# SENG 350

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Project Milestone 1: UML Submissions

**Project Link**

# Use Cases

## Actor: Patient

**Use Case 1:** Register Account
**Use Case 2:** Log In / Out
**Use Case 3:** Update Health Profile
**Use Case 4:** Find Nearby Hospitals
**Use Case 5:** View Hospital Wait Times
**Use Case 6:** Call Emergency Hotline
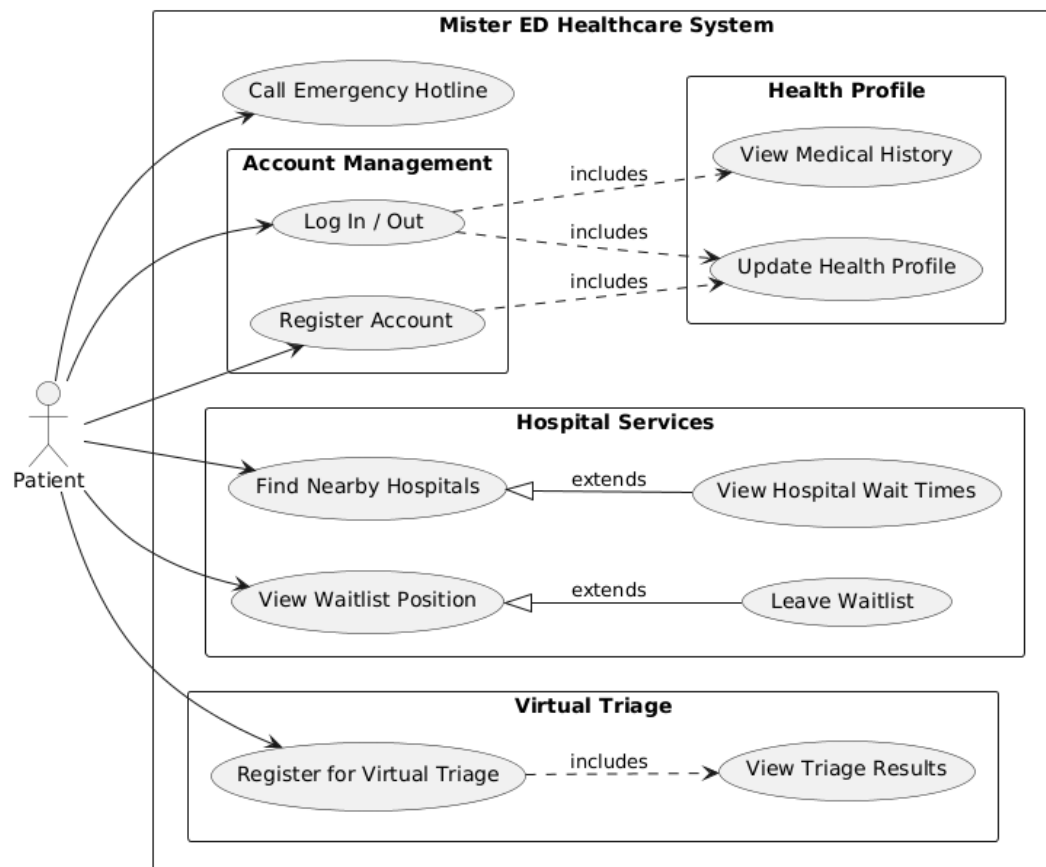**Use Case 7:** Register for Virtual Triage
**Use Case 8:** View Triage Results
**Use Case 9:** View Waitlist Position
**Use Case 10:** Leave Waitlist
**Use Case 11:** View Medical History

# Patient Diagram

# PlantUML Script

```
@startuml
left to right direction
actor "Patient" as patient
rectangle "Mister ED Healthcare System" {
  rectangle "Account Management" {
    usecase "Register Account" as UC1
    usecase "Log In / Out" as UC2
  }
  rectangle "Health Profile" {
    usecase "Update Health Profile" as UC3
    usecase "View Medical History" as UC11
  }
  rectangle "Hospital Services" {
    usecase "Find Nearby Hospitals" as UC4
    usecase "View Hospital Wait Times" as UC5
    usecase "View Waitlist Position" as UC9
    usecase "Leave Waitlist" as UC10
  }
  usecase "Call Emergency Hotline" as UC6
  rectangle "Virtual Triage" {
    usecase "Register for Virtual Triage" as UC7
    usecase "View Triage Results" as UC8
  }
}

patient --> UC1
patient --> UC2
patient --> UC4
patient --> UC6
patient --> UC7
patient --> UC9

UC1 ..> UC3 : includes
UC2 ..> UC11 : includes
UC2 ..> UC3 : includes
UC7 ..> UC8 : includes
UC4 <|-- UC5 : extends
UC9 <|-- UC10 : extends

@enduml
```

