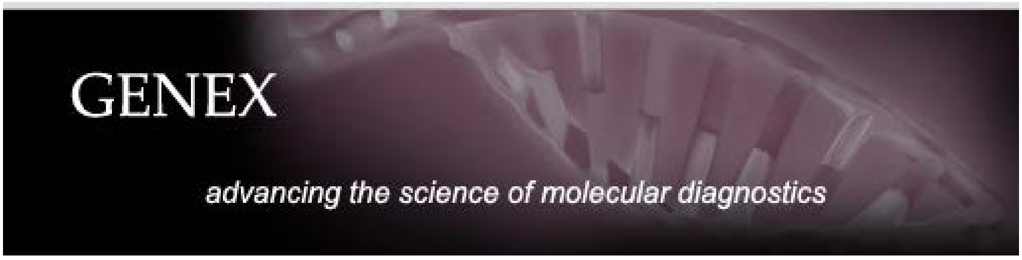

HOME AID SERVICES SYSTEM

Business Requirement Document

ABSTRACT

This document depicts the Business Requirement Document for Home Aid Services System for GenNex.

By Group-1

IST-654: Information Systems Analysis

Chaitra Masur, Ishani Jariwala, Poornima Bhadauria, Shachi Kulkarni, & Siddharth Shukla

Contents

Version History:

Version	*Description*	*Author*	*Date*	*Comments*
0.1	Initial Draft	Shachi Kulkarni	01/Apr/2016	Finalized BRD template.
0.2	Modified	Ishani Jariwala	01/Apr/2016	Added content for account creation use case.
0.3	Modified	Chaitra Masur	01/Apr/2016	Added appointment booking use case related content.
0.4	Modified	Shachi Kulkarni	02/Apr/2016	Modified document to add content for user case – Ecommerce for health care devices.
0.5	Modified	Poornima Bhadauria	02/Apr/2016	Added content for construction and wellness services use case.
0.6	Modified	Siddharth Shukla	02/Apr/2016	Modified document to add case management related content.
1.0	Final	Group – 1	03/Apr/2016	Signed off and published the final document.

Document Overview (What is BRD?):

A Business Requirements Document (BRD) is a formal contract between the organization and the customer for a product. By describing in full detail all the processes that should be implemented, a BRD is used through the entire cycle of the project to ensure that the product meets the detailed specifications and that the project gains value and achieves the desired results. If it is prepared for a technical product, the BRD also includes technical specifications.

The most common objectives of a BRD can be summarized as follows:

- To be universally accepted by the stakeholders
- To provide an appropriate solution to meet the customer/business needs.
- To provide a detailed description of which customer/business needs will be met by the selected solution.
- To provide input between the phases of the project.

RACI Matrix for responsible contributors:

This BRD is created for AT-Home services system, keeping 5 high-level use cases in mind – Account Creation, Appointment booking and Tracking, E-commerce for health care devices, Wellness & Construction services, and Case management. Below is a RACI matrix which depicts the contribution of each team member or contributor:

<table>
<tr><th>Use Case Name</th><th>Responsible (BA) / Accountable (BO)</th><th>Consulted (SME)</th><th>Stakeholders Informed</th></tr>
<tr><td>Account creation & maintenance.</td><td>Ishani Jariwala</td><td rowspan="5">Instructor
Group-1 all members
Daniel Fernandes (CRM)
Swati Nibban (PTS)
Yash Kelkar (Pharmacy)
Pulkit Jain (BPS)
Priyasha Mathur (Analytics)
Yash Bafna (BQT)</td><td rowspan="5">Instructor
Group-1 all members
CRM Team
Patient Tracking Team
Pharmacy Team
Billing & Payments Team
Analytics Team
BQT Team</td></tr>
<tr><td>Appointment Booking & Tracking</td><td>Chaitra Masur</td></tr>
<tr><td>E-commerce for health care devices.</td><td>Shachi Kulkarni</td></tr>
<tr><td>Construction & Wellness services.</td><td>Poornima Bhadauria</td></tr>
<tr><td>Case management</td><td>Siddharth Shukla</td></tr>
</table>

Business Case Justification:

- Implementation of AT-Home Services system will help automate the business processes for services like registering patients, enrolling patients for service offerings, booking appointments, selling products, automating billing and payments, and case management. Automating these process will help reduce intensive manual work involved to manage the process, which in turn will help employees to focus on quality service than managing process and its administration.
- AT-Home Services system aims to increase productivity of employees by 30% which will help them to serve more customer requests in less time. Eventually, it increase the customer base and improve the relationship with them.
- This project also aims to reduce the amount of work done by 5 FTE's (Full time equivalent) on a monthly basis. This way resources can be used for other tasks, which will be an optimization in resource utilization.
- AT-Home services will also ensure real-time communication and data transfer with other internal or external IT systems for Gennex. This project will be tightly-coupled with other systems, so that the changes in one system will automatically flow to other systems. It will help reduce the motion that is involved in communication among systems.

