Requirements Document

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1.0 Brief Problem Statement

Our team will be working to create HealthNet, a product by HAccelerator, whose goal is to streamline the process of maintaining employee and patient records. The problem at hand is to optimize several operations so that ease of use and navigation are at the forefront. Frequent communication with HAcellerator will be our goal in ensuring that this project is completed on time and meets all of the requirements and specifications.

2.0 Stakeholders

HAccelerator Board of Directors – The representative of the HAccelerator corporation, and the board funding the creation of the HealthNet product. While not involved in the planning of the application they hold the largest interest in the success of the project.

HAccelerator Product Owner (Timothy Whitcher) – Primary representative for consultation on HealthNet product's requirements. Referred to as "the customer", he is the main median of communication between TeamSquad and the Board of Directors. He has the final say on what product features will be released and on what days.

TeamSquad – The team of computer scientists and software engineers put together with the task of designing, implementing, testing, and bringing to life the HealthNet application. They are responsible for the day-to-day operations and coordination of the software product's life-cycle.

Beta Testing Team – The testing team represents a small sample of users that will come to use the HealthNet application upon its fruition. Their purpose is to test that all requirements laid out by the customer are met before the final release.

3.0 Users profile

The target user must:
- have basic computer skills
- have filled out forms online prior to this one
- have access to a computer with internet capabilities
- desire to improve their overall health and their interactions with the hospital
- be willing to share contact and medical information, including past and current medical records
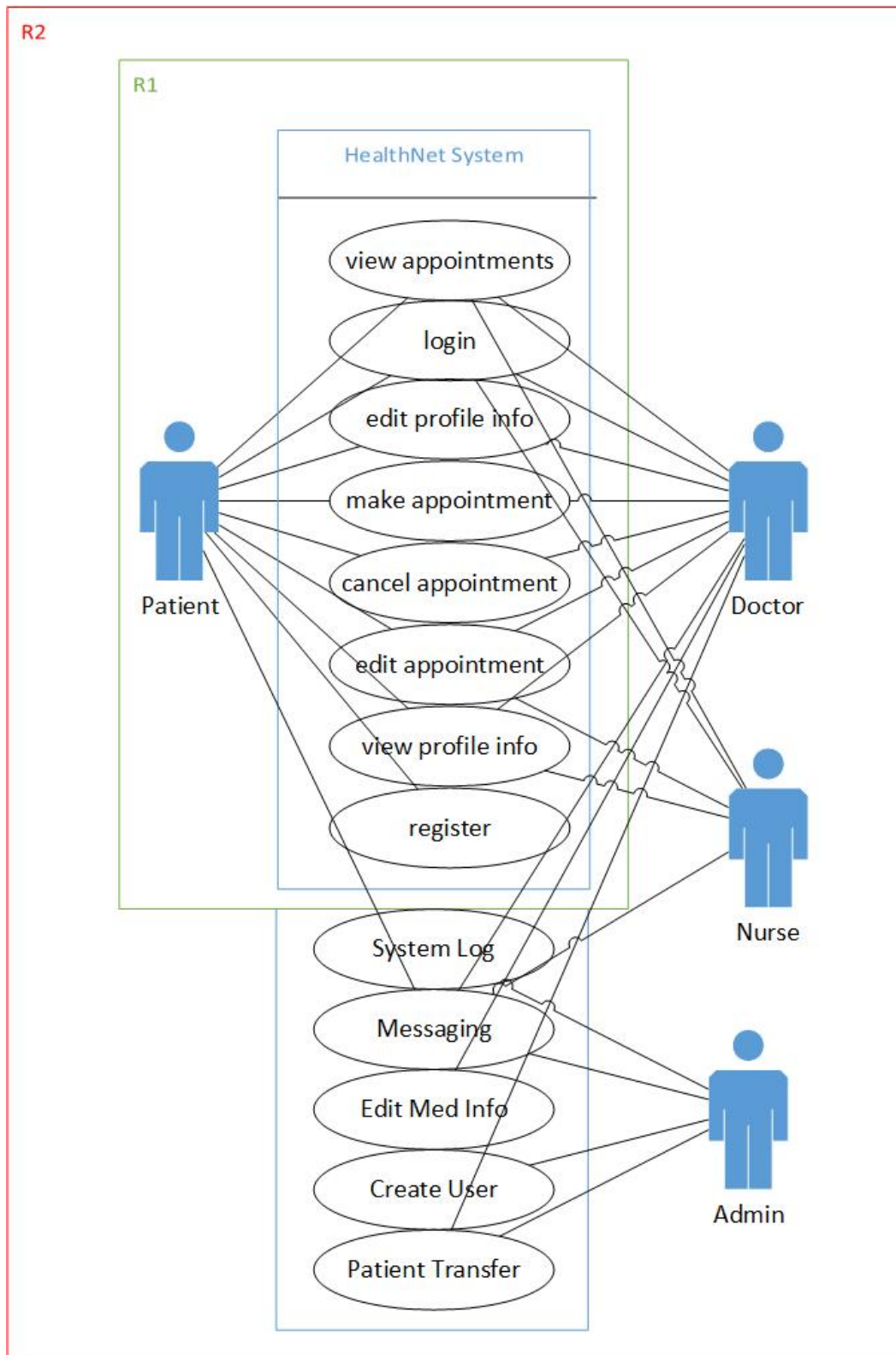
4.0 Use Cases (Operational Scenarios)

