

Requirements Submission

Software Requirement Specification

Group members	Cesar Brito
	Nicholas Biles
	Jake Curduck
	Ngoc Nguyen
	Justin Kiem
	Steffen Niemeyer

1. Project Description

The software allows patients, known as the users, to record the information of the medications they have and are taking. This data can be archived for later reference, as well as can be exported as a text file to be sent to healthcare providers when needed. Additionally, the software allows users to set medication reminders, including to remind them to take their medications and to remind them to get a refill for their medications. Another use of the software is to record symptoms for future reference visiting a healthcare provider, or to be sent to the healthcare provider directly if the user has health inquiries.

2. Functional Requirements

FR01	The software must enable users to edit their list of medications (removing can either send to medication history or delete entirely).
FR02	The software must enable users to view their list of medications.
FR03	The software must enable users to view their medication history.
FR04	The software must enable users to take notes about symptoms they are experiencing.
FR05	The software must enable users to import/export symptom data from medical devices.
FR06	The software must enable users to export medication history.
FR07	The software must enable users to import medication history.
FR08	The software must enable users to enable reminders for when they are due to take their medicine.

FR09	The software must enable users to enable reminders for when they need to get a refill of their medicine.
FR10	The software must enable users to import user settings.
FR11	The software must enable users to export user settings.

3. Non-Functional Requirements

NFR01	The website and medication management system must comply with all HIPAA regulations.
NFR02	When exporting, the software must finish compiling data and initiate a download within 3 seconds.
NFR03	A new page should load within three seconds.
NFR04	The software must display time based on the user's device time zone.
NFR05	Export files must be a txt file.
NFR06	Export files must be formatted with drug data being comma separated values with different drugs being separated by a new line character.
NFR07	If a field has no data, then it must be marked as N/A.

4. Use Case Specification

UC01 Name:	Manage Medications
Description:	The software enables users to edit their list of medications, adding, editing, and deleting medications and enabling them to send medications to their medication history.
Actor:	User
Entry Condition:	The actor clicks the "Edit" button in View Medications Use Case.
Basic Path:	1. The system presents a screen containing: [PRO01] - - - ← Back - - - + Add - A scrollable menu with - List of the current medications with:

	<ul style="list-style-type: none"> - Drug Name - Dosage + Unit - - - Manage - - - Delete - - - Archive - Archived Medicines [Header] - List of the archived medications with: <ul style="list-style-type: none"> - Drug Name - Dosage + Unit - - - Manage - - - Delete - - - Unarchive <p>2. The actor selects Manage on a medication [A01] [A02] [A03] [A04] [A05]</p> <p>3. The system presents a screen containing retrieved drug data: [PRO02]</p> <ul style="list-style-type: none"> - Drug Name (editable) - Dosage (editable) - Unit (dropdown containing list of enumeration values) - Start date (editable) - End date (editable) - Frequency (dropdown containing list of enumeration values) - Notes (editable) - - - Save - - - Cancel <p>4. The actor enters information and clicks Save [A06]</p> <p>5. The system verifies that the information is valid [BR01] [E01]</p> <p>6. The system saves the entered information in place of the retrieved drug data.</p> <p>7. The system returns to step 1 of the basic path.</p>
Alternative Paths:	<p>[A01] The actor selects ← Back:</p> <ol style="list-style-type: none"> 1. The use case is concluded 2. The system returns to the View Medications Use Case <p>[A02] The actor selects + Add:</p> <ol style="list-style-type: none"> 1. The system presents a screen containing: [PRO02] <ul style="list-style-type: none"> - Drug Name (editable) - Dosage (editable) - Unit (dropdown containing list of enumeration values) - Start date (editable) - End date (editable) - Frequency (dropdown containing list of enumeration values) - Notes (editable) - - - Save - - - Cancel 2. The actor enters information and clicks Save [A06] 3. The system verifies if the information is valid [BR01] [E01] 4. The system saves the entered information in a new entry in the current medications array. 5. The system returns to step 1 of the basic path.

	<p>[A03] The actor selects Delete on a medication:</p> <p>1. The system removes the drug data.</p> <p>2. The system outputs “Successfully deleted”</p> <p>3. The system returns to step 1 of the basic path.</p> <p>[A04] The actor selects Archive on a medication:</p> <p>1. The system moves the drug data to the archived medications array.</p> <p>2. The system outputs “Successfully archived”</p> <p>3. The system returns to step 1 of the basic path.</p> <p>[A05] The actor selects Unarchive on a medication:</p> <p>1. The system moves the drug data to the current medications array.</p> <p>2. The system outputs “Successfully unarchived”</p> <p>3. The system returns to step 1 of the basic path.</p> <p>[A06] The actor selects Cancel:</p> <p>1. The system discards entered information.</p> <p>2. The system returns to step 1 of the basic path.</p>																																			
Exception Paths:	<p>[E01] Can’t save blank or invalid information</p> <p>1. System displays a message indicating that mandatory fields weren’t filled or fields have invalid information.</p> <p>2. The system returns to the appropriate step.</p>																																			
Business Rules:	<p>[BR01] The drug name and dosage attributes are required.</p>																																			
Data Description:	<table><tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th></tr><tr><td>Drug name</td><td>String</td><td>50</td><td>-</td></tr><tr><td>Dosage</td><td>Float</td><td>8</td><td>-</td></tr><tr><td>Drug unit</td><td>Unit (enum)</td><td>50</td><td>-</td></tr><tr><td>Frequency</td><td>Frequency (enum)</td><td>50</td><td>-</td></tr><tr><td>Start date</td><td>Date</td><td>10</td><td>XX-XX-XXXX</td></tr><tr><td>End date</td><td>Date</td><td>10</td><td>XX-XX-XXXX</td></tr><tr><td>Notes</td><td>String</td><td>800</td><td>-</td></tr></table>				Name	Type	Length	Mask	Drug name	String	50	-	Dosage	Float	8	-	Drug unit	Unit (enum)	50	-	Frequency	Frequency (enum)	50	-	Start date	Date	10	XX-XX-XXXX	End date	Date	10	XX-XX-XXXX	Notes	String	800	-
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Prototypes:

