

**ISOM5290**  
**Information Systems Analysis and Design**  
***Fall 2024***

**Team Project Report**

**HKUST Volunteer Management System**  
***Group Number: L1-02***

*ZUO SHEN: 21081124*  
*Yuzhuo CHENG: 21081124*  
*Kumaran Thilagarajan: 21122772*  
*LIU,HAI-SUNG:21082154*  
*LIU,YALUN:21117088*  
*MAO,CHENYU: 21124835*

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## **PROJECT DRIVERS**

### **1. The Purpose of the System and Organizational feasibility**

#### **a) Background of your system**

An application to improve the lives of all HKUSTers with a special emphasis on the Special Education Needs (SEN) community of HKUST. There are special needs members on campus and awareness of their needs is low. Students in general are also more than happy to volunteer to help but not all needs are being met. Beyond education there are other needs such as social or even simple day to day annoyances. A more efficient system that matches members who are in need with volunteers, will be a significant addition to the social welfare of our community.

#### **b) Goals of the Project**

The goal of the system is to make it easier to match the daily needs in the HKUST community for assistance to people who are willing to or can provide help.

##### **UC:**

##### Front-End

- UC-001 : Allow HKUSTers to Register as Members
- UC-002 : Allow Members to Make requests
- UC-003 : Allow Members to End their own Requests
- UC-004 : Allow Members to View Requests
- UC-005 : Allow Members to Accept Requests

##### Back-End

- UC-006 : Allow Administrators to Make Requests
- UC-007 : Allow Administrators to Edit Requests
- UC-008 : Allow Administrators to Generate Reports

##### **EUC:**

##### EUC-001 :

Allow members to Register as SEN Members  
For UC-001

##### EUC-002 :

Allow SEN Members to Make Priority requests  
For UC-002

EUC-003 :  
Allow members to View Profile  
For UC-004

EUC-004 :  
Allow members to Save Favorite Requests  
For UC-005

**IUC:**

IUC-001 :  
Member Verify Login  
For UC-002 & UC-003 & UC-004 & UC-005

IUC-002 :  
Administrator Verify Login  
For UC-006 & UC-007 & UC-008

**c) Organizational feasibility**

**Stakeholder Analysis**

The HKUST Volunteer Management system will affect the following communities -

HKUSTers - HKUST as a whole will benefit from a more active community and better social welfare. An important part of the Social pillar of ESG. We also believe that the community will be happy to welcome and actively take part in such a system. However, there could be concerns regarding privacy and profile information being accessed by members outside actors. With sufficient risk planning and security measures this issue can be overcome. Good Likelihood of acceptance.

Members in Need (Particularly SEN) - May be hesitant to use the service due to introversion or nervousness but with good promotion efforts the problem can be overcome. A little uncertain by we believe there to be a Good Likelihood of acceptance.

Volunteers - We generally believe that the HKUST community will be very willing to volunteer their time. Allows them to contribute on their own time and more flexibility. With good awareness through promotion of the system we believe that every request can be satisfied. Good Likelihood of acceptance.

## **Risks and Consequences**

Members in Need (Particularly SEN) - There could be a significantly higher number of requests compared to volunteers leading to most of the requests going unfilled. May lead to those in-need feeling unsupported.

Volunteers - The requests may be misrepresented on the system compared to the work involved in reality leading to volunteers slowly losing trust in the system.

HKUST SIS System - Security vulnerabilities is a new system that could affect and compromise the security of the entire HKUST IT infrastructure. Significant security measures need to be taken to mitigate this risk.

## **Social Concerns**

- 1) Inclusivity - Special care should be taken to ensure that all members of the SEN community can access and make use of the system without any impediments.
- 2) Volunteers need to have some basic awareness or training to handle some requests from SEN members that may be beyond their expertise. In such cases the request should be forwarded to more experience or knowledgeable volunteers.

## **Political Concerns**

- 1) All requests should meet prevailing laws. However, there is a chance that such a system can be used as a communications platform for dealing in illicit substances.
- 2) Looking for a source of Funding for the project could be a hurdle as well. However, given the benefits and the positive effects such a system will have on the HKUST community we believe this obstacle can be overcome.

## **Cultural Concerns**

- 1) Given the international community in HKUST accommodating multiple languages will be ideal to make sure that each community can freely communicate. However, English and Chinese as the common languages are chosen for the time being as they are common languages that can connect the majority of the HKUSTers and in time the system can be expanded to use additional languages.

## 2. Actors of the System

Prepare **Actor Specification Cards** for each actor you identified above in 2.

<b><i>Actor Specification</i></b>
<b>Actor Name:</b> HKUSTers
<b>Role Description:</b> Any HKUST member that would like help or volunteer their time to help others. And wanting to register in the HKUST Volunteer Management System.
<b>Actor Goals:</b> <ul style="list-style-type: none"><li>● Register as Member</li></ul>
<b>Use Cases Involved with:</b> <ul style="list-style-type: none"><li>● UC-001 Allow HKUSTers to Register as Members</li></ul>

<b><i>Actor Specification</i></b>
<b>Actor Name:</b> HKUST SIS System
<b>Role Description:</b> Existing System outside the bounds of the system being developed. It is a system that contains registration information regarding all HKUST members.
<b>Actor Goals:</b> <ul style="list-style-type: none"><li>● Provide Registration Information</li><li>● Identity Verification</li></ul>
<b>Use Cases Involved with:</b> <ul style="list-style-type: none"><li>● UC-001 Allow HKUSTers to Register as Members</li></ul>

