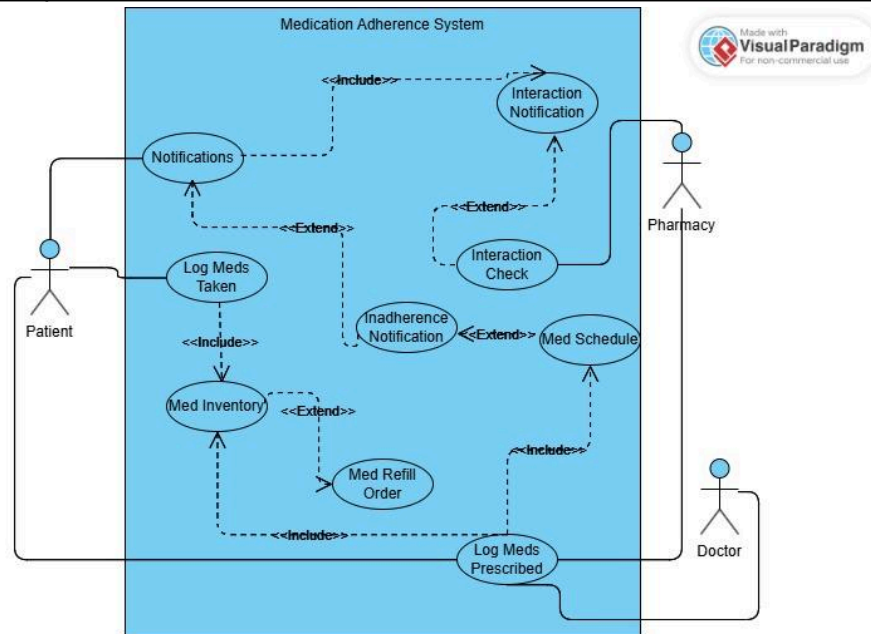


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REQ 1: Allow Patient/Pharmacy/Doctor to Log Prescriptions

REQ 2: Allow Patient to Log Medication Taken

REQ 3: Allow Patient to Manage Notifications From System

REQ 4: Allow Pharmacy to submit Dangerous Medication Interactions Report

REQ 5: Allow System to notify Doctor/Pharmacy when Patient fails to adhere to medication schedule

REQ 6: Allow System to send Prescription Refill Order to Pharmacy

Name:	REQ 1: Log Medications Prescribed
Description:	The software allows the Patient, Doctor, or Pharmacy to add Prescriptions to the Patient's Prescription Log.
Actor:	Patient, Doctor, Pharmacy
Entry condition:	The actor selects Add Prescription
Basic path:	<ol style="list-style-type: none"> The system presents the Add Prescription screen containing the options: <ul style="list-style-type: none"> --- New --- Cancel [A01] The actor selects the option New The system presents a screen for entering the Prescription Details containing: <ul style="list-style-type: none"> - MedName (editable)

	<ul style="list-style-type: none">- Dose (editable)- Inventory (editable)- Pharmacy ID (editable)-Medication ID (editable)- Schedule (editable)- The options:<ul style="list-style-type: none">--- Confirm--- Back [A02] <ol style="list-style-type: none">4. The actor selects the Confirm option5. The system verifies if the information is valid [BR01] [E01]6. The system includes the new Prescription7. The use case is concluded8. The system returns to the home screen																												
Alternative paths:	[A01] The actor selects the Cancel option <ol style="list-style-type: none">1. The use case is concluded2. The system returns to the home screen [A02] The actor selects the option Back <ol style="list-style-type: none">1. The use case returns to step 1 of the basic path																												
Exception path:	[E01] Invalid registration information <ol style="list-style-type: none">1. System displays message indicating the existence of invalid/incomplete information.2. The use case returns to step 3 of the basic path.																												
Business Rules:	[BR01] All attributes are mandatory. .																												
Data description	<table><tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th></tr><tr><td>MedName</td><td>String</td><td>256</td><td>-</td></tr><tr><td>Dose</td><td>Float</td><td>256</td><td>-</td></tr><tr><td>Schedule</td><td>DateTime</td><td>256</td><td>-</td></tr><tr><td>Inventory</td><td>Int</td><td>256</td><td></td></tr><tr><td>Pharmacy ID</td><td>String</td><td>10</td><td></td></tr><tr><td>Medication ID</td><td>String</td><td>10</td><td></td></tr></table>	Name	Type	Length	Mask	MedName	String	256	-	Dose	Float	256	-	Schedule	DateTime	256	-	Inventory	Int	256		Pharmacy ID	String	10		Medication ID	String	10	
Name	Type	Length	Mask																										
MedName	String	256	-																										
Dose	Float	256	-																										
Schedule	DateTime	256	-																										
Inventory	Int	256																											
Pharmacy ID	String	10																											
Medication ID	String	10																											
Prototype:	[]																												

