Product Requirements

Team: 201405-02-SWEN-261-TEAM-B-ProjectCurry
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Revision Number	*Revision Date*	*Summary of Changes*	*Author(s)*
1.0	02/07/2015	Initial creation of the project plan	Project Curry
1.1	2/16/2015	Define R1 and R2 requirements	Project Curry
1.2	2/22/2015	Add move appointment requirement	Joe Cumbo
1.3	2/26/2015	Remove and redo every use case diagram	Joe Cumbo
1.4	3/7/2015	Added end user to stakeholders,edited use case descriptions to a common format for final copy. Checked	David Lor
1.5	3/8/2015	Cancelling registration is now by clicking back instead of a “cancel” button. Finalizing R1 use cases.	David Lor

Brief problem statement

Our team, Project Curry, has been contracted to develop applications to streamline the health-care process for hospitals and patients across the country. The project we currently want to make a reality will be called **HealthNet**. At its core, HealthNet is meant to enable their hospitals in the US to be able to manage both employees and patients. The successful implementation should make it easy for users to effortlessly sign-up as patients so that the hospital can, without difficulty, manage their procedures and patient related tasks to optimize day-to-day work-flow.

The HealthNet product is intended to improve hospitals by providing an easy mechanism for managing employees, gathering statistical data on the inner workings of the hospital, signing up patients, making appointments, and allowing ease of transfer of both patients and their information between hospitals.

We want a product whose emphasis is on ease of use, whose navigation is straightforward and where the status of any, and all, information shown is clearly displayed. Ultimately, a system where understanding and communication about hospital and patient matters is improved.

Stakeholders

HAccelerator Board of Directors – oversee the projects funding and expenses. Have vested interest in the proven success of the product but are not involved in the planning and execution.

HAccelerator Product Owner – will act as principle representative for HealthNet product needs. He/she champions the product with the Board of Directors, helps facilitate product decisions and has the ultimate say on when and what features should be released.

Software Engineering Team – is responsible for the day-to-day operations and coordination of all aspects related to the software product's life-cycle. This include, among others: planning and delegation of team roles and responsibilities; elicitation and clarification of requirements; analysis and design; implementation, testing and release of all software components.

Beta Testing Team – represent the target user base for HealthNet. Will be available in later phases of the project to conduct acceptance testing and provide feedback on product release.

End Users – are the people who are going to be using the product. This group of people needs to be satisfied by the end product. Everything said them must be listened carefully to and considered in development of the product.

Users profile

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

At a high-level this project will be source controlled in SVN, run on Django using python, sqlite and needs to be compatible with the latest browsers.

Although the application needs to be accessible through the internet, deployments and demonstrations for this phase of the project will take place within the RIT Software Engineering environment. To this end, you must understand and document the target platforms from the perspective of the client browser as well as that of the server. Make sure to capture versions or software dependencies, programming languages and hardware specifications that are available for your use and proceed only after you document and confirm these with the customer.

Feature requirements (user stories)

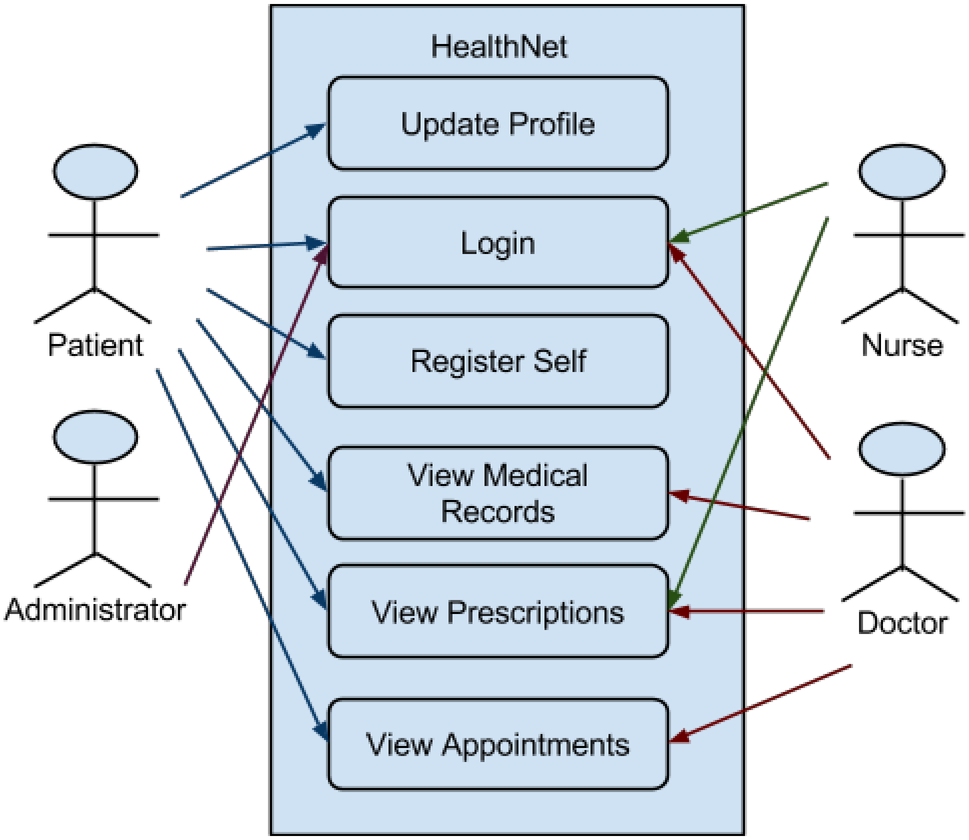
The following list of user stories is neither final nor comprehensive. You must consider it your responsibility to maintain its relevance, clarify any misunderstandings and keep it up-to-date. Any changes must be discussed with the Product Owner for approval.