<b><i>Actor Specification</i></b>
<b>Actor Name:</b> Member
<b>Role Description:</b> Any HKUSTers who are registered and become part of the Volunteer Management System.
<b>Actor Goals:</b> <ul style="list-style-type: none"> <li>• Make Requests</li> <li>• View Requests</li> <li>• End Requests</li> <li>• Accept Requests</li> </ul>
<b>Use Cases Involved with:</b> <ul style="list-style-type: none"> <li>• UC-002 Allow Members to Make requests</li> <li>• UC-003 Allow Members to End their own Requests</li> <li>• UC-004 Allow Members to View Requests</li> <li>• UC-005 Allow Members to Accept Requests</li> <li>• UC-006 Allow Administrators to Make Requests</li> <li>• UC-007 Allow Administrators to Edit Requests</li> </ul>

<b><i>Actor Specification</i></b>
<b>Actor Name:</b> Administrator
<b>Role Description:</b> Responsible for the day to day management of the system. and assisting SEN Members
<b>Actor Goals:</b> <ul style="list-style-type: none"> <li>• Make Requests</li> <li>• Edit Requests</li> <li>• Generate Reports</li> </ul>
<b>Use Cases Involved with:</b> <ul style="list-style-type: none"> <li>• UC-006 Allow Administrators to Make Requests</li> <li>• UC-007 Allow Administrators to Edit Requests</li> <li>• UC-008 Allow Administrators to Generate Reports</li> </ul>

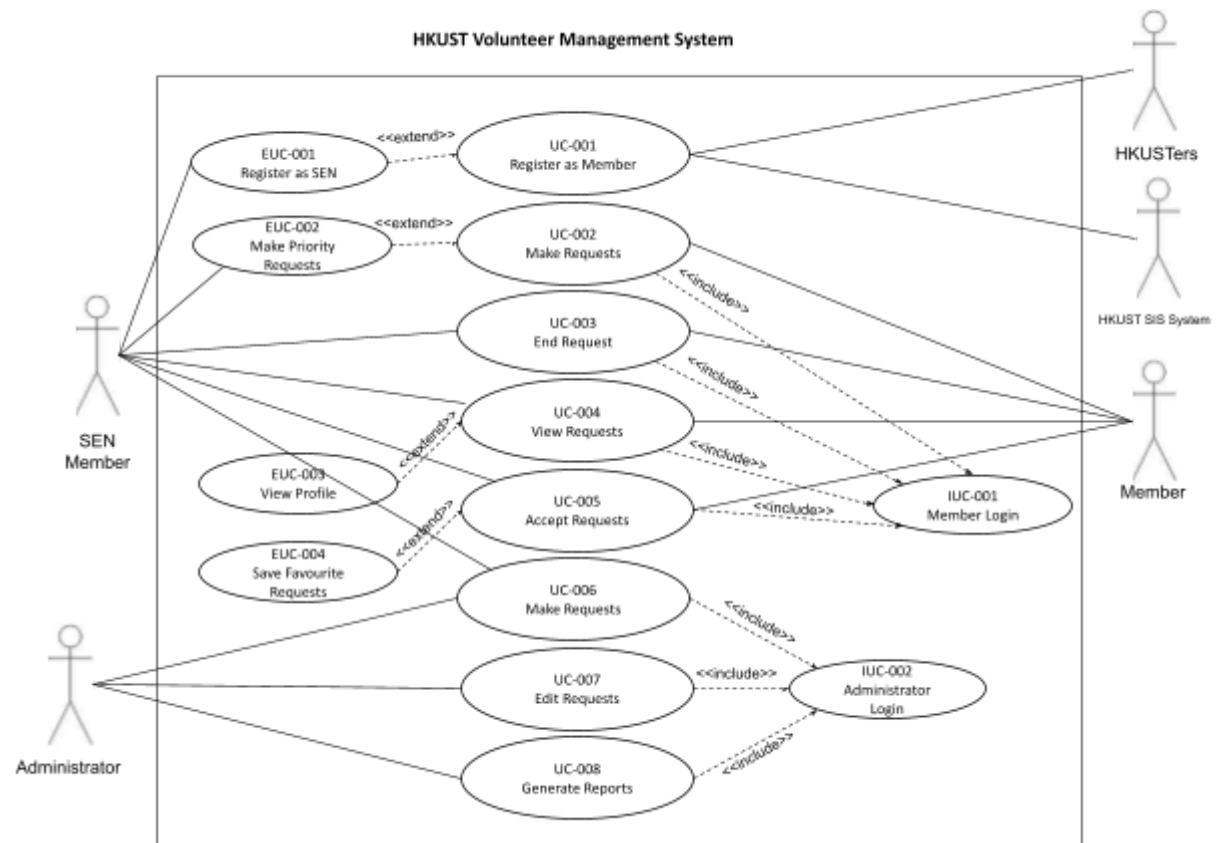
<b><i>Actor Specification</i></b>
<b>Actor Name:</b> SEN Member
<b>Role Description:</b> Special needs members who might need other special or urgent assistance besides using the existing functions.
<b>Actor Goals:</b> <ul style="list-style-type: none"> <li>• Make Requests</li> <li>• Edit Requests</li> <li>• Generate Reports</li> <li>• Make urgent requests</li> </ul>
<b>Use Cases Involved with:</b> <ul style="list-style-type: none"> <li>• UC-002 Allow Members to Make requests</li> <li>• UC-003 Allow Members to End their own Requests</li> <li>• UC-004 Allow Members to View Requests</li> <li>• UC-005 Allow Members to Accept Requests</li> <li>• UC-006 Allow Administrators to Make Requests</li> <li>• UC-007 Allow Administrators to Edit Requests</li> </ul>