# Use Case Tables

## Use Case 1: Register Account

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 1: Register Account |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows a patient to create a new account in the Mister ED Healthcare System. The account is required to access other services, such as health profile management and hospital services. |
| **Actors** | **Patient**: The individual seeking to create an account and access the healthcare services. |
| **Assumptions** | - The patient has access to a mobile device or computer with an internet connection.<br>- The patient does not already have a registered Mister ED account. |
| **Steps** | - The patient accesses the Mister ED homepage and clicks "Register Account".<br>- The patient enters required information (e.g., username, password, email).<br>- The patient optionally provides initial medical history.<br>- The patient confirms registration by clicking "Create Account".<br>- The patient is automatically logged into their new account and redirected to the homepage. |
| **Variations (Optional)** | - If the chosen username is already in use, the system prompts the patient to choose a different one. |
| **Non-Functional (Optional)** | - The system must securely store all sensitive information, including personal and medical data. |
| **Issues** | - Secure storage and encryption of sensitive personal data.<br>- Ensuring that password strength is adequate for account security. |

## Use Case 2: Log In / Out

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 2: Log In / Out |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows a patient to log into their Mister ED account to access services or log out to end their session. |
| **Actors** | **Patient**: The individual logging into or out of their account. |
| **Assumptions** | - The patient has an existing Mister ED account. |
| **Steps** | - The patient clicks "Log In" on the homepage.<br>- The patient enters their username and password.<br>- Upon successful login, the system redirects the patient to their homepage.<br>- To log out, the patient clicks their profile in the top-right corner and selects "Log Out". |
| **Variations (Optional)** | - If the login credentials are incorrect, the system displays an error message and prompts the patient to retry. |
| **Non-Functional (Optional)** | - The system must securely handle passwords and sessions, preventing unauthorized access. |
| **Issues** | - Ensuring secure storage and encryption of login credentials to protect against unauthorized access. |

## Use Case 3: Update Health Profile

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 3: Update Health Profile |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows the patient to update their health profile, adding new medical conditions, allergies, or any other relevant health data. |
| **Actors** | **Patient**: The individual updating their health profile. |
| **Assumptions** | - The patient is logged into their Mister ED account. |
| **Steps** | - The patient navigates to the health profile section.<br>- The patient updates their health information (e.g., new allergies, medications). |

| Field | Description |
|---|---|
| | - The patient saves the updated information, and the system confirms the changes. |
| Variations (Optional) | - N/A |
| Non-Functional (Optional) | - The system must ensure that health data is stored securely and updated in real-time. |
| Issues | - Ensuring that the updated data is accurate and securely stored. |

## Use Case 4: Find Nearby Hospitals

| Field | Description |
|---|---|
| Use Case Identifier and Reference Number | Use Case 4: Find Nearby Hospitals |
| Modification History | Created 2024/09/29 by Arfaz Hussain |
| Description | This use case allows the patient to locate nearby hospitals using GPS and a map interface. |
| Actors | **Patient**: The individual searching for nearby hospitals. |
| Assumptions | - The patient's device has GPS enabled, and they have internet access. |
| Steps | - The patient clicks "Find Nearby Hospitals" on the homepage.<br>- The system accesses the patient's location and displays a map with nearby hospitals.<br>- The patient can click on a hospital to get more information, such as contact details and services. |
| Variations (Optional) | - N/A |
| Non-Functional (Optional) | - The system must display an accurate and up-to-date map based on the patient's location. |
| Issues | - Ensuring GPS accuracy and reliable mapping service. |

## Use Case 5: View Hospital Wait Times

| Field | Description |
|---|---|
| Use Case Identifier and Reference Number | Use Case 5: View Hospital Wait Times |

| Field | Description |
|---|---|
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows the patient to view estimated wait times at hospitals nearby, which helps them decide where to seek medical treatment. |
| **Actors** | **Patient**: The individual checking hospital wait times. |
| **Assumptions** | - The patient has already found nearby hospitals through the system. |
| **Steps** | - The patient selects a hospital on the map.<br>- The system displays the estimated wait times for that hospital.<br>- The patient can compare wait times and choose the most convenient hospital. |
| **Variations (Optional)** | - N/A |
| **Non-Functional (Optional)** | - The system must regularly update wait times to reflect the current status at the hospital. |
| **Issues** | - Ensuring that hospital wait times are updated in real-time to provide accurate information. |