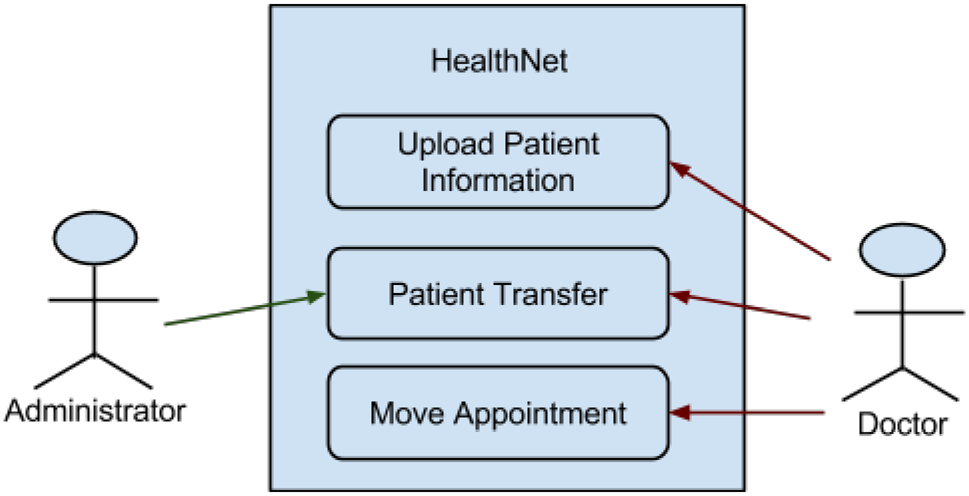
No.	User Story Name	Description	Release
1	Patient Registration	Users sign up to become a Patient by providing their personal contact information, proof of insurance and unique login credentials. Additionally, a patient should provide the system with some basic medical profile information, a choice of 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.	R1
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
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. If the patient or doctor already has an appointment at the time selected, then the system will not allow for the appointment.	R1
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.	R1

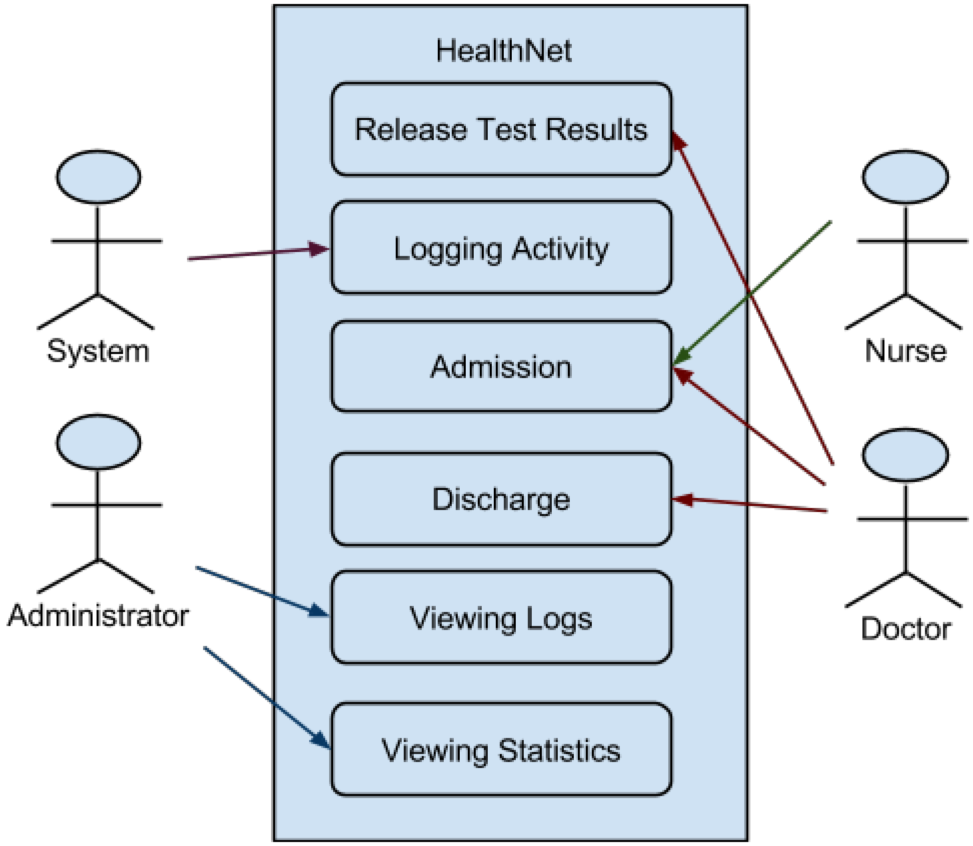
		Nurses will be able to see all appointments for the day and week between Patients and Doctors.	
9	Add/Remove Prescriptions	Doctors can add or remove a prescription to a patient record. Nurses can view the prescriptions of patients belonging to the same hospital. Patients can view their prescriptions from their account.	**R2**
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. Comments may be added to the specific test result for view by the patient.	**R2**
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:	**R1**