## SYSTEM REQUIREMENTS

### 3. The Scope of the System

#### Use Case Diagram



#### 4. Use Cases

##### Elaborated Use Case Descriptions

Use Case ID	UC-001
Use Case	Register as member
Actors	HKUSTers [P], HKUST SIS System[S]
Description	<i>This use case allows any HKUSTER to register as a member in the HKUST Volunteer Management System. Members provide basic information during the registration process, which is validated and securely stored in the system.</i>
Pre-conditions	System screen shows “Welcome to HKUST Volunteer Management System” with 2 choices–Register as member and Login
Flow of Events (include conditional flows here as they occur)	<ol style="list-style-type: none"> <li>1. The user accesses the system homepage</li> <li>2. The system displays the "Register as Member" option on the homepage</li> <li>3. The user clicks the "Register as Member" button</li> <li>4. The system displays a registration form requiring: SIS HKUST ID, SIS HKUST Password</li> <li>5. HKUSTers input HKUST SIS ID and Password</li> <li>6. If the HKUST ID or Password is invalid <ol style="list-style-type: none"> <li>6.1 The system displays an error message: "Invalid ID or Password. Please enter the right information."</li> <li>6.2 Go back to step 4</li> </ol> </li> <li>7. System retrieves basic profile information from HKUST SIS System - Name, Email, Phone, Gender.</li> <li>8. System proceeds to the next page and generates a profile with additional fields that require members to fill in - Preferred Name, Preferred contact information, personal introduction and profile photo.</li> <li>9. User fills in the profile information and clicks the “Submit” button</li> <li>10. If HKUSTers wants to register as SEN Member, extend to EUC-001</li> <li>11. If any additional field is incomplete, <ol style="list-style-type: none"> <li>11.1 The system displays a message: "Fields are empty. Default information will be used"</li> <li>11.2 System Fills empty field with default information.</li> <li>11.3 Go to Step 12</li> </ol> </li> <li>12. User clicks the "Submit" button and finish creating the profile</li> <li>13. The system displays a success message: "Congratulations! You have successfully registered."</li> </ol>
Post-conditions	The system displays “Thank You for Using HKUST Volunteer Management System” and goes back to the Welcome Page
Alternative Flows	NA
Priority	High

Non-Functional Requirements	1. The registration process, should complete within 5 seconds under normal conditions 2. System must support JPEG, PNG, and GIF formats
Assumptions	The user has a valid HKUST ID and email address required for registration.

Note - Member refers to both SEN and ordinary members to all the proceeding Use Cases

Use Case ID	UC-002
Use Case	<i>Make requests</i>
Actors	<i>Member[P] , SEN Memeber [P]</i>
Description	<i>Allows all members to make a request for assistance through the HKUST Volunteer Management System. Members can provide details about the request, such as the type of help needed, a description, and urgency, and submit it to the system.</i>
Pre-conditions	System screen shows “Welcome to HKUST Volunteer Management System” with 2 choices–Register as member and Login
Flow of Events (include conditional flows here as they occur)	<ol style="list-style-type: none"> <li>1. Include IUC-001 Member Login</li> <li>2. Member selects the "Make Requests" option from the dashboard.</li> <li>3. The system displays a form including: Request Title (Compulsory), Request Description(Compulsory), Type of Help Needed (e.g., Physical Help, Educational Help, Emotional Help), Photos attached, Date and Time Preference,</li> <li>4. Member fills in the form</li> <li>5. If Member wants to make priority request extend to EUC-002</li> <li>6. Member clicks "Submit."</li> <li>7. If member does not fill in the compulsory items. <ol style="list-style-type: none"> <li>5.1 The system displays a message: "You must fill in the compulsory information" and a button “Ok”</li> <li>5.2 Memer clicks the button “Ok” and system removes the message</li> <li>5.3 Go back to step 4</li> </ol> </li> <li>8. System sends the form into the Request datastore</li> <li>9. The system displays a confirmation message: "Your request has been successfully posted."</li> <li>10. Member Log outs</li> </ol>
Post-conditions	The system displays “Thank You for Using HKUST Volunteer Management System” and goes back to the Welcome Page
Alternative Flows	NA
Priority	High
Non-Functional Requirements	1.Request form should be user-friendly, with clear instructions and validations for each input field

	2. System must support JPEG, PNG, and GIF formats
Assumptions	

Use Case ID	<i>UC-003</i>
Use Case	<i>End Requests</i>
Actors	<i>Member [P], SEN Memeber [P]</i>
Description	<i>Member selects "Posted Requests", system retrieves all the posted requests made by member from the Request datastore and displays them to member. Member clicks the "End Request" to end the requests.</i>
Pre-conditions	System screen shows "Welcome to HKUST Volunteer Management System" with 2 choices—Register as member and Login
Flow of Events (include conditional flows here as they occur)	<ol style="list-style-type: none"> <li>1. Include IUC-001 Member Login</li> <li>2. Member selects the "Posted Requests" option from the dashboard.</li> <li>3. If member has no posted requests record <ol style="list-style-type: none"> <li>3.1 System displays a blank page with message "No record for posted requests" a</li> <li>3.2 Exit use case</li> </ol> </li> <li>4. System retrieves a list of posted requests made by member from Request datastore and displays it to member</li> <li>5. Member selects the check box on the left hand side of the posted requests he/she wants to end and press "End Request"</li> <li>6. System prompts a confirmation message "Are you sure you want to end the following requests" with two options "Yes, I agree" and "No, please neglect"</li> <li>7. If member clicks "No, please neglect", <ol style="list-style-type: none"> <li>7.1 Go to Step 5</li> </ol> </li> <li>8. Member clicks "Yes, I agree"</li> <li>9. System hides the record from all View Requests (still remain in the request datastore for purpose of generate report)</li> <li>10. System notifies member that the selected requests have been ended</li> <li>11. Member logs off the system</li> </ol>
Post-conditions	The system displays "Thank You for Using HKUST Volunteer Management System" and goes back to the Welcome Page
Alternative Flows	NA
Priority	<i>High</i>
Non-Functional Requirements	
Assumptions	