Name:	REQ 2: Allow Patient to Log Medication Taken
Description:	The software allows the Patient to log their adherence to the provided medication schedule
Actor:	Patient
Entry condition:	The patient selects Log Medication Taken
Basic path:	<ol style="list-style-type: none"> 1.) The system presents a list of the Patient's Logged Prescriptions and the option: -Cancel [A01] 2.) The patient selects the medication/prescription taken/applied 3.) The system presents the options: -Confirm -Back [A02] 4.) The System verifies the time on the device compared to the scheduled time of the medication [E01][E02][BR01] 5.) The system adjusts the stock of the medication accordingly [BR02] 6.) The use case is concluded 7.) The system returns to the home screen
Alternative paths:	<p>[A01] The actor selects the Cancel option</p> <ol style="list-style-type: none"> 1.) The use case is concluded 2.) The system returns to the home screen <p>[A02] The actor selects the option Back</p> <ol style="list-style-type: none"> 1.) The use case returns to step 1 of the basic path
Exception path:	<p>[E01] The medication is taken early</p> <ol style="list-style-type: none"> 1.) The system presents a warning that the patient is taking the medication early and presents the options: <ul style="list-style-type: none"> - Accept - Back [A02] 2.) The use case is concluded

	<p>3.) The system returns to the home page</p> <p>[E02] The medication is taken late</p> <p>1.) The system presents a warning that the patient is taking the medication early and presents the options:</p> <ul style="list-style-type: none">- Accept- Back [A02] <p>2.) The use case is concluded</p> <p>3.) The system returns to the home page</p>																									
Business Rules:	<p>[BR01] Off schedule doses, early or late, must be flagged (handled by REQ 5).</p> <p>[BR02] Low inventory values, less than two weeks’ of doses, must be flagged (handled by REQ 6).</p>																									
Data description	<table><tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th><th></th></tr><tr><td>Medication Name</td><td>String</td><td>256</td><td></td><td></td></tr><tr><td>Medication ID</td><td>String</td><td>10</td><td>-</td><td></td></tr><tr><td>Inventory</td><td>Int</td><td>256</td><td>-</td><td></td></tr><tr><td>Schedule</td><td>DateTime</td><td>256</td><td>-</td><td></td></tr></table>	Name	Type	Length	Mask		Medication Name	String	256			Medication ID	String	10	-		Inventory	Int	256	-		Schedule	DateTime	256	-	
Name	Type	Length	Mask																							
Medication Name	String	256																								
Medication ID	String	10	-																							
Inventory	Int	256	-																							
Schedule	DateTime	256	-																							

Name:	REQ 3: Allow Patient to Manage Notifications From System
Description:	The Patient will receive notifications regarding reminders for their scheduled prescriptions, Dangerous Interaction Warnings, and Refill Request Responses
Actor:	Patient
Entry condition:	The system has generated a notification for the patient.
Basic path:	<ol style="list-style-type: none"> 1. The system presents a list of notifications to the patient. 2. The patient selects a notification to view. 3. The system displays the details of the notification. 4. The patient selects an action: <ul style="list-style-type: none"> - Dismiss notification - Snooze reminder notification (if applicable) 5. The system processes the selected action.

