



Bilkent University

Department of Computer Science

CS319 Project

GOATs: ohmygoat.com

Section: 02

Group: 2d

Analysis Report

Group Member

- Beste Güney (21901631)
- Doruk Onur Çalışkan (21902672)
- Efe Ertürk (21902620)
- Ege Ergül (21902240)
- Emre Erdal (21901597)
- Kerem Erdal (21901596)

Instructor: Eray Tüzün

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1. Introduction

1.1 Operational Research

After a full year of online education, finally this semester Bilkent returned to face-to-face education. Although online education had its upcoming, one of its most obvious shortcomings was the limited social events. Despite the efforts of clubs, the number of events clubs organized decreased and participation in them decreased even further. When the reason behind this decrease is investigated, it is found that many students didn't even know that such events were being organized. Back in the campus days, posters on the entrance of buildings were the greatest advertisement points for clubs and when this was no longer available, awareness about the club activities decreased radically.

Furthermore, many students (especially students who started their education in online mode) don't know about the existence of many clubs. Since the space available on the walls of the entrance of the buildings is limited, not all of the clubs could hang their posters on the walls. When this situation is investigated deeper, it is found that clubs that have fewer participants are having difficulties as they try to advertise their upcoming events. Thus, it can be said that clubs cannot advertise themselves sufficiently.

Another problem that clubs are exhausted from is keeping documentation. In our meeting with the club president of YES, we learned that there exist lots of problems in assignment giving and keeping track of the submitted documents by the board members and active club members. Keeping meeting reports, GE250/251 participants list for each event, and expense receipts are critical to the clubs, as the president stated. Also, Bilkent expects them to keep track of these documentation. However, it is reported to our research team that within time, this documentation-keeping process can get messy when this task is not done on time.

From the above-mentioned realizations, it can be concluded that the students can skip reading BAIS mails which are about club activities and consequently miss club events that they may actually like. As an alternative to this low-functioning mailing system, our group decided to develop a system that will provide a common platform to both students and clubs, that informs students about upcoming club activities easily and lets clubs to advertise their events without being restricted with the walls of the buildings. With this solution, we intend to solve the advertisement problem that clubs are experiencing and increase the number of attendees at club events which will make students more interactive and social. In addition, our system will provide a solution that makes keeping documentation easy and organized.

1.2 Overview Text

In short, we observed that with the pandemic, contribution to the club activities decreased radically. To restore the attendance to the club activities and facilitate the jobs of club members, advisors and Bilkent clubs admin, we intend to develop a multi-functional system. In this system, students will be able to see the upcoming events, which the clubs will organize and ask questions about them. They will have the opportunity to learn about clubs they haven't heard before and will be able to join them. Once a student becomes a member of a club, according to their roles in that club, they will have authority to different functions. For example, a board member can make changes in the club profile, generate assignments for active members to do, check the works of the active members, promote regular members into active members and so on. The functionalities of the different roles are explained thoroughly in the following parts of the report.

With this innovative idea, clubs also benefit as they aim to have more members and have a greater participant ratio on the events that they are hosting because of the reason that they can advertise themselves and their events via the internet on our website. Also, the clubs system will allow clubs to upload documents to the system which will be visible by the club advisor and the administrator. So advisors will always be able to track what their clubs are doing and will be able to intervene when needed. Also administrators will always be aware of where the clubs are spending the club budget which will save tons of formality procedures to both students and them. Thus, with an innovative solution, we intend to make Bilkent even a more interactive university and make life easier for Bilkenters, and also for Bilkent clubs.

1.3 System Introduction and Main Features

To begin with, it is important to note that there will be three different users of this system: Students, club advisors and administrators which will behave like the admin of the system. This requires the development of three different subsystems which will be connected through one common system. Students are divided into 5 subusers, with respect to their role in a club: normal students, members, active members, club board members and club presidents. These actors are essentially students, they can do what students do, but they have extra work and permissions in the system.

Since there are three main subsystems, there will be features only for students, only for club advisors, only for the administrator and shared features that

these three types of users can utilize. The details of this structure will be detailly introduced in section 2.4.1 Use case model.

The main features of the system can be listed as follows:

- Registration (students)
- Login (all)
- Profile editing and viewing (students, club advisors)
- Event posting and media posting related to them (board members and presidents only)
- Event viewing and posting to event forums and reporting forum posts (students and club advisors)
- Uploading event logs, receipts of expenses for events, GE250/251 participants lists, and other documents to the system (edited by board members, checked by club advisors)
- Generating assignments (board member, president, advisor)
- Submitting documents to assignments (active members, board members, presidents)
- Checking and approving documents (board members, presidents, club advisors)
- Viewing and registering to clubs (students)
- Viewing and registering to upcoming events and getting notified (students)
- Checking club event content and according to the content approving or declining club events (club advisors)
- Edit roles of other students (president, board member, advisor)
- Adding newly created clubs to the system (administrator)
- Closing clubs and removing them from the system (administrator)
- Create accounts for advisors (administrator)
- Deleting accounts (students and advisors)

2. Proposed System

2.1 Functional Requirements

2.1.1 Signup

At our website, when students try to enter the system for the first time, they will need to register the system by signing up. In order to sign up, the system will first ask for the student mail, password and password confirmation. The student mail must be Bilkent's mail, which ends with "@ug.bilkent.edu.tr". Club advisors cannot sign themselves up like the students, they will be given temporary passwords by the administrator user (the university officials) and they will enter the system with their email and password through the login page. Via email, the password of the administrator user will be also given, thus they will not sign themselves up. Thus, only students will sign themselves up through this page.

2.1.2 Login

When entered to the system, all users will be navigated to the login page, where the mail of the student and the password will be asked. In normal cases, the first page that the user encounters will be the Login Page. If a user forgets their password, by clicking 'forgot my password', the user will be navigated to the forget my password page where the mail of the student will be asked and a new password will be sent to the email of the user.

2.1.4 Profile

There are 2 types of profiles: Student Profile and Club Profile.

2.1.4.1 Student Profile

In students profile, name, surname, school id, department are the information that needs to be filled. Students can change their passwords, but not their registered mails. Also they can edit their biographies, profile photos and information about themselves. Moreover, they can see the clubs that they are enrolled or have an active role in on the profile page. These roles include a simple member, an active member, a board member or a president. Also by clicking onto the clubs, students will be navigated to the associated club's page. Students will have different roles for different clubs and when they are redirected to the club page, the functionalities they will have on this club profile will be determined according to their roles. For example, if the student is the president of the club, that user will have every permission at the club profile, such as editing. On the other hand, if the student is just a regular member, he/she will not have any ability to edit the club profile. Finally, they can click on my events tab which will also lead them to the upcoming events screen which they have registered.

2.1.4.2 Club Profile

A club profile will include the name, badge, establishment date, short description of the club, the event list, forum pages, links to social media accounts, and links to branches of the clubs. Students can join a club by entering the club's profile and clicking on the "Join the club" button. Sometimes, clubs may not want to accept all students to their clubs, then, instead of the join button, a "request to join" button will appear. Moreover, the forum page link will be on the club's profile page and will be visible to all the students. In addition to that, social media links of the clubs will be on this screen. All users can view the club profiles. Functionalities in the club profile page will be shaped according to the role and the permission of the logged-in user. For example, a basic student can only view and join the club and its events. Students will have no ability to update this profile. A board member will have the ability to change descriptions etc on the club's profile. If the logged-in user is the club president, they will have the ability to edit the whole profile page of the club. There will be a member list, which would enable clubs to see the club members and this list will be accessible only to board members, presidents, and club advisors.

On the club profile page, both the upcoming and past activities would be visible to all users. Furthermore, the links to the forum page would enable the student to go into the "Forum Page" to ask their questions about the club. Moreover, there will be an announcements part on this profile page, through which the students can see the announcements about activities and possible changes. There will be a link to the create event page which will be visible only when the logged-in user is a club executive.

Club profiles will be opened by administrators, edited by board members and president and visible by all. The club name and mail should be specified and the advisor should be assigned when a club is created. Moreover, administrators can remove a club from the system and automatically, the events and the forums of the clubs will be removed. This may be done because of not obeying the rules of the school club regulations. In addition to that, admin can reward the clubs for their work from this page as well. When a club is rewarded, their reward will also be seen at the club profile.

2.1.5 Notification

From the navbar of the website, students and clubs will be able to access their notifications. In the case that there is a new notification which has not been seen by the user yet, a red icon on the notification link will indicate this to the user. At the notifications, students will be able to see notifications from various features of the system. These are:

- If the student has requested to join a club, the information of whether this request has been approved or declined will be here.
- In the case that there is an event which is coming less than 12 hours from the student schedule, a notification to remind this event will appear here.

- If the admin user adds a new club to the system or removes an existing club, this will be notified to the student.
- If a change occurs at the club board which the student is a member of, then a notification will come to the student.

When students are directed to their clubs system, there will be another notification tab. These notifications will shape according to the role of the student viewing these notifications. Club executives will be able to see notifications from various features of the system. These are:

- If the club is invited to an event of another club.
- If a student wants to enter the club.
- If a student leaves the club.
- If something is posted to the club's forum.
- A document is uploaded to the clubs system
- If a request for the events of the clubs are rejected or approved, then a notification will come to the clubs.

Club advisors will be regularly notified at the system to keep them up to date with their club's activities. These notifications can be accessed from this page and the notifications will arrive to the advisors when:

- Their club post or cancel an event
- President submits a document
- Administrator user reports their club or an event hold by their club
- Administrator awards their club

2.1.6 Events

Firstly, the events are created by the board members of the club by specifying their dates, explanation, details, requirements, and maximum quota. Additionally, the clubs will have a chance to put the poster of the activity while creating them. Event creators can specify the attendance policy for the event, whether it is mandatory (like a critical meeting) or not (arbitrary like a beer-pong event). These events can be edited by any number of board members, and it will be presented to the president for approval. If the president is satisfied, he presents this event to the club advisor, who has the last say on the event. (S)He can approve or decline the event. The event will go public if it is approved by the advisor. Once the event is approved, it will be visible to all users. Even after the activity is visible to all, board members can still edit the event like in a case where the quota is not enough.

For each event, there will be a separate page that consists of all the details of the activity, and there would also be a link to the organizing club's Profile Page for reaching the club related information easily. The students can see all the details about the event on this page and there will be two buttons called "Attend" and "Not Attend". "Attend" button is used for registering the events. A student must join the club first to attend the events. On the other hand, clicking the "Not Attend" button is necessary for the students who do not want to take part in this activity, although they are members of the organizing club to avoid seeing this activity in their main feed. Furthermore, there would also be the link to the "Forum Page" on this page.

2.1.7 Forum

On this page, there will be a forum where the students can ask their questions about specific events and clubs. Every comment on this forum can be replied to both by students and by club executives. By this forum, students will be able to get quick answers to their questions. Finally, by the forum, there will be fewer conflicts in students' minds about an event or a club in general. There will be forums under all events and clubs and be visible to all users. Forum posts can be edited and deleted by the writer himself, or board members and the president of the club.

2.1.8 Assignments

A student can view all of the assignments from any club they are registered in students' system. In order for a student to be assigned an assignment, they should be at least an active member of a club. Students can see details of an assignment and make edits/upload artifacts related to the assignment. Yet, they will be able to do this under the clubs' system.

A student can access the club's system and view the assignments of that club (they will be allowed to access this tab only if he is an active member, board member or the president). On this page, all of the assignments given to any member of that club is shown. In this page, board members and presidents can create tasks, specifying the due date, the requirement, the explanation of the task and they assign it to a student. Also unassigned assignments can be taken by students through this page. Board members and presidents can send reminders for each task. Only the president can set an assignment as done. The only function of advisors is to view and comment on the assignments.

2.1.9 Documents

Club documents part is where the club administration related documents are placed. These are not assignments or tasks. They contain information about the status of the events and the club like the event logs, receipts of expenses for the events, GE250/251 participants lists etc. Club Advisors can display these reports, check them, and understand the situation of clubs in terms of their administrative affairs. Also system admin will be able to check these documents in order to check the expenses of the club. Thus, all these club related documents would be present under "Club Documents" section to easen the works of both the club executives and advisors.

Under the navigation bar of the clubs system, there is a tab named "documentations". A student can access this tab only if (s)he is an active member, board member or the president of the club. A student can create and delete folders and browse to a specific directory. They can create new documents. To create a document, students should provide a brief explanation of what the document is. Also, if the document is created for an assignment they were given, they specify it here.

Then, they can attach pdf, jpg ,png, and other types of files to these documents. Each document object will have a forum so that students and club advisors of the club and system admin have an option to post comments related to the document. Also students can delete documents. Club advisors and admin can view these documents and post to their forums. Admins, students, and advisors can download documents. Folders can be duplicated and downloaded.

2.1.10 Roles

Every student has a role at the club, whether a non-member (student), a member, an active member, a board member or a president. These roles can be edited by other students, who have higher roles/ranks in a club.

Students can

- join the club to become a club member

Club members can

- be promoted to active member
- removed from club

Active club members can

- be promoted to board member
- be demoted to regular member

Board members can

- Be promoted to president
- be demoted to active club member
- promote members to active members
- remove or demote active members and members

President can

- promote active members to club board members
- be changed by the club advisor
- remove or demote board members, active members and members

Club advisor can

- promote and demote any kind of student
- change the president
- remove any kind of students from the club

Also, club advisors are chosen for the clubs by the administrator. Thus, club advisors can be changed by the administrator user.

2.1.11 Delete Account

Every student and advisor can decide to delete their accounts. If the student is not the president of any club, their account will be deleted after they click the delete my account button. Similarly, if the advisor is not advising any clubs currently, they will be able to delete their accounts. Only in these specific cases, users will be asked to yield their roles to other users.

2.2 Non-functional Requirements

2.2.1 Usability

UI / UX design of a system, application, or software are the most important requirements. Since the majority of our users will be students (mainly in the age interval of 18-25) it is important to make UI dynamic and favorable for young people. Yet, while doing this, our UI should remain simple and usable.

- Use different font sizes to draw attention to headings (headings are larger in font size)
- Make the minimum font size (for bodies) 16 px
- Use contrast color for background and texts of components (for example, beige color for background and dark gray for the texts)
- Give vivid colors to the component that need extra attention ("Go to event" button in an event component can be red)
- Use mobile first approach (users are likely to use the mobile version of this system)
- Responsive design
- Use soft-transitioned gradients in backgrounds to make system more dynamic looking (makes it more attractive to young aged people)
- use background shadows for components like events or buttons (this will gain a sense of 3rd dimension which will make it easier to distinguish components from each other)

2.2.2 Security - Safety

Our system will contain some sensitive data of users. It is important for both ethical and legal considerations to make sure that unauthorised third parties won't be able to have access to such data.

- Passwords will be saved to the database after being Salt encrypted (this way, passwords will not be seen even by developers) [1].
- Non-users or unauthorized users should not be directed to sensitive pages by copying and pasting the url to that page (for example, a student shouldn't be able to access event editing page if (s)he is not a board member/the president of that club just by copying and pasting the url)
- At database crashes, there should be no data loss
- System needs to be secure against web attacks such as SQL injections and XSS attacks [2]
- When an account is being deleted, all personal data related to that account should be deleted
- After logoff, even from the same ip address, when a certain url is tried to be accessed, until a next authentication, these url should not be accessible

- Each student can access the system with one account, which is a verified account by checking the email function (verifyEmail) and the checking of “@ug.bilkent.edu.tr” substring in the mail.
- There will be a report section in the forums and the forums are not anonymous so the users cannot write irrelevant things.
- The approval of a student to a club or an event is controlled by the club board member and through his/her approval, the student can join the club.

