**Product Requirements**

**Team: *TBD 07c***

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| ***Revision Number*** | ***Revision Date*** | ***Summary of Changes*** | ***Author(s)*** |
| *01* | *09/2/2016* | *Initial recording* | *Matt Maloney, Matt Toro* |
| 02 | 09/06/2016 | Created more use case descriptions and use case diagrams | Matt Maloney, Matt Toro, Xiang Ao, Alex Huang,Henry Udenze |
| 03 | 9/06/16 | Revised Use Case descriptions | Matt Toro |
| 04 | 9/14/16 | Added more Use Cases, and Use Case Diagrams | Matt Toro, Matt Maloney, Xiang Ao |
| 05 | 10/01/16 | Finalized specifications for Release1 | Matt Toro, Henry , Alex H, Xiang Ao, Matt Maloney |
| 06 | 10/15/16 | Discussed R2 specifications | Matt Toro, Henry , Alex H, Xiang Ao, Matt Maloney |

# **Brief problem statement**

Our mission is to help HAccelerator with its goal of establishing an online medical network. We hope to create a well-structured website that can coordinate between employees, doctors, patients, and nurses, while making the experience for all users as easy and effective as possible.

# **Stakeholders**

**HAccelerator Board of Directors** – oversee the project's 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 principal 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.

# **Users profile**

* Patient & Employees - Expected to know and understand how to work a computer, browse through a website, and access an online account.
* Doctor/Administrator - Expected to know basic administrative abilities (changing information, accessing data throughout the site)
* Nurses - Expected to communicate with the patients and doctors directly as well as accessing information from the site.

The target user must:

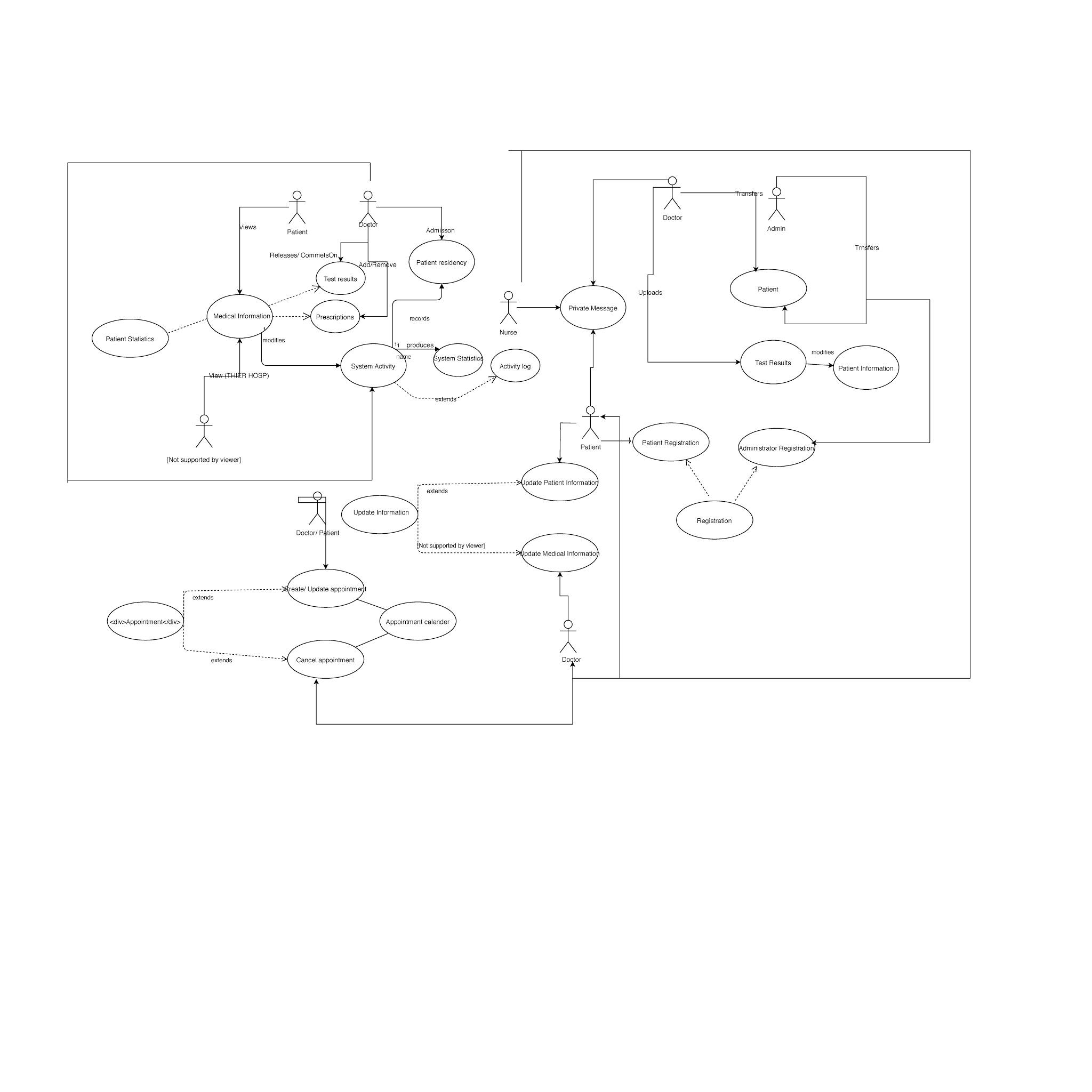
* Have basic experience using computers and browsing the internet. This person has filled out online forms or surveys and may have purchased or sold a product.
* Have a computer with access to the internet
* Have an interest in improving the communication about their health by using an online way of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

