Use Cases

Doctor Use Cases

UC_DOC_01	Manage Patient Records
Summary	The system allows doctors to create, edit, and update patient records, including medical history, diagnoses, treatments, and progress notes.
Actors	Doctor
Preconditions	-Doctor must be logged into the system. -If the patient exists, their record must be retrievable from the database. -If the patient is new, the system must allow new patient entry.
Main Sequence	1. **Doctor logs into the system** using a secure username and password. 2. **Doctor navigates to the 'Patient Records' module** from the system dashboard. 3. **Doctor searches for the patient** by name, patient ID, or other identifier. If the patient exists: 4. **The system retrieves the patient's record** and displays the following: • Personal details (name, date of birth, contact information) • Medical history • Diagnoses and treatments • Prescribed medications • Progress notes 5. **Doctor reviews the record** and makes necessary updates. 6. **Doctor modifies or adds new details**, such as: • Updating medical history (e.g., new allergies or conditions). • Entering new diagnoses and treatments.

	• Adding new medications. • Writing progress notes. 7. **Doctor submits the changes.** 8. **The system validates and securely stores the updated record.** If the patient does not exist: 9. **The system informs the doctor that no matching record was found.** 10. **Doctor selects 'Create New Patient'.** 11. **Doctor enters the patient's personal and medical details.** 12. **Doctor submits the new patient record.** 13. **The system validates and securely stores the new record.**
Alternative Sequence	- If a patient is not found, the system prompts the doctor to create a new record. - If data validation fails, the system requests corrections.
Non-Functional Requirements	- Secure access and encryption - Easy search and update functions
Postconditions	- The patient record is updated (if the patient existed). -A new patient record is created (if the patient did not exist). -The information is securely stored and available in real time.

UC_DOC_02	Electronic Prescription
Summary	The system enables doctors to prescribe medications electronically, check for potential drug interactions, and send prescriptions to pharmacies.
Actors	Doctor, Pharmacy

Preconditions	- Doctor must be logged in. - The patient must have an active medical record.
Main Sequence	1. Doctor logs into the system using secure credentials. 2. Doctor selects the 'Prescribe Medication' option. 3. Doctor searches for and selects the patient. 5. Doctor enters prescription details, including: • Medication name • Dosage and frequency • Duration of use 6. The system checks for potential drug interactions by: • Comparing with the patient's existing medications • Checking for known allergies • Identifying contraindications 7. If interactions are found, the system alerts the doctor and suggests alternatives. 8. Doctor reviews and confirms the prescription. 9. The system securely sends the prescription to the selected pharmacy. 10. The pharmacy system receives the prescription and verifies it. 11. Pharmacist checks stock availability. 12. If medication is available, the pharmacist: • Prepares the medication. • Labels it with instructions. • Updates the system to "Ready for Pickup." 13. If medication is out of stock, the pharmacist:

	• Notifies the system to alert the doctor. • Suggests an alternative if available. 14. Patient receives an SMS or email notification that the prescription is ready. 15. Patient arrives at the pharmacy, verifies identity, and collects medication. 16. Pharmacist updates the system to mark the prescription as 'Dispensed'.
Alternative Sequence	- If the doctor enters incomplete prescription details, the system prompts for missing information before proceeding. -If the patient does not have a medical record, the doctor is prompted to create one before prescribing medication. -If the doctor accidentally submits a duplicate prescription, the system warns them and asks for confirmation.
Non-Functional Requirements	- High security and encryption - Real-time interaction checking - Integration with pharmacy systems
Postconditions	-The prescription is securely stored and sent to the pharmacy. -The patient collects their medication without errors. -The pharmacy logs the successful dispensation of the medication.