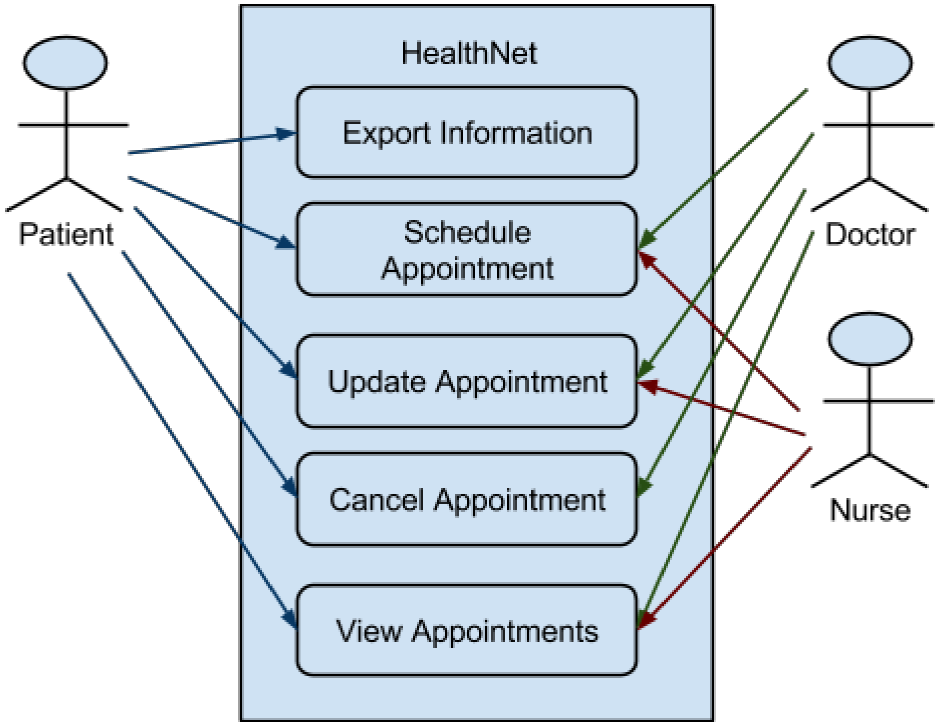
		- breakdown of the viewing activity of patient records or by system user - most common system activities (or by user) Other important and informative statistics yet to be determined.	
15	Viewing System Statistics	Administrators will be able to view compiled statistics for a given time-frame at their 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 Other important and informative statistics yet to be determined.	**R2**
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**
19	Move Appointment	Doctors can move appointments on their calendar. Patients will see the original time.	**R2**