Use Case ID	<i>UC-004</i>
Use Case	<i>View Requests</i>
Actors	<i>Member [P], SEN Memeber [P]</i>
Description	<i>Member uses username and password to login the system. Member selects “View Requests”, system retrieves all the existing requests made by member from the Requests datastore and displays them to member.</i>
Pre-conditions	System screen shows “Welcome to HKUST Volunteer Management System” with 2 choices–Register as member and Login
Flow of Events (include conditional flows here as they occur)	<ol style="list-style-type: none"> <li>1. Include IUC-001 Member Login</li> <li>2. Member selects “View Request”</li> <li>3. System retrieves all the posted requests made by members from the Request datastore and displays request titles, user name, and posted date. A separate column with Priority Requests and The member’s Favourite is also (If there are any) is also displayed.</li> <li>4. If there is no requests, <ol style="list-style-type: none"> <li>4.1 System displays a message: “No available requests at this time.”</li> <li>4.2 Exit the use case.</li> </ol> </li> <li>5. Member selects an request title to view details</li> <li>6. System retrieves request details(e.g., Full Request Description) from request datastore and displays to member</li> <li>7. If member wants to view profile of the member who made the post, extend to EUC-003</li> <li>8. Member logs off the system</li> </ol>
Post-conditions	The system displays “Thank You for Using HKUST Volunteer Management System” and goes back to the Welcome Page
Alternative Flows	
Priority	<i>High</i>
Non-Functional Requirements	1. System displays the posted request sorted by the posted date.
Assumptions	

Use Case ID	<i>UC-005</i>
Use Case	<i>Accept Request</i>
Actors	<i>Member [P], SEN Memeber [P]</i>
Description	<i>This use case allows a Member to accept a request posted by another Member. The Member can browse requests and select one to accept, after which the system updates the status of the request and notifies the requester that their request has been accepted.</i>

Pre-conditions	System screen shows “Welcome to HKUST Volunteer Management System” with 2 choices–Register as member and Login
Flow of Events (include conditional flows here as they occur)	<ol style="list-style-type: none"> <li>1. Include IUC-001 Member Login</li> <li>2. Member click “Take Request” button from the dashboard</li> <li>3. System prompts the Member with a confirmation message: “Are you sure you want to accept this request?” with options “Yes” or “No.” <ol style="list-style-type: none"> <li>3.1.If member clicks “No”, <ol style="list-style-type: none"> <li>3.1.1.Exit user case</li> </ol> </li> </ol> </li> <li>4. If the Member clicks “Yes,” the system updates the request status to “Accepted” and saves the Member ID as the volunteer for this request. <ol style="list-style-type: none"> <li>4.1 If the request is taken, prompts “Sorry this request has already been taken” and exit user case</li> </ol> </li> <li>5. System sends a notification to the requester that their request has been accepted</li> <li>6. System notifies the member that the request has been successfully accepted</li> <li>7. System hides the record from all View Requests (still remain in the request datastore for purpose of generate report)</li> </ol>
Post-conditions	The request is marked as “Accepted” in the system, and the requesting Member is notified. The accepting Member is recorded as the volunteer for this request.
Alternative Flows	
Priority	<i>High</i>
Non-Functional Requirements	<i>1.The system should update the request status in less than 3 seconds after the Member confirms acceptance</i>
Assumptions	Member is viewing a request

Use Case ID	<i>UC-006</i>
Use Case	<i>Make Requests</i>
Actors	SEN Member[P], Administrator [S]
Description	<i>This use case allows the Administrator to create and submit a request for assistance on behalf of SEN members who are not convenient. The request includes details such as the title, type of help needed, urgency, and other relevant information. The system saves the request and makes it available for others to view and accept.</i>
Pre-conditions	System displays Administrator interface with ‘Login’.
Flow of Events (include conditional)	<ol style="list-style-type: none"> <li>1. Include IUC-002 Administrator Login</li> <li>2. Administrator selects the "Make Requests" option from the dashboard.</li> <li>3. The system displays a form including: Request Title (Compulsory), Request Description(Compulsory), Type of</li> </ol>

<i>flows here as they occur</i>	<p>Help Needed (e.g., Physical Help, Educational Help, Emotional Help), Photos attached, Date and Time Preference,</p> <ol style="list-style-type: none"> <li>Administrator fills in the form</li> <li>Administrator clicks "Submit."</li> <li>If the administrator does not fill in the compulsory items. <ol style="list-style-type: none"> <li>The system displays a message: "You must fill in the compulsory information" and a button "Ok"</li> <li>Administrator clicks the button "Ok" and system removes the message</li> <li>Go back to step 5</li> </ol> </li> <li>System sends the form into the Request datastore</li> <li>The system displays a confirmation message: "Your request has been successfully posted."</li> <li>Administrator Logs out</li> </ol>
Post-conditions	System screen shows Administrator Exit Screen
Alternative Flows	
Priority	<i>High</i>
Non-Functional Requirements	<ol style="list-style-type: none"> <li><i>The request submission process should take no longer than 5 seconds under normal conditions.</i></li> <li><i>The system must validate all input fields and provide clear error messages for invalid inputs.</i></li> </ol>
Assumptions	