# **System requirements**

This networking-style project is going to be implementing version control through SVN, utilizing the languages Django with Python and SQLite, with use in current generation browsers.

# **Feature requirements (user stories)**

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| **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. | **R2/Beta** |
| **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.  If the patient or doctor already has an appointment at the time selected, then the system will not allow for the appointment. | **R2/Beta** |
| **7** | Cancel Patient Appointment | Patients can cancel their existing appointments.  Doctors can cancel their existing appointments.  Nurses cannot cancel (only modify) existing appointments. | **R2** |
| **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. | **R2/Beta** |
| **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/Beta** |
| **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 Patient's information/records, and transfers of a Patient from one hospital to another. | **R2** |
| **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. | **R2** |
| **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 prescription statistics * hospital   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/Beta** |
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**Use case context diagram**

**Patient Registration**

**Administrator Registration**

**Update Patient Profile Information**

**Update Patient Medical Information**

**Export Information**

**Create or Update Patient Appointment**

**Cancel Patient Appointment**

**Appointment Calendar**

**Add/Remove Prescriptions**

**Viewing Patient Medical Information, Prescriptions and Tests and Results**

**Release Test Results**

**Logging System Activity**

**Admission and Discharge to/from Hospital**

**Viewing Activity Log**

**Viewing System Statistics**

**Patient Transfer**

**Upload Patient Information**

**Send Private Message**

**Use case description**

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| **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*** |
| **Precondition(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 personal information*** 3. ***Registrant provided personal information.*** 4. ***System verifies required information is provided.***  * ***If information is invalid System displays message. Return to Step 2***  1. ***System requests basic medical information*** 2. ***Registrant provides medical information*** 3. ***System verifies required information is provided.***  * ***If information is invalid System displays message. Return to Step 5***  1. ***System requests emergency contact information*** 2. ***Registrant provides emergency contact information*** 3. ***System verifies required information is provided***    * ***If information is invalid System displays message. Return to Step 8*** 4. ***System requests login information*** 5. ***Registrant provides login information*** 6. ***System verifies required information is provided***    * ***If information is invalid System displays message. Return to Step 11*** 7. ***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.*** |

