ISSUED TO
Professor Narayanasami
SE 3354.002 (Software Engineering)
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Phase 2

Peer Connections

Learn the difference between Functional &
Non-Functional Requirements
Create Requirements / System Modeling

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Overview of the approach used to gather requirements:

First, we utilized our knowledge of our app's intended goal and Statement of Work as reference to understand what our app will need to entail of. We then brainstormed 6+ functionalities each and composed it on one Word doc to prevent contradiction and repetition. Next, we all came together and decomposed the functionalities, breaking them down into smaller, more manageable tasks. As we worked through this process. We organized the tasks into a more concise structure, utilizing techniques such as user stories. This approach helped us prioritize and sequence the tasks effectively for development.

Functional Requirements:

R1 User should be able to authenticate.

- R1.1 User will be able to sign up by linking their school email to the app.
- R1.2 User will be able to log into account via DUO push after authenticating.
- R1.3 User will be able to have the app unlocked until inactivity reaches 30 days.

R2 The App will be easy to use and accessible on many devices.

- R2.1 The app will be available and functional on numerous devices. (Smartphone, iPad, tablets, etc.).
- R2.2 User interface will be intuitive, ensuring ease of use across various devices and screen sizes.

R3 User should be able to change privacy settings.

- R3.1 User will be allowed to restrict access for group created.
- R3.2 User will be allowed to restrict public viewing of profile including sensitive information and classes.

R4 Users should be able to customize their profile/schedule.

- R4.1 Users will be able to add their name, year, and major to their profile.
- R4.2 Users will be able to add a profile picture.
- R4.3 User will be able to customize notifications received.
- R4.4 Users will have the ability to set their availability status (online, offline, busy)
- R4.5 Users will be able to add and remove courses from their profile.
- R4.6 Users will be able to add and remove occupied times from their schedule.
- R4.7 Users can set reminders of important events or deadlines within the app.

R5 Users should be able to join/create study groups.

- R5.1 Users will be able to use a search engine to search for study groups.
- R5.2 Users can send invite links to join groups to other users.
- R5.3 Users will be able to accept/decline group invites.
- R5.4 Users will have the capability to view detailed information about the group upon accepting a group invite.
- R5.5 Users accepting invites will add the user to the group and provide access to discussions and relevant information.
- R5.6 Users will be able to name groups.
- R5.7 Users shall be able to leave groups.
- R5.8 Users shall be able to send documents and links in chats.
- R5.9 Users shall be able to create polls within groups, gather opinions and make group decisions.
- R5.10 Users will be able to create events within groups, specifying details such as date, time, and location (linking to their schedule calendar).

R5.11 Users will be able to save important messages, documents, or links within groups to easy access later.

R5.12 Users will have a search engine to find specific messages, files, or events within group conversations efficiently.

R5.13 Users within groups will be able to track contributions and attendance history for group events.

Nonfunctional Requirements:

R1 Site should be accessible to many devices.

R1.1 The app must be optimized for all devices.

R1.2 The system should perform correctly in 95 percent of use cases.

R1.3 Users should be able to access their groups with ease.

R2 The app must ensure strong security measures for data protection.

R2.1 The security and confidentiality of each user's personal data must be upheld and maintained at all times.

R2.2 The app should only reject a login only 3 times before locking profile.

R2.3 The app should regularly backup user data to prevent loss of data.

R3 The app should perform well and handle large number of users.

R3.1 The app should load within 2 seconds whenever it opens on any device that has a reliable internet connection.

R3.2 The app shall be able to accommodate large volumes of users on the app.

R4 The app should accommodate further personalization.