	<div>6. The use case is concluded.</div> <div>7. The system returns to the home screen.</div>																													
Alternative paths:	<div><div>● [A01] Patient chooses to dismiss all notifications:</div><div><div>1. The system marks all notifications as read and removes them from the active list.</div><div>2. The use case is concluded.</div><div>3. The system returns to the home screen.</div></div></div> <div><div>● [A02] Patient selects “Back” instead of an action:</div><div><div>1. The use case returns to step 1 of the basic path.</div></div></div>																													
Exception path:	<div><div>● [E01] No new notifications available:</div><div><div>1. The system informs the patient that there are no new notifications.</div><div>2. The use case is concluded.</div></div></div>																													
Business Rules:	<div><div>● The system must store notifications for a predefined period before automatic removal.</div><div>● Critical warnings (e.g., dangerous drug interactions) must require patient acknowledgment before dismissal.</div></div>																													
Data description	<table><tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th><th></th></tr><tr><td>Notification ID</td><td>String</td><td>256</td><td>-</td><td></td></tr><tr><td>Notification Type</td><td>String</td><td>256</td><td>-</td><td></td></tr><tr><td>Notification Message</td><td>String</td><td>512</td><td>-</td><td></td></tr><tr><td>Timestamp</td><td>DateTime</td><td>-</td><td>-</td><td></td></tr></table>					Name	Type	Length	Mask		Notification ID	String	256	-		Notification Type	String	256	-		Notification Message	String	512	-		Timestamp	DateTime	-	-	
Name	Type	Length	Mask																											
Notification ID	String	256	-																											
Notification Type	String	256	-																											
Notification Message	String	512	-																											
Timestamp	DateTime	-	-																											

Name:	REQ 4: Allow Pharmacy to submit Dangerous Medication Interactions Report
Description:	The pharmacy can submit reports about potentially dangerous drug interactions.
Actor:	Pharmacy
Entry condition:	The pharmacy identifies a potential dangerous drug interaction.

Basic path:	<ol style="list-style-type: none">1. The system presents the option to submit an interaction report.2. The pharmacy selects “New Report.”3. The system presents a form for entering report details:<ul style="list-style-type: none">● Drug combination details● Description of the interaction● Severity level● Recommend action4. The pharmacy submits the report.5. The system validates the information and stores the report.6. The system sends alerts to relevant users (doctors, patients).7. The use case is concluded.																									
Alternative paths:	<ul style="list-style-type: none">● [A01] Pharmacy selects “Cancel” before submitting:<ol style="list-style-type: none">1. The use case is concluded.● [A02] Pharmacy selects “Back” instead of submitting:<ol style="list-style-type: none">1. The use case returns to step 1 of the basic path.																									
Exception path:	<ul style="list-style-type: none">● [E01] Report submission fails due to incomplete data:<ol style="list-style-type: none">1. The system prompts the pharmacy to complete missing fields.2. The use case returns to step 3.																									
Business Rules:	<ul style="list-style-type: none">● All reports must include a severity rating.● The system must notify affected patients and doctors within a specified timeframe.																									
Data description	<table><tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th><th></th></tr><tr><td>Report ID</td><td>String</td><td>256</td><td>-</td><td></td></tr><tr><td>Drug Names</td><td>String</td><td>256</td><td>-</td><td></td></tr><tr><td>Interaction</td><td>String</td><td>512</td><td>-</td><td></td></tr><tr><td>Severity</td><td>Enum (low, mod., high)</td><td>-</td><td>-</td><td></td></tr></table>	Name	Type	Length	Mask		Report ID	String	256	-		Drug Names	String	256	-		Interaction	String	512	-		Severity	Enum (low, mod., high)	-	-	
Name	Type	Length	Mask																							
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Interaction	String	512	-																							
Severity	Enum (low, mod., high)	-	-																							