UC_DOC_03	Manage Doctor's Timetable
Summary	This use case allows doctors to manage their schedules by viewing, updating, and organizing patient appointments, surgeries, and administrative tasks. The system ensures that patient bookings are automatically reflected in the timetable and prevents scheduling conflicts. Doctors can also manually add appointments if a patient is physically present or unable to book online.
Actors	• Primary Actor: Doctor

	• Secondary Actors: System, Patients
Preconditions	- The doctor must be logged into the system with valid credentials. -The system must have access to the doctor's existing schedule and patient appointments. -The system must support patient-initiated bookings that automatically reflect in the doctor's schedule. -The doctor must have the appropriate system permissions to modify the schedule.
Main Sequence	1. Doctor logs in using secure credentials. 2. Doctor navigates to the "Timetable" or "Schedule" section. 3. The system retrieves and displays the doctor's full schedule, including: • Confirmed Patient Appointments (automatically booked by patients). • Pending Appointments (requests that require manual approval). • Surgery Schedules. • Administrative Meetings or Tasks. • Breaks or Blocked Time Slots. 4. Doctor views appointment details, including: • Patient's name, contact details, and medical history (if authorized). • Reason for the visit. • Appointment type (physical visit, teleconsultation, follow-up). • Appointment status (confirmed, pending, rescheduled). 5. Doctor updates the schedule as needed: • Manually Add Appointments (New Step!): ○ If a patient is physically present or unable to book online, the doctor selects "Add Appointment". • Doctor enters patient details (or selects an existing patient from the system). • Doctor selects an available time slot.

	• System validates availability and prevents double booking. • Doctor confirms, and the system updates the timetable. • Patient receives an appointment confirmation. • Reschedule Appointments: Selects a new time slot → System checks for conflicts → Patient is notified. • Block Time Slots: Doctor blocks time for personal use or administrative tasks → System prevents bookings in those slots. 6. System automatically prevents double bookings and ensures time slot availability. 7. Doctor confirms and saves changes. 8. System updates the timetable and sends notifications to affected patients (if changes were made).

Organ Donor Coordinator Use Cases

UC_ORG_01	Register Organ Donors
Summary	The system allows coordinators to register organ donors by storing personal and medical details. It automatically generates donor-recipient matches and notifies coordinators for further review.
Actors	Organ Donor Coordinator
Preconditions	- The coordinator must be logged into the system with valid credentials. -The donor must provide required personal and medical details for registration. -The system must have access to the donor-recipient matching database to check for potential matches.
Main Sequence	1. Coordinator logs into the system using valid credentials. 2. Coordinator navigates to the 'Register Donor' section from the dashboard. 3. Coordinator selects 'Add New Donor'. 4. Coordinator enters donor's personal details, including: • Name • Date of birth • Contact information • Address 5. Coordinator enters donor's medical details, including: • Blood type • Known allergies • Any medical conditions that may affect donation 6. The system validates the entered information to ensure completeness and correctness. 7. The system stores the donor details in the database for future reference. 8. The system attempts to generate a donor-recipient match based on: • Blood type compatibility • Urgency level of recipient • Geographic proximity 9. The system notifies the coordinator with a match recommendation if a match is found.

	10. Coordinator reviews the match details and finalizes the registration. 11. System confirms donor registration and logs the activity.
Alternative Sequence	- If validation fails, the system prompts for corrections. - If no match is found, the donor remains in the database for future matches.
Non-Functional Requirements	- Secure data storage - Fast retrieval of donor information
Postconditions	- Donor details are saved in the system. - A match is generated (if available). - Notification sent to the coordinator.

UC_ORG_02	Generate Reports
Summary	The system allows coordinators to generate monthly and yearly reports covering donor registrations, transplants, waiting list status, and key metrics.
Actors	Organ Donor Coordinator
Preconditions	- Coordinator must be logged into the system. - The database must contain donor and transplant data.
Main Sequence	1. Coordinator logs into the system using authorized credentials. 2. Coordinator selects 'Generate Report' from the dashboard. 3. Coordinator chooses the report type and time period (monthly or yearly). 4. • The system retrieves relevant data from the database, including: • Number of donor registrations • Number of successful transplants • Current waiting list statistics 5. The system processes the data and compiles it into a structured report.