2.2.3 Maintainability

When a system requires an update, a bug fix or an additional feature; making these changes should not take too much time or affect the end user's experience. That is, the site should not be off for days.

- Use of encapsulation (easier to detect and correct problems)
- Use of different objects for different components/users/systems/tasks (this makes it easier to bug-fix and/or add feature)
- Using a consistent commenting method (like javadoc) for each class (methods, properties, ...). This will make code more understandable and will save lots of time for further bug-fixing / feature adding
- When a update is being made to a type of user's system, other user's systems should be up and running (when a modification is made for admin system, advisor and student systems should be running)

2.2.4 Performance

The whole purpose of this system is to make the lives of students/advisors easier and rapidizing many procedures as much as we can. Thus, if our system works slowly, it would make our system almost pointless.

- While signing up, verification mail should be delivered to the user within one minute
- Logins should take less than 5 seconds when the correct data is provided
- When users are being directed to other endpoints (for example a student is being directed to the clubs page to make operations from there), this should take less than 5 seconds
- Logout operation should take less than 5 seconds

2.3 Pseudo Requirements:

2.3.1 Implementation

For the implementation of the project, the requirements are:

- The project must be implemented with an object oriented programming language.
- The project needs to be a web based application.
- The project needs to have a class hierarchy similar to 2.4.1.

2.3.2 Packaging Requirements

- The program needs to run as a one executable file independent from the IDE's that are used at development.
- The program needs to run on both MacOS Big Sur version 11.5.2 and Windows 10 operating systems.

2.3.3 Operations Requirements

- The project needs to be developed by 6 people using waterfall product development techniques.
- The project will be organized by using the Jira project management tool.
- The project needs to be developed by using version control system Git and the online repository at Github.

2.4 System models

2.4.1 Use Case Model

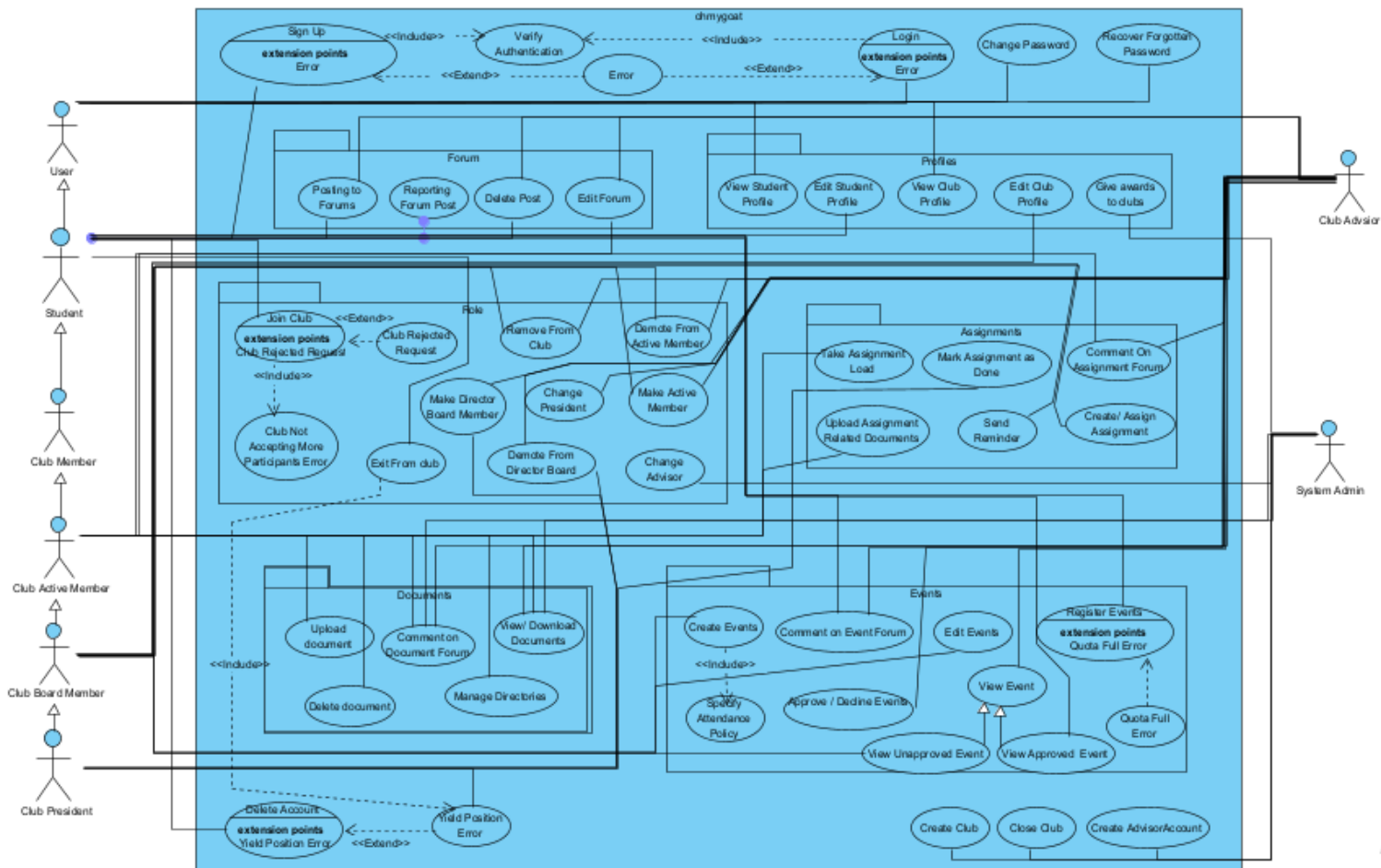


Fig.1. Use Case Diagram of The System

Important Reminder: The student actor is a regular student who is not a member of a given club. Also system admin is not the ohmygoat.com developer team but instead the responsible personels of Bilkent who are to manage club related activities and affairs.

1. Name: Sign Up
2. Participating Actor: Students
3. Entry Condition: ohmygoat.com is rowsed
4. Exit Condition: Sign up gets completed or fails
5. Flow of Events:
 - 5.1. Students decides to sign up to the system

5.2 Student clicks to sign up and fills required blanks

5.3 System checks if the entered email ends with bilkent mail extension and the provided password is strong enough

5.4 System expects students to verify that he is from Bilkent University by sending them a mail. Only if the verification gets completed, the student's profile is created and saved to the system. IF verification fails, an error message is displayed and sign up fails.

1. Name: Log in

2. Participating Actor: All Users

3. Entry Condition: ohmygoat.com is browsed

4. Exit Condition: User signs in to the system or login fails

5. Flow of Events:

5.1. User decides to login to the system

5.2 User clicks to login and fills required blanks

5.3 System checks if such a user exists. If the provided data is missing or wrong, send an error. Else if the data is correct, the system figures what kind of a user that user is and directs the user to their profile.

1. Name: Delete My Account

2. Participating Actor: All Students, Club Advisors

3. Entry Condition: Participating actors decides to delete their account

4. Exit Condition: Account is not currently an advisor of a club or a president of any clubs

5. Flow of Events:

5.1. Participating actor decides to delete their account from the system

5.2 Participating actors view their profiles and clicks to "delete my account" button

5.3 If the participating actor is not currently an advisor of a club or a president of any clubs, their account is deleted. Else, they are shown a warning error telling them to yield their positions to other advisors/students

1. Name: Create Club

2. Participating Actor: Administrator

3. Entry Condition: None

4. Exit Condition: Club is created or procedure is cancelled

5. Flow of Events:

5.1. Admin clicks to the "create club" button on their system.

5.2 Admin provides a name to the club

5.3 Admin provides an advisor to the club.

5.4 admin clicks to the cancel button or create club button

1. Name: Close Club
 2. Participating Actor: Administrator
 3. Entry Condition: None
 4. Exit Condition: Club is closed or procedure is cancelled
 5. Flow of Events:
 - 5.1. Admin views club's profile.
 - 5.2 Admin click to "delete club" button
 - 5.3 Admin is shown a pop up message asking "Are you sure to delete this club?"
 - 5.4 Admin clicks "continue" button or "cancel" button
-

1. Name: Create Advisor Account
 2. Participating Actor: Administrator
 3. Entry Condition: None
 4. Exit Condition: New Advisor Account is created or the procedure is cancelled
 5. Flow of Events:
 - 5.1. Admin clicks to "create new advisor" button
 - 5.2 Admin provides the mail of the new advisor to the system
 - 5.3 Admin clicks "create advisor" button or "cancel" button
-

1. Name: Change password
 2. Participating Actor: All users
 3. Entry Condition: being registered to the system
 4. Exit Condition: none
 5. Flow of Events:
 - 5.1 User clicks to change my password
 - 5.2 User is asked to enter the old password
 - 5.3 User is asked to enter a new password
 - 5.4 New password is saved to the database
-

1. Name: Recover Forgotten Password
2. Participating Actor: All users
3. Entry Condition: being registered to the system
4. Exit Condition: none

5. Flow of Events:
 - 5.1 User clicks to forget my password
 - 5.2 User is asked to verify their account
 - 5.3 User is asked to enter a new password
 - 5.4 New password is saved to the database

Profiles Package

1. Name: View Club Profile
2. Participating Actor: All users
3. Entry Condition: Clicking the club name while searching clubs
4. Exit Condition: returning to main menu
5. Flow of Events:
 - 5.1. User decides to view the profile page of specific club by searching its name
 - 5.2. While searching, the user can see the club name and click on its name
 - 5.3. Users can view the profile page of this specific club they clicked on
 - 5.4. If “back to main menu” button is clicked, the profile page of this club would disappear.

-
1. Name: View Student Profile
 2. Participating Actor: All users
 3. Entry Condition: Clicking the student name while searching the students on the system
 4. Exit Condition: Returning to main menu
 5. Flow of Events:
 - 5.1. User decides to view the profile page of specific student by searching his/her name
 - 5.2. While searching, the user can see the student’s name and click on it
 - 5.3. Users can view the profile page of this specific student they clicked on if
 - 5.4. “back to main menu” button is clicked, the profile page of this student will disappear.

-
1. Name: Edit Club Profile
 2. Participating Actor: Club Board Member, Club President
 3. Entry Condition: Clicking to the “edit profile” button on the clu profile page
 4. Exit Condition: Clicking “apply changes” or “cancel” buttons
 5. Flow of Events:
 - 5.1. User decides to edit his/her club’s profile page, so clicks to club’s profile page button on the main screen

5.2. The user can change the club's description, links to social media, links to other branches, links to the forums, announcements, past and upcoming events displayed on this page, or the profile photo.

5.3. By clicking the "apply changes" button, the club's profile page would be edited according to newly entered information

1. Name: Edit Student Profile

2. Participating Actor: Students

3. Entry Condition: Clicking to "edit my profile" button on the my profile page

4. Exit Condition: Clicking "apply changes" or cancel buttons

5. Flow of Events:

5.1. User decides to edit his/her profile page, so clicks to profile page button on the main screen

5.2. The user can change his/her profile photo, biography, interests, clubs, events, or department.

5.3. By clicking the "apply changes" button, the profile page would be edited according to newly entered information

1. Name: Give awards to clubs

2. Participating Actor: Administrator

3. Entry Condition: Clicking to "Give Award" button on the club profile page

4. Exit Condition: Clicking to "Accept" or "Exit" buttons on the Awards page

5. Flow of Events:

5.1. Administrator decides to give an award to a club

5.2. The admin opens the profile page of the club by searching its name

5.3. By clicking the "Give Award" button on the profile page, the admin would be directed to Awards page

5.4. The admin can select the associated Award to give the club

5.5. The admin should press the "Accept" button to give this selected award.

Events Use Case Diagram

1. Name: Create Events

2. Participating Actor: Club Board Member, Club President

3. Entry Condition: Being a board member. Clicking the create event button from the clubs events section.

4. Exit Condition: Click exit or add button.

5. Flow of Events:

5.1. The board member clicks the add event button after clicking the event.

5.2. The board member should add the date of the event, the attendance policy, quota, the poster, explanation and additionally add forums.

5.3. After doing that, they should click the add button to add it.

1. Name: Register Events

2. Participating Actor: Club Member, Club Active Member, Club Board Member, Club President

3. Entry Condition: Being a member of the club and clicking the attend to the event button.

4. Exit Condition: Click the exit or attend button.

5. Flow of Events:

5.1. A student views an event.

5.2. Students click to attend the event button.

5.4. If they are not a member of the club, then the system will request them to be a member.

5.4. After being a member, they can press to attend the event button. If the set quota is full, an error will be displayed.

1. Name: View Approved Event

2. Participating Actor: Club Advisor, Student, Club Member, Club Active Member, Club Board Member, Club President

3. Entry Condition: Clicking the view event button.

4. Exit Condition: Click the exit button.

5. Flow of Events:

5.1. A student or the advisor views an approved event.

1. Name: View Unapproved Events

2. Participating Actor: Club Advisor, Club Board Member, Club President

3. Entry Condition: Clicking the view event button.

4. Exit Condition: Click the exit button.

5. Flow of Events:

5.1. A student or the advisor views an unapproved event. This will enable them to edit, or evaluate the event proposal before it goes public

1. Name: Approve or Decline Events

2. Participating Actor: Club Advisor

3. Entry Condition: Clicking the event button from the events section.

4. Exit Condition: Click exit, approve or reject buttons.

5. Flow of Events:

- 5.1. The club advisors click to the event from the events section.
 - 5.2. The club advisors click to the approve or reject button.
-

1. Name: Edit Events
 2. Participating Actor: Club Board Member, Club President
 3. Entry Condition: Being a board member. Clicking the event button from the clubs events section. Then, click the edit button.
 4. Exit Condition: Click exit or change button.
 5. Flow of Events:
 - 5.1. The board member clicks the edit button after clicking the event.
 - 5.2. The board member can change the date of the event, the attendance policy, quota, the poster, explanation and add additional forums.
 - 5.3. After doing that, they should click the change button to change it.
-

1. Name: Comment on Event Forum
2. Participating Actor: Club Advisor, Club Member, Club Active Member, Club Board Member, Club President
3. Entry Condition: Viewing event detailed page
4. Exit Condition: Click post button
5. Flow of Events:
 - 5.1. Participating actor decides to comment on the forum
 - 5.2. Participating actor will be shown an text field in which he can write their message, comments, questions
 - 5.3. Participating actor clicks to the post button

Forum Use Case Diagram

1. Name: Posting to Forums
2. Participating Actor: Club Advisor, Student, Club Member, Club Active Member, Club Board Member, Club President
3. Entry Condition: Write some text to forum's edit text field
4. Exit Condition: Click exit or post buttons
5. Flow of Events:
 - 5.1. Participating actor decides to write a post to the forum
 - 5.2. Participating actor will write some text to the forum's edit text field
 - 5.3. Participating actor can select another post if his post is a reply post, or make his post to the thread
 - 5.4. Participating actor either posts the texts or exists without posting
 - 5.5. If the text was posted, it will be saved to the database

-
1. Name: Reporting Forum Post
 2. Participating Actor: Student, Club Member, Club Active Member, Club Board Member, Club President
 3. Entry Condition: Click to “Report this post” button
 4. Exit Condition: Click cancel or report button
 5. Flow of Events:
 - 5.1. Participating actor decides to report a post to the forum
 - 5.2. Participating actor will be shown a pop-up field asking the reason for them reporting this post
 - 5.3. Participating actors will select the reason they are reporting this post from the radio group and/or will write the reason they are reporting this post manually to the edit text.
 - 5.4. Participating actor will click either report button or cancel button
 - 5.5. Participating actor either posts the texts or exists without posting
 - 5.6. If the report button is clicked, that club’s director, board members president and advisor will be notified as well the administrator.
-

1. Name: Delete Post
 2. Participating Actor: Club Advisor, Student, Club Member, Club Active Member, Club Board Member, Club President
 3. Entry Condition: The participating actor is the owner of the post; or the actor is either a board member, the president or the advisor of that club
 4. Exit Condition: Click cancel or delete buttons
 5. Flow of Events:
 - 5.1. Next to the forum post, an option as “delete this post” will be shown only if the entry condition is satisfied. Otherwise, this option will not be shown and the user won’t be able to delete this post.
 - 5.2. Participating actor decides to delete a post they have posted to the forum
 - 5.3. Participating actor will either click to cancel button or delete buttons
 - 5.4. If the user clicks to the delete button, that post and each post that been replied to that post will be deleted from the database
-

1. Name: Edit Forum
2. Participating Actor: Club Advisor, Club Active Member, Club Board Member, Club President
3. Entry Condition: Click edit forum button
4. Exit Condition: Click exit or save buttons

5. Flow of Events:

- 5.1. Participating actor decides to edit forum'
- 5.2. Participating actor will be shown an text field in which he can modify the current title and description
- 5.3. Participating actor either saves the changes or exists without saving
- 5.4. If the changes were saved, new title will be saved to database.