Use Case Number	User Story Name	Description	Release
UC-01	Patient Registration	Users sign up to become a Patient with their personal contact information and creates login credentials. Additionally, a patient may provide the system with some basic medical profile information, a choice of preferred hospital, health insurance provider, and emergency contact information (linked to another patient if they are already in the system).	**R1**
UC-02	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**
UC-03	Update Patient Profile Information	Patients can update their profile information.	**R1**
UC-04	Update Patient Medical Information	Doctors and Nurses can update patient medical information.	**R2**
UC-05	Export Information	Patients will be able to export their information and their test results from the system with relevant privacy warnings.	**R2**
UC-06	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**
UC-07	Cancel Patient Appointment	Patients can cancel their existing appointments. Doctors can cancel their existing appointments. Nurses cannot cancel (only modify) existing appointments.	**R1**

UC-08	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**
UC-09	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**
UC-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**
UC-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**
UC-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 Patient's information/records, and transfers of a Patient from one hospital to another.	**R2**

UC-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**
UC-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.	**R2**
UC-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 1. average length of stay (from admission to discharge) 1. most common reasons for being admitted to the hospital 1. prescription statistics Other important and informative statistics yet to be determined.	**R2**
UC-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**

UC-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** |
| UC-18 | Send Private Message | Doctors, nurses, patients and administrators can send private messages of limited length via the system. | **R2** |
| UC-19 | Hospital Assignment | The same doctor can be assigned to multiple hospitals.
Nurses can only be assigned to one hospital. | **R2** |
| UC-20 | Logging Patient Services | Log events should pertain to the services provided to a patient: when they visited their doctor, what immunizations they received, what test they received and the results of those tests. etc. | **R2** |
| UC-21 | Patient Being Transferred with Reason | A doctor or admin may transfer a patient to their hospital and the reason will be logged. | **R2** |
| UC-22 | Message Traffic Restriction | Users are restricted to who they can send messages to depending on their profile permissions.

If a user tries to send a message to a user outside of their group they will receive a error message. | **R2** |
| UC-23 | Available Times on Calendar | Doctors, Nurses, and Patients should be able to view available times on the calendar. | **R2** |

4.1 Use Case Diagram

4.2 Use Cases (Description)

Use Case Number:	UC-01-01
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: ● Registrant selects option to register ● System requests <u>personal</u> information ● Registrant provided personal information. ● System verifies required information is provided. 　　● If information is invalid System displays message. Return to Step 2 ● System displays confirmation of registration
Alternate Flows:	Main (success) Flow: Alternate #1: Throughout the process the user has the ability to go back to the home screen which will cancel the registration process at anytime. 1. Registrant selects option to register 2. System requests <u>personal</u> information 3. Registrant provided personal information. 4. Registrant clicks back button to cancel
Post Condition:	Registrant did not complete registration. System does not store Registrant's information.