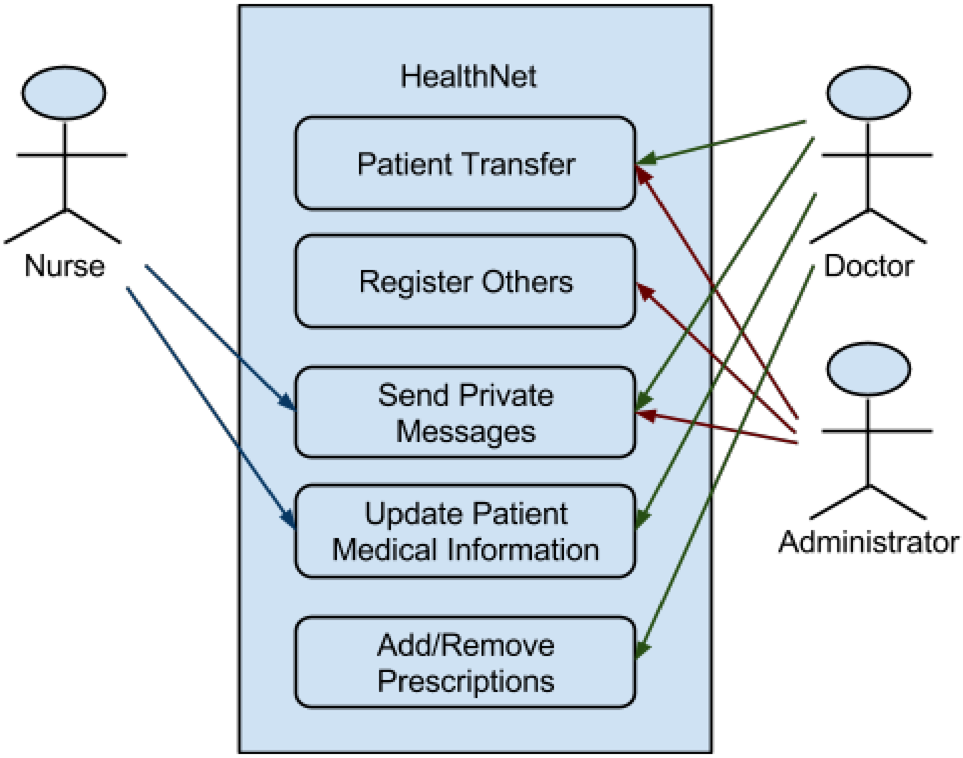
Use case diagram






HealthNet
Release Test Results
Logging Activity
Admission
Discharge
Viewing Logs
Viewing Statistics
System
Administrator
Nurse
Doctor


HealthNet
Export Information
Schedule Appointment
Update Appointment
Cancel Appointment
View Appointments
Patient
Doctor
Nurse



Use case description

Use Case Number:	**UC-01**
Use Case Name:	**Patient 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 email address, password, first name, last name, and insurance.** 3. **Registrant provides listed information and clicks register.** 4. **System verifies required information is provided.** ● **If information is invalid System displays message. Return to Step 3.** 5. **System brings user to main page.** 6. **User clicks on update profile.**

	7. **System requests basic medical information and emergency contact information.** 8. **Registrant provides medical information and contact info and clicks update profile.** 9. **System verifies required information is provided.** ● **If information is invalid System displays message. Return to Step 7**
Alternate Flows:	**Alternate Flow #1: During any point in the success scenario the user may decide to cancel registration.** **1. User opts to cancel during registration by clicking the back button.** **2. System returns to main screen.** **Alternate Flow #2: User has no medical insurance. After step** **1. User has no medical insurance to enter. Patient must hit the back button to return to the main page (cancelling registration). Patient must enter insurance information to complete registration.** **Alternate Flow #3: The emergency contact information is an existing user in the system. During Step 15 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:	**Success Flow Post Condition: Patient is successfully registered.** **Alternate Flow #1-3 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:	**The administrator will have the option to register doctors, nurses, or other administrators. Unlike patients, employees and future administrators will not be able to register themselves. Current Administrators will register them and provide personal contact information for each person. Also the status of the person will need to be provided whether nurse, doctor, or administrator is the status of the person.**
Actor(s):	**Administrator**
Pre-condition(s):	**- System has been setup and configured.** **- Administrator has a new employee who will register.** **- Administrator has accessed website via URL.** **- Default administrator account is already created.** **- Administrator has successfully logged into their account.**
Scenario Flow:	**Main (success) Flow:** **1. New nurse, doctor, or administrator creates a normal user account.** **2. System requests personal information of new employee.** **3. System verifies required information is provided.** **● If information is invalid System displays message. Return to Step 2.** **4. Once required information is provided system moves on to requesting emergency contact information for employee.** **5. New employee fills in emergency contact information for new account.** **6. System verifies required emergency contact information is provided.** **● If information is invalid System displays message. Return to Step 4.** **7. System displays new account with personal information and emergency contact information and generates login info.** **8. Administrator elevates the new employee to their proper position from a regular user.**
Alternate Flows:	**Alternate Flow #1: During any point in the success scenario the user may decide to cancel registration.** **1. New employee opts to cancel during registration by clicking the back button.** **2. System returns to main page.**
Post Condition:	**Success Flow Post Condition: New account has been created via the administrator account.** **Alternate Flow #1 Post Condition: New employee did not complete new account registration. System does not create new account and administrator never gets to elevate new employee.**

Use Case Number:	**UC-03**
Use Case Name:	**Update Patient Profile Information**
Overview:	**Patients can update their profile information.**
Actor(s):	**Patient**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and accessible.** **- Patient has accessed website via URL.** **- Patient already has been registered and logged into their account.**
Scenario Flow:	**Main (success) Flow:** **1. System displays the all of the registrant's profile information on the main page.** **2. Patient clicks edit profile and makes changes to his/her information.** **3. System verifies required information is provided and correct (integer vs character).** **● If information is invalid System displays message. Return to Step 3.** **4. System displays message information updated and returns to original screen.**
Alternate Flows:	**Alternate Flow #1: During any point in the success scenario the user may decide to cancel editing their profile:** **1. Patient clicks back button.** **2. System returns to main page.**
Post Condition:	**Success Flow Post Condition: Patient successfully updates their profile information.** **Alternate Flow #1 Post Condition: Patient did not update their profile information. System does not store patient's information.**