Edit Role Use Case

1. Name: Join Club

2. Participating Actor: Student , Club Board Member, Club President

3. Entry Condition: Current User is not a member of that club already and the club has available place for new members

4. Exit Condition: Student's request for joining to club is accepted or denied

5. Flow of Events:

- 5.1. Student is shown a button as "join to the club" if he is not already a member and the club has available spots for a new member
 - 5.2. Student clicks to "join the club" button
 - 5.3. If the club allows students to join directly, students will be accepted. Else if the club accepts students by accepting, a request is sent to the board members of the club and to the president of the club. If one of them accepts the request, the student will be accepted to the club; if not, the student won't be accepted to the club.
 - 5.4. Students will be notified whether they have been accepted or not. If they have been accepted, this will be saved to the database.
-

1. Name: Make active member

2. Participating Actor: Club Advisor, Club Board Member, Club president

3. Entry Condition: The candidate for becoming an active member is already a club member

4. Exit Condition: Candidate becomes an active member

5. Flow of Events:

- 5.1. Participating actors are shown a "make an active member" button next to the candidate member.
 - 5.2. Participating actors click to the "make an active member" button
 - 5.3. Member's role is changed at the database
-

1. Name: Make Director Board Member

2. Participating Actor: Club Advisor, Club president

3. Entry Condition: The candidate for becoming a board member is already an active member
 4. Exit Condition: Candidate becomes a board member
 5. Flow of Events:
 - 5.1. Participating actors are shown a “make a board member” button next to the candidate member.
 - 5.2. Participating actors click to the “make a board member” button
 - 5.3. Active member’s role is changed at the database
-

1. Name: Change President
 2. Participating Actor: Club Advisor
 3. Entry Condition: The candidate for becoming the club president is a board member
 4. Exit Condition: Candidate becomes the president
 5. Flow of Events:
 - 5.1. Club board members decide the new president by voting and tell this to the club advisor
 - 5.2. Club advisor click to the “make the president” button next to the the candidate
 - 5.3. Board member’s role is changed at the database
-

1. Name: Change Advisor
 2. Participating Actor: Administrator
 3. Entry Condition: None
 4. Exit Condition: Candidate becomes the new club advisor
 5. Flow of Events:
 - 5.1. Current club advisor finds a new candidate for becoming the club advisor. Then he informs the administrator about this request.
 - 5.2. Administrator creates an account for the new advisor and makes him the new advisor while they remove the old advisor from the system.
 - 5.3. Changes are saved to the database.
-

1. Name: Exit from Club
2. Participating Actor: Club Member, Club Active Member, Club Board Member
3. Entry Condition: The user trying to exit the club should be a member of the club and the user is not the club president
4. Exit Condition: Student exits the club
5. Flow of Events:

- 5.1. Participating actors are shown a “exit the club” button next to the candidate member.
 - 5.2. Participating actors click to the “exit the club” button
 - 5.3. Members are deleted from the participants list at the database.
-

1. Name: Remove from Club
 2. Participating Actor: Club Advisor, Club Board Member, Club President
 3. Entry Condition: The removed student is a member
 4. Exit Condition: Member is removed from the club
 5. Flow of Events:
 - 5.1. Participating actors are shown a “remove from the club” button next to the candidate member.
 - 5.2. Participating actors click to the “remove from active members” button and the member is removed from the participants list of the club at the database.
-

1. Name: Demote from Active Member
 2. Participating Actor: Club Advisor, Club Board Member, Club President
 3. Entry Condition: The removed student is an active member
 4. Exit Condition: Active member is reduced to member or removed from the club
 5. Flow of Events:
 - 5.1. Participating actors are shown a “remove from active members” button next to the candidate member.
 - 5.2. Participating actors click to the “remove from active members” button and ask a question “Make a regular member or remove from the club” in a pop up menu. If they click remove from club, the member is removed from the club; else, their role is edited as a member in the database.
-

1. Name: Demote from Director Board
2. Participating Actor: Club Advisor, Club President
3. Entry Condition: The removed student is a board member
4. Exit Condition: Board member is reduced to an active member or member or removed from the club
5. Flow of Events:
 - 5.1. Participating actors are shown a “remove from director board” button next to the candidate member.
 - 5.2. Participating actors click to the “remove from director board” button and ask a question “Make a regular member or member or remove from the club” in a pop up menu. If they click remove from club, member is removed from the

club; else, their role is edited as a member or an active member in the database.

Assignment Use Case Diagram

1. Name: Create/ Assign Assignment
 2. Participating Actor: Club Board Member, Club President
 3. Entry Condition: Create assignment button is clicked
 4. Exit Condition: Assignment is created or cancelled
 5. Flow of Events:
 - 5.1. Participating actors visit the assignments page on the club system. and clicks to create an assignment button.
 - 5.2 Participating actors specify the required information for creating the assignment.
 - 5.3 Participating actors can assign this task to an active student, board member or the president or can leave the assigned slot empty.
 - 5.4 Participating actor clicks to the “create assignment” button or “cancel” button
-

1. Name: Take Assignment Load
 2. Participating Actor: Club Active Member, Club Board Member, Club President
 3. Entry Condition: Assignment is currently unassigned
 4. Exit Condition: Click “Do It” button
 5. Flow of Events:
 - 5.1. Participating actor views the assignment and decides that they can do the assignment
 - 5.2. Participating actors will be shown a button named “Do it”. If they click the button, the assignment will be theirs
-

1. Name: Upload Assignment Related Documents
 2. Participating Actor: Club Active Member, Club Board Member, Club President
 3. Entry Condition: Viewing Assignment
 4. Exit Condition: A document is uploaded or failed
 5. Flow of Events:
 - 5.1. Participating actor views the assignment and decides to upload an artifact related to the assignment
 - 5.2. Participating actors will be shown a button for uploading a document
 - 5.3 Participating actors select a document and specify a name for it and then upload it. If something goes wrong (internet loss or unsupported file type, they receive an error message indicating the problem)
-

1. Name: Send reminder

2. Participating Actor: Club Board Member, Club President
 3. Entry Condition: Viewing assignment
 4. Exit Condition: Click send reminder
 5. Flow of Events:
 - 5.1. Participating actor decides to send a reminder for the assignment
 - 5.2. Participating actor will be shown a button named "Send Reminder Notification to the assignee"
 - 5.3. Participating actor clicks to the button
-

1. Name: Mark assignment as done
 2. Participating Actor: Club President
 3. Entry Condition: Viewing assignment
 4. Exit Condition: Click "Done" button
 5. Flow of Events:
 - 5.1. Participating actor views the assignment and decides if the assignment is okay or not
 - 5.2. Participating actors will be shown a button named "Set as done". If they are satisfied with the assignment, they click the button
-

1. Name: Comment on Assignment Forum
 2. Participating Actor: Club Advisor, Student, Club Member, Club Active Member, Club Board Member, Club President
 3. Entry Condition: Viewing assignment
 4. Exit Condition: Click post button
 5. Flow of Events:
 - 5.1. Participating actor decides to comment on the forum
 - 5.2. Participating actor will be shown an text field in which he can write their message, comments, questions
 - 5.3. Participating actor clicks to the post button
-

Documents Use Case Diagram

1. Name: Upload Document
2. Participating Actor: Club Active Member, Club Board Member, Club President,
3. Entry Condition: Viewing Documents Page
4. Exit Condition: A document is uploaded or failed
5. Flow of Events:
 - 5.1. Participating actor views the assignment and decides to upload an artifact
 - 5.2. Participating actors will be shown a button for uploading a document

5.3 Participating actors select a document and specify a name for it and then upload it. If something goes wrong (internet loss or unsupported file type, they receive an error message indicating the problem)

1. Name: View/ Download Document
 2. Participating Actor: Club Advisor, System Admin, Club Active Member, Club Board Member, Club President
 3. Entry Condition: Viewing Documents Page
 4. Exit Condition: A document is uploaded or failed
 5. Flow of Events:
 - 5.1. Participating actor views a document and decides to download it
 - 5.2 Participating actor clicks to the “download” button
-

1. Name: Manage Directories
 2. Participating Actor: Club Active Member, Club Board Member, Club President
 3. Entry Condition: Viewing documents page
 4. Exit Condition: Click return home button
 5. Flow of Events:
 - 5.1. Participating actor views the directories on the documents page
 - 5.2 Participating actor can travel between folders
 - 5.3 Participating actors can add/edit/remove files for a specified folder
-

1. Name: Comment on Document Forum
 2. Participating Actor: Club Advisor, Student, Club Member, Club Active Member, Club Board Member, Club President
 3. Entry Condition: Viewing document
 4. Exit Condition: Click post button
 5. Flow of Events:
 - 5.1. Participating actor decides to comment on the forum
 - 5.2. Participating actor will be shown an text field in which he can write their message, comments, questions
 - 5.3. Participating actor clicks to the post button
-

1. Name: Delete Document
2. Participating Actor: Club Active Member, Club Board Member, Club President
3. Entry Condition: Viewing document
4. Exit Condition: Click delete button
5. Flow of Events:
 - 5.1. Participating actor views a document and decides to delete it
 - 5.2 Participating actor clicks to the “delete” button