Use Case ID	UC-007
Use Case	Edit Requests
Actors	Administrator [P]
Description	Administrator logs into the system to edit the details of existing requests. System retrieves a list of requests, allows the Administrator to select a request, and makes changes. The system updates the datastore with the modified details.
Pre-conditions	System displays Administrator interface with 'Login'.
Flow of Events (include conditional flows here as they occur)	<ol style="list-style-type: none"> <li>Include IUC-002 Administrator Login</li> <li>Administrator selects "Edit Requests" from the dashboard</li> <li>System retrieves a list of existing requests from the request datastore and displays them to the Administrator</li> <li>If no requests exist, <ol style="list-style-type: none"> <li>The system displays a message: "No available requests"</li> <li>Exit use case.</li> </ol> </li> <li>Administrator selects a request and edit</li> <li>Administrator clicks "Submit Changes."</li> <li>System validates the changes and updates the request datastore</li> </ol>

	8. System displays a confirmation message: "Request successfully updated." 9. Administrator logs out
Post-conditions	System screen shows Administrator Exit Screen
Alternative Flows	NA
Priority	Medium
Non-Functional Requirements	<i>Editing and validation processes should take no longer than 3 seconds.</i>
Assumptions	Administrator has sufficient privileges to edit requests.

Use Case ID	UC-008
Use Case	Generate Reports
Actors	Administrator [P]
Description	Administrator logs into the system to generate reports based on request data. The system aggregates data and generates a report in a predefined format (e.g., PDF or Excel).
Pre-conditions	System displays Administrator interface with 'Login'.
Flow of Events (include conditional flows here as they occur)	<ol style="list-style-type: none"> <li>1. Include IUC-002 Administrator Verify Login</li> <li>2. Administrator selects "Generate Reports" from the dashboard</li> <li>3. System displays a menu for selecting report type (e.g., monthly summary, request statistics)</li> <li>4. Administrator selects specific range of dates to generate report</li> <li>5. If there are no records given the specified date range               <ol style="list-style-type: none"> <li>5.1. System prompts an error and a message "No records can be found" to manager</li> <li>5.2. Go to step 4</li> </ol> </li> <li>6. System retrieves data from request datastore and generates the report</li> <li>7. Administrator logs out of the system</li> </ol>
Post-conditions	System screen shows Administrator Exit Screen
Alternative Flows	NA
Priority	Medium
Non-Functional Requirements	<i>Report generation should take no longer than 20 seconds. The system should be able to generate the report in different format e.g. .excel, .pdf, .doc</i>



Assumptions	System has installed the necessary tools to view or download the report
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## Extended Use Case Descriptions

Use Case ID	EUC-001
Use Case	Register as SEN
Actors	HKUSTers [P], HKUST SIS System [P], Member [P],
Description	Allow members who are part of the SEN community to register as SEN Members
Extending Use Case	UC-001 (Register as Member)
Flow of Events	<ol style="list-style-type: none"> <li>1. HKUSTers clicks “Register as SEN”</li> <li>2. If a SEN HKUSTers is unable to register for accessibility reasons <ol style="list-style-type: none"> <li>2.1 HKUSTers contact the Administrator using the phone number displayed under the “Register as SEN” button.</li> <li>2.2 Go to Step 10</li> </ol> </li> <li>3. HKUSTers fills in an additional “SEN Form” with details such as disability type, severity and additional medical information</li> <li>4. HKUSTers then upload a “Proof of SEN” document such as a doctor's note (stored for reference not verification)</li> <li>5. If member does not have document <ol style="list-style-type: none"> <li>5.1 System collects contact information for review by administrator</li> <li>5.2 Go to Step 10</li> </ol> </li> <li>6. HKUSTers clicks “Submit”</li> <li>7. System inserts record into the SEN Member’s datastore</li> <li>8. System also generates a Profile page based on information provided.</li> <li>9. System notifies HKUSTER that is registration is successful</li> </ol>
Alternative Flows	
Priority	Medium
Non-Functional Requirements	1. Registration information should be encrypted
Assumptions	

Use Case ID	EUC-002
Use Case	Allow SEN Members to Make Priority requests
Actors	Member [P], SEN Member [P]
Description	Allow Members who are registered as SEN to make priority requests
Extending Use Case	UC-002 (Make Requests)

Flow of Events	<ol style="list-style-type: none"> <li>1. SEN Member clicks “Make Priority Requests”</li> <li>2. If a SEN member is unable to make requests for accessibility reasons <ol style="list-style-type: none"> <li>2.1 HKUSTers contact the Administrator using the phone number displayed under the “Make Priority Requests” button.</li> <li>2.2 Go to Step 9</li> </ol> </li> <li>3. System verifies SEN Member information</li> <li>4. SEN Member fills out the regular Request form</li> <li>5. SEM Member fills out an additional section with information regarding urgency and its importance from Urgent to Extremely Urgent numerical scale.</li> <li>6. SEM Member clicks “Submit”</li> <li>7. System inserts entry into the Priority Requests Database</li> <li>8. System notifies SEN user that the request was submitted successfully</li> </ol>
Alternative Flows	
Priority	Medium
Non-Functional Requirements	<ol style="list-style-type: none"> <li>1. The form should be fillable in less than 5 minutes</li> <li>2. The data should be inserted in less than 2 minutes.</li> </ol>
Assumptions	

Use Case ID	EUC-003
Use Case	Allow Members to View Profile
Actors	Member [P], SEN Member [P]
Description	Allow Members to also view profiles of the members who are making requests.
Extending Use Case	UC-004 (View Requests)
Flow of Events	<ol style="list-style-type: none"> <li>1. Members click “View Profile”</li> <li>2. System retrieve information from database</li> <li>3. System then displays the Profile page that was generated for the requester.</li> <li>4. Member can then review the Profile</li> <li>5. Member exits the profile by clicking “Exit”</li> <li>6. System brings Member back to the previous step</li> </ol>
Alternative Flows	
Priority	Medium
Non-Functional Requirements	<ol style="list-style-type: none"> <li>1. Profile should be available both in English and Chinese</li> </ol>
Assumptions	