Use Case Number:	**UC-04**
Use Case Name:	**Update Patient Medical Info**
Overview:	**Doctors and Nurses can update patient medical information.**
Actor(s):	**Doctor**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and open for registrations.** **- The doctor has accessed website via URL** **- The doctor has an account already set up**
Scenario Flow:	**Main (success) Flow:** **1. Actor logs on to his/her account.** **2. System verifies that account exists** **● If account does not exist System displays message. Prompt actor to register.** **● If login information is wrong then System displays message. Prompt actor to try again.** **3. System display the main window.** **4. Actor selects update patient medical info option.** **5. System requests for patient name and BOD.** **6. System displays all the medical info about the patient.** **7. Actor makes changes to the info.** **8. Actor selects save and system confirm the info is saved successfully.**
Alternate Flow:	**Alternate Flow #1: After Step 5 the system might not be able to find the patient the actor enters. The following should occur:** **System unable to find the patient.** **1. System inform the actor no result found and offer the actor to re-enter patient name.**
Post Condition:	**Success case post condition: The user is able to find the correct patient, edit his/her medical info and save it successfully.** **Alternate flow #1 post condition: No patient found and the actor receive a error message.**

Use Case Number:	**UC-05**
Use Case Name:	**Export Information**
Overview:	**Patient will be able to export their own information into readable document on their computer. Higher level users such as doctors and administrators will be able to export any patient’s information.**
Actor(s):	**Patient, Doctors, and Administrators.**
Pre-condition(s):	**- The requesting user is logged into the system.** **- The requesting user has accessed website via URL.** **- Patient has registered and exists within the system.**
Scenario Flow:	**Main (success) Flow:** **1. Patient selects option to export their information.** **2. System generates a security prompt confirming the actor is sure they would like to export the information.** **3. System generates a text document containing all data related to the patient.** **a. This will include the patient’s contact information.** **b. History of current and previous medications.** **c. Instructions for each medication.** **d. All recorded appointments.** **4. The requesting user is prompted to save the document.**
Alternate Flows:	**Alternate Flow #1: If a higher user such as a doctor, nurse, or administrator wants to export a specific patient’s information, following steps will occur:** **1. Doctor/Nurse/Admin selects a patient.** **2. Proceed to step 2 of the main success flow.**
Post Condition:	**The system was unable to export the patient’s information.**

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):	**Doctors, Nurses, or Patients**
Pre-condition(s):	**- System has been setup and configured.** **- System is running .** **- Doctor, Nurse, or Patient has accessed website via URL.** **- Nurse, Doctor, or Patient has account in system.**
Scenario Flow:	**Main (success) Flow:** **1. Doctors, Nurse or Patient logs in.** **2. User clicks on view appointments.** **3. User is brought to page showing current existing appointments for said User.** **4. User chooses to update appointment.** **5. After choosing create option actor is brought to page to choose available start and ending appointment time.** **6. User chooses time from available times.** **7. User is guided back to appointments page.**
Alternate Flows:	**Alternate Flow #1: After Step 1 in success scenario if user decides to create an appointment instead of updating** **2. User clicks on create appointments.** **3. User is brought to page where system prompts for description, hospital, doctor, startime, endtime, and date.** **1. Actor chooses to go back to main menu.** **2. System returns back to main menu.**
Post Condition:	**Success Flow Post Condition: Appointment is created and displayed in appointments tab.** **Alternate Flow #1 Post Condition: System returns to main menu after redirection from appointments page.**

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):	**Patients and Doctors.**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and open for registrations.** **- Patients and Doctors has accessed website via URL.** **- Patients and Doctors has an account in the system.** **- The desired appointment to be cancelled exists in the system.**
Scenario Flow:	**Main (success) Flow:** **1. Patient or Doctor logs into their account.** **2. Patient or Doctor clicks on the appointment tab.** **3. Patient or Doctor is brought to page showing current appointments.** **4. Patient or Doctor has option to delete current appointments via check boxes.** **5. Patient or Doctor chooses checks box to delete desired appointment.** **6. System displays message to confirm delete.** **7. System takes user back to home page.**
Alternate Flows:	**Alternate Flow #1: After Step 2 in success scenario System will display the option to Cancel the patient appointment cancellation process. The following steps would occur:** **1. Registrant selects option to cancel while looking at appointment tab.** **2. System requests confirmation to cancel.** **3. Registrant confirms intent.** **4. System returns to main screen.**
Post Condition:	**Patient or doctor did not cancel appointment.**