2.4.2 Dynamic Models

2.4.2.1 Activity Diagrams

Activity Diagram of Editing Forums

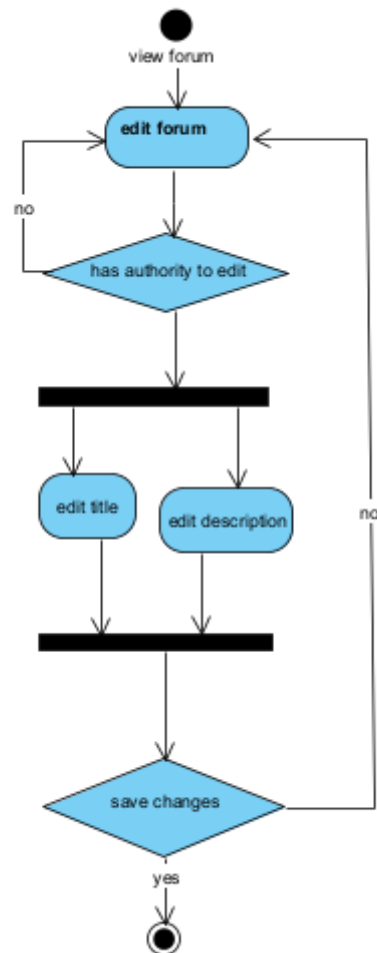


Fig. 2.1. Activity diagram representing the editing process of the forums

Activity Diagram of Reporting Forum Post

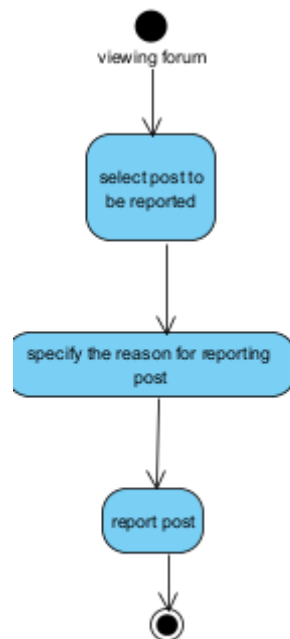


Fig. 2.2. Activity Diagram of reporting forum posts

Activity Diagram of Posting Forum Post

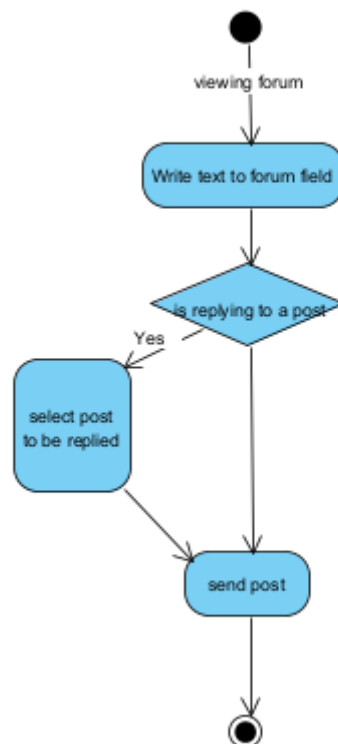


Fig. 2.3. Activity diagram for posting a post to forum

Activity Diagram of Deleting Forum Post

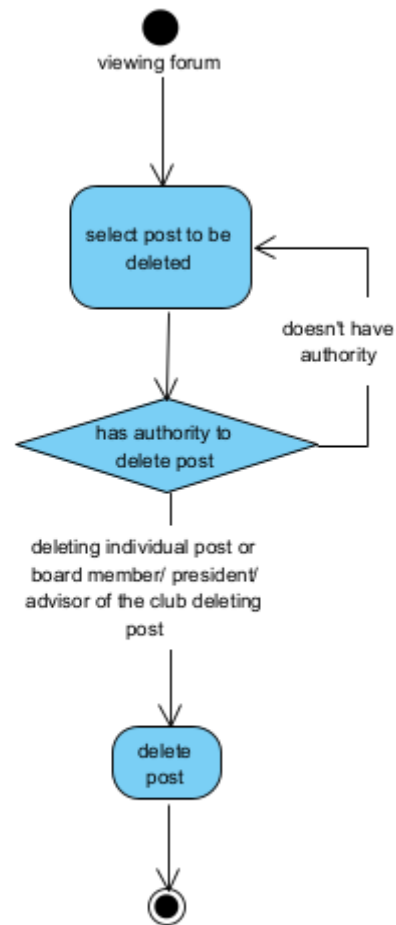


Fig. 2.4. Activity diagram for deleting a post from forum

Activity Diagram For Assignments

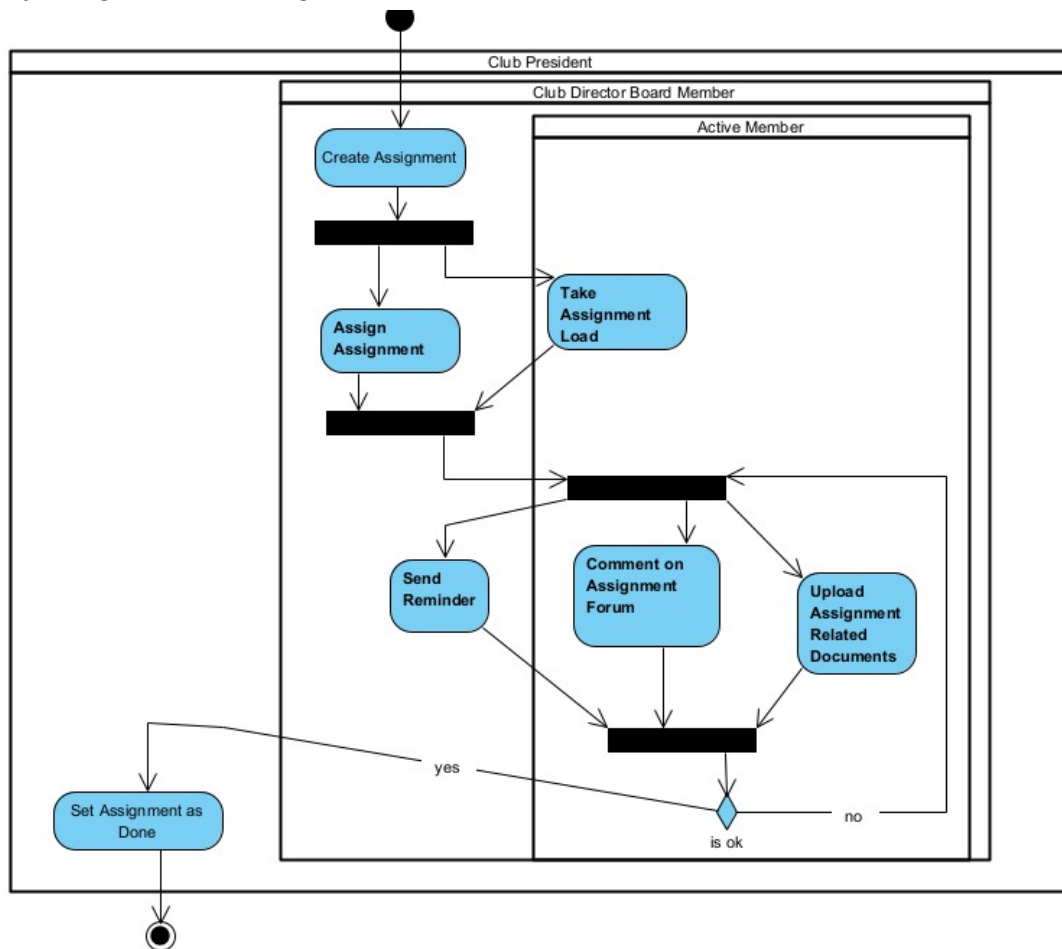


Fig. 2.5. Activity diagram showing the assignment process at clubs

As it can be seen from the diagram, the president of the club, director board members and active members can take assignment load, comment on the assignment's forum and upload assignment related documents; whereas only both the director board members and the president can create & assign assignments and can send reminders. The only one that can set an assignment as done is the president of the club.