Use Case ID	<i>EUC-004</i>
Use Case	Allow Members to Save Favorite Requests
Actors	<i>Members[P]</i> , SEN Member [P]
Description	<i>Allow members to save the requests that they are interested in for later check.</i>
Extending Use Case	UC-005 (Accept Requests)
Flow of Events	<ol style="list-style-type: none"> <li>1. Member views a request</li> <li>2. Member click a star icon shows "Add to Favorite"</li> <li>3. System adds the record to database</li> <li>4. The request is added to this member's favorite list</li> <li>5. The System then displays the Members Favourites List</li> <li>6. If the saved request is marked as finished <ol style="list-style-type: none"> <li>6.1 System notifies the user</li> <li>6.2 After one day the system removes the finished requests from the favorite list</li> </ol> </li> </ol>
Alternative Flows	
Priority	<i>Low</i>
Non-Functional Requirements	
Assumptions	

## Included Use Case Descriptions

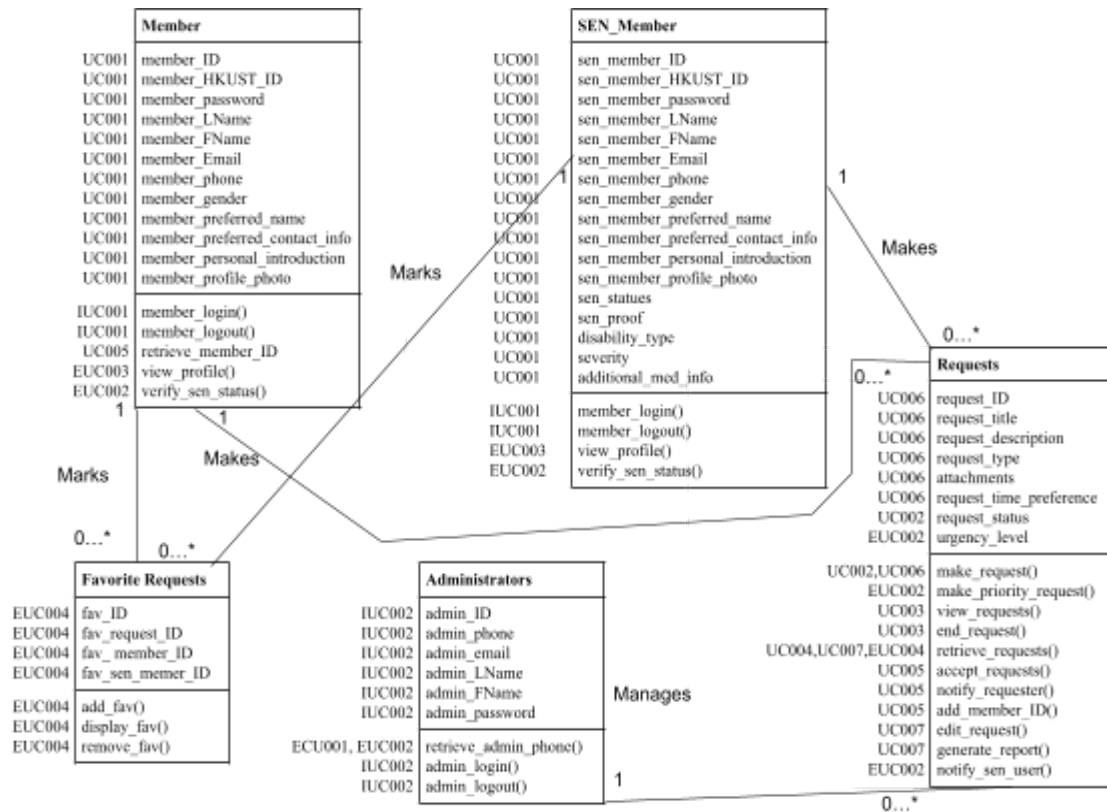
Use Case ID	<i>IUC-001</i>
Use Case	<i>Member Login</i>
Description	<i>Member needs to login in order to manage requests(eg. Make, View, End, Accept requests).</i>
Including Use Cases	<i>UC-002 Make Requests; UC-003 End Requests; UC-004 View Requests; UC-005 Accept Requests</i>
Flow of Events	<ol style="list-style-type: none"> <li>1. If member forgets password <ol style="list-style-type: none"> <li>1.1 Member clicks “Forget Password”</li> <li>1.2 Member fills in the request information such as: HKUST Student ID and Username</li> <li>1.3 System checks the filled information with the Member datastore</li> <li>1.4 If the request information is incorrect <ol style="list-style-type: none"> <li>1.4.1. System notifies the member to visit the HKUST SIS department in person for assistance</li> <li>1.4.2. Exit use case</li> </ol> </li> <li>1.5 System sends a new generated password to member’s email</li> <li>1.6 Exit use case</li> </ol> </li> <li>2. Member enters his/her username and password and press “Login”</li> <li>3. If member’s username and password does not match <ol style="list-style-type: none"> <li>3.1 System notifies member</li> <li>3.2 Go to Step 2</li> </ol> </li> <li>4. System verifies member</li> <li>5. System notifies member of successful login</li> </ol>
Alternative Flows	
Priority	<i>High</i>
Non-Functional Requirements	<i>1. Login process should be less than 2 seconds</i>
Assumptions	