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| **Use Case Number:** | ***UC-02*** |
| **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):** | ***Registrant, Administrator*** |
| **Precondition(s):** | ***- System has been setup and configured.***  ***- System is running and open for registrations.***  ***- Registrant has accessed website via Administrator*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Current Admin selects option to add another Admin*** 2. ***System request personal information of Registrant*** 3. ***Registrant provides information directly to current Admin.*** 4. ***Current Admin fills out information of Registrant.*** 5. ***System verifies person information***    * ***If information is invalid, System displays message. Return to Step 2*** 6. ***System request login information*** 7. ***Registrant provides login information*** 8. ***System verifies login information***    * ***If information is invalid, System displays message. Return to Step 6.*** 9. ***System displays confirmation of registration*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: After step 2 in success scenario System will display the option to cancel. The following steps occur***   1. ***Current Admin selects option to cancel*** 2. ***System request confirmation to cancel*** 3. ***Current Admin confirms intent*** 4. ***System returns to main Admin Screen*** |
| **Post Condition:** | ***Main Flow: New Admin is created, System stores all info***  ***Alternate Flow: Admin is not created, no information gets stored.*** |

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| **Use Case Number:** | ***UC-03*** |
| **Use Case Name:** | **Update Patient Profile Information** |
| **Overview:** | ***Patient should be able to update their personal profile in the system.*** |
| **Actor(s):** | ***Patient*** |
| **Pre-condition(s):** | ***-System is ready and configured.***  ***-System is ready for update of personal profile.***  ***-The patient are able to get access of the website.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Patient select option to login account.*** 2. ***System request patient login information.*** 3. ***Patient provide login information.*** 4. ***System verifies information that is provided.***   ***-If information is invalid system displays a message and return***  ***to step 2.***   1. ***Patient select option to update.*** 2. ***System request Patient personal new profile information.*** 3. ***Patient provide new profile information*** 4. ***System verifies required information that is provided.***    * ***If information is invalid system displays a message and return to Step 6*** 5. ***System displays confirmation of the update information.*** |
| ***Alternate Flows:*** | ***Alternate Flows: #1 After step 8. System will display option to cancel the update. The following step will occur.***   1. ***Patient select option to cancel the update.*** 2. ***System request to confirm cancellation.*** 3. ***Patient confirms intent.*** 4. ***System return to main screen.*** |
| **Post Condition:** | ***Patient did not update the new profile information. System did not store update information.*** |

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| **Use Case Number:** | ***UC-04*** |
| **Use Case Name:** | **Update Patient Medical Information** |
| **Overview:** | ***Doctor and nurse should be able to update their patient ne medical information in the system.*** |
| **Actor(s):** | ***Doctor, and Nurse*** |
| **Pre-condition(s):** | ***-System is ready and configured.***  ***-System is ready for update of patient’s new medical information.***  ***-The Doctor or Nurse are able to get access of the patient personal medical information.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Doctor or Nurse select option to login account.*** 2. ***System request patient login information.*** 3. ***Doctor or Nurse provide login information.*** 4. ***System verifies information that is provided.***   ***-If information is invalid system displays a message and return***  ***to step 2.***   1. ***Doctor or Nurse select option to update patient’s new medical information.*** 2. ***System request Patient personal new medical information.*** 3. ***Doctor or Nurse provide patient’s new medical information*** 4. ***System verifies required information that is provided.***    * ***If information is invalid system displays a message and return to Step 6*** 5. ***System displays confirmation of the update information.*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: After step 8. System will display option to cancel the update. The following step will occur.***   1. ***Doctor or Nurse select option to cancel the update.*** 2. ***System request to confirm cancellation.*** 3. ***Doctor or Nurse confirms intent.*** 4. ***System return to main screen.*** |
| **Post Condition:** | ***Doctor or nurse did not update the new medical information. System did not store update information.*** |