Use Case Number:	UC-02-01
Use Case Name:	Administrator Registration
Overview:	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 (Admin)
Pre condition(s):	- System has been setup and configured. - System is running and open for registrations. - Administrator has accessed website via URL and is logged in
Scenario Flow:	Main (success) Flow: 1. Administrator clicks "Create User" button 2. System prompts user to select account type (doctor/staff) 3. Admin selects appropriate user type 4. System displays subsequent registration form 5. Administrator enters required user info and hits "Register User" button 6. System verifies required information is provided. 1. If information is invalid or left field is left blank the system displays error message and highlights appropriate fields. Return to Step 5 1. System displays confirmation of registration
Alternate Flows:	Alternate Flow: After Step 4 in success scenario System will display the option to Cancel the user creation process. The following steps would occur: 1. Admin selects option to cancel during user registration 2. System returns to welcome page
Post Condition:	Admin did not complete account setup. System does not store new user's information.

Use Case Number:	UC-03-01
Use Case Name:	Update Patient Profile Information
Overview:	Patients can update their profile information.
Actor(s):	Patient
Pre condition(s):	- Patient has accessed website via URL - Patient has previously created a profile

Scenario Flow:	Main (success) Flow:
	
	   i. System prompts patient for username and password
	  ii. Patient enters username and password in appropriates fields
	 iii. Patient clicks on edit profile link
	 iv. System returns completed profile form
	  v. Patient changes field to update and hits save
	 vi. System verifies required information is provided.
	vii. System updates profile form in database
	viii. System returns to welcome page

Alternate Flows	Alternate Flows: After step 6, the patient decides they do not need to make and changes and no longer need to edit.
	
	  - Patient clicks the cancel button
	  - System keeps original information in form
	  - System returns to Welcome page

Post Condition:	All patient information is valid and back in read only format

Use Case Number:	UC-04-01
Use Case Name:	Update Patient Medical Information
Overview:	Doctors and Nurses can update patient medical information.
Actor(s):	Doctors, Nurses
Pre condition(s):	- Doctor or Nurse must have accessed website via URL - Doctor or Nurse must have a healthnet account - Patient must have healthnet account and be assigned to that Doctor or Nurse
Scenario Flow:	Main success flow 1. System prompts Doctor/Nurse for username and password 2. Doctor/Nurse enters username and password and selects login button 3. Directed to main landing page 4. Doctor/Nurse selects List Patients 5. System returns list of patients belonging to that user 6. Doctor/Nurse selects view patient 7. System returns form with patient medical info 8. Doctor/Nurse makes change and selects update 9. System updates change to form in the database 10. System returns back to main page
Alternate Flows:	Alternate Flows: After step 7, the Doctor/Nurse decides to cancel the profile change. 1. Doctor/Nurse clicks the cancel button 2. System does not change any information in the database 3. User returned to index page
Post Condition:	Patients changed medical info is saved in database

Use Case Number:	UC-05-01
Use Case Name:	Export Information
Overview:	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):	- Patient has accessed website via URL - Patient has previously created a profile
Scenario Flow:	Main (success) Flow: 1. System prompts patient for username and password 2. Patient enters username and password in appropriates fields 3. Patient clicks on medical info link 4. System displays current patient's medical info 5. Patient clicks export info button 6. System displays pop-up with privacy warning that requests acknowledgement 7. Patient clicks "OK" button 8. System displays computer directory to store new file 9. Patient selects directory to store file 10. System logs activity 11. System begins download to store new text document of medical info 12. System returns to medical info page
Alternate Flows	Alternate Flows: After step 6, the patient decides they do not need to make and changes and no longer need to edit. - Patient clicks the cancel button - System cancels export request - System returns to medical info page
Post Condition:	All patient medical info is set to be downloaded by the browser

Use Case Number:	UC-06-01
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
Pre condition(s):	- The patient has an account in the system - Patient has accessed the website via URL
Scenario Flow:	Main (success) Flow: 1. Patient logs in to website 2. Patient clicks "Appointment" link 3. System displays user's appointments 4. User clicks "Make Appointment" button 5. System displays Make Appointment form 6. Patient fills out all fields in form 7. Patient clicks submit appointment 8. System creates appointment in database 9. System returns to Appointments page 10. Patient logs out
Alternate Flows	Alternate Flows: After the patient makes an appointment, they realize they need to change the appointment date. 1. From welcome screen, patient clicks View Appointment 2. Patient clicks edit appointment 3. System returns completed form 4. Patient changes the date field and clicks submit 5. System updates appointment in database 6. System returns to Welcome page
Post Condition:	The patient must have an appointment scheduled in system