Use Case ID	<i>IUC-002</i>
Use Case	Administrator Verify Login
Description	<i>Administrators logs in and gets authenticated</i>
Including Use Cases	UC-006 Make Requests; UC-007 Edit Requests; UC-008 Generate Reports
Flow of Events	<ol style="list-style-type: none"> <li>1.Administrator types in the user name and password and press “Login”</li> <li>2.System verifies administrators</li> <li>3. If password is incorrect</li> </ol>

	3.1 If password is incorrect for 3 times 3.1.1 System shows “Reset password” under the password 3.1.2 Administrator clicks “Reset password” 3.1.3 System reset the password and sends it to administrator’s email address 3.1.4 Go back to step 1
Alternative Flows	NA
Priority	<i>High</i>
Non-Functional Requirements	<i>Authentication should take place within 3 seconds after password entered</i>
Assumptions	NA

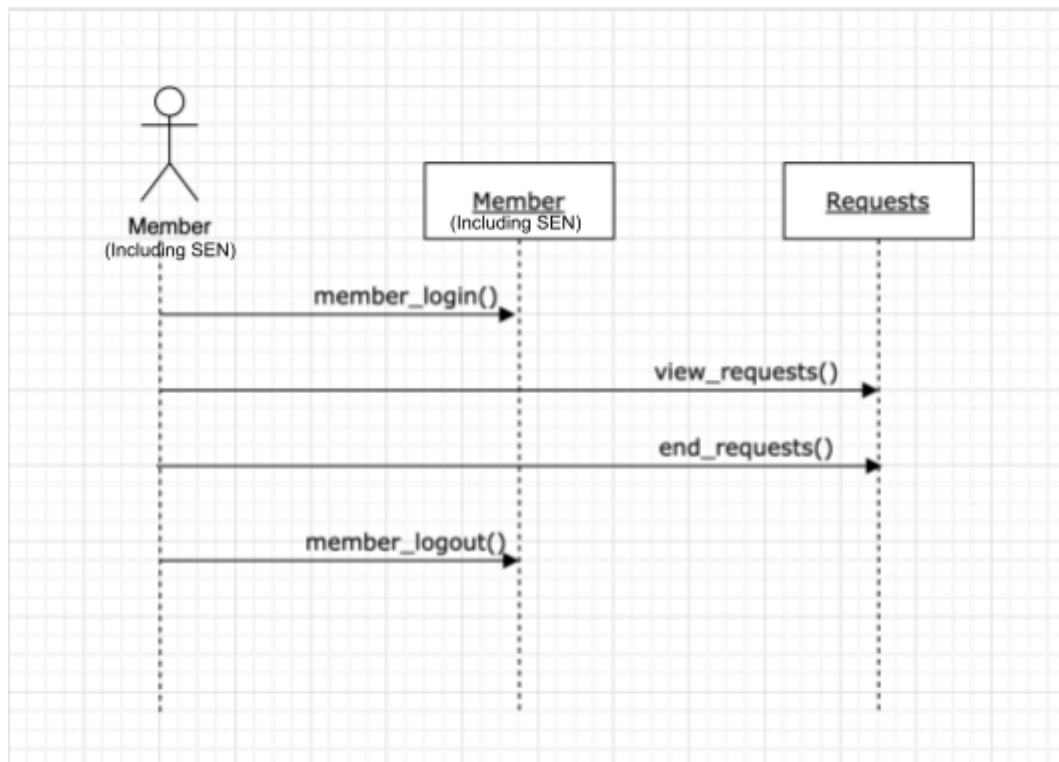
## ADDITIONAL SYSTEM REQUIREMENTS

### Class Diagram



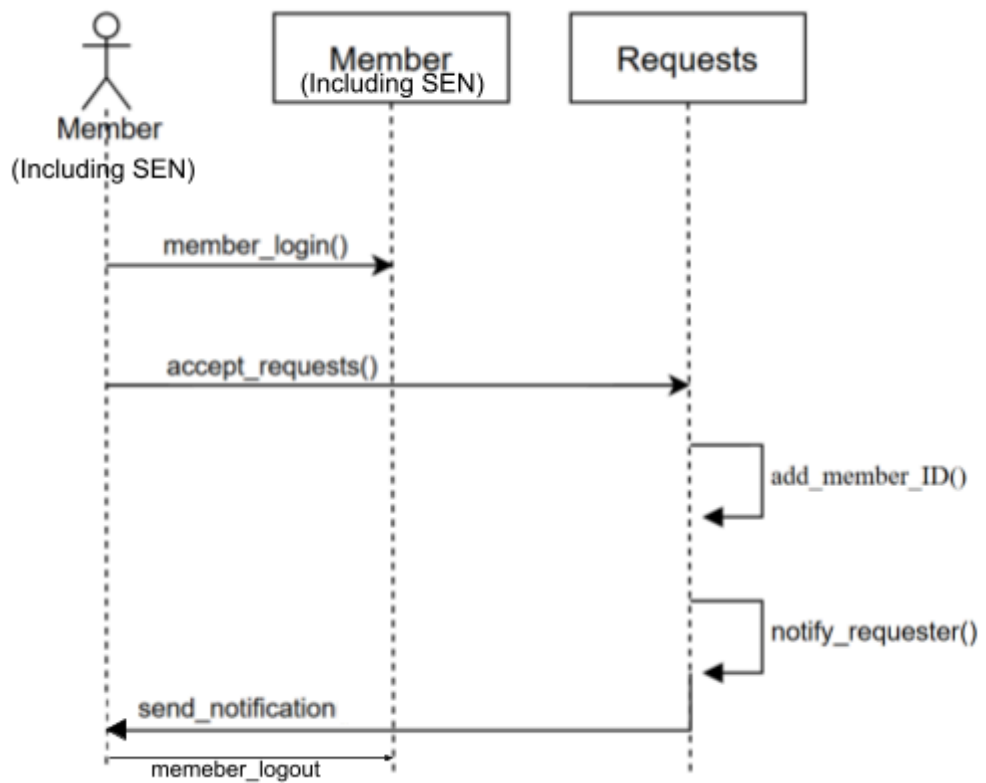