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| **Use Case Number:** | ***UC-05*** |
| **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 must be Registered in the system.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Patient logs in*** 2. ***Patient selects option to export their information*** 3. ***System displays privacy warning and request confirmation*** 4. ***Patient confirms intent*** 5. ***System displays Patient information*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: After Step 2 in the success scenario the System displays privacy warning and request confirmation. The following steps occur***   1. ***Patient selects cancel option*** 2. ***System returns to Main Screen without exporting Patient information*** |
| **Post Condition:** | ***Main Flow: System displays Patient information, then returns them to main screen.***  ***Alternate Flow: System never exports information, returns Patient to main screen.*** |

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| **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.*** |
| **Actor(s):** | ***Patients, doctors and nurses*** |
| **Pre-condition(s):** | ***-System is ready and configured***  ***-System is ready for creating or updating appointments***  ***-Patients, doctors or nurses has successfully login*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Patient, doctor or nurse select option to make a new appointment*** 2. ***System shows user the list of available doctors*** 3. ***User selects a doctor*** 4. ***System shows the selected doctor’s available locations*** 5. ***User selects listed location*** 6. ***System shows the selected doctors available times*** 7. ***User selects time*** 8. ***System request for patient information*** 9. ***User fills the patient information (reason for appointment.)*** 10. ***System shows success message and saves the appointment in both patient’s and doctor’s account*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: At step 1 the user has another option that is to check existing appointment(s). The following steps occur***   1. ***System show user the list of existing appointment(s)*** 2. ***User selects an appointment*** 3. ***System shows user the information of the appointment including the doctor, the location and patient’s information*** 4. ***User edits appointment information***    1. ***User edits the doctor***       1. ***Step 2,3,4,5 of the success scenario flow***    2. ***User edits the location of the doctor***       1. ***Step 4,5 of the success scenario flow***    3. ***User edits the time of the appointment***       1. ***Step 6,7***    4. ***User edits the patient information***       1. ***Step 8,9 of the success scenario flow*** 5. ***Step 10 of the scenario flow*** |
| **Post Condition:** | 1. ***Systems shows user the appointment information*** 2. ***User click done to return to main menu*** |

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| **Use Case Number:** | ***UC-07*** |
| **Use Case Name:** | **Cancel patient appointment** |
| **Overview:** | ***Doctor and Patient should be able to cancel their appointment.***  ***Nurse can only modify the appointment.*** |
| **Actor(s):** | ***Doctor, patient, and Nurse*** |
| **Pre-condition(s):** | ***-System is ready and configured***  ***-System is ready for creating or updating appointments***  ***-Patients, doctors or nurses has successfully login*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Doctor, or patient select option to cancel an appointment.*** 2. ***System displays all registered appointments*** 3. ***Doctor or Patient selects an appointment*** 4. ***System display request for Doctor or Patient to confirm restoration or cancellation.*** 5. ***Doctor, or patient confirm intent.*** 6. ***System registers or cancels the appointment.*** 7. ***System displays confirmation of register or cancellation of the appointment.*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: If the user is a Nurse, the system follows the following steps.***   1. ***Nurse selects option to modify appointment for specific patient.*** 2. ***System request Patient information*** 3. ***Nurse selects a patient*** 4. ***System displays all registered appointments for that patient*** 5. ***Nurse selects appointment*** 6. ***System displays appointment information*** 7. ***Nurse changes information needed and hits save*** 8. ***System request confirmation*** 9. ***Nurse confirms intent*** 10. ***System updates appointment*** |
| **Post Condition:** | ***Doctor or the patient did not successfully cancelled the appointment.***  ***Nurse did not successfully modify the appointment.*** |

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| **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):** | ***Patients, nurses and doctors*** |
| **Pre-condition(s):** | ***-System is ready and configured***  ***-Patients, doctors or nurses has successfully login*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***User selects the option of appointment calendar*** 2. ***System shows user the calendar including all the related appointments*** 3. ***User selects an appointment showing on the calendar*** 4. ***System shows the appointment information*** |
| ***Alternate Flows:*** | ***Alternate Flows #1: At step 1, if user login as nurses, the system has another option that is to check appointments between patients and doctors. The following steps occur***   1. ***User enters name of the patient or the doctor*** 2. ***System shows user the related appointment(s) or the patient/doctor*** 3. ***Step 3,4 of the scenario flow*** |
| **Post Condition:** | ***Main flow:***   1. ***Systems shows user the appointment information*** 2. ***User click done to return to main menu*** |