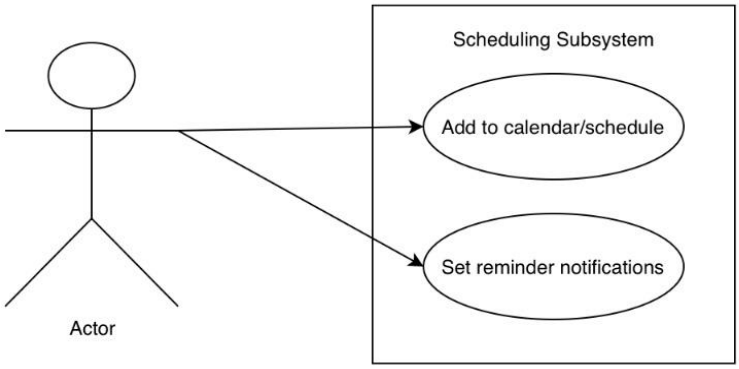
R4.1 The app should allow transfer of ownership of study group between group members.

R4.2 The app should be able to translate languages (for course where foreign languages are spoken)

R4.3 The app should include a feedback form on the main menu, allowing users to submit comments or suggestions directly.

Individual (Expanded) Use Case Diagrams

Habeel Mumtaz
Scheduling Subsystem



Expanded use cases:

Add to calendar/schedule (R4.6)

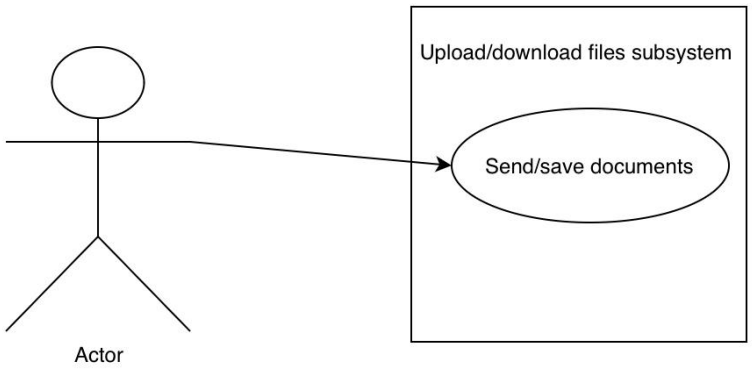
Actor: Web user	System: Peer Connection
	0: System displays the group dashboard.
1. TUCBW user clicks on schedule study sessions button	2. System displays the page to create a new study session
3. User enters the details of the study sessions such as subject, date, time, and location, and saves the new session.	4. System shows the message confirming the successful scheduling of the study session and notifies group members.
5. TUCEW User sees the newly scheduled study session on their calendar	

Set reminder notifications (R4.3)

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard

1. TUCBW user clicks on account icon	2. System loads the user's account page
3. User clicks on 'Control Notification'	4. System loads notifications page and presents options for setting a new reminder, including date, time, and reminder message.
5. User enters the desired date, time, and message for the reminder, and confirms the settings	6. System confirms the successful creation of the reminder and displays a message acknowledging it.
6. TUCEW users receive a notification at the specified data and time with the reminder message.	

Habeel Mumtaz
Upload/download files Subsystem



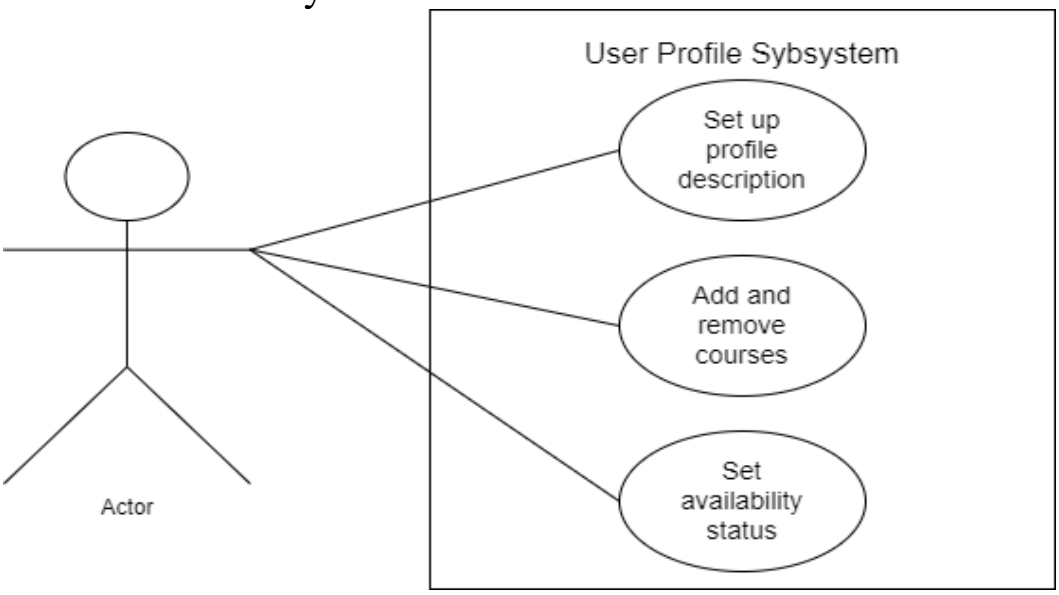
Send documents (R5.8)