	6. The system formats the report (e.g., PDF, Excel, or dashboard view). 7. Coordinator reviews the generated report for accuracy. 8. Coordinator exports or shares the report with relevant stakeholders.
Alternative Sequence	- If no relevant data is available, the system notifies the coordinator that report generation is not possible. -If an error occurs during report generation, the system logs the error and provides a retry option. -If the system takes too long to generate the report, the coordinator is given an option to receive it via email when ready
Non-Functional Requirements	- Fast data retrieval - Secure report storage - Compliance with healthcare regulations
Postconditions	- The report is generated and available for review. - The coordinator can download or share the report.

Nutricionist Use Cases

UC Name	Dietary Record Management & Monitoring
UC Code and Name	UC_NUT_01: Dietary Record Management & Monitoring
Summary	The system shall allow the nutritionist to manage (view, add, update, and delete) patient dietary records, assess intake, create personalized plans, and generate progress reports for data-driven decision-making.
Dependency	This use case may depend on the "Patient Profile Management" use case for retrieving patient details.
Actors	**Primary Actor:** Nutritionist **Secondary Actors:** Patient (for providing dietary data)
Preconditions	● The nutritionist must be logged into the system. ● The patient must have a registered profile in the system. ● If the patient is new, the system must allow the entry of a new patient profile.
Description of the Main Sequence	1. The nutritionist logs into the system using a secure username and password. 2. The nutritionist navigates to the “Dietary Record Management” module from the dashboard. 3. The nutritionist searches for a patient using a unique identifier (e.g., name, patient ID, or contact details). 10. **If the patient exists:** 4. The system retrieves and displays the patient's dietary records. 5. The nutritionist reviews and updates dietary records. 6. The nutritionist modifies or adds new details. 7. The nutritionist submits the changes. 8. The system validates and securely stores the updated record. 11. **If the patient does not exist:** 9. The system informs the nutritionist. 12. The nutritionist creates a new patient record. 13. The system validates and securely stores the new record. 4. The nutritionist generates a progress report. 5. The system compiles and presents the report for review. 6. The nutritionist finalizes and saves the report.
Description of the Alternative Sequence	1. If the patient has no existing dietary records, the nutritionist creates a new dietary record. 2. If invalid data is entered, the system prompts the nutritionist to correct it.

	3. If the patient profile is incomplete, the system notifies the nutritionist.
Non-Functional Requirements	- The system should allow real-time access to dietary records. - Data security measures must be implemented to ensure patient confidentiality. - The system should support a user-friendly interface with role-based access control.
Postconditions	- The dietary records are updated and saved in the system. - A personalized dietary plan is created. - A progress report is generated for monitoring dietary intake.

UC Name	**Healthcare Collaboration**
UC Code and Name	UC_NUT_02: Healthcare Collaboration
Summary	The system shall enable the nutritionist to share patient data with other healthcare professionals for coordinated care.
Dependency	This use case may depend on "Dietary Record Management & Monitoring" for accessing patient dietary records.
Actors	**Primary Actor:** Nutritionist **Secondary Actors:** Other Healthcare Professionals (Doctors etc)
Preconditions	- The nutritionist must be logged into the system. - The patient's dietary records must exist in the system.
Description of the Main Sequence	1. The nutritionist logs into the system. 2. The nutritionist selects the "Share Patient Data" option. 3. The system displays a list of available patient records. 4. The nutritionist selects a patient record and chooses a healthcare professional to share it with.

	5. The system verifies access permissions and confirms data-sharing authorization. 6. The system securely shares the data with the selected healthcare professional. 7. The system notifies the recipient of the shared patient data.
Description of the Alternative Sequence	1. If the healthcare professional is not authorized, the system denies access. 2. If no patient records are available, the system notifies the nutritionist. 3. If network issues occur, the system prompts the user to retry later.
Non-Functional Requirements	- The system must ensure secure data sharing using encryption and access control mechanisms. - Only authorized healthcare professionals should access patient data. - The system should log all data-sharing activities for auditing purposes.
Postconditions	- Patient data is securely shared with authorized healthcare professionals. -The recipient healthcare professional receives a notification about the shared data.