Use Case Number:	UC-07-01
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
Pre condition(s):	- Patient has an appointment scheduled - Patient has account and is in the system - Patient has accessed website via URL and is logged in
Scenario Flow:	Main (success) Flow: 1. Patient clicks on view appointments. 2. System brings up log of patient's appointments 3. Patient clicks delete appointment button 4. System deletes appointment 5. System refreshes view of appointments with update
Alternate Flows	Alternate Flows: 1. Patient clicks on view appointments. 2. System brings up log of patient's appointments 3. Patient clicks delete all appointments button 4. System deletes all appointments for patient 5. System refreshes view of appointments with update 6. System displays empty appointment page
Post Condition:	The patient's original appointment must no longer be within the system or must have a different time

Use Case Number:	UC-08-01
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, Nurse
Pre condition(s):	- Patient has an appointment scheduled - Patient has account and is in the system - Patient has accessed website via URL and are logged in
Scenario Flow:	Main (success) Flow: 1. Patient clicks on view appointments button 2. System displays list of appointments and information 3. User clicks "Go Back To Home" button 4. System displays welcome page 5. user clicks "log out" button 6. System displays login page
Post Condition:	Appointments have been viewed

Use Case Number:	UC-09-01
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, Nurse, Patient
Pre condition(s):	- Doctor, Patient, or Nurse must have accessed website via URL - Doctor, Patient, or Nurse must have a healthnet account - Patient must have healthnet account and be assigned to that Doctor or Nurse
Scenario Flow:	Main (success) Flow: 1. System prompts Nurse for username and password 2. Nurse enters username and password and selects login button 3. Directed to main landing page 4. Nurse selects View Patients 5. System returns list of patients belonging to that user 6. Nurse selects Patient Medical Info 7. System returns form with patient medical info 8. Nurse clicks "View All Patients" button 9. System returns to previous page
Alternate Flows:	Alternate Flow: After step 5, Doctor is the user 1. Doctor selects Edit Patient Medical Info 2. System returns form with patient medical info 3. Doctor selects "make prescription" 4. System displays Make Prescription form 5. Doctor fills out required fields and hits submit 6. System updates adds new form to the database 7. System returns to patient's page
Post Condition:	Patient's changed medical info is saved in database

Use Case Number:	UC-10-01
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 medical information of patients who are in the hospital they work for. Patients can view their tests and results and prescriptions
Actor(s):	Patient, Doctor, Nurse
Pre condition(s):	- System has been setup and configured. - System is running on all hospitals. - Patient and Doctor and Nurse is registered in the system.
Scenario Flow:	Main (success) Flow: 1. Doctor logs in to their account. 2. Doctor navigates to List Patients. 3. Doctor types into a search bar to locate patient. 4. System verifies that patient information is in the system. 1. If information is invalid System displays message. Patient is not in the System 2. System displays the patient profile. 3. Doctor selects the profile to view medical information.
Alternate Flows:	Alternate #1: Instead of doctor, nurse views the medical information. 1. Nurse logs into their account. 2. Nurse selects option to view patient's medical information. 3. Patient name is searched in the search bar. 4. Only patients who are in the hospital the nurse works for are displayed. 5. Patient medical information is displayed. Alternate #2: Instead of nurse, patient views their medical information. 1. Patient logs into their account. 2. Patient selects option to view medical information. 3. Patient's medical information is displayed.
Post Condition:	Medical information is displayed to respective users who are given access to them.

Use Case Number:	UC-11-01
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 the patient. The doctors may also add comments for the patients to view.
Actor(s):	Doctor
Pre condition(s):	- Patient is a part of the doctor's hospital - Patient has some test results - Doctor has accessed the patient's profile
Scenario Flow:	Main (success) Flow: 1. Doctor clicks "make test" 2. System returns appropriate form 3. Doctor fills in form and clicks save 4. System stores test form and returns to updated profile page
Alternate Flows	Alternate Flows: After step 4, the doctor receives results and posts them 1. Doctor scrolls to relevant test and clicks edit 2. System returns test form 3. Doctor changes result field from None to proper results 4. Doctor clicks save 5. System updates form in database 6. System displays updated patient form
Post Condition:	All patient information and doctor comments are valid and available to the patient in read only format when he/she goes to his/her profile.