## Sequence Diagrams

### UC-003 End Requests (Sunny day Scenario)

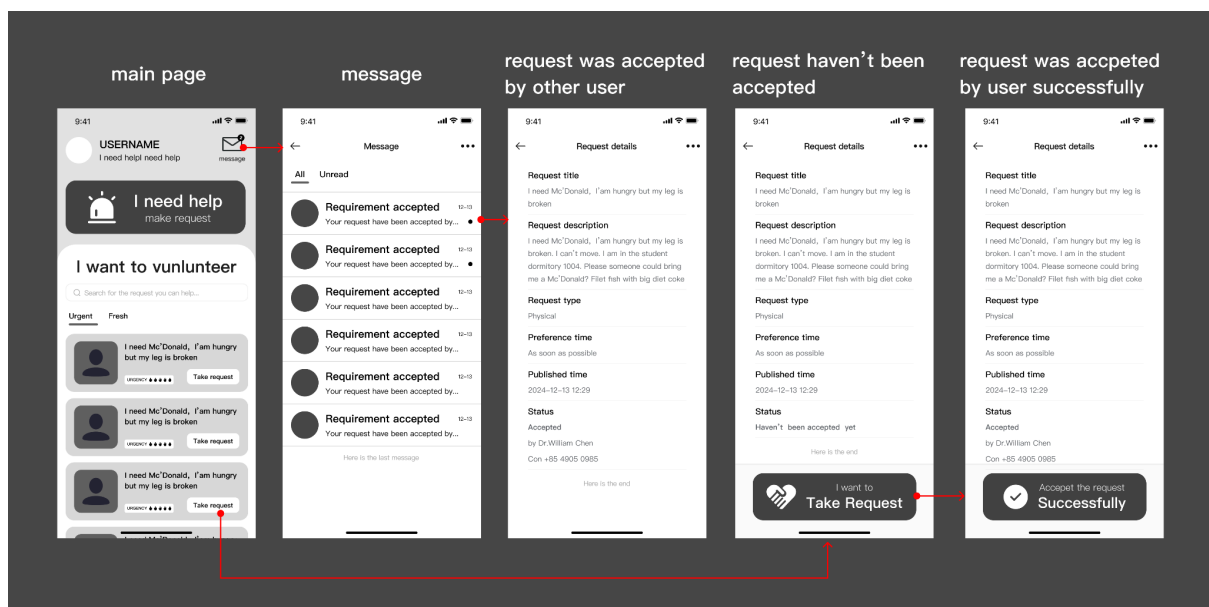




## UC-005

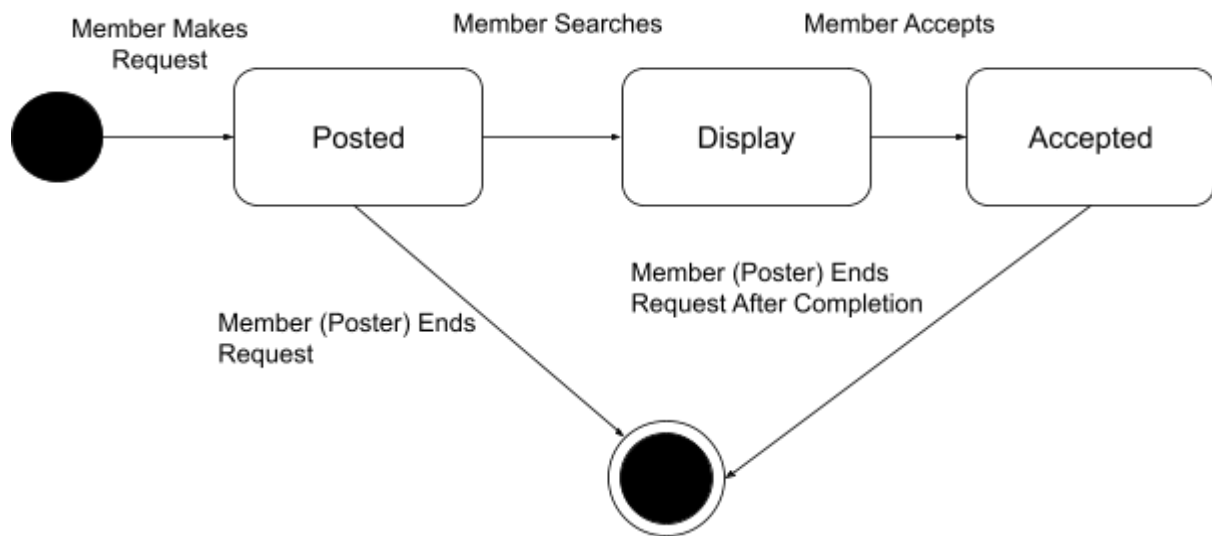


## UC-005 (Wireframe)



## Behavioral State Machine Diagram

For the “Requests” Object



## **Nonfunctional Requirements**

### **5a. Performance Requirements**

- All pages should not take more than 5 seconds to load
- All text should be bigger than 11pt font size

### **5b. Operational Requirements**

- System can be accessed by both computers and mobile devices
- System should operate on all popular OS and Browsers

### **5c. Security Requirements**

- Each user should access their system using their own account. i.e no sharing of accounts
- Scan all uploaded files for viruses and threats

### **5d. Cultural and Political Requirements**

- Support Multiple Languages on all aspects of the system (English & Chinese)
- Allow (Google Chrome) auto translation for requests posted in any language chosen by the user