UC Name	**Consultation Management**
UC Code and Name	UC_NUT_03: Consultation Management
Summary	The system shall allow the nutritionist to schedule, update, and conduct consultations, both in-person and virtual, for flexible patient care.
Dependency	This use case may depend on "Patient Profile Management" for retrieving patient details.

Actors	**Primary Actor:** Nutritionist **Secondary Actors:** Patient
Preconditions	- The nutritionist must be logged into the system. - The patient must have an active profile in the system.
Description of the Main Sequence	1. The nutritionist logs into the system. 2. The nutritionist accesses the "Consultation Management" module. 3. The system displays a calendar with available consultation slots. 4. The nutritionist selects an available time slot and schedules a consultation. 5. The system confirms the appointment and notifies the patient. 6. On the scheduled date, the nutritionist conducts the consultation (in-person or virtual). 7. The nutritionist records notes and recommendations after the consultation.
Description of the Alternative Sequence	1. If the patient requests rescheduling, the system allows the nutritionist to modify the appointment. 2. If the patient does not show up, the system logs a missed consultation. 3. If network issues occur in virtual consultations, the system suggests rescheduling.
Non-Functional Requirements	- The system should provide real-time scheduling updates to prevent conflicts. - Secure communication must be ensured for virtual consultations. - The system should provide automated reminders to both the nutritionist and patient.
Postconditions	- The consultation is successfully completed. - The system updates the consultation records.

UC Name	Patient Engagement & Compliance
UC Code and Name	UC_NUT_04: Patient Engagement & Compliance
Summary	The nutritionist shall be able to provide patients with educational materials, meal plans, send reminders, and track adherence to support patient engagement and compliance with dietary plans.
Dependency	This use case may depend on "Dietary Record Management & Monitoring" for accessing patient dietary data.
Actors	**Primary Actor:** Nutritionist **Secondary Actor:** Patient
Preconditions	- The nutritionist must be logged into the system. - The patient must have a registered profile in the system.
Description of the Main Sequence	1. The nutritionist logs into the system. 2. The nutritionist accesses the "Patient Engagement" module. 3. The system displays a list of patients and their dietary plans. 4. The nutritionist selects a patient and provides educational materials or updates meal plans. 5. The system sends reminders to the patient. 6. The patient logs dietary intake and progress updates. 7. The system tracks patient adherence and generates a compliance report. 8. The nutritionist reviews the report and adjusts the dietary plan if needed.

Description of the Alternative Sequence	1. If the patient does not engage with reminders, the system escalates the notification frequency. 2. If the patient misses logging their intake, the system prompts them to enter data. 3. If the nutritionist updates a dietary plan, the system automatically notifies the patient.
Non-Functional Requirements	- The system must ensure secure messaging for patient communication. - The system should provide automated reminders via multiple channels (email, SMS, app notifications). - Data analytics should track patient adherence trends.
Postconditions	- The patient receives educational materials and meal plans. - The system tracks and records patient adherence. - The nutritionist can assess patient compliance and modify plans accordingly.

Pharmacy Staff Use Cases

UC Name	Prescription Management
UC Code and Name	UC_PH_01: Prescription Management
Summary	The system shall manage prescriptions by allowing pharmacy staff to securely access, verify, process, and update patient prescriptions while checking for drug interactions, duplicate prescriptions, and ensuring secure communication with doctors.
Dependency	This use case may depend on "Patient Profile Management" and "Doctor Prescription Entry."
Actors	**Primary Actor:** Pharmacy Staff **Secondary Actors:** Doctors, Patients
Preconditions	- The pharmacy staff must be logged into the system. - The patient must have a valid prescription from a doctor.
Description of the Main Sequence	1. The pharmacy staff logs into the system using secure credentials. 2. The pharmacy staff navigates to the "Prescription Management" module. 3. The system displays a list of active prescriptions. 4. The pharmacy staff searches for a prescription using patient ID, prescription number, or doctor name. 5. The system retrieves the prescription details, including: ○ Patient information ○ Medication details (name, dosage, quantity) ○ Prescribing doctor details ○ Expiry date of prescription 6. The pharmacy staff verifies prescription validity and checks for: ○ Drug interactions ○ Duplicate prescriptions ○ Dosage errors