Business Objectives:

- AT-Home Services aims at bringing all the health related services at the user's doorstep. At Home Services also collaborates with all the business users and network users to allow smooth interaction of the prospective user with the system.
- One of the business objective is to enhance the customer/patient experience by eliminating their commuting and wait time at the diagnostic center by providing health aid services at home. These services include:
  - Door Step sample collection for performing tests
  - If sample can't be collected from home or if the patient cannot come to the diagnostic center, At home service provides cab pickup facility that picks up the patient and drops them back home
  - At Home 24/7 Nurse help
- Another business objective of the At Home Services department is to provide medical and holistic services like yoga, reiki, acupuncture etc. to the patient at home. The user has the ability to choose the doctor they prefer and the duration of the service they request. The main aim is to provide the user with an experience which will make them want to come back to GenNex and recommend others too.
- To attract more customers and increase revenue by delivering possible case management services through an application portal of AT-Home Services, digitally.
- To reduce work of 5 FTEs (full time equivalent) per month by eliminating required manual work and creating a fully automated system which will felicitate the case management process for case managers, practitioners/doctors/nurses, and customers.

Stakeholder Expectations:

Stakeholders	Expectations (WIIFM)
User (Customer/Patients/Care Takers/ Front Desk Booker)	• Home aid service like physiotherapy, reiki, sample collection etc. at home • Cab request service • Translator service • Health care related construction service • Booking an appointment for a service • Viewing and purchasing health aid products • Requesting for case management
Practitioner (Physiotherapist/ Phlebotomists/ Chiropractor/ Reiki Experts/ Yoga Trainer)	• The system should allow them to check patient's case details through the portal. • The system should help to manage schedule and appointments for their assigned case. • To provide service to the user which has requested a particular service through At Home Services portal
Construction Vendors	• Construction Assignment • Construction duration • Construction Progress/feedback
Cab Drivers	• Appointment details that include patient address and phone number
Translators	• Translating requirement • Appointment schedule
Case Manager	• The system should make the case management, tracking, and reporting fast and easy. • The system should be able to keep the history of cases, archived digitally, which can be retrieved in just few clicks, anywhere or anytime.
Analytics Team	• The system should be able to generate huge transaction raw data related to case management process which will be use by analytics team to generate insights and recommendations.

Executive board	• The system should help management board to track the effectiveness and efficiency of current practices that are being used for case management which will help them to take decisions to optimize the process.
Patient Tracking Team	• The system should be able to transfer the details of new patients which are opting for case management services to PTS team.
CRM	• The system should be able to delegate all the new account creation or existing account maintenance activities to CRM.
IT Admin	• Modify , delete , update ,insert any products or services or people details • Notified if the system is not behaving as expected. Error and Notification emails
IT Help Desk	• Able to take customer requests and perform action on their behalf like appointment scheduling • Viewing reports, bills, orders • Updating them with clarification

Functional Requirements:

A functional requirement defines a function of a system or its component. Functional requirements may be calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish. The plan for implementing functional requirements is detailed in the system design. In this section we have captured functional requirements specific to each use case and in general i.e. which are applicable to all use cases. Below is the table, in which, we have captured all the functional requirements pertaining to AT-Home Services system:

Id	Requirement Description	Requirement Context	Requested By	Priority
Generic requirements for all Use Cases				
1	The user shall log into the website of GenNex Diagnostics and Devices Ltd using their username and password.	User Login & Access	Business Owner	Critical
2	The system shall validate the entered credentials and login. If the credentials are invalid the system shall throw an error message "Invalid credentials, please try again"			
Use Case - ACCOUNT CREATION & MAINTENANCE				
3	The user must register through the CRM portal in order to get access to At Home Services	User Account	CRM	Blocker
4	User must provide the registration details such as: Username, First Name, Last Name, City, State, Username, Password and Contact Information (Work Phone Number, Cell Phone Number, Email Address)	User Account		Critical
5	User must verify the email address upon receiving verification mail from At Home Services	User Verification	Business Owner	Blocker
6	User can modify their profile information at any point of time	User Account		High
Use Case – APPOINTMENT BOOKING & TRACKING				
7	When the user clicks on "Book and appointment tab", the system shall display the services in the "Book an Appointment" drop down box which are:			