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| **Use Case Number:** | ***UC-09*** |
| **Use Case Name:** | **Add/Remove Prescription** |
| **Overview:** | **Doctors can add or remove a prescription to a patient record.** |
| **Actor(s):** | **Doctors** |
| **Pre-condition(s):** | ***-System is ready and configured***  ***-Patients, doctors or nurses has successfully login*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Doctor selects option to search for patient*** 2. ***System displays search page*** 3. ***Doctor searches for patient*** 4. ***System displays all matching results*** 5. ***Doctor selects patient*** 6. ***System shows patient record*** 7. ***Doctor selects option to add/remove prescriptions*** 8. ***System displays list of patient prescriptions*** 9. ***Doctor selects option to add patient prescription*** 10. ***System prompts doctor to fill out appropriate information for prescription*** 11. ***Doctor fills out information*** 12. ***System request confirmation*** 13. ***Doctor confirms*** 14. ***System adds prescription to patient record*** |
| ***Alternate Flows:*** | ***Alternative Flow #1: After step 8, doctor selects option to remove prescription instead***   1. ***Doctor selects option to remove prescription*** 2. ***System request confirmation*** 3. ***Doctor confirms*** 4. ***System removes prescription from patient record***   ***Alternative Flow #2:After step 8, doctor selects option to edit patient prescription instead***   1. ***Doctor selects option to edit prescription*** 2. ***System prompts doctor to fill out appropriate information for prescription*** 3. ***Doctor fills out information*** 4. ***System request confirmation*** 5. ***Doctor confirms*** 6. ***System edits prescription from patient record*** |
| **Post Condition:** | ***System shows patient record*** |

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| **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-condition(s):** | ***-System is ready and configured***  ***-Patients, doctors or nurses has successfully login*** |
| **Scenario Flow:** | ***Doctor (success) Flow:***   1. ***Doctor selects option to search for patient*** 2. ***System displays search page*** 3. ***Doctor searches for patient*** 4. ***System displays all matching results*** 5. ***Doctor selects patient*** 6. ***System displays patient record***   ***Nurse (success) Flow:***   1. ***Nurse selects option to search for patient*** 2. ***System displays search page*** 3. ***Nurse searches for patient*** 4. ***System displays all matching results in that hospital*** 5. ***Nurse selects patient*** 6. ***System displays patient record***   ***Patient (success) Flow:***   1. ***Patient selects option to view record*** 2. ***System displays allowed patient information*** |
| ***Alternate Flows:*** | ***Alternative Flow #1: Patient selects option to view test results***   1. ***Patient selects option to view test results*** 2. ***System checks if doctor has released pending/completed test information*** 3. ***System displays all test information released by patients doctor*** |
| **Post Condition:** | ***Doctor, Nurse, or Patient successfully views information, and returns to the home page*** |

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| **Use Case Number:** | ***UC-11*** |
| **Use Case Name:** | ***Release Test Results*** |
| **Overview:** | ***Doctors can, after evaluating their patient decide to release their test results.*** |
| **Actor(s):** | ***Doctors*** |
| **Pre-condition(s):** | ***-System is ready and configured***  ***-Patients, doctors or nurses has successfully login***  ***-Patients have test results in the system.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Doctor evaluates patient*** 2. ***Doctor logs in*** 3. ***Doctor clicks on patients (all doctor’s patients are shown)*** 4. ***Doctor selects patients*** 5. ***Clicks on “Release Results”*** 6. ***Confirms selection*** 7. ***Results are then sent to the patient*** |
| ***Alternate Flows:*** | ***Alternate Flows #1: At step 1, if user logs in as doctor, the system has another option that is to check appointments between patients and doctors. The following steps occur following 7***   1. ***User hits cancel*** 2. ***User confirms cancellation*** |
| **Post Condition:** | ***Main flow:***   1. ***The doctor is shown that results have been sent*** 2. ***The “release Results” is grayed out*** |