Actor: Web user	System: Peer Connection
	0: System displays the group dashboard
1. TUCBW user clicks the share button	2. System displays the share screen
3. User selects the document they wish to share in the group	4. System displays either share button or cancel.
5. User shares the document	6. System notifies the user of the successful share
7. TUCEW user can view the shared document in the group chat	

Save documents (R5.11)

Actor: Web user	System: Peer Connection
	0: System displays the group dashboard
1. TUCBW user clicks on the document they wish to save	2. System displays the document on the screen
3. User will be able to save the document on their local device	4. System notifies the user of the successful save
5. TUCEW user can view the document they have saved	

Zainab Olaleye
User Profile Subsystem



Set up profile description (R4.1)

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard
1. TUCBW user clicks profile icon	2. System displays profile page
3. User selects profile picture icon	4. System asks for camera access or camera roll access
5. User takes photo and clicks add photo or User adds photo from camera roll and clicks add photo	6. System adds photo as profile picture icon
7. User clicks profile description	8. System displays empty profile description
9. User enters name, grade, and major then clicks save	10. System saves description to profile
11. TUCEW user can view their profile	

Add and remove courses (R4.5)

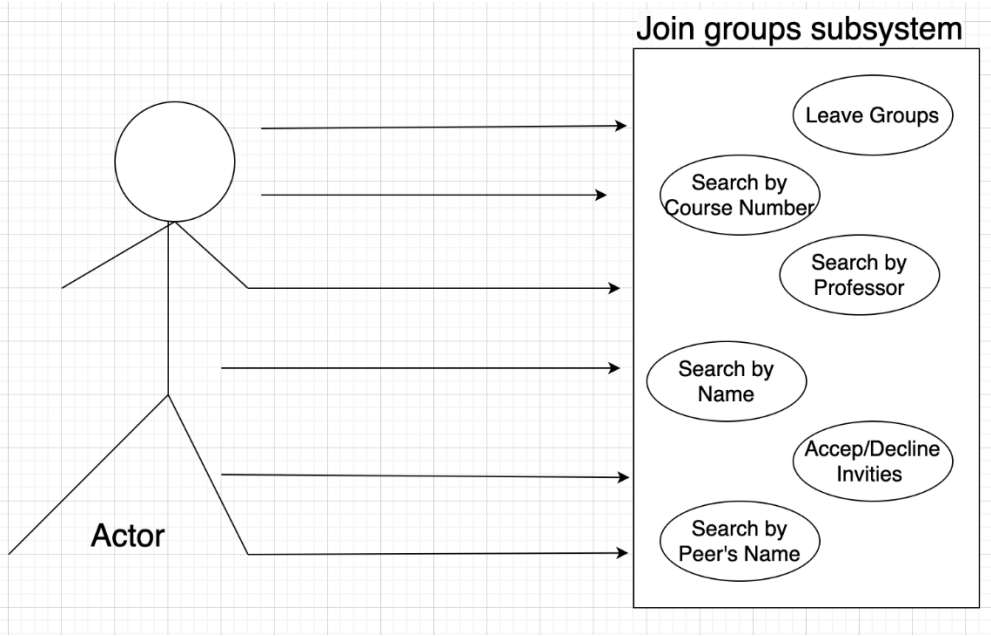
Actor: Web user	System: Peer Connection

	0: System displays the user dashboard
1. TUCBW user clicks profile icon	2. System displays profile page
3. User selects add courses or remove courses	4. System displays courses section
5. User types in course name, then clicks add course Or User clicks remove course	6. TUCEW system adds course to profile or system removes course from profile