Activity Diagram of Editing Club Profile

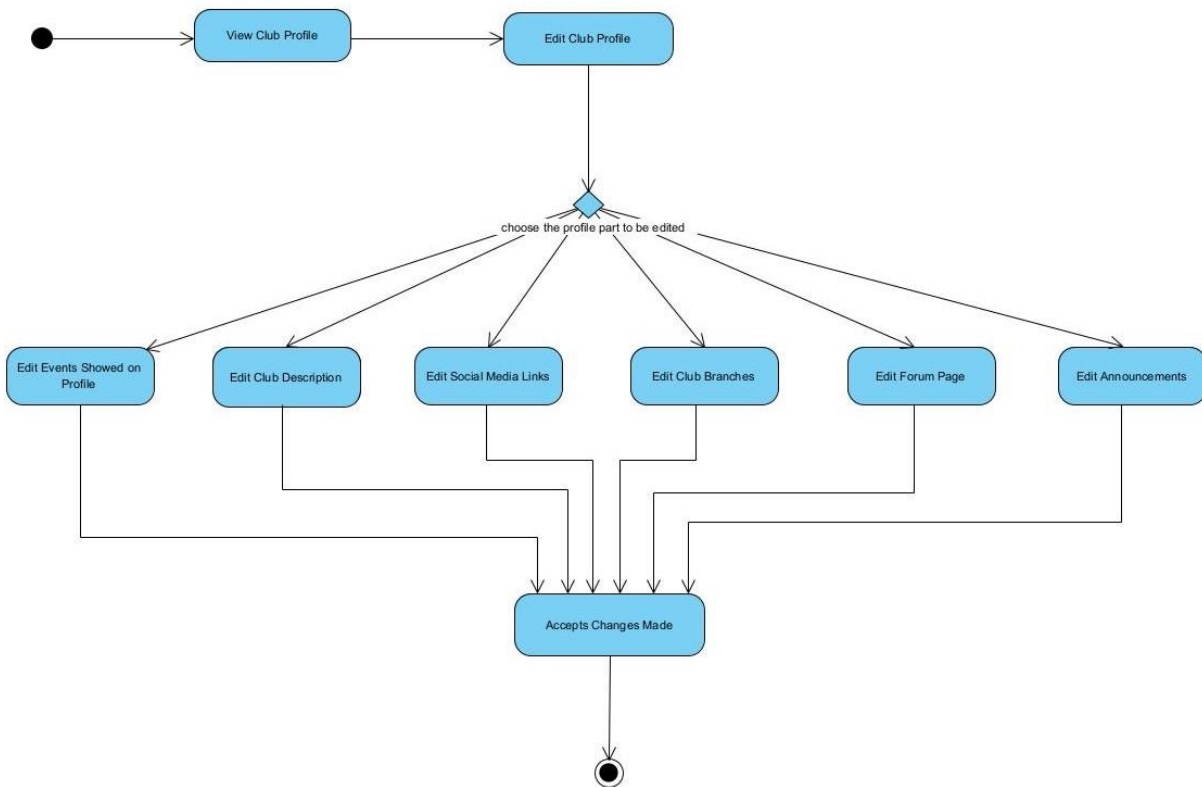


Fig. 2.6. Activity diagram to edit club profiles

Activity Diagram of Editing Student Profile

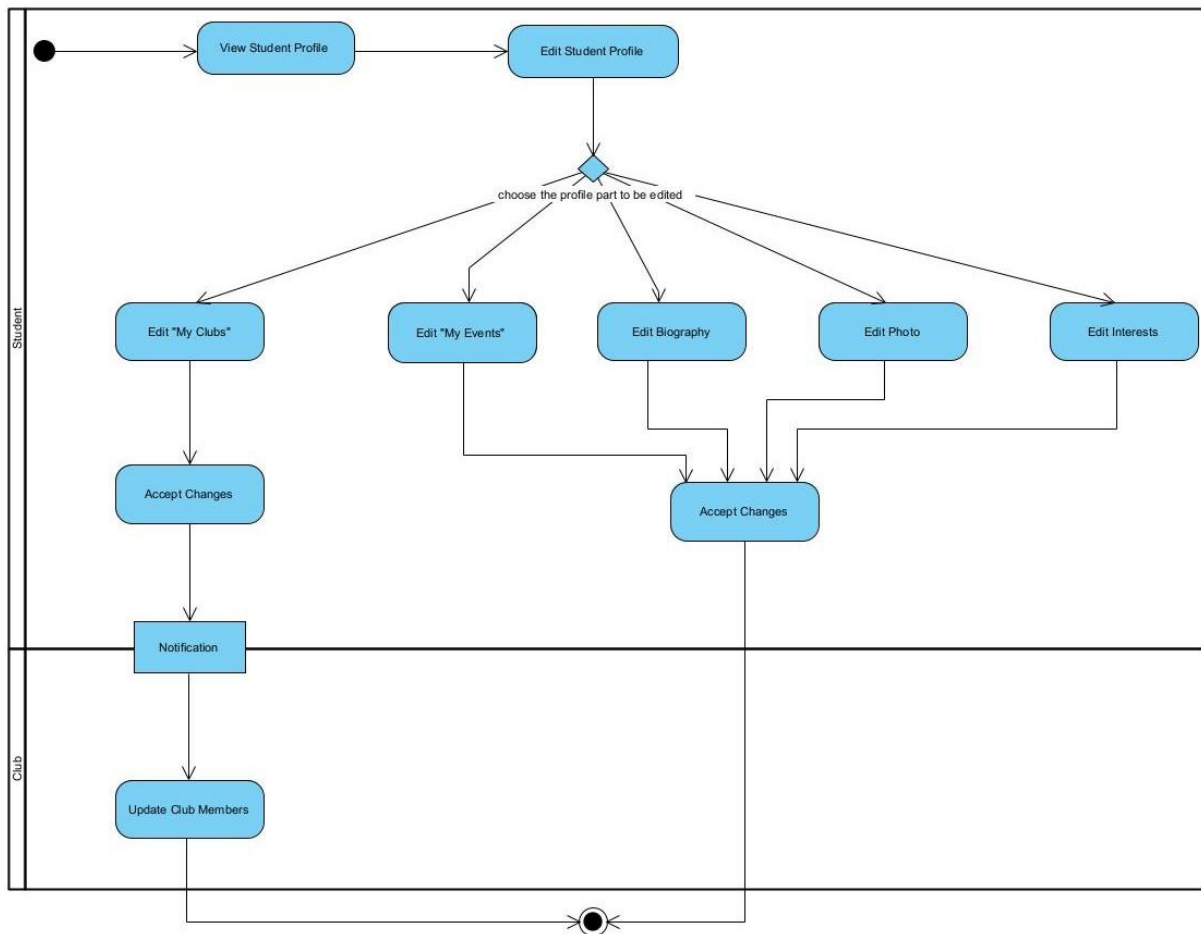


Fig. 2.7. Activity diagram showing the process of editing profile for student

Activity Diagram for Events

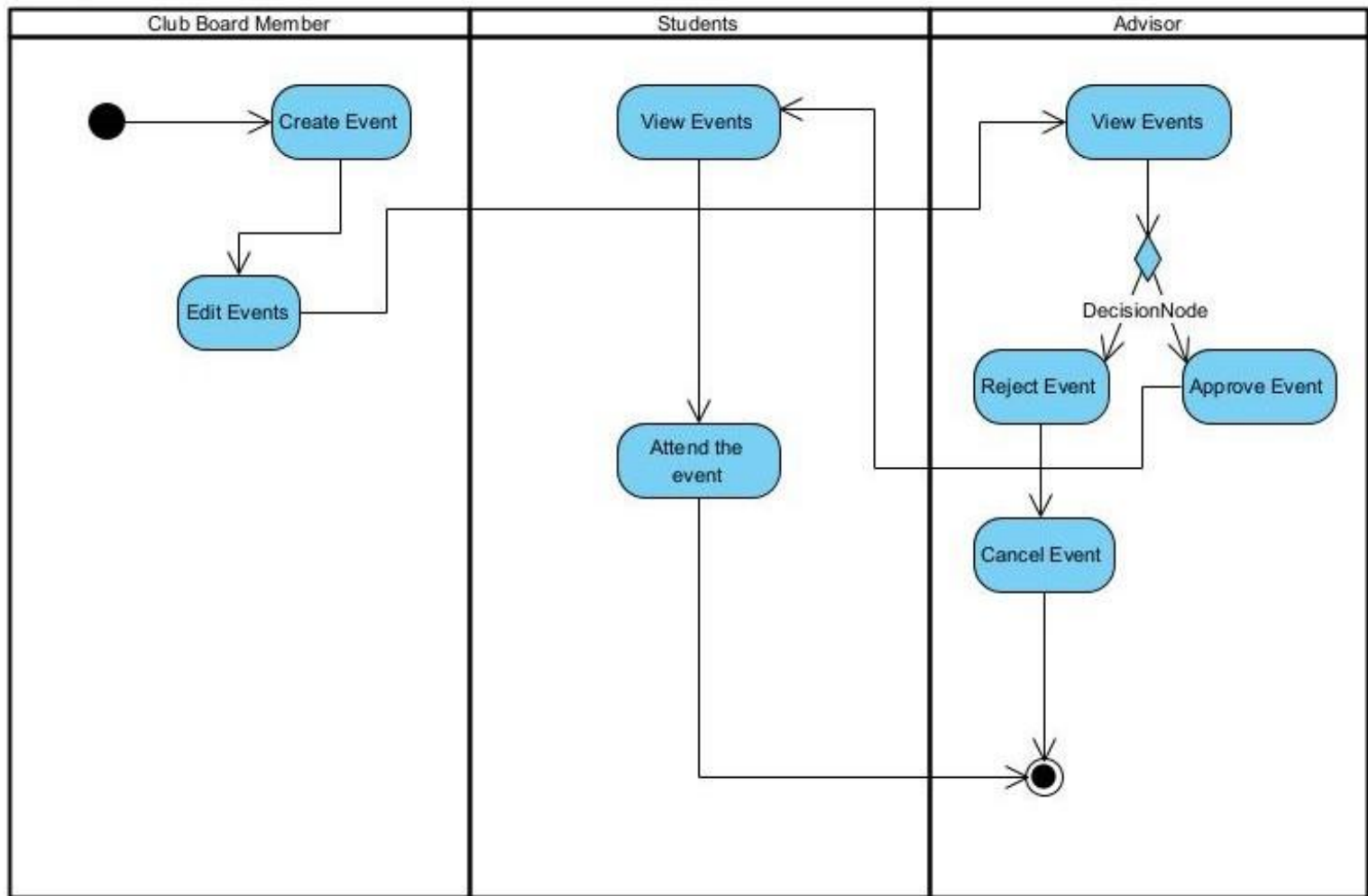


Fig. 2.8. Activity diagram showing the event process

2.4.2.2 Sequence Diagrams

Edit Event Sequence Diagram

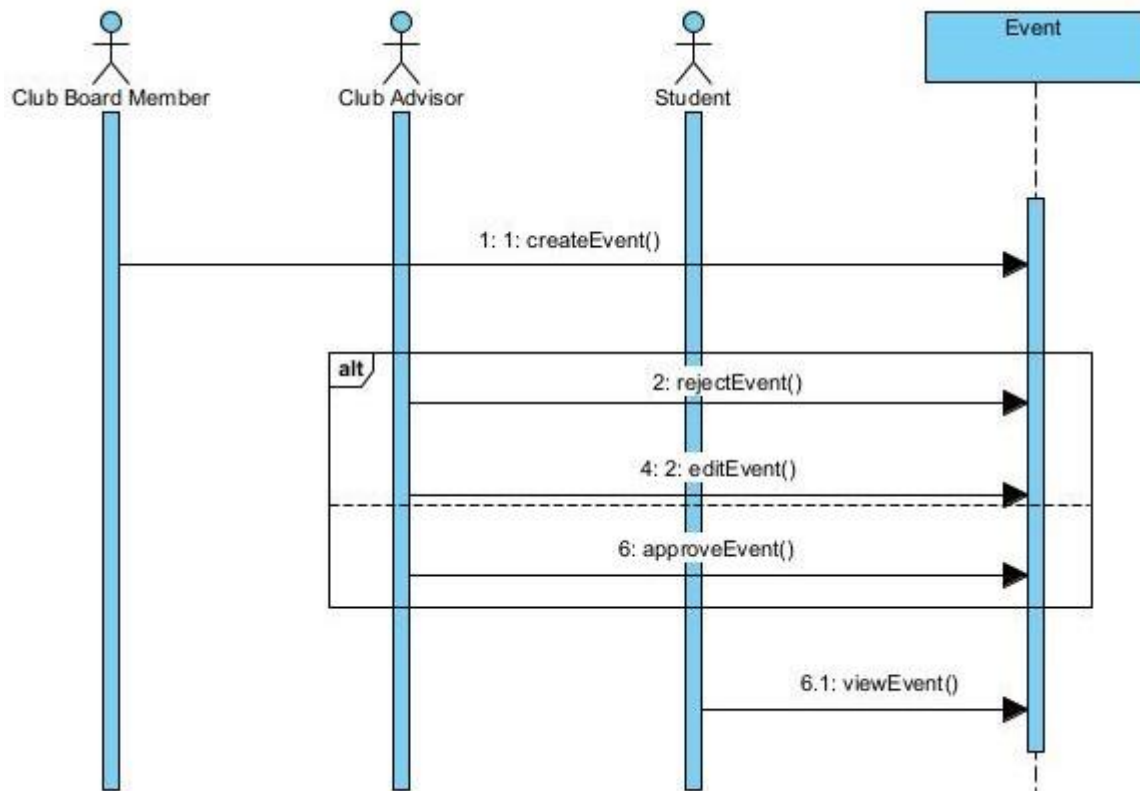


Fig. 2.9. Sequence diagram which shows the editing process of events

Attend Event Sequence Diagram

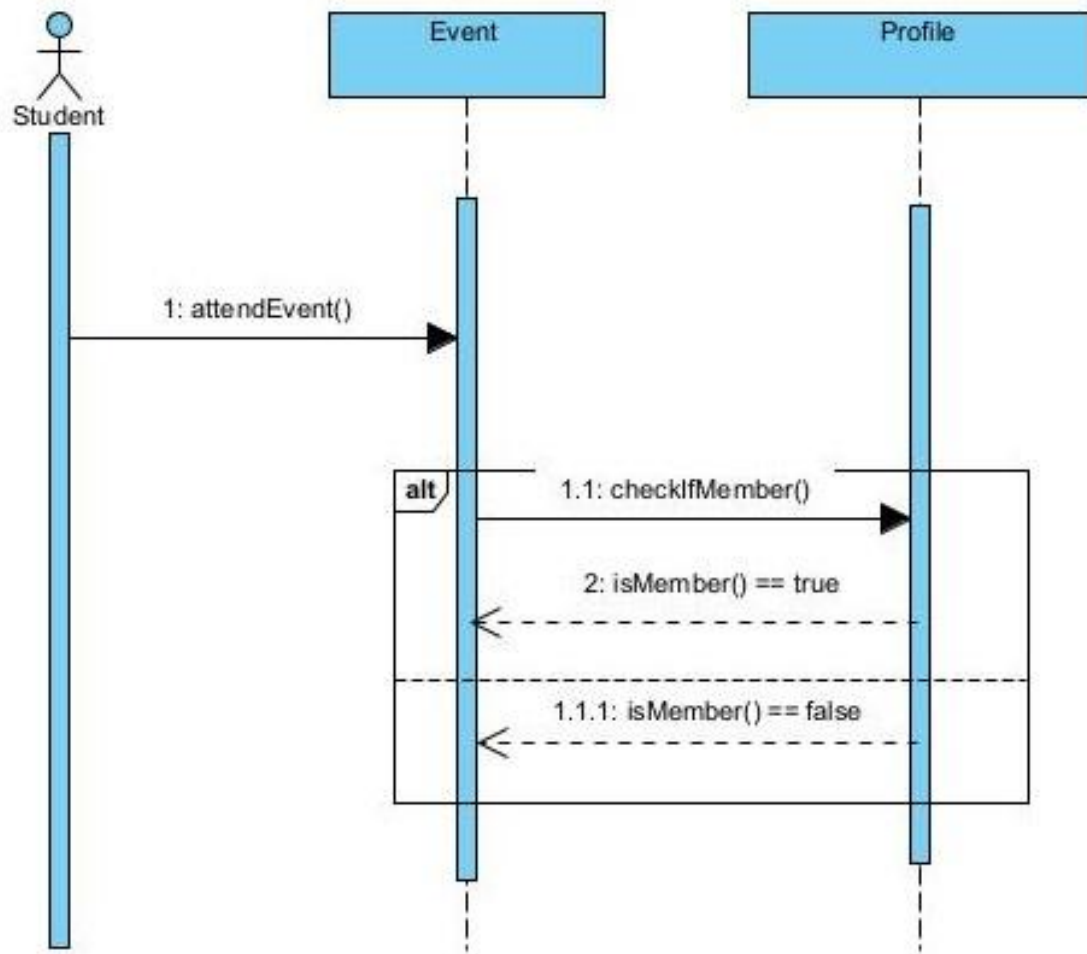


Fig. 2.10. Sequence diagram showing the attendance process to events

2.4.2.3 State Machine Diagrams

State Diagram For Roles of a Student

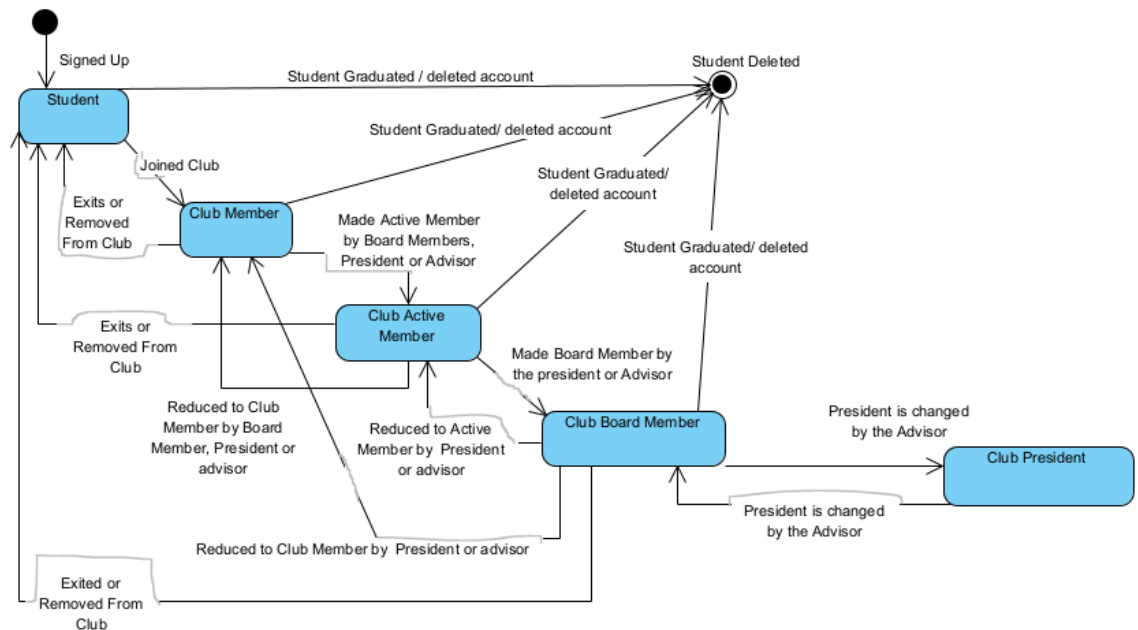


Fig. 2.11. State diagram which shows the change of roles of the student

It is important to note that all student types are the instances of a single class called Student. Although it is reflected as if they are different classes that extend each other in the use case diagram and class diagram, this is just for underlining the different roles of students and different functionalities that these students can do. Thus, this diagram is legal since it doesn't reflect the different states of different classes but instead it reflects the different states of a single object.

Note that a club cannot be left without a president. That is why it cannot exit the club directly. First, the club has to decide on a candidate for the new president. Then, they should inform the club advisor. Then, the club advisor changed the club president from one of the director board members. Only then the old president can exit the club or get demoted. In this way, it is ensured that the club president's role never remains empty.

State Diagram For Assignments

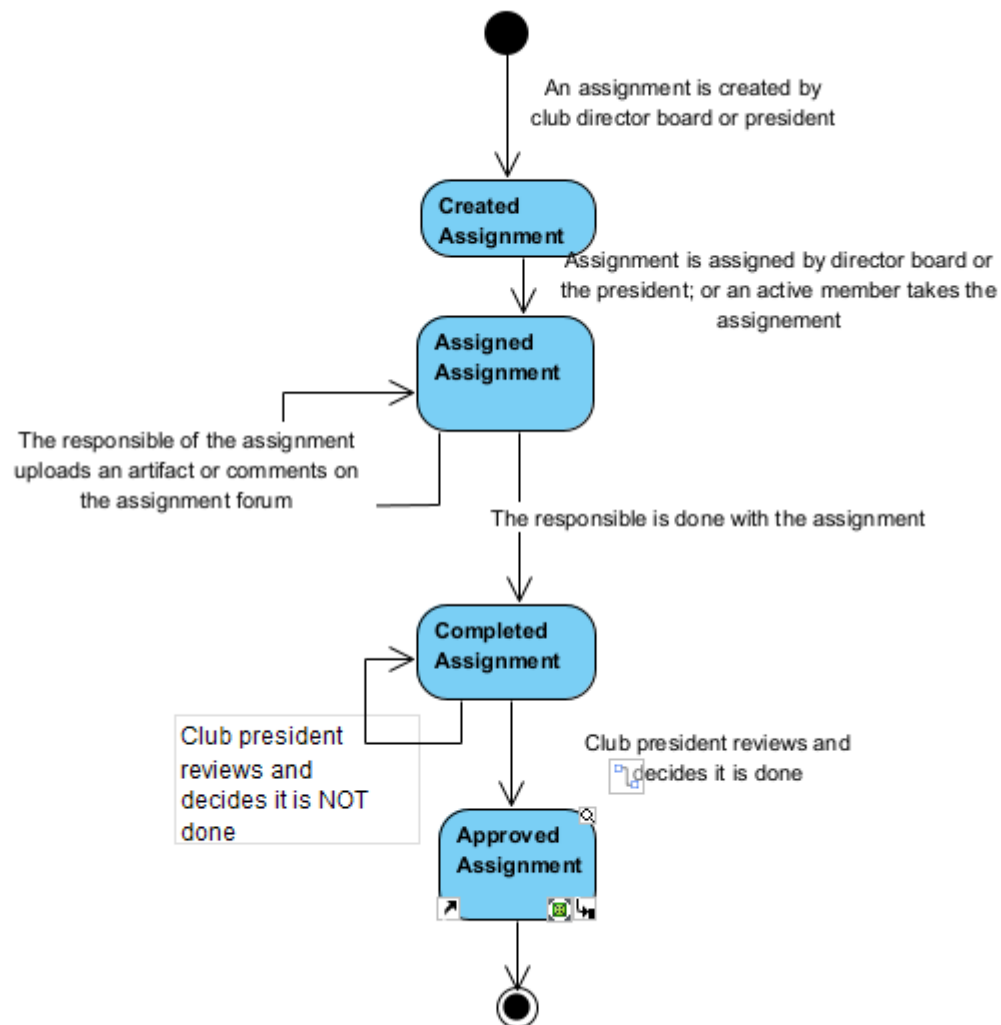


Fig. 2.12. State diagram showing assignment process at clubs

After an assignment has been created, it can be assigned to some participant or a participant can take the assignment workload. After they work on the assignment, if it gets completed, the assignment becomes a completed assignment. Then, if the president approves that it is finished, the assignment becomes approved.

State Diagram for Events

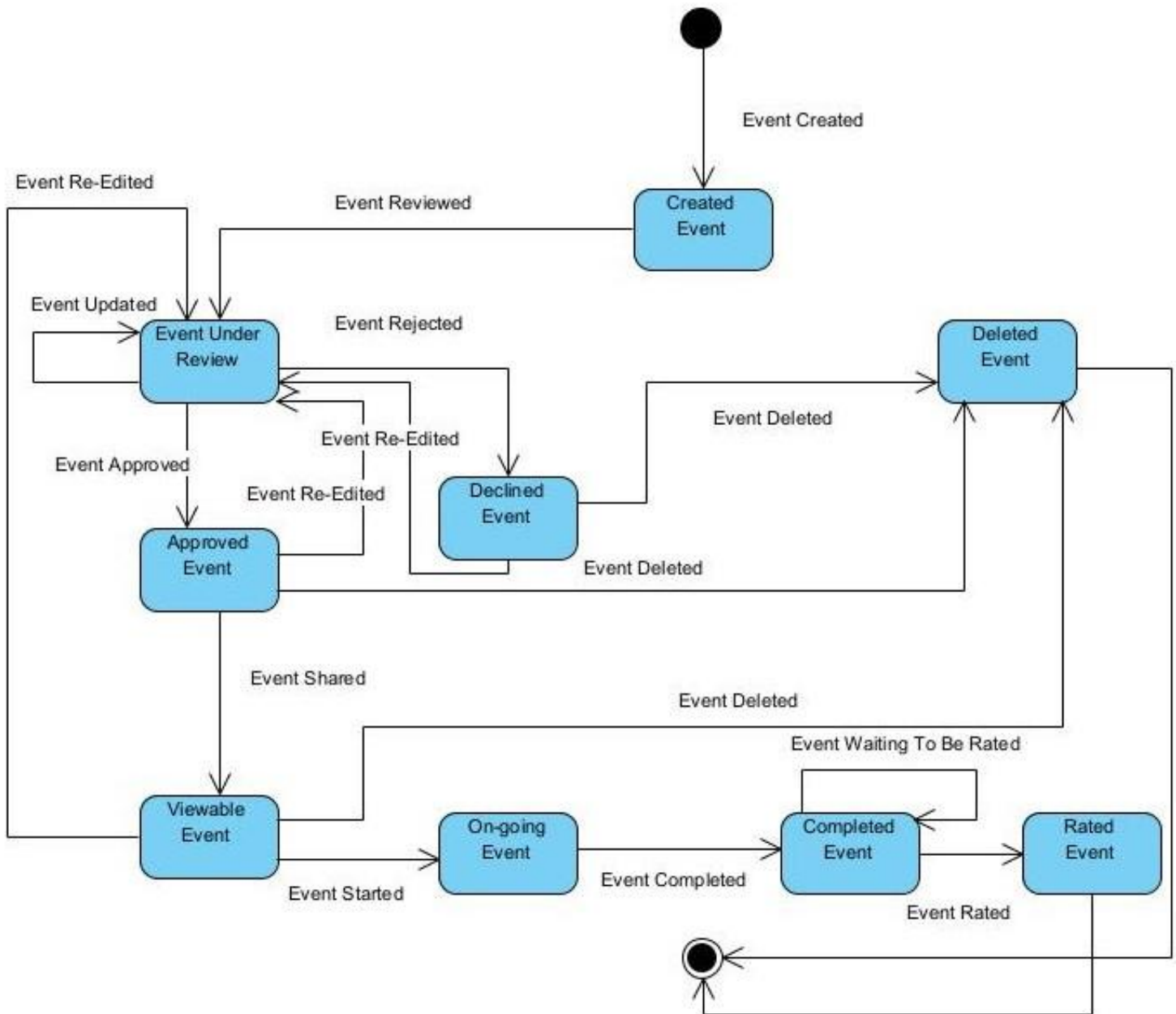


Fig. 2.13. State diagram representing event controlling

Here, in the first step after an event is created by the board member of a club, it automatically goes to the event under review step. Then, if the event is declined by the advisor, the club has two opportunities. They can both delete the event which ends the states by coming to the final or they can re-edit the event which makes the event go to the event under review step once more. Or, an event can be approved. After that step, the club can edit the event once more which makes them return back to the event under review section once more, or they can delete the event which makes them go to the final state or they can continue on publishing the event. If the event is published, then also it can be re-edited and go to the event under review section once more, or it can be deleted, or to continue the event can be started and

go to the on-going event section. After it comes to the ongoing event section, after the event is completed, it goes to the completed event section and students have the opportunity to rate the event for some time. After being rated by all students or the time passes, it reaches the final step.