Use Case Number:	UC-12-01
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):	Patient, Doctor
Pre condition(s):	- Patient/Doctor has logged into website
Scenario Flow:	Main (success) Flow: 1. Patient clicks on edit profile 2. System displays current patient's info 3. Patient edits emergency contact and hits save 4. System verifies required information is provided. • If information is invalid System displays message. Return to Step 3 5. System updates emergency contact in database 6. System logs action 7. System returns to welcome screen
Alternate Flows	Alternate Flows: Doctor accesses patient info 1. Doctor enters patient info into search bar 2. System suggest patient 3. doctor selects suggestion 4. System displays patient's profile 5. System logs action
Post Condition:	Actions must have been logged

Use Case Number:	UC-13-01
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):	Doctor, Nurses
Pre condition(s):	- Patient has a hospital profile
Scenario Flow:	Main (success) Flow: 1. Doctor searches for patient, and is authenticated within the system 2. System returns patient profile for Doctor to view 3. Doctor clicks "Admit/Release patient" 4. System logs all information to its database, and protects the admission status of the patient to only be writeable by doctors 5. Page refreshes with new information displayed 6. Doctor later on clicks "Admit/Release patient" on the patient profile 7. Patient status is updated in database and logged 8. System displays updated page and status
Alternate Flows	Alternate Flows: Nurses admits the patient 1. Nurse searches for patient, and is authenticated within the system 2. System returns patient profile for Doctor to view 3. Nurse clicks "Admit patient" 4. System returns form to admit the patient for an extended stay 5. Nurse submits form 6. System logs all information to its database, and protects the admission status of the patient to only be writeable by doctors 7. Doctor later on clicks "discharge patient" on the patient profile 8. Patient is discharged
Post Condition:	Patient is discharged after some arbitrary length of time

Use Case Number:	UC-14-01
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)
Actor(s):	Administrator
Pre condition(s):	- Multiple entries have been made in the system log for day X - Admin has logged into the website
Scenario Flow:	Main (success) Flow: 1. Admin clicks on Log link 2. System log is displayed
Alternate Flows	Alternate Flows: New activity recently logged in the system 1. Admin clicks on Log link 2. System displays the system logs 3. Admin confirms that new activity has been logged
Post Condition:	System log has been viewed and is up to date

Use Case Number:	UC-15-01
Use Case Name:	Viewing System Statistics
Overview:	Administrators will be able to view compiled statistics for a given time-frame at their hospital. If the administrator leaves the statistics page must first be uploaded to view most recent information.
Actor(s):	Administrators
Pre condition(s):	- All information about the hospital is logged. - Administrator has an active account at the hospital.
Scenario Flow:	Main (success) Flow: 1. Administrator logs in through their account 2. Administrator clicks, "Statistics" 3. System displays Statistics about hospital 4. Administrator is satisfied and then clicks log out.
Alternative flows	Alternate Flow: 1. Administrator logs in through their account 2. Administrator clicks, "Statistics" 3. Administrator leaves for a while and then comes back 4. Administrator must refresh page to view most up to date statistics 5. Administrator is satisfied and then clicks log out
Post Condition:	Statistics about hospital have been viewed

Use Case Number:	UC-16-01
Use Case Name:	Patient Transfer
Overview:	Patients can be transferred between hospitals and this can only be done by administrators or doctors who are at the receiving hospital
Actor(s):	Patient, Administrator, Doctor
Pre condition(s):	- System has been setup and configured. - System is running on all hospitals. - Patient and Doctor is registered in the system.
Scenario Flow:	Main (success) Flow: 1. Doctor/admin logs in to their respective accounts. 2. Doctor/admin selects option to transfer patients. 3. Doctor/admin types into a search bar to locate patient. 4. System verifies that patient information is in the system. • If information is invalid System displays message. Patient is not in the System 5. System displays the patient profile for transfer. 6. Doctor/admin selects the profile and selects the transfer button.
Alternate Flows:	Alternate Flow: Throughout the process the doctor/admin has the ability to go back to the home screen which will cancel the transfer process at anytime. 1. Doctor/admin selects option to transfer 2. Patient name is searched in the search bar. 3. Patient profile is displayed. 4. Doctor/admin clicks back button to cancel
Post Condition:	Doctor/admin did not complete transfer. System does not transfer patient information.

