The doctor selects a patient 18. The doctor selects performed tests to release to the patient 19. The doctor releases the test results

	20. The doctor may also return to the released results to add comments
Alternate Flows:	***Alternate Flow:*** 1. Patient logs in 2. If test results have been released by the doctor the patient can click on a notification to view the results 3. If any new comments have been added to the test results by the doctor then the patient will receive a notification to view them
Post Condition:	Any comments that were added to the test results are saved in the system

Use Case Number:	UC-12
Use Case Name:	Logging System Activity
Overview:	For security, many actions in the system will be logged for review at a later date. Some examples of actions to be logged include but are not limited to updating of a Patient’s information, viewing of a Patient's information/records, and transfers of a Patient from one hospital to another.
Actor(s):	Doctors, Nurses, Patients.
Pre-condition(s):	None?
Scenario Flow:	***Main (success) Flow:*** 21. Any change to patient information will be logged within the system 22. If a patient is transferred to a different hospital that will be logged 23. Appointments, prescriptions, and other patient specific information will be logged
Alternate Flows:	***Alternate Flow:*** 6. User exits the account creation process, realizing they lack some necessary information 7. System returns user to main page

Post Condition:	A comprehensive log of all activity within the system is stored and can be accessed by an administrator

Use Case Number:	UC-13
Use Case Name:	Admission and Discharge to/from Hospital
Overview:	Doctors and Nurses can admit a patient to the hospital for an extended stay (reasons could be: emergency, observation, surgery, etc.). These are typically unexpected visits but can result from a decision made after a scheduled appointment. This event is recorded by the system. Doctors are the only ones to approve a patient's discharge from the Hospital. This event is recorded by the system.
Actor(s):	Doctors, Nurses, Patients.
Pre-conditio n(s):	Patient either needs to be admitted or needs to be discharged from the hospital
Scenario Flow:	***Main (success) Flow:*** 24. Doctor inputs patient name to be discharged 25. Or Doctor intakes new patient and creates a new patient account 26. System will log all patient activity to be view by an administrator at a later date.
Alternate Flows:	***Alternate Flow:*** ***1.*** Nurses can admit patients to the hospital ***2.*** Nurse can submit a request to discharge a patient from the hospital 3. This must be approved by the patient's doctor
Post Condition:	Any addition or dismission from the hospital will be logged by the system noting which doctor approved the change.

Use Case Number:	UC-14
Use Case Name:	Viewing Activity Log
Overview:	Administrators will be able to view the logs of all system activity for a given time-frame at their hospital. Some examples of this might be:

	- breakdown of the viewing activity of patient records or by system user - most common system activities (or by user) Other important and informative statistics yet to be determined.
Actor(s):	Administrators
Pre-condition(s):	Activity has already been logged and stored by the system
Scenario Flow:	***Main (success) Flow:*** 27. Administrator is logged in 28. Admin will navigate to the statistics and log page 29. Admin will be able to view all statistics 30. Admin will also be able to view individual employee and patient statistics 31. Admin can set up alerts to be sent if certain preset conditions are reached
Alternate Flows:	***Alternate Flow:*** No alternate flow
Post Condition:	System will store when the activity log was viewed for future reference

Use Case Number:	UC-15
Use Case Name:	Viewing System Statistics
Overview:	Administrators will be able to view compiled statistics for a given time-frame at their hospital. Some examples of this might be: - 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
Actor(s):	Administrator, System
Pre-condition(s):	Logged in as administrator.

Scenario Flow:	. 1) Admin views the history of events registered in server. 2) Server shows the list of the events which are bound by the time frame. 3) Administrator looks through different events. 4) Each event consist of each registered patient, patient's length of stay etc. 5)Considering the total number of events and calculating the following attributes help to understand the statistics.
Alternate Flows:	No alternate flow
Post Condition:	Administrator gets to know the statistics of the working of hospital.

Use Case Number:	UC-16
Use Case Name:	Patient Transfer
Overview:	Patient can be transferred between hospitals. Transfers can be carried out by either administrators or by doctors (ones who are at the receiving hospital).
Actor(s):	Doctors, Administrators
Pre-condition(s):	Logged in as administrator or registered doctor
Scenario Flow:	1)Logged in as administrator or doctor . 2) Send Transfer request to other hospital. 3)Transfer carried out once doctors of receiving hospital gets the transfer request.

Alternate Flows:	If transfer request not received or declined then emergency call to other hospital for urgent transfer .
Post Condition:	Transfer carried out successfully.

Use Case Number:	UC-17
Use Case Name:	Upload Patient Information
Overview:	Doctors will be able to upload the results of a patient's tests if needed. Doctors will be able to upload images such as those used in X-Rays to update a patient's record. Uploads are considered as updates to a patient's medical information.
Actor(s):	Doctor
Pre-condition(s):	Staff login as doctor
Scenario Flow:	1) Access the medical info page of the registered patient. 2) Upload the result of the test and images of x-ray to the health record. 3) Update the medical info page.
Alternate Flows:	No alternate flows

Post Condition:	Medical info page of patients gets updated with recent results. Patient can view the updated information.

Use Case Number:	UC-18
Use Case Name:	Sending private message
Overview:	Doctors, nurses, patients and administrators can send private messages of limited length via the system.
Actor(s):	Doctors, Nurses, Patients, Administrator
Pre-condition(s):	Logged in as one of the users: Staff, admin, patient
Scenario Flow:	1) Logged in. 2) Select the sms application and write the sms. sms is of limited length. 3) Choose the receiver from the contacts in the profile or doctor’s homepage. 4) Send the sms.
Alternate Flows:	If word length exceeded then sms not sent. Try again sending more than one sms.
Post Condition:	Receiver gets the sms.