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):	**Patient, doctor or nurse.**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and open for registrations.** **- Patients and Doctors has accessed website via URL.** **- Patients and Doctors has an account in the system.** **- Nurse has an account in the system already.**
Scenario Flow:	**Main (success) Flow:** **1. User logs into their account.** **2. User clicks on the appointment tab.** **3. If the user is a patient or Doctor, then he/she is brought to page showing their appointments in a calendar view.** **4. If the user is a nurse, then the system displays all appointments for the day and week between Patients and Doctors.**
Alternate Flows:	**Alternate Flow #1: In case the system is unable to generate a calendar view, the following should happen:** **1. System unable to generate a calendar view and display an error message.**
Post Condition:	**Successful use case: user is able to see appointments pertaining to their titles.** **Alternate use case #1: user is unable to see appointments and receives an error message.**

Use Case Number:	**UC-09**
Use Case Name:	**Add / Remove prescriptions**
Overview:	**Doctors, and Admins will be able to add and remove prescriptions to patient’s account. Prescriptions will have directions and dates associated with them.**
Actor(s):	**Doctors and Administrators.**
Pre-condition(s):	**- System has been setup and configured.** **- System is running accessible .** **- The actor is logged into the system.** **- The actor has accessed website via URL.** **- Patient has registered and exists within the system.**
Scenario Flow:	**Main (success) Flow:** **1. Actor selects a patient’s profile.** **2. System requests the patient’s profile information.** **Adding a medication:** **1. Actor selects the add medication button.** **2. System prompts the actor with a form containing the type of medication, dosage, instructions, and start date for the medication.** **3. Actors submits the information.** **4. System verifies the information has been filled out completely** **a. If the information is not completely filled out, the system goes back to step 2 in adding a medication.** **5. The medication is added to the patient’s record.** **Removing a medication** **1. Actor looks for the desired medication to removed on the patient’s profile.** **2. System prompts the actors with a confirmation message containing the medication that will be removed the the patient’s record.** **3. Actor accepts the prompt.** **a. If the patient does not accept the prompt, they are returned to the profile page.** **4. System removes the medication from the patient’s profile.**
Alternate Flows:	
Post Condition:	**The system was unable to add or remove a medication to a patient’s profile.**

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, and Patients.**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and open for registrations.** **- Doctor, Nurse, or Patient has accessed website via URL.** **- Doctor, Nurse, or Patient already is already registered.**
Scenario Flow:	**Main (success) Flow:** **1. If Doctor then System pulls up the list of the hospitals in the system; if nurse then skip to step 2; if patient then skip to step 3.** **2. System pulls up a search tab for the input of the patient's name, id, etc.** **● If patient does not exist then System displays error message** **3. System pulls up patient medical information. This includes prescriptions and other non-sensitive information.**
Alternate Flows:	**Alternate Flow #1: After Step 2 in success scenario System will display the option to Cancel the look-up process. The following steps would occur:** **1. User selects option to cancel while looking up data.** **2. System request confirmation to cancel.** **3. User confirms intent.** **4. System returns to main screen.**
Post Condition:	**User cancelled request for patient data and System brings user back to home screen.**

Use Case Number:	**UC-11**
Use Case Name:	**Release Test Results**
Overview:	**Doctors can release test results for view for patients as well as add comment to the test results.**
Actor(s):	**Doctors**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and accessible.** **- Doctor has accessed website via URL.** **- Patient is in system.**
Scenario Flow:	**Main (success) Flow:** **1. Doctor has logged into system.** **2. Doctor searches for patient in system.** **3. Doctor selects patient.** **4. After selecting patient doctor can choose to edit/view test results.** **5. System directs to patient's test results.** **6. Bottom of page has add comments window.** **7. Doctor chooses option to release test results.** **8. System prompts doctor for confirmation.** **9. Upon confirmation test results with comments or none if none are added are released for viewing to patient.**
Alternate Flows:	**Alternate Flow #1: After Step 3 in success scenario System will display the option to redirect to main menu. The following steps would occur:** **1. Doctor chooses back to main menu option.** **2. System redirects to main menu.**
Post Condition:	**Success Flow Post Condition: Test results are released for patient's viewing.** **Alternate Flow #1 Post Condition: System returns to main menu**

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 Patients information/records, and transfers of a Patient from one hospital to another.**
Actor(s):	**System**
Pre-condition(s):	**- System has been setup and configured.** **- The user has an active account to log on to** **- The user is interacting with the system.**
Scenario Flow:	**Main (success) Flow:** **1. User logs on to the system.** **2. System records user activities such as updating of a Patient's information, viewing of a Patients information/records, and transfers of a Patient from one hospital to another.** **3. Keep recording until user logs off.** **4. Store the activity log in the database.**
Alternate Flows:	**Alternate Flow #1: When the system is unable to record user activity, the following should occur:** **1. Inform system administrators that user activity cannot be recorded.**
Post Condition:	**Success Flow Post Condition: System records user's activity and stores in the database.** **Alternate flow #1: System administrators receive a warning when they log in.**