## Use Case 6: Call Emergency Hotline

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 6: Call Emergency Hotline |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows a patient to call an emergency hotline for urgent medical assistance. The system connects the patient with an emergency service or a healthcare professional. |
| **Actors** | **Patient**: The individual seeking emergency medical assistance. |
| **Assumptions** | - The patient is logged into their Mister ED account and has access to a phone or internet service. |
| **Steps** | - The patient clicks "Call Emergency Hotline" on the homepage.<br>- The system connects the patient to an emergency service for immediate medical assistance. |

| Field | Description |
|---|---|
| | - The patient communicates their emergency to the service, and assistance is dispatched if necessary. |
| **Variations (Optional)** | - N/A |
| **Non-Functional (Optional)** | - The call must be secure and private to protect patient confidentiality. |
| **Issues** | - Ensuring the quality and reliability of the emergency communication system. |

## Use Case 7: Register for Virtual Triage

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 7: Register for Virtual Triage |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows the patient to register for virtual triage, providing initial symptom information and receiving advice or next steps based on the assessment. |
| **Actors** | **Patient**: The individual seeking medical evaluation through virtual triage. |
| **Assumptions** | - The patient is logged into their account and has internet access. |
| **Steps** | - The patient clicks "Register for Virtual Triage" and enters their symptoms.<br>- The system processes the symptoms and provides triage results, including possible next steps for treatment. |
| **Variations (Optional)** | - N/A |
| **Non-Functional (Optional)** | - The system must provide a quick and accurate evaluation of the patient's symptoms. |
| **Issues** | - Ensuring that the virtual triage system provides accurate and timely medical advice. |

## Use Case 8: View Triage Results

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 8: View Triage Results |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows the patient to view the results of their virtual triage session, which may include recommended next steps or suggested medical treatments. |
| **Actors** | **Patient**: The individual reviewing the results of their virtual triage. |
| **Assumptions** | - The patient has already completed the virtual triage process and is logged into their account. |
| **Steps** | - The patient receives a notification that their triage results are available.<br>- The patient clicks "View Triage Results" and reviews the system's recommendations. |
| **Variations (Optional)** | - N/A |
| **Non-Functional (Optional)** | - The system must ensure that results are presented clearly and securely to the patient. |
| **Issues** | - Ensuring the accuracy of triage results and safeguarding patient privacy. |

## Use Case 9: View Waitlist Position

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 9: View Waitlist Position |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows the patient to view their position on a hospital or clinic waitlist. |
| **Actors** | **Patient**: The individual checking their position on the waitlist. |
| **Assumptions** | - The patient has previously joined a waitlist through the Mister ED system. |
| **Steps** | - The patient clicks "View Waitlist Position" on the homepage.<br>- The system displays the patient's current position on the waitlist for a hospital or clinic. |

| Field | Description |
|---|---|
| **Variations (Optional)** | - N/A |
| **Non-Functional (Optional)** | - The system must display real-time information about the patient's waitlist position. |
| **Issues** | - Ensuring real-time synchronization with the hospital or clinic's waitlist data. |

## Use Case 10: Leave Waitlist

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 10: Leave Waitlist |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows the patient to leave a hospital or clinic waitlist if they no longer wish to remain in line for services. |
| **Actors** | **Patient**: The individual removing themselves from a hospital or clinic waitlist. |
| **Assumptions** | - The patient has previously joined a waitlist. |
| **Steps** | - The patient clicks "Leave Waitlist" on the homepage.<br>- The system confirms the patient's removal from the waitlist. |
| **Variations (Optional)** | - N/A |
| **Non-Functional (Optional)** | - The system must immediately update the waitlist to reflect the patient's removal. |
| **Issues** | - Ensuring the patient is promptly removed from the waitlist and notifications are sent to the hospital or clinic. |

## Use Case 11: View Medical History

| Field | Description |
|---|---|
| **Use Case Identifier and Reference Number** | Use Case 11: View Medical History |
| **Modification History** | Created 2024/09/29 by Arfaz Hussain |
| **Description** | This use case allows the patient to view their past medical history, including previous treatments, diagnoses, and procedures. |

| Field | Description |
|---|---|
| **Actors** | **Patient**: The individual reviewing their medical history. |
| **Assumptions** | - The patient is logged into their account and has previously visited medical providers through the Mister ED system. |
| **Steps** | - The patient navigates to the "Health Profile" section.<br>- The patient clicks "View Medical History" to see a detailed log of past treatments, diagnoses, and medical visits.<br>- The patient can filter or search specific records if needed. |
| **Variations (Optional)** | - The patient may request to download a copy of their medical history. |
| **Non-Functional (Optional)** | - The system must securely store and display medical records, ensuring patient privacy and data protection. |
| **Issues** | - Ensuring the accuracy of the displayed medical history and compliance with data privacy regulations. |