	1. Door step sample collection 2. Nurse – Personal Assistant 3. Physiotherapist 4. Yoga Trainer 5. Reiki Expert 6. Chiropractor 7. Cab driver			High
8	The user shall select a drop down from the service drop down. It contains the following list of drop down "Door Step sample collection" and the "test" requested for. The users click on next	Appointment Booking	Business Owner	High
9	System takes the user request and validates it with the available slots. System checks the instrument availability and the practitioner availability with the master schedule. The system should display the fields date and time that are available based on checking the schedule table. The schedule is displayed only for the next week.		PTS	Blocker
10	The user selects "Date" and "Time" from the displayed list and click "Next". System shall save these details and navigate to the Address and Phone Number Details page.			High
11	The "Address Verification" block should display the Address of this patient at the time of registration as "Address 1" check box.			Critical
12	There should be two buttons displayed below the "Address 1" check box "Edit Address" and "Add a New Address"			High

13	The "Edit Address" should let the user change the "Address 1". If the user modifies the address, the system shall replace and update the entered address as "Address 1 "on the page and the Address field in the Patient table.		Business Owner	High
14	The "Add a New Address" button shall allow the user to create a new check box called "Address2". This will then display the 4 mandatory fields "Name", "Address Line 1", "City", "State", "Postal code". System shall also display a "Cancel" button in case the user does not want to continue with entering the "Address 2". All the mandatory fields should be filled by the user to enter "Adress2". If "Address 2" is entered, it should then be inserted in the Patient table.	Address Verification	Business Owner	High
15	The system shall be able to add up to 5 different Addresses with the "Add a New Address".			Medium
16	The Patient then has to select at least one Address to proceed with the Appointment Booking			High
17	The system shall display the patients "Primary Phone Number" on the same page			Medium
18	There should be two buttons displayed below the "Phone Verification" heading namely "Edit Number" and "Add a New Number"			Medium
19	The "Edit Number" should let the user change the "Primary Phone Number". If the user modifies the number, the system shall replace and update the entered number as "Primary Phone Number "on the page and the "Primary Phone Number" field in the Patient table.	Phone Verification	Business Owner	Medium
20	The "Add a New Number" button shall allow the user to create a new check box called "Number 2". This will then			Medium

	display a mandatory field "Number 2".System shall also display a "Cancel" button in case the user does not want to continue with entering the details. All the mandatory fields should be filled by the user to enter "Adress2". If "Address 2" is entered, it should then be inserted in the Patient table.			
21	The system shall be able to add up to 5 different Numbers with the "Add a New Number" which would be consecutively stored as "Number 1", "Number 2", "Number 3", "Number 4", "Number 5"			Medium
22	The Patient then has to select at least one Number from the list and once he clicks on continue the system shall navigate to the Booking Confirmation page. This page should display the following 4 fields: - "Address", "Phone Number", "Service Requested", "Date and Time". This page verifies the Booking details. The user then confirms the booking.			High
23	The system shall mail the booking confirmation to the user's registered mail ID. The system shall display Appointment Confirmation page with the message "Your Appointment has been confirmed. It will display the following fields with the user entered values for the field. "Patient Name": "Patient Address": "Patient Phone Number": "Service Requested": "Test Requested": "Sample Request Date and Time": "Assigned Practitioner":	Phone Verification	Business Owner	Medium

24	The page should also display a "Logout" Button so that the user can logout.			Medium
25	The system should also display a "Home Page" button that will navigate the user to the AT Home Services home page			Medium
	Use Case – Ecommerce for Health Care Devices			
26	When a registered user logs in, the system shall display the product catalog.	Product Catalog	Business Owner	High
27	When the registered user expands the product, the system shall display the selected product.			High
28	The system shall allow the registered user to select the number of desired products.			Medium
29	When the registered user selects the desired product and its quantity, the system shall check the availability of selected products in the inventory.	Inventory	Pharmacy Team	Blocker
30	If a product is unavailable, the system shall display 'Out of Stock' notification.			Critical
31	Once address for delivery is updated, the system shall display shipping costs.	Shipping	Business Owner	Medium
32	The system shall allow the registered user to add a product to the shopping cart.	Shopping Cart		Medium
33	When all products are added to cart, the system shall calculate cart totals.	Check out & Payment		High
34	The system shall display cart totals along with shipment cost.			High
35	The system shall direct user to the payment gateway.		BPS	Blocker
36	The system shall allow the user to either go back to shopping or log out.		Business Owner	Medium
	Use Case – Construction & Wellness Services			
37	The user shall navigate to the Wellness webpage section through the website.			Blocker