Use Case Number:	UC-17-01
Use Case Name:	Upload Patient Information
Overview:	Doctors will be able to upload the results of a patient's tests if needed.
Actor(s):	Doctor
Pre condition(s):	- Doctor is logged in - Doctor has results of patients tests
Scenario Flow:	Main (success) Flow: 1. Doctor clicks on, "Upload Form" 2. Doctor enters in patient name and uploads information 3. Doctor clicks, "Save" 4. System uploads the information for the user and saves it to the database
Alternate Flows	Alternate Flows: 1. Doctor clicks on, "Upload Form" 2. Doctor enters in patient name and uploads information 3. Doctor clicks, "Save" 4. System attempts to upload information, but the file is not found 5. Doctor is presented with, "File not found" error and asked to find the file again 6. Doctor finds new file to upload and uploads it and then clicks, "Save" 7. System uploads the information for the user and saves it to the database
Post Condition:	The Doctor has uploaded the form and information the both the patient and the doctor can now view.

Use Case Number:	UC-18-01
Use Case Name:	Send Private Message
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):	- User must have accessed website via URL - User must have a healthnet account - User can only send message to another user within their network
Scenario Flow:	Main (success) Flow: 1. System prompts User for username and password 2. User enters username and password and selects login button 3. Directed to main landing page 4. User selects Private Message button 5. System directs user to message page 6. User selects New message button 7. System returns private message form 8. User selects recipient based on their profile type 9. User fills in subject and body fields with message and clicks submit 10. System sends form to database to be updated to the recipient's inbox 11. System returns back to main page
Alternate Flows:	After step 8, the user decides that they no longer want to send a private message 1. User clicks on the cancel button 2. System does not save message 3. User returned to index page.
Post Condition:	A private message is sent to a recipient's inbox

Use Case Number:	UC-19-01
Use Case Name:	Hospital Assignment
Overview:	The same doctor can be assigned to multiple hospitals A nurse can only be assigned to one hospital
Actor(s):	Administrator (Admin)
Pre condition(s):	- System has been setup and configured. - System is running and open for registrations. - Administrator has accessed website via URL and is logged in
Scenario Flow:	Main (success) Flow: 1. Administrator clicks "Create User" button 2. System prompts user to select account type (doctor/staff) 3. Admin selects doctor 4. System displays subsequent registration form 5. Administrator enters required user info, highlights multiple hospitals, and hits "Register User" button 6. System verifies required information is provided, adds user form to database, and assigns user to specified hospitals 7. System displays confirmation of registration
Alternate Flows:	Alternate Flow: Admin registers nurse 1. Administrator clicks "Create User" button 2. System prompts user to select account type (doctor/staff) 3. Admin selects doctor 4. System displays subsequent registration form 5. Administrator enters required user info, highlights multiple hospitals, and hits "Register User" button 6. System verifies required information is provided, adds user form to database, and assigns user to specified hospitals 7. System displays confirmation of registration
Post Condition:	New User has been registered and assigned to appropriate hospital(s)

Use Case Number:	UC-20-01
Use Case Name:	Logging Patient Services
Overview:	Log events should pertain to the services provided to a patient: when they visited their doctor, what immunizations they received, what test they received and the results of those tests. etc.
Actor(s):	Admin, Doctor, Patient
Pre condition(s):	- Admin/Doctor has logged into website - Patient exists in database
Scenario Flow:	Main (success) Flow: 1. Doctor clicks on edit profile 2. System displays current patient's info 3. Doctor edits emergency contact and hits save 4. System verifies required information is provided. • If information is invalid System displays message. Return to Step 3 5. System updates emergency contact in database 6. System logs action 7. System returns to welcome screen
Alternate Flows	Alternate Flows: Doctor accesses patient info 6. Doctor enters patient info into search bar 7. System suggest patient 8. doctor selects suggestion 9. System displays patient's profile 10. System logs action
Post Condition:	Actions must have been logged

Use Case Number:	UC-21-01
Use Case Name:	Patient Being Transferred with Reason
Overview:	A doctor or admin may transfer a patient to their hospital if the patient is in another hospital.
Actor(s):	Doctor/Admin
Pre condition(s):	- System has been setup and configured. - Doctor/Admin is logged into their account - Doctor/Admin is navigated to the selected patient they wish to transfer - Doctor/Admin is viewing that patient
Scenario Flow:	Main (success) Flow: 1. Doctor/Admin clicks on "Transfer Patient" button at the bottom of the page 2. Doctor/Admin types in reason and selects hospital they want to transfer to 3. System returns Doctor back to the patient and displays the hospital that patient is now in
Alternate Flows:	Main (success) Flow: Alternate #1: Throughout the process the doctor has the ability to go back to the view patient to avoid transferring the patient and will cancel the transfer process. (continuing after step 1) 2. Doctor/Admin clicks "cancel" 3. Doctor/Admin is returned to the view patient page, patient is still in the same hospital
Post Condition:	The doctor has either changed the hospital of the selected patient or not depending on whether they clicked cancel