Set availability status (R4.4)

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard
1. TUCBW user clicks profile icon	2. System displays profile page
3. User selects availability status	4. System displays availability options (online, offline, or busy)
5. User clicks one of the availability options	6. TUCEW system displays availability status to profile

Akhil Varma Penmetsa
Join groups Subsystem



Leave Groups (R5.7)

Actor: Web user	System: Peer Connection
	0: System displays the group dashboard
1. TUCBW user clicks on 3 lines on the top right corner	2. System displays the group chat settings
3. user clicks on leave group and user doesn't group on their dashboard	4. System displays that the user successfully left the group
5. TUCEW user does not see the group on their dashboard anymore	

Accept/ Decline Invites (R5.3)

Actor: Web user	System: Peer Connection

	0: System displays the user dashboard.
1. TUCBW user clicks on notifications icon	2. System displays notification page
3. User sees invitation and click on either accept or decline	4. System adds the user to the group if they clicked on accept or system removed the invitation if rejected.
5. TUCEW Users can see the study group if they accepted and joined the group.	

Search by Professor (R5.1)

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page
3. User clicks on search by professor	4. System shows a small list of popular professors searched by users under search bar
5. User selects from list or searches for their professor	6. System displays study groups for the professor searched
7. User clicks on join group	8. System adds user to group and notifies user and other group members
9. TUCEW User sees group on their dashboard	

Search By Course Number (R5.1)

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page

3. User clicks on search by Course Number	4. System shows a list of popular searched courses under search bar
5. User selects from list or searches for their course	6. System displays study groups for the courses searched
7. User clicks on join group	8. System adds user to group and notifies user and other group member
9. TUCEW User sees group on their dashboard	

Search by Group Name (R5.1)

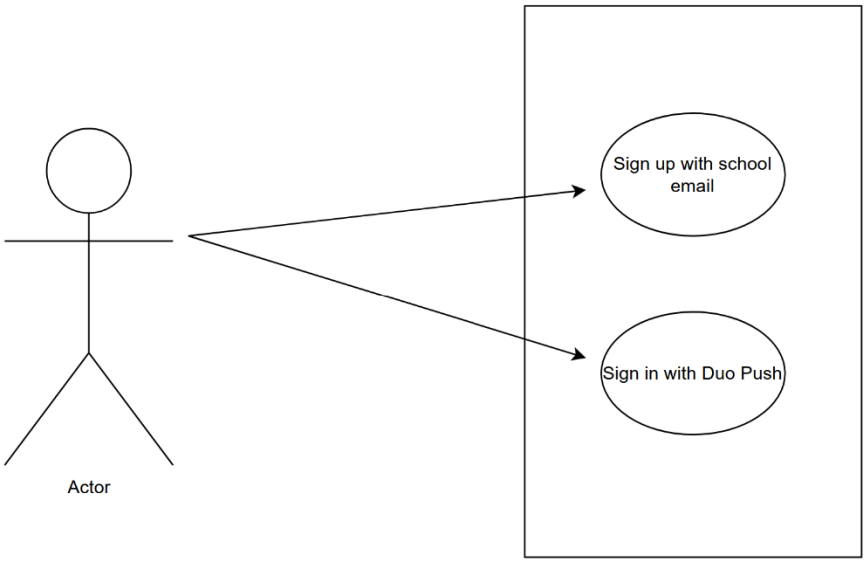
Actor: Web user	System: Peer Connection
	0: System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page
3. User clicks on search by Group Name	4. System shows a list of popular searched study group names under search bar
5. User selects from list or search for specific group name	6. System displays groups that match the group name searched
7. User clicks on join group	8. System adds user to group and notifies user and other group member
9. TUCEW user sees group on their dashboard	