38	The user shall select the wellness service they want from the drop down menu.	Service	Business Owner	High
39	The system shall take the user to the webpage of the wellness service selected.			High
40	The user selects the doctor they prefer from the list provided in the drop down menu.			Medium
41	The system books the doctor for the service at the appointed time selected by the user.			Medium
42	The system sends a confirmation notification to the user and the doctor.	Notifications		High
43	The system sends the doctor user details like address and contact details so that the doctor can go to the user's residence to provide the service requested by the user.			High
44	The system sends a feedback form to the user after the service is completed.	Feedback		Medium
45	The user fills the feedback form and sends it back to the system.			Medium
46	The system records the feedback form into the database for future use.			Low
Use Case - Case Management Service				
47	The system should create a case and assign a case manager to it internally.			Critical
48	The system should then send a notification to the assigned case manager.			High
49	The system shall allow the case manager to view the new case request.			Critical
50	The system shall allow the case manager to create a new entry for patient and its case.			Critical
51	The system shall trigger an email to case manager and supervisor when a new entry for patient and its case is created.			Medium

52	The system shall allow the case manager to assign an entry for review to his/her supervisor.	Case Management		Critical
53	They system shall trigger an email to supervisor of case manager to notify him/her about new pending request for new added entry.	Notifications		Medium
54	The system shall allow the case manager to delete an entry for patient and its case before it is signed off.	Case Management		Medium
55	The system shall trigger an email to supervisor if an entry for patient and its case is deleted before it is signed off.	Notifications		Medium
56	The system shall allow the supervisor of case manager to review an entry for sign off.			High
57	The system shall allow the supervisor of case manager to sign off an entry.	Case Management		High
58	The system shall trigger an email to case manager to notify him/her about sign off completion.	Notifications		Medium
59	The system shall allow the supervisor of case manager to reject an entry.	Case Management		High
60	The system shall trigger an email to case manager to notify him/her about rejection of request.	Notifications		Medium
61	The system shall allow the supervisor of case manager to view the inbox to review pending sign off requests for newly added entries.			Low
62	The system shall allow case manager and their supervisors to search a case through patient id.			Critical
63	The system shall allow case manager and their supervisors to search a case through case id.		Business Owner	Critical
64	The system shall allow the case manager to upload documents for respective cases.			Medium
65	The system shall allow the case manager to choose start and end date for respective case.	Case Management		Medium

66	The system shall allow the case manager to choose a provider for respective cases.			High
67	The system shall show alert to supervisor of case manager for pending requests for sign off.			Low
68	The system shall show alert to supervisor of case manager for pending requests for rejection.	System Alert	Business Owner	Low
69	The system shall show alert to case manager when a file is successfully uploaded.			Medium
70	The system shall show alert to case manager when a case is successfully created.			High
71	The system shall allow user to log out of the system at anytime from anywhere.	Case Management		Low
72	The system shall have an option to download the documents for a case.			Medium
73	The system shall have an option to print the documents for a case.			Medium

Non-Functional Requirements:

A non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. They are contrasted with functional requirements that define specific behavior or functions. The plan for implementing non-functional requirements is detailed in the system architecture, because they are usually architecturally significant requirements.

Id	Requirement Description	Requested By (Stakeholder)
1	The system shall send a file with list of patient and its details to patient tracking system over-nightly.	PTS
2	The system shall receive real time feed file from patient tracking system for the schedule and availability of employees (doctors/nurses etc).	AT-Home Services Business users
3	The system shall receive real time feed file from CRM for newly created accounts.	
4	The system shall receive real time feed file from CRM for changed properties of existing accounts.	
5	The system shall send raw data files with case management transactions to analytics team on monthly basis.	Analytics
6	The system shall send real time feed for billing data to billing and payments system.	BPS
7	The system shall receive real time feed file from billing and payments system for payments that are done.	AT-Home Services Business users
8	The system shall send real time feed to pharmacy team for the list of products that need to be delivered.	Pharmacy
9	The system must support 1000 users at a time.	
10	The system shall respond in 2 second after any button is clicked.	
11	The user interface screens would respond in 5-6 seconds.	
12	The system shall require a downtime of 10 minutes if the server crashes.	

13	The system shall require a downtime of 10 minutes to make a new functionality/ modify module available on the production.	Business Owner
14	The system shall ask for login id and password from the patients and hospital staff for authorized access.	
15	The system shall have easy to navigate, readable and user friendly screens.	
16	The system shall contain independent and simple code modules that can be re-used in future system enhancements.	Project Manager

Behavioral Requirements:

Behavioral requirements refers to how the system will perform (behave) when certain conditions occur. In below table, we have captured the behavior of system specific to each use case.