2.4.3 Object and Class Model

Fig. 2.14. Object diagram representing the entites at the system

Class Explanations:

At our project, there are 23 classes.

User Class: User class is the super class of all types of users in the system. Due to the fact that this class will be used for authentication and accessing the system, this class has mail password and username information as its attributes. This class has methods to check the information at the login process. This class does not have a getter for password for security concerns.

Club Advisor: Club advisor is a user type and inherits the user class. The main property of this class is its own profile. This profile is created when the user is created and it cannot exist without the club advisor user. Because of that it is connected to its profile through composition.

Student: Student is another type of user. Similar to the club advisors, the main property this class has is its own profile. Student profile is connected through composition and is created when a new user registers to the system. Student is the superclass of other student types in the system.

When a student first enters the system, it will be just a regular student. To be one of its subtypes, students need to join the club. In addition to that, students join events and leave events.

Member: Member is a student subtype. At this project, students can be members of some clubs or they can stay as normal students. When a student becomes a member, they have the ability to leave their clubs.

ActiveMember: Active member is a more advanced type of member at the clubs. Differently from being a member of the club, active members can give assignments to other members of the club.

BoardMember: Board member is an active member subtype. It represents the highest ranked members of clubs. It has all the functionalities that member users have. In addition to that, these users have the ability to hold events, cancel events, check the assignments of active members and also change the rank of members.

President: President class represents the highest ranked member of the club. It is a subtype of board member and has all permissions of board members. Additionally, presidents can control board members as well.

Administrator: This class represents the university system that controls the clubs of Bilkent University. There will be only one admin in the system and because of that this class will not have multiple instances. The main property of this class is the

administrator profile which is different from other profile types at the system from an edibility and reviewability perspective.

AdministratorProfile: This class represents the profile which the admin of the system will have. Through this profile, admin will hold the information of existing clubs and will have the ability to add new clubs. At this profile, admin can see new club requests and the coming events. Admin will have the right to reject or approve these events on this profile. Admins can have announcements in this profile and can alter the president of a club.

Profile: Many features of the system are related to the interaction between profiles. This super class is created to represent these relationships. Profile class holds the information of the users and enables them to interact with other user types through their profiles. In this class, common attributes at every profile such as description, when the profile is created, name of the profile owner and profile photo will be included.

ClubAdvisorProfile: This profile type inherits the attributes and methods of the profile class. In addition to that, this profile cannot exist without a club advisor in the system. Because of that it is connected to club advisors through composition. This profile holds the information of the club which the club advisor is the advisor of. In this profile, the club advisor can deny/approve events of their club or make recommendations to their club. In addition to that, club advisors can edit the status of a member of their club. Also, club advisors have full permission to check the budget of their clubs.

ClubProfile: In the system, the club profile acts like a class that is accessed by all user types. It represents the clubs which are added by the administrator to the system. Club profile holds the information of its president, members and board members. In addition to that, if a club has subbranches it holds the data of these through their profiles. Due to the fact that branches also act like clubs, they will have their own club profiles. Club profile has a club advisor, keeps the record of its budget and has the info of its social media accounts. Clubs may occasionally need to make announcements so at this class, there is an announcements attribute. Also, a club can organize multiple events and these events can be organized by the collaboration of multiple clubs so it has many to many associations with event class. Lastly, every club will have a common forum page where students can ask questions about general work of the club. This is why the club profile has a one to one relationship with forum class.

StudentProfile: Every student user at the system will have a student profile. Student profiles cannot exist without an appropriate user and inherit attributes of profile class. Different from profile class, student profiles have the properties to identify the student

such as interests, school id, department and GE250 status. It also holds the clubs of the student with its role.

JoinClubRequest: At the system, there will be many requests between users. The main purpose of this class is to hold these requests for a student to join a club. This class has a status attribute which holds the information about whether this request has been accepted or declined. Also the time when this request is created is also in this class.

Event: Every club holds meetings, events and other activities under this class. This class has the information on event details such as description, requirements and date of the event. In addition to that, this class holds the record of attended students and budget of the event. Every event has its forum so it has a one to one association with forum class. In addition to that, whenever an event is approved, a notification is created at the system. So, it has an association with the notification class as well.

Document: This class is used for the documentation system of the clubs. When a club holds a meeting or changes its board members or creates an event the related information of these occasions will hold under this class. Clubs will hold their related files and the information of the profile who prepared the document under this class. Due to the fact that a class can have many documents, it has many to many relationships with club profiles.

Forum: This class shows the forum which is under events and clubs at the system. It has an id attribute to show if the owner is a club or an event. Forums consist of many posts, so it has an aggregation relationship with the posts class. Forums also have the information of students who can access them. At the forum, users can reply to posts or create new posts. Also, a post which is considered to be not suitable, can be reported to the system as well.

Post: Posts are the messages that are sent at forums. Post is related to itself through reply posts. Post has also the information of the sender and sending time as its attributes.

Notification: After certain activities at the system, notifications will be created. This class carries the description message and whether the notification is seen as its property. It has one to one relationships with the activities that create notifications and the requests in the system.

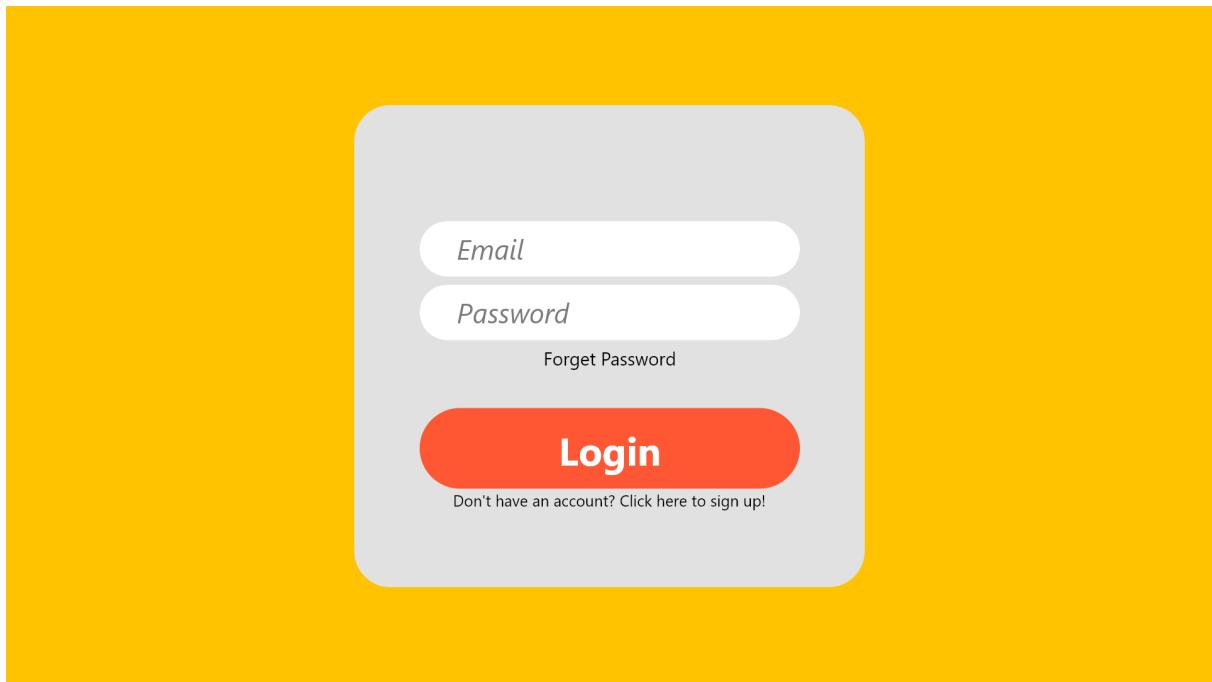
BudgetDocument: This class shows the budget of the club profiles for easy control and supervision over budgets. Budget document is a document with extensive features to separate incomes and expenses. Due to the fact that budgets will belong to the clubs, it has a composition relationship with club profiles.

Award: This class represents the awards given by the club commission to certain clubs. Because awards are given to the clubs, they cannot exist without clubs in the system. Because of that, they are connected to club profiles through composition. In addition to that, the club commission can give multiple awards so it has one to many relationships with awards.

Assignment: At the system, club members can give assignments to each other to control the work of the club. These assignments will consist of documents to show the content of the assignment and will be given one profile to another. For example, a board member can give an assignment to another active member or a president can give an assignment to a board member.

2.4.4 User Interface - Screen Mock-ups

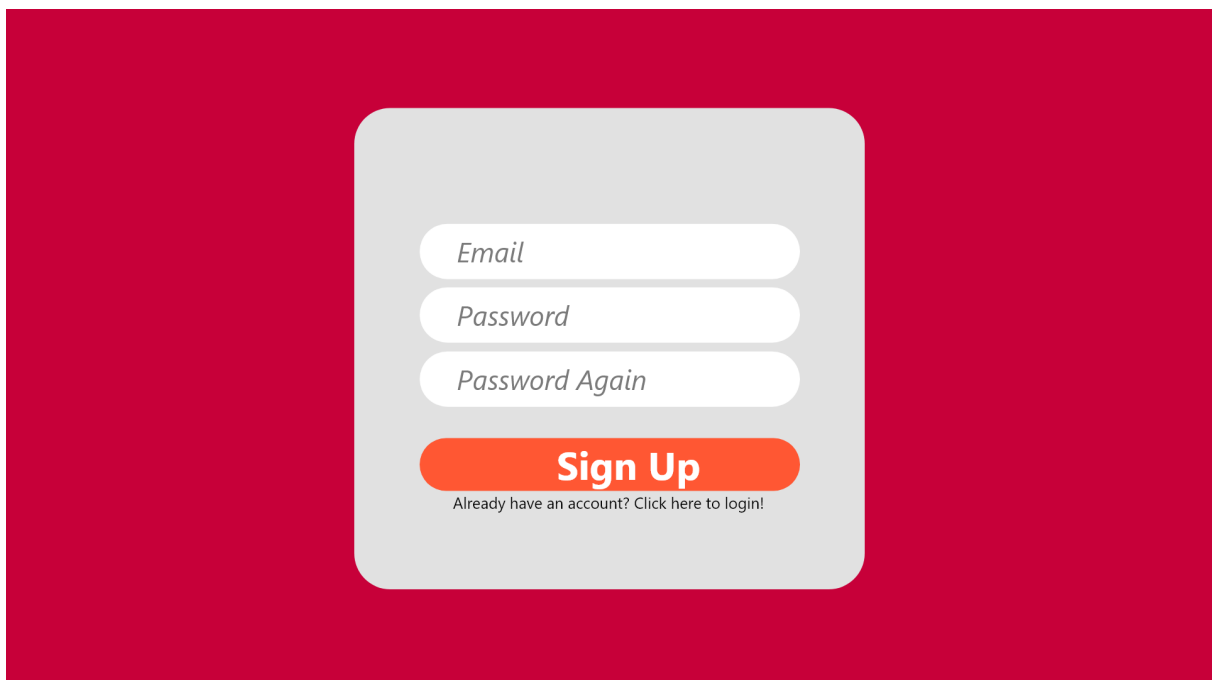
- Login Page



A login page mock-up with a yellow background. In the center is a light gray rounded rectangle containing the login form. The form has two white rounded input fields: the first is labeled 'Email' and the second is labeled 'Password'. Below the password field is a link that says 'Forget Password'. At the bottom of the form is a red rounded button with the text 'Login' in white. Below the button is a link that says 'Don't have an account? Click here to sign up!'.

This is the first page any user is directed to when they enter the website.

- Sign Up Page

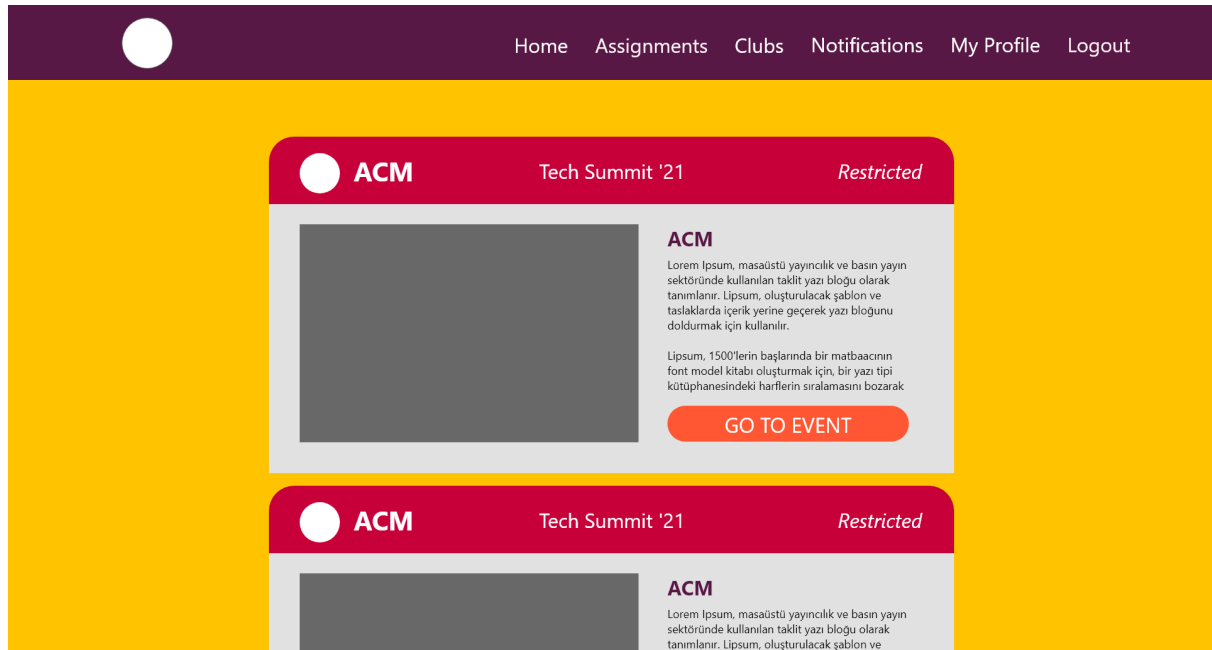


A sign up page mock-up with a red background. In the center is a light gray rounded rectangle containing the sign up form. The form has three white rounded input fields: the first is labeled 'Email', the second is labeled 'Password', and the third is labeled 'Password Again'. Below the third field is a red rounded button with the text 'Sign Up' in white. Below the button is a link that says 'Already have an account? Click here to login!'.