Search by peers by Name (R5.1)

Actor: Web user	System: Peer Connection
	0. System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page
3. User clicks on search by peer name.	4. System loads the search page
5. User types in peer's name.	6. System displays peer names that match
7. User clicks on peer name	8. System adds user and peer in a group chat

9. TUCEW user sees group chat on their dashboard	

Dagmawet Zemedkun
User authentication subsystem



Sign up with school email (R1.1)

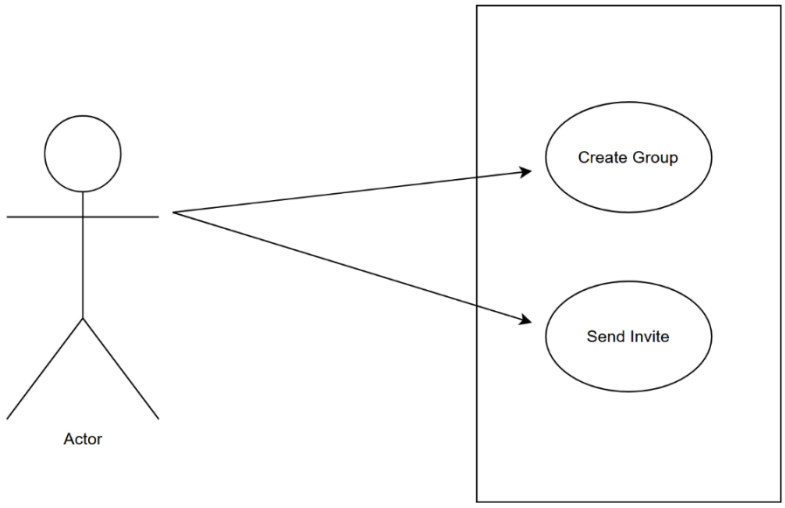
Actor: Web User	System: Peer Connection
	0. System displays two options 'Sign up' or 'Sign in'
1. TUCBW user click on 'Sign up'	2. System prompts for user's school email
3. User enters school email	4. System validates email by matching with stored email list and redirect user to school login page
5. User logs in with school email and password and clicks enter	6. System validates credentials and sends a confirmations email to user
7. TUCEW user sees details confirmed and account dashboard	

Sign in with DUO Push (R1.2)

Actor: Web User	System: Peer Connection

	0. System displays two options 'Sign up' or 'Sign in'
1. TUCBW user click on 'Sign in'	2. System redirects user to school login page
3. User logs in with school email and password and clicks enter	4. System validates and sends a Duo Push to user's phone
5. User selects the 'Accept' option on Duo Push	6. System validates
7. TUCEW user is redirected to see their account dashboard	

Dagmawet Zemedkun
Group Creation Subsystem



Create Group (R5.6)

Actor: Web User	System: Peer Connection
	0. System displays dashboard
1. TUCBW user selects the 'Create Group' tab	2. System loads the group creation forum
3. User enters study groups name, group description, and selects group's status as either public or private and clicks 'Create Group'	4. System create a study group chat interface with user's entered information and notifies the user of the successful creation of the group
5. TUCEW user is able to see their created group	

Send Invite (R5.2)

Actor: Web User	System: Peer Connection
	0. System displays study group created by user
1. TUCBW user selects the 'Invite' tab	2. System loads choices for invite 2.1 Direct message 2.2 Link
3. User selects an invite method	4. System sends the invite
5. TUCEW user sees that the invite has been sent	