Requirement	Input	Condition	Output
Use Case - ACCOUNT CREATION & MAINTENANCE			
The user should login to the system	User fills in Login Credentials	If Existing User	User lands on the home page.
	User fills in Registration Details	If New User	User receives email verification mail from system
User verifies their email address	User verifies email id by following the link in email from system	If user email address is verified	User is registered with the system and account is created
User wants to modify the information	User fills in the new information in the edit mode and saves the information	User must be logged in.	System present user detail with edit mode. Once the user edits and hits the save button, system performs data validation and saves the changes.
Use Case – APPOINTMENT BOOKING & TRACKING			
The user logs into the system	User logs in to the system with valid “username” and “password”.	User is an existing user	The system shall display “Appointment Tab” page
The user logs into the system with incorrect “username” and “password”	User logs in to the system with invalid	User is an existing user	The System shall display the error message “Username or Password is

	"username" or "password".		incorrect, please enter your correct credentials again."
Existing user calls the Help desk to request for appointment booking	Existing user calls the help desk to book an appointment	Help desk professional takes the user's patient ID and enters it to log into the Appointment booking page	The System displays the patients Appointment booking page.
User calls the Help desk to request for appointment booking	A new user calls to request an appointment booking	Help desk professional needs to create a new account for the user	The system is able to create a new account with a "username" and a generic "password" that can be changed
User type ID admin logs into the system with "username" and "password"	Login	The IT admin logs into the system	The system shall display the IT admin dashboard in addition to all the other account specific functionalities tab
User type ID Wellness practitioner logs into the system with "username" and "password"	Login – Wellness Practitioner	A wellness practitioner logs into the system	The system shall display his schedule ,patient details, patient history
Use Case – Ecommerce for Health Care Devices			
When a registered user logs in, the system shall display the product catalog.	Username Password	Username and password must be of a registered user.	Display product catalog.
When the registered user expands the product, the	Selected product.	User must be logged in.	Display selected product.

system shall display the selected product.			
The system shall allow the registered user to select the number of desired products.	Enter number of products.	User must be logged in.	Display product and quantity.
When the registered user selects the desired product and its quantity, the system shall check the availability of selected products in the inventory.	Select product and quantity of products.	User must be logged in.	Check availability of the product.
If a product is unavailable, the system shall display 'Out of Stock' notification.	Select the product and quantity of products.	User must be logged in Availability must be checked.	Display availability of the product.
Once address for delivery is updated, the system shall display shipping costs.	Address	User must be a registered user.	Calculate and display shipping costs.
The system shall allow the registered user to add a product to the shopping cart.	Selected product.	User must be a registered user.	Add product to shopping cart.
When all products are added to cart, the system shall calculate cart totals.	Costs of all products.	All products must be added to cart.	Calculate cart totals.

The system shall display cart totals along with shipment cost.	All product costs	All products must be added to shopping cart.	Display cart totals.
The system shall direct user to the payment gateway.	Nil	User must have bought products.	Direct user to payment gateway.
The system shall allow the user to either go back to shopping or log out.	Nil	User must be logged in.	Display back/log out buttons.
Use Case – Construction & Wellness Services			
The user shall log into the website of GenNex Diagnostics and Devices Ltd using their username and password	Username and Password	The user is a new user	Take the user to the Registration page
The user shall navigate to the Wellness webpage section through the website	Navigation to the wellness webpage by the user	The user is a new user or is using the website for the first time and has trouble navigating through the website	The user refers to the FAQ section or contacts GenNex through the contact us section
The user shall select the wellness service they want from the drop down menu	The user selects the wellness service they want	The user is unable to find the wellness service they want	The user refers to the FAQ section or contacts GenNex through the contact us section
The user selects the doctor they prefer from the list provided in the drop down menu	The user selects the name of the doctor they prefer	The doctor preferred by the user is not available	The system asks the user to select a new doctor or try again later

The system sends a confirmation notification to the user and the doctor	System sends the patient a confirmation	The system fails to send a confirmation	The system displays a pop up to the user that if the user doesn't receive a confirmation within 30 mins, they should contact the customer service
	System sends the doctor a confirmation	The system fails to send a confirmation	The doctor is supposed to reply back to the confirmation within 24 hours of receiving it. If the doctor doesn't reply back, the system sends the confirmation to the doctor again
Use Case - Case Management Service			
The system shall allow the user to enroll for a case management service.	Service type dropdown box should be selected with value as Case Management	1. If selected 2. If not selected	1. System will allow to proceed. 2. System will not allow to proceed.
The system shall allow the case manager to login to the case management functionality.	Username & Password for the case manager.	1. If entered correct credentials. 2. If entered incorrect credentials.	1. System will open up the case management welcome screen. 2. System will show error message showing wrong credentials entered.
The system shall allow the case manager to view the new case request.	Case manager will select a radio button against a case and click review button.	1. If a radio button selected. 2. If no radio button is selected.	1. System allows to open the request detail page for a case.