Name:	REQ 5: Allow System to notify Doctor/Pharmacy when a Patient fails to adhere to medication schedule
Description:	The system monitors the patient's medication schedule. If the patient does not log their medication use during the prescribed

	time, the system will create a notification that is then sent to the doctor and the Pharmacy.
Actor:	Patient, Doctor, Pharmacy
Entry condition:	The patient has a medication schedule. The system is tracking the medication adherence
Basic path:	<ol style="list-style-type: none"> 1. The system monitors the patient's medication schedule. 2. If the patient fails to log medication intake within the prescribed time frame, the system triggers an adherence notification. 3. The system sends an adherence notification to the doctor and pharmacy.
Alternative paths:	<p>[A01] Patient logs medication intake late but within an acceptable grace period: The system generates a warning instead of a full adherence notification and does not notify the doctor or pharmacy.</p> <p>[A02] Patient manually updates the log after missing a dose: The system records the late entry and does not send an adherence notification if it is within an allowed timeframe.</p> <p>[A03] Doctor/Pharmacy disables adherence notifications for a specific patient: The system does not send notifications to the opted-out recipient but continues to track adherence.</p>
Exception path:	<p>[E01] System fails to retrieve adherence data: The system retries fetching the data after a predefined interval. The use case returns to step 1.</p> <p>[E02] Notification delivery to doctor/pharmacy fails due to communication error: The system logs the failed attempt and retries after a set period. The use case returns to step 3.</p> <p>[E03] Patient reports an error in the medication log after a notification is sent: The system allows the patient to correct the log and updates the adherence record.</p>
Business Rules:	<ul style="list-style-type: none"> - Notifications should only be sent when the missed medication exceeds a defined threshold

	<ul style="list-style-type: none"> - Patients should have a grace period before being marked as non-adherent. - Doctors and pharmacies should be notified based on their subscription preferences. 				
Data description					
	Name	Type	Length	Mask	
	Patient ID	String	10	-	
	Medication ID	String	10	-	
	Doctor ID	String	10	-	
	Pharmacy ID	String	10	-	
	Notification	String	10	-	
	Timestamp	String	-	-	

Name:	REQ 6: Allow System to send Prescription Refill Order to Pharmacy
Description:	The system should automatically generate and send a prescription refill order to the pharmacy when a patient's medication inventory reaches a predefined threshold.
Actor:	Patient, Pharmacy, System
Entry condition:	<p>Patient's medication inventory is low, requiring a refill.</p> <p>A valid prescription exists in the system.</p>
Basic path:	<ol style="list-style-type: none"> 1. The system continuously monitors the patient's medication inventory. 2. When the inventory reaches the predefined threshold, the system generates a refill request. 3. The system sends the refill order to the pharmacy. 4. The pharmacy receives the order and processes it accordingly. 5. The system notifies the patient about the refill order status.
Alternative paths:	<p>Patient manually requests a refill instead of relying on the automatic trigger.</p> <p>Pharmacy rejects the refill request due to prescription expiration or regulatory issues.</p>

Exception path:	The system fails to send the refill order due to technical issues. The pharmacy does not have the medication in stock and notifies the system.																																							
Business Rules:	Prescription validity must be verified before processing a refill request. A refill can only be issued if the patient's insurance coverage (if applicable) allows it. Notifications must be sent to both the patient and pharmacy upon refill request processing.																																							
Data description	<table><thead><tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th><th></th></tr></thead><tbody><tr><td>patient ID</td><td>String</td><td>10</td><td>-</td><td></td></tr><tr><td>Prescription ID</td><td>String</td><td>15</td><td>-</td><td></td></tr><tr><td>Medication Name</td><td>String</td><td>50</td><td>-</td><td></td></tr><tr><td>Refill Quantity</td><td>Integer</td><td>-</td><td>-</td><td></td></tr><tr><td>Pharmacy ID</td><td>String</td><td>10</td><td>-</td><td></td></tr><tr><td>Refill Status</td><td>String</td><td>20</td><td>-</td><td></td></tr></tbody></table>					Name	Type	Length	Mask		patient ID	String	10	-		Prescription ID	String	15	-		Medication Name	String	50	-		Refill Quantity	Integer	-	-		Pharmacy ID	String	10	-		Refill Status	String	20	-	
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