Use Case Number:	**UC-13**
Use Case Name:	**Admission and Discharge to/from hospital**
Overview:	**A doctor or nurse can admit a patient to the hospital for a longer stay due to certain decisions made. However, only a doctor is allowed to discharge a patient. Both admissions and discharges are detailed in patient’s file.**
Actor(s):	**Doctors and Nurses.**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and open for registrations.** **- Doctors and nurses have been previously signed in.** **- Patient has been registered in the system (only for Discharge).**
Scenario Flow:	**Main (success) Flow [Admission]:** **1. Doctor or nurse signs in.** **2. User selects to admit patient.** **3. System requests the user to choose the patient who is going to be admitted.** **4. System asks for the initial reason(s) why patient is being admitted.** **5. User inputs that information.** **6. Systems prompts for verification before information is saved.** **7. User verifies information and the patient is added as ad admitted patient in the system.** **Main (success) Flow [Discharge]:** **1. Doctor signs in.** **2. User selects to discharge a patient.** **3. Systems requests the name of the patient to be discharged.** **4. User inputs the name of that patient.** **5. System prompts for verification for being discharge is committed.** **6. User verifies the request and the patient is discharged in the system.**
Alternate Flows:	**Alternate Flow #1 [Admission] (Success): The person to be admitted has never been to his hospital and therefore has no information in the system. After step 3, the following steps would occur:** **4. User creates a new profile for the incoming patient.** **5. System requests for basic information of the new patient.** **6. User enters that information.**

	7. System requests for the initial reason(s) why he/she is being admitted. **8. User enters that information.** **9. Systems prompts for verification before information is saved.** **10. User verifies information and the patient is added as an admitted patient in the system.** **Alternate Flow # 2 [Admission]: After step 2 in the admission flow, the system will display the option to cancel the admission and return to the main menu is given. The following steps would occur:** **3. User selects option to cancel the admission.** **4. System requests confirmation to cancel.** **5. User confirms intent.** **6. System returns to main screen** **Alternate Flow #3 [Discharge]: After step 2 in the discharge flow, the option to cancel the discharge and return to the main menu is given. The following steps would occur:** **3. User selects option to cancel the discharge.** **4. System requests confirmation to cancel.** **5. User confirms intent.** **6. System returns to main screen.**
Post Condition:	**Success Flow (Admission): Patient is admitted to the hospital.** **Success Flow(Discharge): Patient is discharged from the hospital.**

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):	**Administrator**
Pre-condition(s):	**- System has been setup and configured.** **- Administrator account is running.** **- Administrator has accessed website via URL** **- Default administrator account is already created** **- Admin has successfully logged into their account**
Scenario Flow:	**Main (success) Flow:** **1. Administrator clicks on view activity** **2. Administrator clicks on one of the headers of type, description, user or time to sort by that option.** **3. Go back to step 2 and repeat filter until done.**
Alternate Flows:	
Post Condition:	**Success Flow Post Condition: The system is able to find the username and the administrator is able to view the activity log.**

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**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and open for registrations.** **- System is able to successfully log all actions in the system (view system activity works properly)** **- Administrator has accessed website via URL.** **- Administrator already has an account and has logged into their account**
Scenario Flow:	**Main (success) Flow:** **1. Administrator logs into System and clicks on view system statistics tab.** **2. Administrator selects "Number of Visited Patients" statistic to view from drop down menu** **3. System displays date and time fields for user to enter.** **4. System displays desired data.** **5. Administrator has option to go to home page or go back.**
Alternate Flows:	**Alternate Flow #1: After step 1, user chooses top 10 prescriptions from drop down menu:** **3. Administrator selects "Top 10 prescriptions" statistics to view from drop down menu.** **4. System displays desired data** **Alternate Flow #2: After step 1, user chooses top reason for admission from drop down menu:** **3. Administrator selects "Top Reason for Admission" statistics to view from drop down menu.** **4. System displays desired data**
	Success Flow Post Condition: Administrator successfully views desired system statistics.

Use Case Number:	**UC-16**
Use Case Name:	**Patient Transfer**

Overview:	**Administrators or doctors will have the option to transfer patients between hospitals.**
Actor(s):	**Administrators and receiving Doctors.**
Pre-condition(s):	**- System has been setup and configured.** **- Administrator or Doctor has accessed website via URL**
Scenario Flow:	**Main (success) Flow:** **1. Actor logs into account.** **2. Actor searches for patient in search bar.** **3. After selecting patient profile actor has option to transfer patient.** **4. System directs to transfer patient page.** **5. Actor selects hospital to be transferred to from available hospitals.** **6. After hospital selection system directs to additional information for transfer of doctors.** **7. Transfer doctor at new hospital is selected from available doctors.** **8. Actor chooses finish option and system asks for confirmation.** **9. After confirmation patient information is displayed with new hospital shown on profile.**
Alternate Flows:	**Alternate Flow #1: After Step 3 in success scenario System will display the option to return to main profile menu. The following steps would occur:** **1. Administrator chooses to go back to main menu.** **2. System redirects to logged in actors profile page.** **Alternate Flow #2: After Step 4 in success scenario System will display the option to return to main profile menu. The following steps would occur:** **1. Administrator redirects from patient page back to main menu.** **2. System redirects to logged in actors profile page.** **Alternate Flow #3: After Step 4 in success scenario System will have a search bar to go to other patient’s profile. The following steps would occur:** **1. The actor enters a different patient’s name in the search bar.** **2. Upon selection, actor is directed to selected patient’s name.**
Post Condition:	**Success Flow Post Condition: Patient has been succesfully transferred into different hospital.** **Alternate Flow #1 Post Condition: System returns to main menu.** **Alternate Flow #2 Post Condition: System returns to main menu.** **Alternate Flow # Post Condition: System directs to newly selected patient.**