			2. System prompts user to select at least one radio button for a case.
The system shall allow the case manager to create a new entry for patient and its case.	Case manager will select a patient id to create a case for it.	1. If a patient id is selected. 2. If no patient id is selected.	1. System allows to open new case request page. 2. System prompts user to select at least one patient id to create a case.
The system shall allow the case manager to assign an entry for review to his/her supervisor.	Case manager will select a newly created entry and click on assign button.	1. If a case id is selected. 2. If no case id is selected.	1. System allows to assign new case to supervisor. 2. System prompts user to select at least one case id to assign for review.
The system shall allow the case manager to delete an entry for patient and its case before it is signed off.	Case manager will select a radio button against a case and click delete button.	1. If a radio button selected. 2. If no radio button is selected.	1. System allows to delete a case entry. 2. System prompts user to select at least one radio button for a case to delete.
The system shall allow the supervisor of case manager to review an entry for sign off.	Case manager will select a radio button against a case and click review button.	1. If a radio button selected. 2. If no radio button is selected.	1. System allows to open the request detail page for a case. 2. System prompts user to select at least one radio button for a case.

The system shall allow the supervisor of case manager to sign off an entry.	Case manager will select a radio button against a case and click Sign off button.	1. If a radio button selected. 2. If no radio button is selected.	1. System allows to sign off the new case request. 2. System prompts user to select at least one radio button for a case.
The system shall have an option to download the documents for a case.	User will have to select a case first. Within a case page, user can download any document by clicking the document, which was previously uploaded for that case.	1. If clicked on the document name.	1. System will start the download of document.
The system shall have an option to print the documents for a case.	User will have to select a case first. Within a case page, user can print any document by clicking the print button, which was previously uploaded for that case.	1. If clicked on the print button.	1. System will print the document.
The system shall allow the supervisor of case manager to reject an entry.	Case manager will select a radio button against a case and click Reject button.	1. If a radio button selected. 2. If no radio button is selected.	1. System allows to reject the new case request. 2. System prompts user to select at least one

			radio button for a case.
The system shall allow case manager and their supervisors to search a case through patient id.	Supervisor or Case manager will enter a patient id or number to search a case.	1. If valid patient id entered. 2. If invalid patient id entered	1. System will show the details of the case for the patient id entered. 2. System will show message saying no case found for entered patient id.
The system shall allow case manager and their supervisors to search a case through case id.	Supervisor or Case manager will enter a case id or number to search a case.	3. If valid case id entered. 4. If invalid case id entered	3. System will show the details of the case id entered. 4. System will show message saying case id not found.
The system shall allow the case manager to upload documents for respective cases.	Case manager will select a file location from its local machine and click on Upload button.	1. If file location is selected. 2. If no file location is selected.	1. System will allow the selected file to be uploaded on server. 2. System will give an error and will prompt user to select a file location first.
The system shall allow the case manager to choose start and end date for respective case.	Case manager will have to select valid start date and end date.	1. If selected current or future date. 2. If select past date for start or end of service	1. System will accept the date of start and end of service for that case. 2. System will prompt an error saying this is not a valid date.

The system shall allow the case manager to choose a provider for respective cases.	Case manager will have to type in the name of provider which should match with the values in internal database.	1. If enter correct name of the provider. 2. If entered incorrect name of the provider	1. System will accept the name of the provider for that case. 2. System will prompt an error saying this is not a valid provider.
The system shall allow user to log out of the system at anytime from anywhere.	User will have to click on the log out button to get out of the system.	1. If clicked on button Log out. 2. If clicked on close button of the window.	1. System will log out the user and take back to the home screen. 2. System will prompt an alert message that closing window will log out the user.