	7. If no issues are found, the pharmacy staff processes the prescription and dispenses the medication. 8. The system updates the prescription status to "Fulfilled." 9. The system notifies the patient that their medication is ready for collection. 10. If verification from the doctor is required, the system notifies the doctor.
Description of the Alternative Sequence	1. If a drug interaction is detected, the system alerts the pharmacy staff and suggests alternatives. 2. If a duplicate prescription is found, the system prompts for manual review. 3. If the prescription is incomplete or invalid, the system requests clarification from the doctor. 4. If the patient does not collect the prescription within a defined period, the system sends a reminder.
Non-Functional Requirements	- The system must encrypt prescription data to ensure security. - Secure messaging should be available for doctor communication. - The system should maintain a complete audit log of prescription handling.
Postconditions	- The prescription is processed, updated, and marked as fulfilled. - The patient is notified to collect their medication.

Use Case ID	UC_PH_03: Customer Loyalty & Discount Program
Summary	The system allows pharmacy staff to enroll patients in a loyalty program, track purchase history, apply discounts for regular customers, and generate reports on high-demand medications and customer purchasing trends.
Dependency	May depend on "Pharmacy Inventory Management" for tracking dispensed medications.

Actors	**Primary Actor:** Pharmacy Staff **Secondary Actor:** Patients
Preconditions	- Pharmacy staff must be logged into the system. - The patient must have a registered profile in the system.
Description of the Main Sequence	1. **Pharmacy staff logs into the system** using secure credentials. 2. **Pharmacy staff navigates to the "Customer Loyalty Program" module** from the system dashboard. 3. **Pharmacy staff searches for an existing patient profile** using name, patient ID, or contact details. ○ If the patient exists, their profile is displayed. ○ If the patient does not exist, staff must register the patient before proceeding. 4. **Pharmacy staff enrolls the patient in the loyalty program** by selecting the enrollment option and confirming participation. 5. **The system generates a unique loyalty ID** and links it to the patient profile. 6. **Patient makes a purchase** at the pharmacy. 7. **The system tracks the patient's purchase history, including:** ○ Medication names and quantities ○ Date of purchase ○ Total amount spent ○ Any applicable insurance or discounts used 8. **The system calculates loyalty points based on the purchase** and updates the patient's account. 9. **The system applies a discount if the patient has accumulated sufficient loyalty points.** ○ If the patient qualifies for a discount, it is applied automatically. ○ If not, the points are saved for future use.

	10. **The system generates a transaction receipt,** displaying purchase details, loyalty points earned, and available discounts. 11. **The pharmacy staff provides the receipt to the patient** and confirms the successful transaction. 12. **The system updates inventory records** to reflect the dispensed medications. 13. **The system periodically generates reports on:** ● High-demand medications ● Customer purchasing trends ● Effectiveness of the loyalty program 14. **Pharmacy staff reviews the reports** to make data-driven decisions regarding inventory and promotions.
Description of the Alternative Sequence	- If the patient is not registered, the system prompts pharmacy staff to create a new profile. - If there's a discount calculation error, the system notifies pharmacy staff to apply the discount manually or adjust the loyalty balance. - If the patient opts out, the system removes their loyalty status and stops tracking purchases for rewards.
Non-Functional Requirements	- Secure handling of customer data and compliance with privacy regulations. - Real-time discount calculations at checkout. - Automated reports with analytics on customer trends and loyalty program effectiveness.
Postconditions	- Patient is enrolled in the loyalty program (if new). - Purchase is processed, loyalty points are updated, and discounts are applied. - System tracks purchasing trends and generates reports for decision-making.

Patient Use Cases

UC_PT_01	Appointment Management
Summary	Patients can schedule, modify, and cancel appointments.
Actors	Patient
Description	The patient accesses the scheduling feature, selects an available slot, and confirms the appointment. They can also modify or cancel it.
Pre-Condition	Patient must be logged into their account.
Post-Condition	Appointment is scheduled, modified, or canceled as per the patient's request.