Use Case Number:	**UC-17**

Use Case Name:	**Upload Patient Information**
Overview:	**Doctors upload test results & images from medical screenings such as X-Rays to a patient's record. These uploads are added on to their medical information.**
Actor(s):	**Doctor**
Pre-condition(s):	**- System has been setup and configured.** **- System is running and open for registrations.** **- Doctor has signed into system previously.** **- The patient whose information is to be uploaded exists already.**
Scenario Flow:	**Main (success) Flow:** **1. Doctor signs into system.** **2. Doctor selects to upload patient information.** **3. System requests for the user to choose the patient.** **4. Doctor selects the patient he/she is uploading information to.** **5. System prompts for what kind of information is to be uploaded.** **6. Doctor selects what kind of information is going to be uploaded.** **7. System requests the name of the medical test & the date it was performed.** **8. Doctor enters that information in.** **9. System prompts for the results of the test.** **10. User enters that information in.** **11. Systems requests for any additional comments about the test (can be medical opinions, interpretations of the results, etc.)** **12. User enters that information in if desired.** **13. User selects to upload the given information.** **14. System prompts for verification before the information is saved.** **15. User confirms intent.** **16. The system displays that the medical test was uploaded succesfuly.**
Alternate Flows:	**Alternate Flow #1 (Success): The doctor is uploading images to the patient's record. After Step 8 in the success flow, the following steps would occur:** **9. System gives user the option to choose an image file to upload.** **10. Doctor selects file(s) to upload.** **11. System displays the selected images and asks user to verify that those images are the ones intended.** **12. Doctor confirms the selected images.**

	13. System requests for any additional comments about the test (can be medical opinions, interpretations of the results, etc.) 14. User enters that information in if desired. 15. User selects to upload the given information. 16. Systems prompts for verification before the information is saved. 17. User confirms intent. 18. The patient’s medical information is updated and system displays that the test was uploaded successfully. Alternate Flow #2: After step 2, the system will display the option to cancel uploading the information and return to the main menu. The following steps would occur: 1. User selects option to cancel uploading. 2. System requests confirmation to cancel. 3. User confirms intent. 4. System returns to the main menu.
Post Condition:	Registrant did not complete registration. System does not store Registrant's information.

Use Case Number:	UC-18
Use Case Name:	Send private messages
Overview:	Doctors, nurses, patients and administrators can send private messages of limited length via the system.

Actor(s):	**Doctors, nurses, patients and administrators**
Pre-condition(s):	**- System has been setup and configured.** **- System is running accessible** **- The actor is logged into the system** **- The actor has accessed website via URL** **- Patient has registered and exists within the system**
Scenario Flow:	**Main (success) Flow:** **1. Actors selects another actors profile** **2. System requests the patient's profile information** **3. Actor selects the send message option** **4. System directs the actor to a conversation page between the selected profile and the actor** **a. The conversation page consists of a list of previous messages exchanged, a input box, and a send button.** **5. Actors types message into the box and hits the send button** **6. System verifies the message is valid (Not empty)** **a. If the message is empty, steps 7 and on are skipped** **7. System logs the message and marks the target profile that they have unread messages** **8. System adds the message to the conversation page**
Alternate Flows:	
Post Condition:	**The system was unable to send the message**

Use Case Number:	**UC-19**
Use Case Name:	**Move appointments**
Overview:	**Doctors can move appointments on their calendar. Patients will see the update and vice versa. Notifications will be sent to update the other of the change.**
Actor(s):	**Doctors**

Pre-condition(s):	**- System has been setup and configured.** **- System is running, accessible.** **- The actor is logged into the system.** **- The actor has accessed website via URL.** **- Patient has registered and exists within the system.** **- Patient and doctor have an appointment together.**
Scenario Flow:	**Main (success) Flow:** **1. Doctor navigates through appointment list and selects the appointment they would like to move.** **2. System gets the appointment information and displays date and time information.** **3. Doctor enters new date and/or time.** **4. System validates the time.** **5. System stores the original time and modified time and sends message notification to inform the patient/doctor of change.**
Alternate Flows:	**Alternate Flow #1: After step 4, if time is invalid then system displays the date and time information along with the error. step 5 never happens in this case.**
Post Condition:	**Success Scenario: Appointment was successfully moved and patient informed of change.** **Alternate Flow #1: Move appointment failed, doctor informed of error and update is not saved/no notification sent.**