Risk Response Requirements:

Identifying and categorizing risks with Risk Response

Risk ID	Risk	Risk Response	Category
1	User Enters Invalid User Account Information during registration like : • Missing information items • Username already exists in the system • User Account information entered does not comply to its definition in the glossary • Not well formed e-mail address	• The system describes which entered data was invalid and presents the User with suggestions for entering valid data • The system prompts the User to re-enter the invalid information	People Risk
2	Invalid Login credentials	The user receives an email from the system stating their username and auto generated temporary password.	People Risk
3	User gives non-existent email address and User doesn't received any email from system	System doesn't allow user to register and user has to re-do the registration process	System Level People Risk
4	User Cancels Request	At any time, the User may choose to cancel the account creation. At which point, the processing is discontinued, the user account remains unchanged, and the user is notified that the account management request has been cancelled	People Risk
5	If 2 users are concurrently booking for the same service and try to select the same time slot and only one can get the slot	The system confirms the booking for the one who clicked on the time slot first.	System/People

6	The practitioner cancels an appointment	The system assigns a new practitioner by seeing the schedule availability, notifies a help desk by email. The help desk calls the practitioner to inform the new schedule	People
7	The practitioner does not get notified about the appointment	The system admin is notified. The admin ensures that the appointment is confirmed and all the participants are informed	People
8	Patient cancels a request and the service providers don't get informed	Help desk professional is notified about the appointment cancellation and he ensures that he mails the concerned practitioners involved	People
9	User does not have login credentials.	In case the user does not have login credentials, the system should redirect the user to the account creation subsystem. This subsystem will walk the user through all the steps of setting up an account thereby granting access to the GenNex Online Marketplace.	System Level
10	The database which stores all product details becomes inaccessible or corrupt.	To mitigate the risk of loss of data due to a corrupt database, there is an internal backup and recovery process. Archives of current data are stored on the backup server which can be recovered in case of database disaster.	System Level

11	The system displays incorrect product details.	The risk of the system displaying incorrect data can be prevented by having an internal user acceptance testing team which keeps constant tabs on the user interface to ensure the population of correct data.	System Level
12	User cannot add more products as shopping cart becomes full.	When a shopping cart exceeds limit, the system displays an option of either deleting products from the cart or starting a new transaction.	System Level
13	The shopping cart displays wrong cart total.	The risk of the system displaying incorrect data can be prevented by having an internal user acceptance testing team which keeps constant tabs on the user interface to ensure the population of correct data.	System Level
14	The interface between e-marketplace and payment gateway denies access.	The risk of connection failure between the browser and payment gateway can be mitigated by using a strong, secure payment gateway suitable for this business.	System Level
15	A doctor is booked for the same time slot by two different patients	The system keeps the appointment made first and cancels the second one asking the second user to choose another doctor	System/People
16	A doctor wants to cancel an appointment(The window for canceling is 48hrs prior to the appointment)	The system notifies the patient immediately and asks the patient to choose another doctor or another day + time slot if the same doctor is preferred	System/People

17	The patient or the doctor do not receive the confirmation message	The system displays a pop up message to the user while booking the appointment that if a confirmation message is not received with 30 mins, the customer care should be contacted. For the doctor, if the doctor doesn't reply back to the confirmation message within 2hrs, the system resends the confirmation message.	System/People
18	The doctor/nurse is late for the appointment	If the doctor/nurse do not arrive at the patient's residence within 30 mins of the appointment time, the patient is given 10%discount.	People
19	The doctor/nurse forgets to submit the payment collected from the patient using the pay by cash option and this affects the audit process.	The system sends a reminder every day to the doctor/nurse reminding them to submit the payment	People
20	Patient's records initially come from Patient Tracking system. So if doesn't come to our system then Patient will not be able to request for case management service.	In case of this issue, need to trigger a message to PTS team, requesting for latest patient file dump. Also, notify user with appropriate message like record not found.	

Risk Assessment and Priority

Risk Priority = (Probability of Occurrence X Impact X Discovery factor) / Preventiveness

Calculate Priority of the Risk

Risk ID	Description	Probability	Impact	Discovery	Prevention	Priority
1	User Enters Invalid User Account Information during registration	4	3	2	1	24
2	Invalid Login credentials	5	3	2	1	30
3	User gives non-existent email address and User doesn't received any email from system.	2	4	2	4	4
4	User Cancels Request	2	2	2	1	8
5	2 users concurrently try to select the same practitioner	3	5	1	3	45
6	Practitioner cancels an appointment	2	2	2	1	8
7	Practitioner does not get notified about the appointment	2	5	2	4	80
8	Patient cancels a request and the service provider don't get informed	2	5	4	2	80
9	User does not have login credentials.	5	1	5	5	5
10	The database which stores all product details becomes inaccessible or corrupt.	2	4	3	3	8
11	The system displays incorrect product details.	3	3	5	5	9
12	User cannot add more products as shopping cart becomes full.	1	3	5	5	3
13	The shopping cart displays wrong cart total.	1	4	5	5	4
14	The interface between e-marketplace and payment gateway denies access.	3	4	5	3	20