UC_PT_02	Access to Medical Records
Summary	Patients can securely access their medical records and test results.
Actors	Patient
Description	The patient logs in, navigates to the medical records section, and views their test results.
Pre-Condition	Patient must have valid credentials.
Post-Condition	Patient successfully views their medical records.

UC_PT_03	**Requests Prescription Refill**
Summary	Patients can request prescription refills through the system.
Actors	Patient
Description	The patient submits a refill request through the system, which is forwarded to the healthcare provider.

Pre-Condition	Patient must have an active prescription.
Post-Condition	Refill request is sent to the provider for approval.

UC_PT_04	Telemedicine Access
Summary	The system shall provide access to telemedicine consultations through the platform.
Actors	Patients, Healthcare Providers
Description	Patients can access the telemedicine feature on the platform, enabling them to schedule, attend, and review online consultations with healthcare providers. This service includes features like video calls, chat support, and digital prescriptions.
Pre-Condition	Patients must be registered and logged into the system.
Post-Condition	Patients successfully connect with healthcare providers for consultations, enhancing accessibility and convenience in receiving care.

UC_PT_05	Patient Feedback
Summary	The system shall allow patients to provide feedback and rate their care experience.
Actors	Patients
Description	Patients can access the feedback module in the healthcare management system to rate their care experience and provide detailed feedback on services received. This feature aims to collect valuable insights from patients to help healthcare providers improve service quality.
Pre-Condition	Patients must be registered and logged into the system.
Post-Condition	Feedback is successfully submitted and stored in the system, available for healthcare providers to review and act upon.

UC_PT_06	Emergency Response Activation
Summary	The system shall allow patients to quickly access emergency services, enabling one-click alerts to emergency responders.
Actors	Patients
Description	Patients can activate emergency services through the platform with a single click. This feature immediately alerts emergency responders and shares critical patient information to ensure rapid and effective medical intervention.
Pre-Condition	Patients must be registered and logged into the system.
Post-Condition	Emergency responders are notified, and relevant patient information is shared instantly to facilitate a swift response.

UC_PT_07	Organ Match Request
Summary	The system shall allow patients or their representatives to request organ matches, linking their profiles directly with potential donor databases.
Actors	Patients
Description	Patients or their authorized representatives can initiate a request for organ matches through the platform. This system connects directly with donor databases to find potential matches based on medical compatibility and urgency.
Pre-Condition	Patients must be registered and logged into the system.
Post-Condition	The request is processed, and potential organ matches are identified, facilitating timely communication between transplant teams and patients.

IT Support Use Cases

UC_IT_01	**IT Support Manages User Accounts**
Summary	IT Support can add, update, deactivate, or delete user accounts, and modify user roles and permissions.
Actors	IT Support
Description	IT Support accesses the system's administration panel to manage user accounts and adjust roles and permissions. They can select a user account to create, update, deactivate, or delete it, and modify roles and permissions to ensure appropriate access levels.
Pre-Condition	IT Support must be logged in with admin privileges.
Post-Condition	User accounts are appropriately managed, and roles and permissions are updated to reflect current access needs.

UC_IT_03	**System Monitors Performance**
Summary	The system tracks performance in real time and alerts IT Support to potential issues.
Actors	System, IT Support
Description	The system continuously monitors key performance metrics and sends alerts to IT Support when issues arise.
Pre-Condition	System must be active and running.
Post-Condition	IT Support is notified of system issues.

4.1.8 Emergency Service Use Cases

UC Name:	**UC_ES_01 Real-time Patient Vitals Streaming**
Summary:	The system provides emergency responders with real-time streaming of patient vitals from wearable health devices, integrates with GPS for automatic ETA updates, and pre-notifies hospital staff about incoming cases.
Actors:	• **Primary Actor:** Emergency responders • **Secondary Actor:** Hospital staff
Preconditions:	-The emergency responder must be logged into the system with valid credentials. -Wearable health devices must be functional and paired with the system. -GPS tracking must be enabled.
Description of the Main Sequence:	1. The emergency responder logs into the system using secure credentials. 2. The system verifies the login details and grants access to the dashboard. 3. The responder selects the 'Real-time Patient Vitals' module from the dashboard. 4. The responder searches for the patient by entering their unique ID or scanning the wearable device pairing code. 5. The system retrieves the patient's details and confirms a connection with the wearable device. 6. The system starts receiving real-time vital signs from the patient's device (e.g., heart rate, blood pressure, oxygen levels). 7. The responder reviews the incoming vitals on their interface.