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| **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):** | ***Administrator*** |
| **Pre-condition(s):** | ***- System has been setup and configured.***  ***- User has been authorized to view system activity history***  ***- User has logged in*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Administrator click the option to check system activity history*** 2. ***System shows the main timeline of the system activity history*** 3. ***Administrator has options to view them in parts through different tags (updating of a Patient’s information, viewing of a Patient's information/records, transfers of patients, etc.)*** 4. ***Administrator click a certain activity*** 5. ***System shows administrator the detailed information of the activity history (time, user, activity, etc.)*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: After Step 4 in success scenario System will display the option to delete the certain activity history. The following steps would occur:***   1. ***System asks administrator for deleting confirmation*** 2. ***Administrator click yes to confirm*** |
| **Post Condition:** | ***Main flow:***   1. ***Administrator click return to homepage*** 2. ***System saves changes and shows administrator the main menu*** |

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| **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 and Nurses*** |
| **Pre-condition(s):** | ***- System has been setup and configured.***  ***- User has logged in*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***User click the option to find patient information*** 2. ***User enter patient name to search patient information*** 3. ***System show user the patient information*** 4. ***User click option to admit a patient to the hospital for an extended stay*** 5. ***User fill the reason, edit patient information, and confirm it*** 6. ***System saves the change*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: After Step 4 in success scenario, if user has logged as Doctors, there will be another option that is to approve a patient’s discharge. The following steps would occur:***   1. ***User fill the reason and send discharge request, then confirm*** 2. ***System saves the change and the request*** |
| **Post Condition:** | ***Main flow:***   1. ***User click return to homepage*** 2. ***System saves changes and shows user the main menu*** |

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| **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):** | ***- System has been setup and configured.***  ***- User has logged in as administrator.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Administrator click the option to view system activities*** 2. ***System asks administrator for time range (start & end)*** 3. ***System shows administrator the given time-frame*** 4. ***User has option to view them in parts through different tags (breakdown of the viewing activity of patient records or by system user, most common system or user activities, etc.)*** 5. ***System shows administrator the detailed information of the activity history (time, user, activity, etc.)*** |
| ***Alternate Flows:*** | ***Alternate Flow #1: After Step 4 in success scenario System will display the option to delete the certain activity history. The following steps would occur:***   1. ***System asks administrator for deleting confirmation*** 2. ***Administrator click yes to confirm*** |
| **Post Condition:** | ***Main flow:***   1. ***Administrator click return to homepage*** 2. ***System saves changes and shows administrator the main menu*** |

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| **Use Case Number:** | ***UC-15*** |
| **Use Case Name:** | **Viewing System Static** |
| **Overview:** | ***Administrators will be able to view statics in a given time-frame.*** |
| **Actor(s):** | ***Administrator*** |
| **Pre-condition(s):** | ***-System is ready and configured.***  ***-The administrator can access the website.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Administrator login request*** 2. ***System request administrator login information.*** 3. ***Administrator provide login information.*** 4. ***System verifies information that is provided.***   ***-If information is invalid system displays a message and return***  ***to step 2.***   1. ***Administrator choose to view a static data.*** 2. ***System display request for the type of information that is being request to view.*** 3. ***Administrator choose the type of information*** 4. ***System displays the information*** |
| ***Alternate Flows:*** | ***Alternate Flow:#1 After step 4. The login account is a nurse.***   1. ***Administrator request to search for the information*** 2. ***System request search information*** 3. ***Administrator provide search information*** 4. ***System verifies the information***   ***-If information is invalid system display message and return to***  ***step 1.*** |
| **Post Condition:** | ***Administrator did not successfully view the information.*** |