Use Case Number:	UC-22-01
Use Case Name:	Message Traffic Restriction
Overview:	Users can send messages to those inside their group but not to anyone outside of that specific group.
Actor(s):	Patients, Doctors, Nurses, Admins
Pre condition(s):	- A user must have accessed website via URL - The user must have a healthnet account
Scenario Flow:	Main success flow 1 System prompts User for username and password 2 User enters username and password and selects login button 3 Directed to main landing page 4 User selects Messages link 5 System brings user to messages page with a list of messages belonging to that user 6 User selects "New Message" 7 System returns New Message page with a text body to enter message and recipient 8 User enters a recipient within their group and enters message in body 9 System updates change to form in the database updates both recipients and receiver's messages view 10 System returns back to messages page
Alternate Flows:	After step 8, the user enters the name of a recipient that is not within their group 1. User clicks Send 2. System pops up message "You are not allowed to message this user" 3. User remains in new message page
Post Condition:	User has sent a message to an appropriate recipient

Use Case Number:	UC-23-01
Use Case Name:	Available Times on Calendar
Overview:	Doctors, Nurses and Patients should be able to view available times on the calendar.
Actor(s):	Doctors, Nurses and Patients
Pre condition(s):	- System has been setup and configured. - System is running and open for registrations. - User has accessed website via URL - Doctor, Nurses and Patients exist
Scenario Flow:	Main (success) Flow: 1. User logs in (Doctors, Nurses or Patients) 2. System renders their respective index pages and a calendar is displayed. 3. System displays a populated calendar of appointments in respect to the type of User and location of Hospital. 4. User now has information on when to make valid appointments.
Alternate Flows:	Main (success) Flow: Alternate #1: User logs in to find an unpopulated calendar. 1. User has the ability to choose any time to make appointments as long as it is in the range of working hours.
Post Condition:	User now has information on when to make appointments after seeing the available times on their calendar.

5.0 System Requirements (Software Features)

Requirements ID	Relevant Use Case Numbers	Description	Targeted Release
REQ-001	UC-01, UC-02, UC-03	System must be able to store user account information and make it accessible.	R1
REQ-002	UC-02, UC-04, UC-19	Must be able to add new Doctor and Nurse accounts to the system	R1
REQ-003	UC-06, UC-23	System must have a way of checking new appointment times against existing appointments	R1
REQ-004	UC-11, UC-12	System should be able to to store patients' test results for viewing and sharing	R2
REQ-005	UC-1, UC-4, UC-5, UC-17	System should be able to contain editable medical information for all patients in the system	R2
REQ-006	UC-12, UC-13, UC-14, UC-15, UC-16, UC-21	System should maintain a log of important events for view by admins and a page of statistics for each hospital's current status	R2
REQ-007	UC-18, UC-22	Users of the system should be able to send messages to each other within their valid messaging group privileges	

6.0 Design Constraints

6.1 Software Constraints

-Computer must be running Django v1.8.3

-Computer must be running Python v 3.4.3

-Computer should be able to run .bat (windows batch) files

-Computer must have google chrome (preferably as default browser) or equivalent browser installed in the programs directory on the C: drive

6.2 Deployment Constraints

TBD

7.0 Document Change Log

Document Version Number	Revision Date	Summary of Changes	Author(s)
Initial	09/06/2015	Update of sections 1, 2, & 3 Creation of use cases 1, 3, 6, 7, 8, 12, & 14	Ian London
v1.2	09/18/2015	Update of 4.1 System UML diagram	Ian London
v1.3	09/20/2015	Use case 2 added	Ian London
v1.4	10/02/2015	Use cases 1, 3, 6, 7, and 8 updated Reassigned use cases 2, 12, and 14 Use case diagram updated	Ian London
v1.5	10/25/2015	Use cases 4, 5, 9, 10, 13, 15, 16, 17, & 18 created	All members
v2.0	12/04/2015	Formatting for use cases 1-18 fixed All use cases flows updated to correspond to most recent web design	Ian London
v2.1	12/06/2015	Use cases 19-23 added and formatted Use Case Diagram updated for R2	Ian London