Requirements Use Case Traceability Matrix

Requirements	Priority	UC1	UC2	UC3	UC4	UC5	UC6	UC7	UC8	UC9	UC10	UC11	UC12	UC13	UC14	UC15	UC16
R1	1	X	X														
R1.1	1	X															
R1.2	2		X														
R1.3	4																
R2	2	X		X		X	X										
R2.1	2			X		X	X										
R2.2	2						X										
R3	3							X									
R3.1	3			X													
R3.2	2							X									
R4	3					X	X	X	X	X							
R4.1	3							X									
R4.2	5							X									
R4.3	5						X										
R4.4	5					X				X							
R4.5	4								X								
R4.6	2					X											
R4.7	3					X	X										
R5	2			X	X						X					X	
R5.1	1											X	X	X	X		
R5.2	1				X						X						
R5.3	1															X	
R5.4	2			X							X						
R5.5	1										X					X	
R5.6	4			X													
R5.7	3										X						
R5.8	2																X
R5.9	3			X													
R5.10	2					X											
R5.11	3																X
R5.12	3																X
R5.13	5																
UC Priority		1	1	2	3	1	2	3	3	5	2	1	1	1	1	2	2

UC1: User signs up by linking their school email to the app
UC2: User logs into account via DUO push after authenticating
UC3: Create group z
UC4: Send invite
UC5: Add to calendar/schedule
UC6: Set reminder notification
UC7: Users set up their profile w/ picture and profile description.
UC8: Users will be able to add and remove courses from their profile.
UC9: Users set their availability status (online, offline, busy)
UC10: Join or leave group
UC11: Search by course number
UC12: Search by professor
UC13: Search for study group by name
UC14: Search for peers by name
UC15: Accept/decline invites
UC16: Send/save documents

High Priority Use Cases w/ Expanded Use case

UC1: User signs up by linking their school email to the app

Actor: Web User	System: Peer Connection
	0. System displays two options 'Sign up' or 'Sign in'
1. TUCBW user click on 'Sign up'	2. System prompts for user's school email
3. User enters school email	4. System validates email by matching with stored email list and redirect user to school login page
5. User logs in with school email and password and clicks enter	6. System validates credentials and sends a confirmations email to user
7. TUCEW user sees details confirmed and account dashboard	

UC2: User logs into account via DUO push after authenticating

Actor: Web User	System: Peer Connection

	0. System displays two options 'Sign up' or 'Sign in'
1. TUCBW user click on 'Sign in'	2. System redirects user to school login page
3. User logs in with school email and password and clicks enter	4. System validates and sends a Duo Push to user's phone
5. User selects the 'Accept' option on Duo Push	6. System validates
7. TUCEW user is redirected to see their account dashboard	

UC5: Add to calendar/schedule

Actor: Web user	System: Peer Connection
	0: System displays the group dashboard.
1. TUCBW user clicks on schedule study sessions button	2. System displays the page to create a new study session
3. User enters the details of the study sessions such as subject, date, time, and location, and saves the new session.	4. System shows the message confirming the successful scheduling of the study session and notifies group members.
5. TUCEW User sees the newly scheduled study session on their calendar	

UC11: Search by course number

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page
3. User clicks on search by Course Number	4. System shows a list of popular searched courses under search bar
5. User selects from list or searches for their course	6. System displays study groups for the courses searched
7. User clicks on join group	8. System adds user to group and notifies user and other group member
9. TUCEW User sees group on their dashboard	

UC12: Search by professor

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page

3. User clicks on search by professor	4. System shows a small list of popular professors searched by users under search bar
5. User selects from list or searches for their professor	6. System displays study groups for the professor searched
7. User clicks on join group	8. System adds user to group and notifies user and other group members
9. TUCEW User sees group on their dashboard	