[PRO01]

←

+ Add

Drug 1 ✓

Manage

Delete

Archive

Drug 2 ✓

Drug 3 ✓

Archive Medicine

Drug 4 ✓

Edit page

[PRO02]

←

Name:

Dose Unit ✓

Start (MM/DD)

End (MM/DD)

Frequency ✓

Note:

Cancel Save

Manage Page

UC02 Name:	View Medications
Description:	The software enables the user to view all their current drug information (drug name, frequency, date, etc.) in one page as well as view archived medication information.
Actor:	User
Entry Condition:	The software loads in this use case, and when other use cases are exited.
Basic Path:	<ol style="list-style-type: none"> The system presents a screen containing: [PRO01] <ul style="list-style-type: none"> - - - Edit - A scrollable list of the current medications with: <ul style="list-style-type: none"> - Drug Name - Start Date - End Date - Dosage + Unit - Frequency - Note - - - History The actor selects History [A01] The system presents a screen containing: [PRO02] <ul style="list-style-type: none"> - - - Back - A scrollable list of the archived medications with: <ul style="list-style-type: none"> - Drug Name - Start Date - End Date - Dosage + Unit - Frequency - Note - - - <input type="checkbox"/> Download The actor selects Back [A02] The system returns to step 1 of the basic path.
Alternative Paths:	<p>[A01] The actor selects Edit:</p> <ol style="list-style-type: none"> The use case is concluded. The system starts the Manage Medications Use Case <p>[A02] The actor selects <input type="checkbox"/> Download:</p> <ol style="list-style-type: none"> The use case is concluded. The system starts the Export Medications Use Case
Exception Paths:	
Business Rules:	

Data Description:

Name	Type	Length	Mask
Drug name	String	50	-
Dosage	Float	8	-
Drug unit	Unit (enum)	50	-
Frequency	Frequency (enum)	50	-
Start date	Date	10	XX-XX-XXXX
End date	Date	10	XX-XX-XXXX
Notes	String	800	-

Prototypes:

[PRO01]

A hand-drawn prototype of a mobile application screen. At the top is a blue header bar with a left-pointing arrow, the word 'Edit', and a right-pointing arrow. Below the header is a list of three drug entries, each in a rectangular box. The first box is labeled 'Drug 1' with a checkmark to its right and contains the text: 'Start: MM/DD/YYYY', 'End: MM/DD/YYYY', 'dosage: -mg', and 'Note: N/A'. The second box is labeled 'Drug 2' with a checkmark to its right. The third box is labeled 'Drug 3' with a checkmark to its right. At the bottom of the screen is a bar labeled 'History'.

View page

[PRO02]

A hand-drawn prototype of a mobile application screen. At the top is a blue header bar with a left-pointing arrow. Below the header is a list of three drug entries, each in a rectangular box. The first box is labeled 'Drug 1' with a checkmark to its right and contains the text: 'Start: MM/DD/YYYY', 'End: MM/DD/YYYY', 'dosage: -mg', and 'Note: N/A'. The second box is labeled 'Drug 2' with a checkmark to its right. The third box is labeled 'Drug 3' with a checkmark to its right. At the bottom of the screen is a bar with a downward-pointing arrow and a right-pointing arrow.

History Page

UC03 Name:	Export Medications										
Description:	The software enables the actor to export their medication history to their healthcare provider, securely transferring the data while ensuring compliance with healthcare regulations. It does this by downloading a text file with their medication history formatted within it.										
Actor:	User										
Entry Condition:	The actor clicks the “□ Download” button in View Medications Use Case										
Basic Path:	1. The system verifies the existence of data. [BR01] [E01] 2. The system compiles the data into a txt file. 3. The system initiates a download of the file. 4. The use case is concluded. 5. The system returns to View Medications Use Case										
Alternative Paths:											
Exception Paths:	[E01] No information to export <ol style="list-style-type: none"> 1. System displays a message indicating that there is nothing to export. 2. The use case is concluded. 3. The system returns to View Medication Use Case 										
Business Rules:	[BR01] The system cannot export when there is no save data.										
Data Description:	<table border="1"> <thead> <tr> <th>Name</th><th>Type</th><th>Length</th><th>Mask</th></tr> </thead> <tbody> <tr> <td>Data export file</td><td>.txt file</td><td>-</td><td>-</td></tr> </tbody> </table>			Name	Type	Length	Mask	Data export file	.txt file	-	-
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Data export file	.txt file	-	-								
Prototypes:											