	8. The system streams the vitals in real-time to the emergency response team's dashboard. 9. The system calculates the estimated time of arrival (ETA) using GPS data and updates it dynamically. 10. The hospital staff receives a pre-notification with the patient's details, current vitals, and ETA. 11. The emergency responder continuously monitors the vitals and updates necessary records. 12. The system securely stores the patient's vitals and logs for future reference.
Description of the Alternative Sequence:	1. If the wearable device fails to transmit data, responders are alerted to check vitals and input them manually. 2. If GPS tracking is lost, responders manually update ETA and notify hospital staff.
Non-functional Requirements:	- Secure data transmission. - Must support low-latency data transmission.
Postconditions:	- Hospital staff receive the pre-notification with updated patient status. -Patient vitals are securely stored for reference.

UC Name:	**UC_ES_02 Digital Emergency Checklist**
Summary:	The system provides a digital checklist that guides responders based on patient conditions and enables automated report generation through voice commands and sensor data.
Actors:	• **Primary Actor: Emergency responders**
Preconditions:	-The emergency responder must be logged into the system with valid credentials. -The digital checklist system must be functional.

	-The system should have voice recognition enabled.
Description of the Main Sequence:	1. The emergency responder logs into the system using secure credentials. 2. The system verifies the credentials and grants access. 3. The responder navigates to the ‘Digital Emergency Checklist’ module. 4. The responder inputs or selects the patient's condition or symptoms. 5. The system customizes the checklist based on the patient’s symptoms and displays step-by-step guidance. 6. The responder follows the guided steps, checking off completed tasks. 7. If applicable, the system collects real-time sensor data to update the checklist dynamically. 8. The responder provides voice inputs for additional details (e.g., consciousness level, pain response). 9. The system records the voice input and automatically generates a report.

	10. The system securely saves the report and sends it to relevant hospital staff.
Description of the Alternative Sequence:	1. If voice recognition fails, responders manually input checklist data. 2. If automated report generation is not possible, responders complete reports manually.
Non-functional Requirements:	- The checklist must be accessible offline. - Support voice recognition. - Integrate with hospital records.
Postconditions:	-A completed emergency report is generated and available for medical staff review.

UC Name:	**UC_ES_03 Dynamic Ambulance Rerouting**
Summary:	The system allows ambulances to reroute dynamically based on real-time traffic conditions and enables automatic hospital bed availability checks.
Actors:	• **Primary Actor:** Emergency responder
Preconditions:	- The emergency responder must be logged into the system with valid credentials. -GPS tracking must be active. - Hospital databases must be accessible.
Description of the Main Sequence:	1. The emergency responder logs into the system using secure credentials.

	2. The system verifies the login and grants access. 3. The responder accesses the ‘Dynamic Ambulance Rerouting’ module. 4. The system continuously monitors real-time traffic conditions using GPS data. 5. The system suggests the fastest available route based on traffic updates. 6. The responder confirms the suggested route or selects an alternative if necessary. 7. The system checks hospital bed availability in the nearest facilities. 8. If the initially intended hospital has available capacity, the system confirms the route. 9. If the preferred hospital is full, the system automatically suggests the next best option. 10. The system reroutes the ambulance accordingly and updates ETA. 11. The hospital staff is notified about the incoming patient and estimated arrival time.

	12. The responder follows the optimized route while monitoring patient condition updates.
Description of the Alternative Sequence:	1. If GPS tracking fails, responders manually select a route. 2. If no nearby hospitals have available beds, the system suggests the next best option.
Non-functional Requirements:	- Must support real-time updates. - Ensure accurate data processing. - Provide high system reliability.