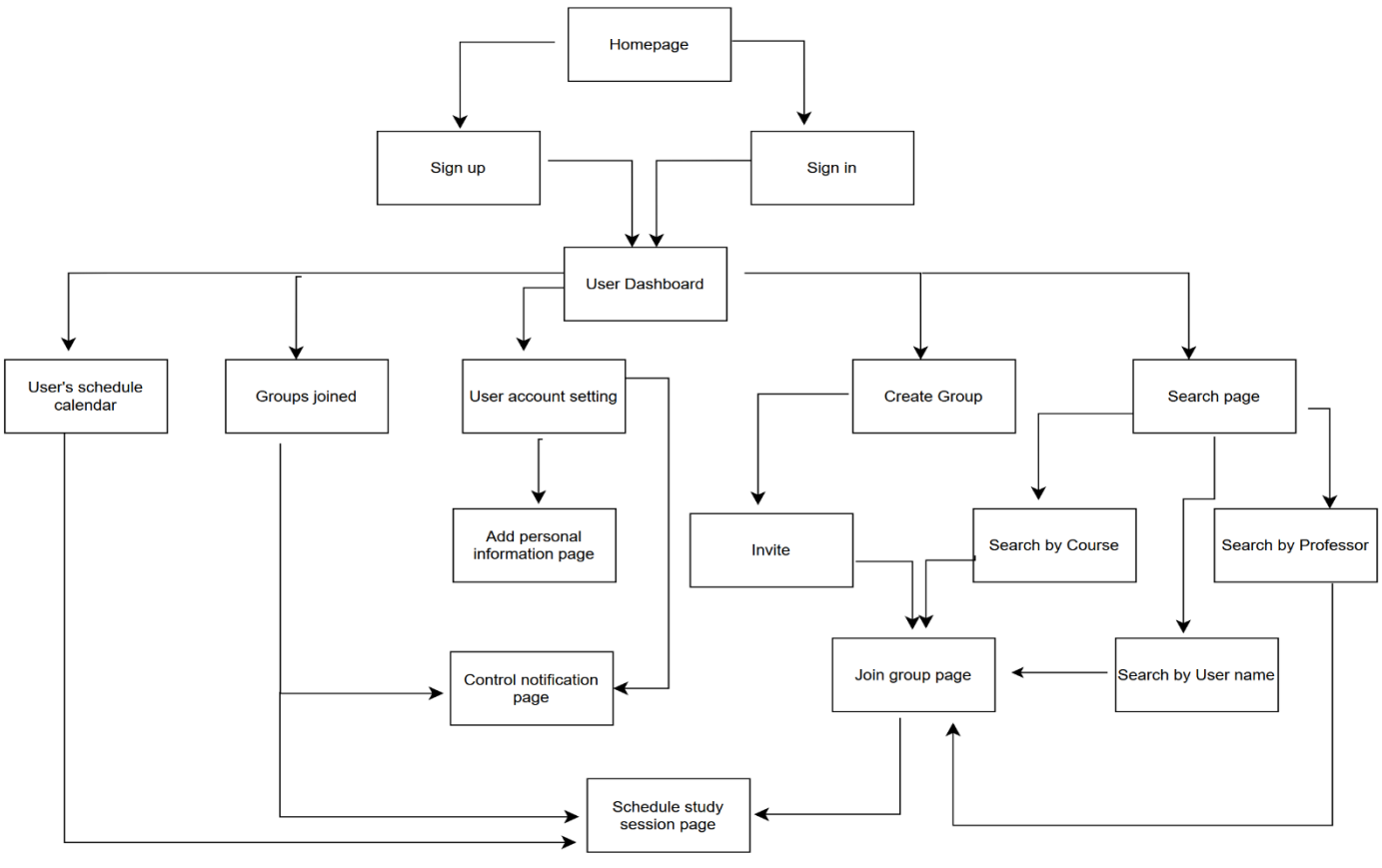
UC13: Search for study group by name

Actor: Web user	System: Peer Connection
	0: System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page
3. User clicks on search by Group Name	4. System shows a list of popular searched study group names under search bar
5. User selects from list or search for specific group name	6. System displays groups that match the group name searched
7. User clicks on join group	8. System adds user to group and notifies user and other group member
9. TUCEW user sees group on their dashboard	

UC14: Search for peers by name

Actor: Web user	System: Peer Connection
	0. System displays the user dashboard.
1. TUCBW User click on the search bar	2. System shows search page
3. User clicks on search by peer name.	4. System loads the search page
5. User types in peer's name.	6. System displays peer names that match
7. User clicks on peer name	8. System adds user and peer in a group chat
9. TUCEW user sees group chat on their dashboard	

Sitemap


Homepage
Sign up
Sign in
User Dashboard
User's schedule calendar
Groups joined
User account setting
Create Group
Search page
Add personal information page
Invite
Search by Course
Search by Professor
Control notification page
Join group page
Search by User name
Schedule study session page