This is the sign up page for students.

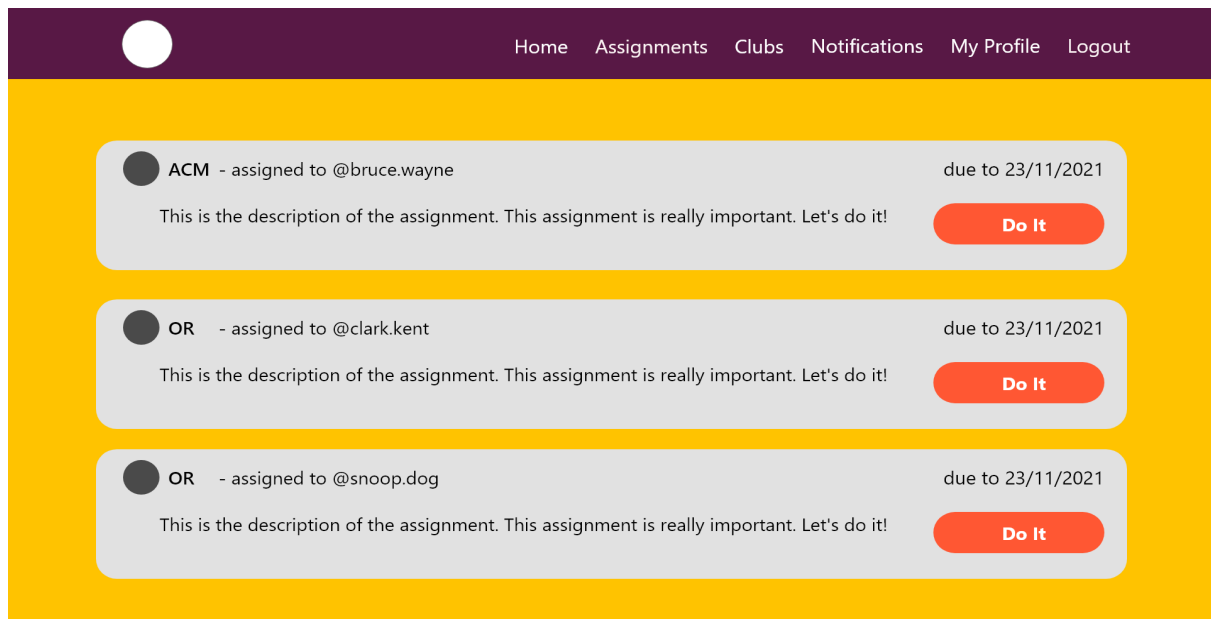
STUDENT SYSTEM

- Student Home Page



This is the home page for the students. When “Filter” is clicked, a hamburger menu pops as in the following image (Student Home Page Filtered).

- Student Assignment Page



The screenshot shows the 'Student Assignment Page' with a purple header bar containing a profile icon and navigation links: Home, Assignments, Clubs, Notifications, My Profile, and Logout. The main content area has a yellow background and displays three assignment cards. Each card has a grey header with a club icon and name, the assignee's username, and a due date. The body of each card contains a description and a red 'Do It' button.

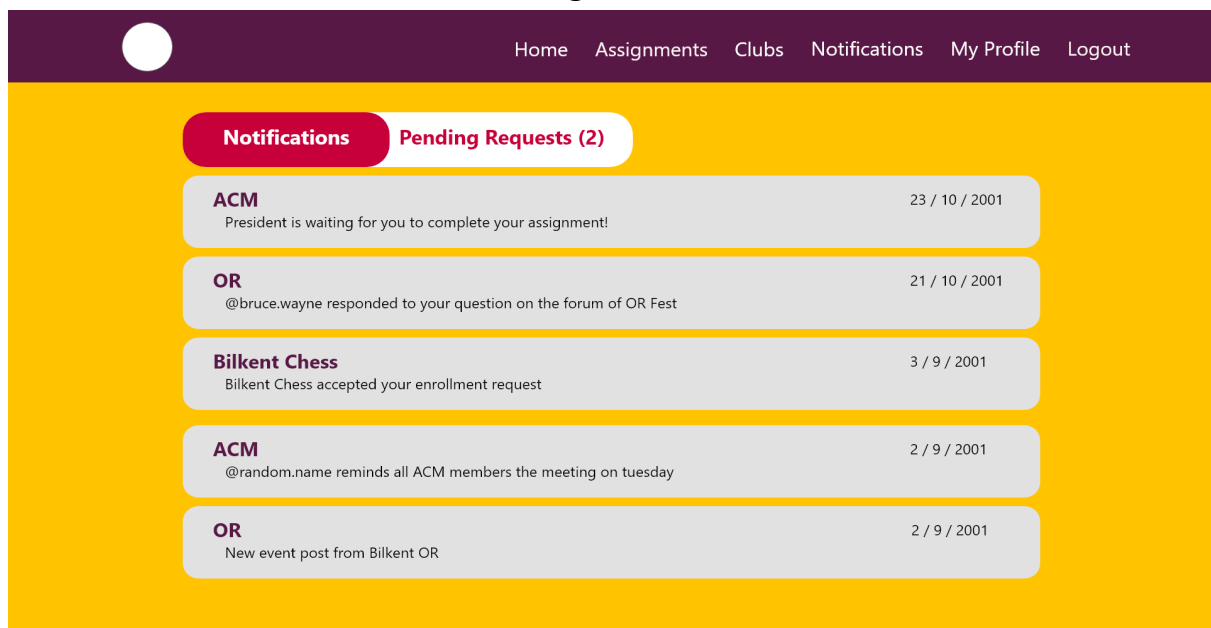
| Club | Assigned to | Due Date | Description | Action |
|------|--------------|------------|--|--------|
| ACM | @bruce.wayne | 23/11/2021 | This is the description of the assignment. This assignment is really important. Let's do it! | Do It |
| OR | @clark.kent | 23/11/2021 | This is the description of the assignment. This assignment is really important. Let's do it! | Do It |
| OR | @snoop.dog | 23/11/2021 | This is the description of the assignment. This assignment is really important. Let's do it! | Do It |

If there are any, all of the assignments of a student (each assignment from every club he joined) is shown here. When “Do It” clicked, the student is transferred to the “Club Assignment Page”.

- Student Clubs Page

When the “All Clubs” option is selected, all clubs registered to the system are shown here. If the “My Clubs” option is selected, the clubs (if there are any) of the current student are shown.

- Student Notifications Page



The screenshot shows the 'Student Notifications Page' with a purple header bar containing a profile icon and navigation links: Home, Assignments, Clubs, Notifications, My Profile, and Logout. The main content area has a yellow background and features two tabs: 'Notifications' (active) and 'Pending Requests (2)'. Below the tabs is a list of five notification cards, each with a club name, a message, and a date.

| Club | Notification | Date |
|---------------|---|----------------|
| ACM | President is waiting for you to complete your assignment! | 23 / 10 / 2001 |
| OR | @bruce.wayne responded to your question on the forum of OR Fest | 21 / 10 / 2001 |
| Bilkent Chess | Bilkent Chess accepted your enrollment request | 3 / 9 / 2001 |
| ACM | @random.name reminds all ACM members the meeting on tuesday | 2 / 9 / 2001 |
| OR | New event post from Bilkent OR | 2 / 9 / 2001 |

When the “Notifications” option is selected, all notifications (alerts, announcements and etc.) are shown here. If the “Pending Requests” option is selected, the pending requests of that student (joining to club/event request, etc) are shown.

- Student My Profile Page

HomeAssignmentsClubsNotificationsMy ProfileLogout

Delete My Account

can ozan

GE 250/251: Not taken

Bio: Select the relevant object on the canvas and apply the color you need from the Property Inspector.To add the color as an asset, select the above object and click the + icon next to

EDIT PROFILE

My Clubs

Operational Research Club

OR Club | 2 upcoming events | 17 total events | 4 sub-

EXIT

VISIT CLUB

Operational Research Club

OR Club | 2 upcoming events | 17 total events | 4 sub-

EXIT

VISIT CLUB

Operational Research Club

OR Club | 2 upcoming events | 17 total events | 4 sub-

EXIT

VISIT CLUB

My Events

ACMTech Summit '21Restricted

ACM

Lorem Ipsum, masaüstü yayıncılık ve basın yayın sektöründe kullanılan taklit yazı bloğu olarak tanımlanır. Lorem, oluşturulacak şablon ve tasarlarda içerik yerine geçerek yazı bloğunu doldurmak için kullanılır.

Lipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak

GO TO EVENT

ACMTech Summit '21Restricted

ACM

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Lipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak

GO TO EVENT

ACMTech Summit '21Restricted

ACM

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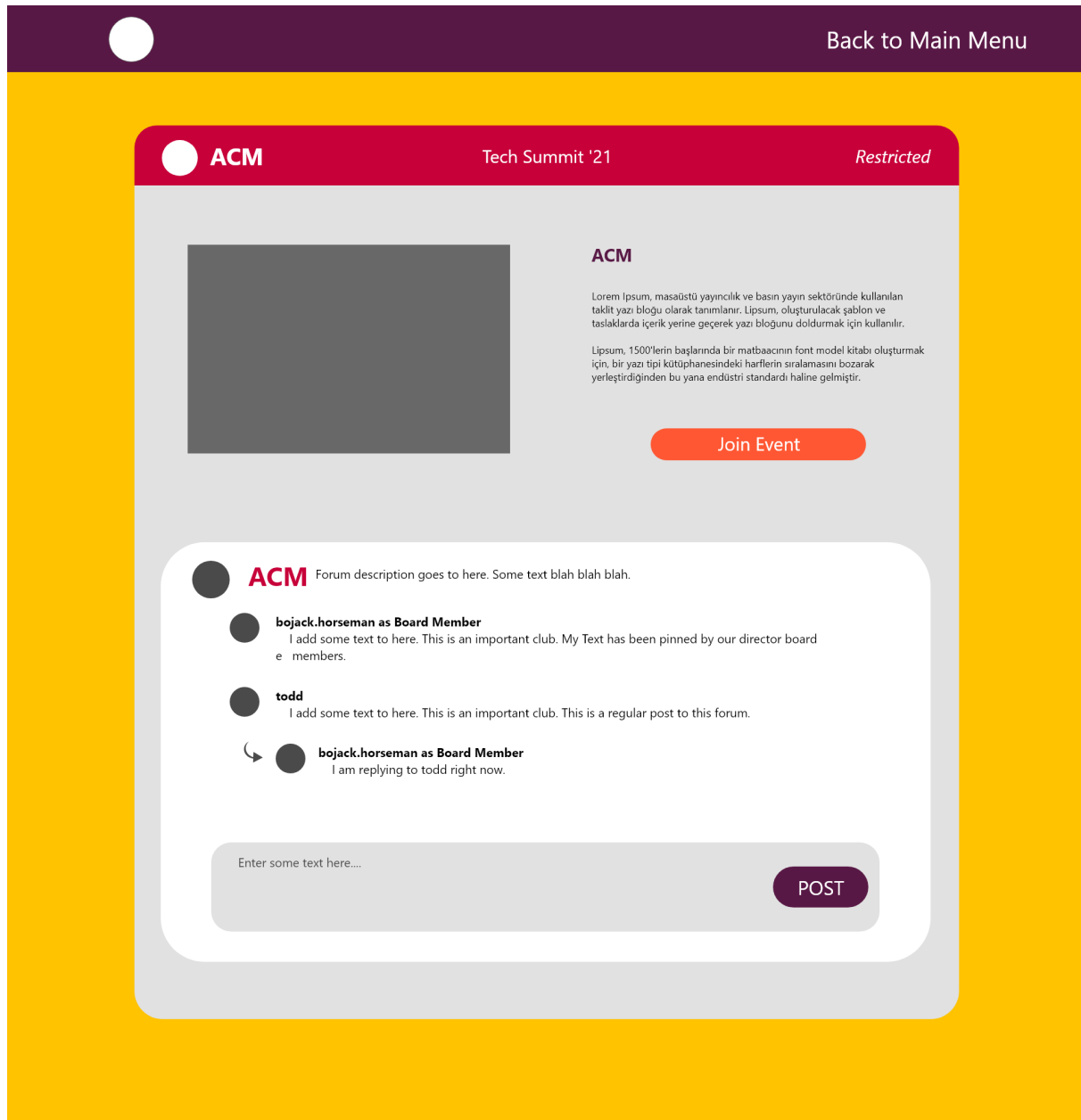
Lipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak

GO TO EVENT

49

When the student is viewing his own profile, the “Edit Profile”, “Delete My Account”, and “Exit” (for each “My Club”) buttons are shown. When another user views their profile, these buttons are not shown.

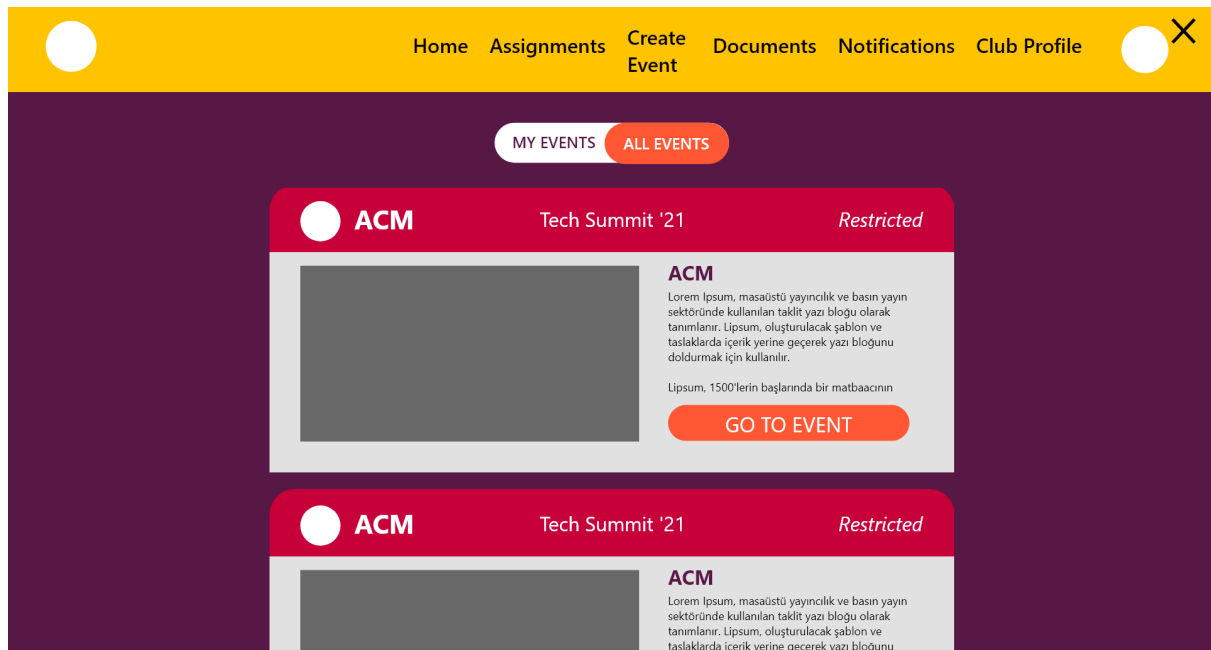
- Student View Event Page



This is the page when a student clicks to “Go to Event” button (accessible from Home and My Profile Pages). If the student has already joined the event, instead of the “Join Event” Button, there will be a “Roll Out from Event” button.