15	A doctor is booked for the same time slot by two different patients	3	5	2	3	10
16	A doctor wants to cancel an appointment(The window for canceling is 48hrs prior to the appointment)	2	4	2	4	4
17	The patient or the doctor do not receive the confirmation message	4	5	2	3	13
18	The doctor/nurse is late for the appointment	2	5	2	2	10
19	The doctor/nurse forgets to submit the payment collected from the patient using the pay by cash option and this affects the audit process.	2	5	2	3	6
20	Patient’s records initially come from Patient Tracking system. So if doesn’t come to our system then Patient will not be able to request for case management service.	2	5	2	2	10

Maintenance Requirements:

Archiving Policy

- The user account information will be fed to CRM (Customer Relationship Management) weekly at midnight.
- The system shall archive data every Sunday at 10 am, the data from the appointment boking table will be archived to a physical drive.
- If a Practitioner ID has not been active or used for 6 months, it will be purged.
- The user information including medical history and payment information will be weekly updated to the Customer Relationship Management. The feedback received from the customer is also recorded and captured in the CRM for future use.

Errors and notifications

- The system shall display error messages if the user enters invalid user name and password
- The system shall notify the admin if an appointment process fails
- The system shall notify the user in case no appointments are available for scheduling during the week.
- The doctor gets an error message if they try to cancel an appointment 48hurs before it is due. The window to cancel any appointment up to 48 hours before the appointment.

Security and access requirements

- User should have a secured login to the system making sure there are no internet security attacks possible.
- User can access only their own account when they login.
- Only system admin can view entire system and all the data in the system.
- The system shall only provide view only or read only rights to the patient
- The system shall provide the admin of AT Home services with the data manipulation and add rights.
- The system shall allow the front desk to add a new service or a new practitioner to the database.
- The other departments do not have access to the Wellness system but can request the admin for information whenever needed.

Data/Reporting/Business Intelligence Requirements:

- User data to be sent to CRM (Customer Relationship Management) weekly at midnight in order to maintain a central customer base.
- User data can be reported to the top management when requested.
- Requesting the analytics team to study the period when maximum user accounts were created.
- To determine which location in United States uses a lot of At Home Services
- The system shall archive data from the tables to a physical drive on a weekly basis every Sunday
- The system shall be able to generate test results, patient reports on an adhoc and timely basis
- The system shall give the Appointment data to the business analytics team to understand patient booking patterns to predict and notify them with best practices.
- Weekly reports to be sent to business top management to track the progress of the business.
- The patient data will be handed over to the analytics team for analyzing the data.

Transition or Deployment Requirements/Plan:

- The parent child tables dependencies need to be established and verified in production
- The data dependencies between different sub systems must be validated in production
- The lookup or reference tables must be loaded in production to facilitate transactional processes.
- The data to be uploaded to the target system should be in the format of the target system so that during deployment data format issues do not arise.
- There will not be a customer database since the business has not yet started so that should be kept in mind and accounted for.
- Dummy data used to test the system during the testing phase must be eliminated from the final system before system is opened to do business.
- Open issues must be resolved during the deployment phase.
- Business sign off must be taken for each testing cycle.

Business Process Requirements:

- The existing user is given three chances to login to the system with their login credentials. If they are wrong, system admin is notified.
- If the user fails to verify their email address, the system sends reminder emails to user twice and if the user doesn't verify than the system doesn't create account for that user.
- User can modify their profile any number of time and at any time.
- The system shall archive data from the tables to a physical drive on a weekly basis every Sunday
- The system shall purge a practitioner ID if it has not been used for six months
- The system shall lock the user from logging in after 3 unsuccessful login attempts
- The appointment boking can be scheduled only one week in advance
- The system will allow the user to store up to 5 different address and 5 phone numbers
- The system will generate the pre requisites needed for the tests in the appointment booking
- The system shall notify the admin if appointment booking failed online. Help desk will be provide with the user name , patient ID and phone number to call them back and take their request.
- System will give routinely check for the license expiry dates of doctors and nurses and send out timely messages asking them to renew it.
- Data backup process to take place every night so that in the event that the data is lost or modified incorrectly, the system can be rolled back using the backup data.
- Creating a knowledge repository documenting the entire process of building the system from scratch including the requirements elicitation meeting documents and business sign offs as a reference guide for the future developers.
- Creating a user manual for the admins and users of the system on how to use the system.
- Creating the front end for the office staff like admins, doctors, nurses, bill generating department etc.