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| **Use Case Number:** | ***UC-16*** |
| **Use Case Name:** | **Patient Transfer** |
| **Overview:** | ***Patient can be transfer between hospital, only by doctor or administrator*** |
| **Actor(s):** | ***Administrator, Doctor, and Patient*** |
| **Pre-condition(s):** | ***-System is ready and configured.***  ***-System ready for transfer***  ***-The administrator can access the website.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Administrator, or Doctor login request*** 2. ***System request administrator, or Doctor login information.*** 3. ***Administrator, or Doctor provide login information.*** 4. ***System verifies information that is provided.***   ***-If information is invalid system displays a message and return***  ***to step 2.***   1. ***Administrator, or Doctor select transfer request.*** 2. ***System display request for the patient that is being transfer*** 3. ***Administrator, or Doctor choose the patient*** 4. ***System verifies the patient information*** 5. ***System transferred the patient*** |
| ***Alternate Flows:*** | ***Alternate Flow:#1 After step 8. The login account is a nurse.***   1. ***Administrator or doctor request to cancel the transfer*** 2. ***System request the patient’s information*** 3. ***Administrator, or doctor provide the patient’s information*** 4. ***System verifies the information***   ***-If information is invalid system display message and return to***  ***step 1.*** |
| **Post Condition:** | ***Administrator, or doctor did not successfully transfer a patient.*** |

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| **Use Case Number:** | ***UC-17*** |
| **Use Case Name:** | **Upload Patient Information** |
| **Overview:** | ***Doctor should be able to upload the test results of their patients.*** |
| **Actor(s):** | ***Doctor*** |
| **Pre-condition(s):** | ***-System is ready and configured.***  ***-System ready for to upload test result***  ***-The Doctor can access the website.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Doctor login request*** 2. ***System request Doctor login information.*** 3. ***Doctor provide login information.*** 4. ***System verifies information that is provided.***   ***-If information is invalid system displays a message and return***  ***to step 2.***   1. ***Doctor select upload patient’s test result request.*** 2. ***System display request for the patient test result*** 3. ***Doctor provides patient's test result*** 4. ***System verifies the patient’s test result information*** 5. ***System upload the patient’s test results.*** |
| ***Alternate Flows:*** | ***Alternate Flow:#1 After step 8. The login account is a nurse.***   1. ***Doctor request to cancel the upload*** 2. ***System request to confirm doctor’s intent.*** 3. ***Doctor confirm intent.*** 4. ***System verifies the information***   ***-If information is invalid system display message and return to***  ***step 1.*** |
| **Post Condition:** | ***Doctor did not successfully upload patient's test result*** |

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| **Use Case Number:** | ***UC-18*** |
| **Use Case Name:** | **Send private message** |
| **Overview:** | ***Doctor, nurse, and patient can send private message with each other*** |
| **Actor(s):** | ***Doctor, nurse, and patient*** |
| **Pre-condition(s):** | ***-System is ready and configured.***  ***-System ready to send message***  ***-The Doctor, nurse, and patient can access limited length via the system.*** |
| **Scenario Flow:** | ***Main (success) Flow:***   1. ***Doctor, nurse, and patient login request*** 2. ***System request Doctor, nurse, and patient login information.*** 3. ***Doctor, nurse, and patient provide login information.*** 4. ***System verifies information that is provided.***   ***-If information is invalid system displays a message and return***  ***to step 2.***   1. ***Doctor, nurse, and patient select private message request.*** 2. ***System display request for the person and the message*** 3. ***Doctor, nurse, and patient provides the person and the message*** 4. ***System verifies the person and the message*** 5. ***System send the message*** |
| ***Alternate Flows:*** | ***Alternate Flow:#1 After step 8. The login account is a nurse.***   1. ***Doctor, nurse, and patient request to cancel the message*** 2. ***System request to confirm Doctor, nurse, and patient intent.*** 3. ***Doctor, nurse, and patient confirm intent.*** 4. ***System verifies the information***   ***-If information is invalid system display message and return to***  ***step 1.*** |
| **Post Condition:** | ***Message was not send*** |