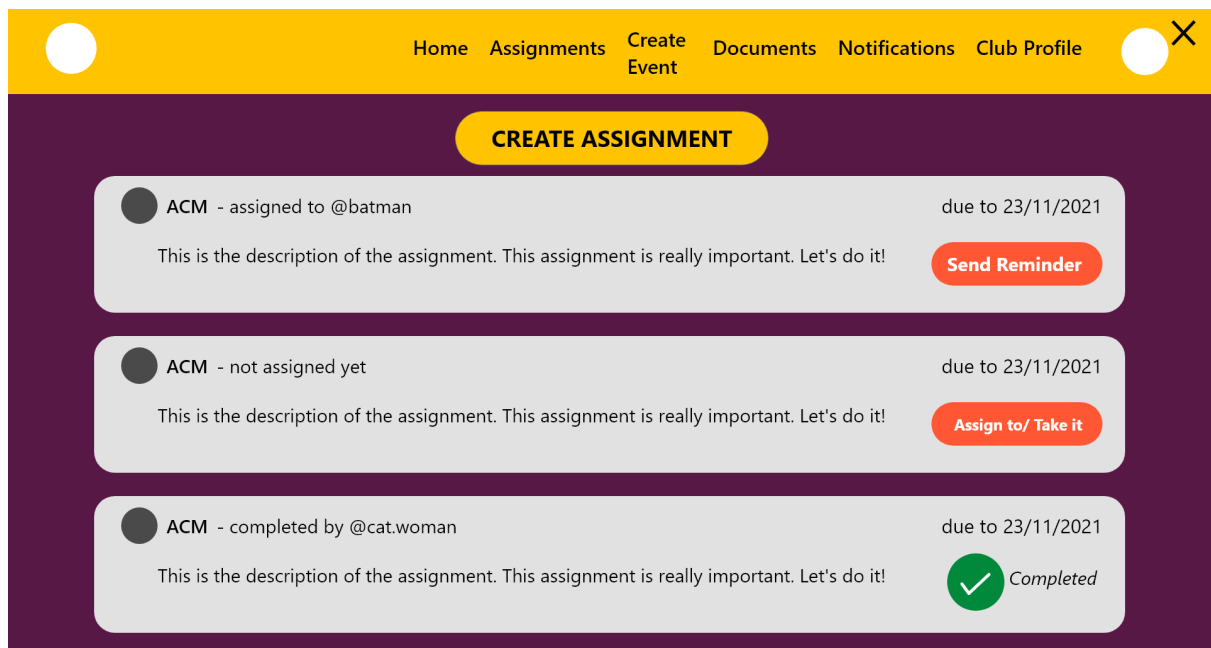
CLUB PAGE

- Club Home Page



This is the “Home” page of a club. This page is accessible when a student clicks the “Visit Club” button (accessible from “Student My Profile” and “Student Club” pages). By clicking to the cross at the right top corner of the navigation bar, students can return to their home pages.

- Club Assignment Page



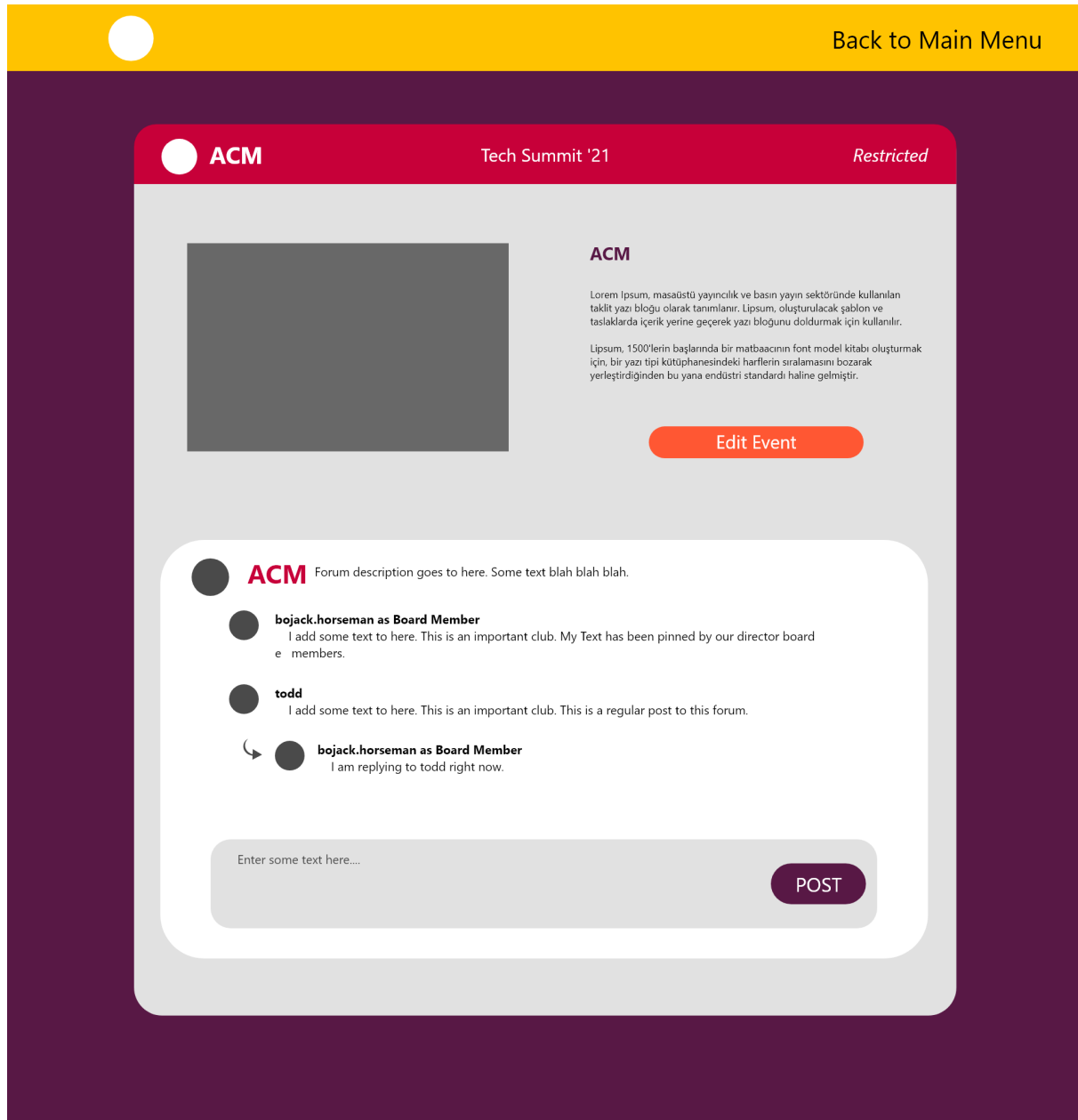
This page is accessible by the navigation bar of a club and also by the button “DO IT” present at the Student Assignment Page. Every assignment of that club is shown here. If the assignment is the current student’s duty, a button such as “DO IT” is shown. If the current student is a board member or the president, they can assign an unassigned assignment to others and can send reminders to the assigned but not completed assignments. Thus these options are only visible by them.

- Club Create Event Page

The screenshot displays the 'Club Create Event Page' interface. At the top, a yellow navigation bar contains a white circular icon on the left and the text 'Back to Main Menu' on the right. The main content area has a dark purple background. On the left, a sidebar titled 'Make an Event with...' lists 20 items, each labeled 'Bilkent Chess' with an adjacent radio button. The central 'Event Information' panel features a pink header. It includes a text input for 'Event Name', a larger text area for 'Event Explanation', and a date selection section with 'Starting Date' and 'Ending Date' (both showing DD/MM/YYYY format and a small calendar icon). Below these is an 'Upload Images' section with three image upload buttons (each labeled 'image_1.jpg') and a plus icon. To the right of the main form is a student selection panel with tabs for 'Public', 'Club Members', and 'Custom'. It has a 'Search student' input field and a list of six radio buttons, each labeled 'can.ozan'. At the bottom right of the form is an orange 'Apply Changes' button.

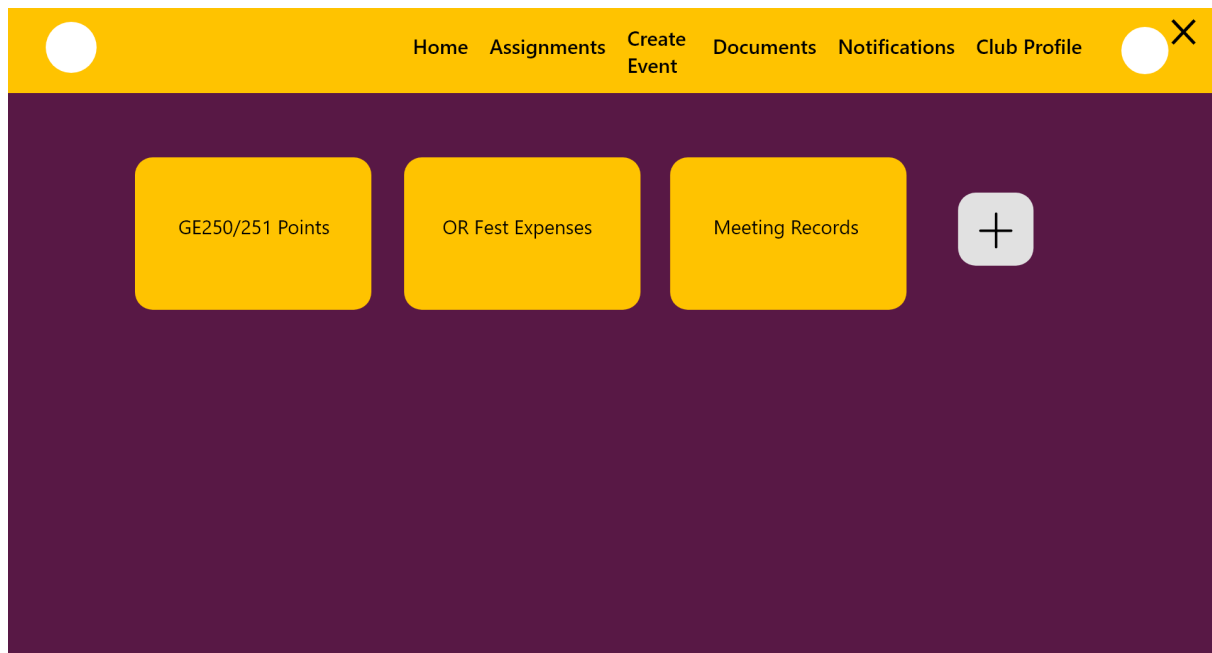
Clubs create events by this page. Same template is also used for editing events.

- Club Edit Event Page



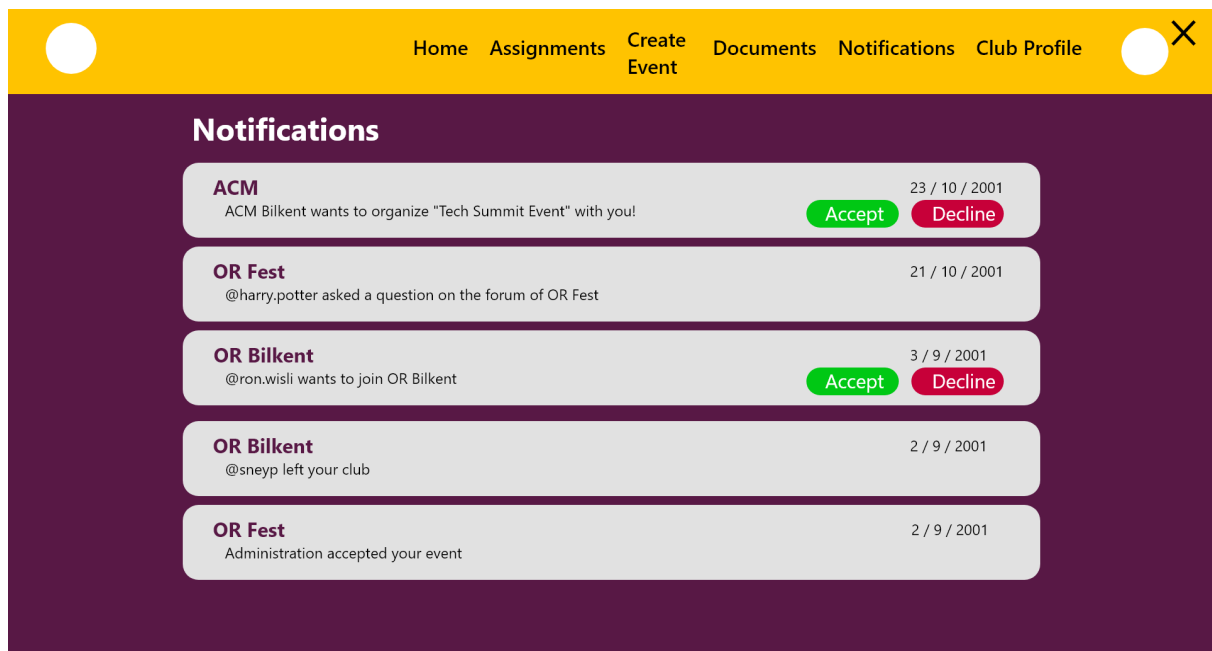
Only the director board and the president are shown delete buttons next to each button. Else, it will appear next to only the posts the student himself posted.

- Club Document Page



Clubs can create new folders or add new files here.

- Club Notification Page



Every notification of the club will be seen here. According to the role of the student accessing this page, "Accept" and "Decline" buttons will or won't be shown.

- Club Profile Page

HomeAssignmentsCreate EventDocumentsNotificationsClub Profile

ACM Bilkent | 192 Members

WhatsApp | Instagram | Twitter

Bio: Select the relevant object on the canvas and apply the color you need from the Property Inspector. To add the color as an asset, select the

4 sub-branches | 12 Events

EDIT PROFILE/ GO TO CLUB FORUM

PINNED by ACM Bilkent

This shout out is customized by clubs. Think here as a white board with pinned texts.

My Events

ACMTech Summit '21Restricted

ACM

Lorem Ipsum, masaüstü yayıncılık ve basın yayın sektöründe kullanılan taklit yazı bloğu olarak tanımlanır. Lorem Ipsum, oluşturulacak şablon ve tasarlarda içerik yerine geçerek yazı bloğunu doldurmak için kullanılır.

Lorem Ipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak

GO TO EVENT

ACMTech Summit '21Restricted

ACM

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Lorem Ipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak

GO TO EVENT

ACM

Forum description goes to here. Some text blah blah blah.

sinan as Board Member

I add some text to here. This is an important club. My Text has been pinned by our director board members.

ipek

I add some text to here. This is an important club. This is a regular post to this forum.

sinan as Board Member

I am replying to ipek right now.

Enter some text here....

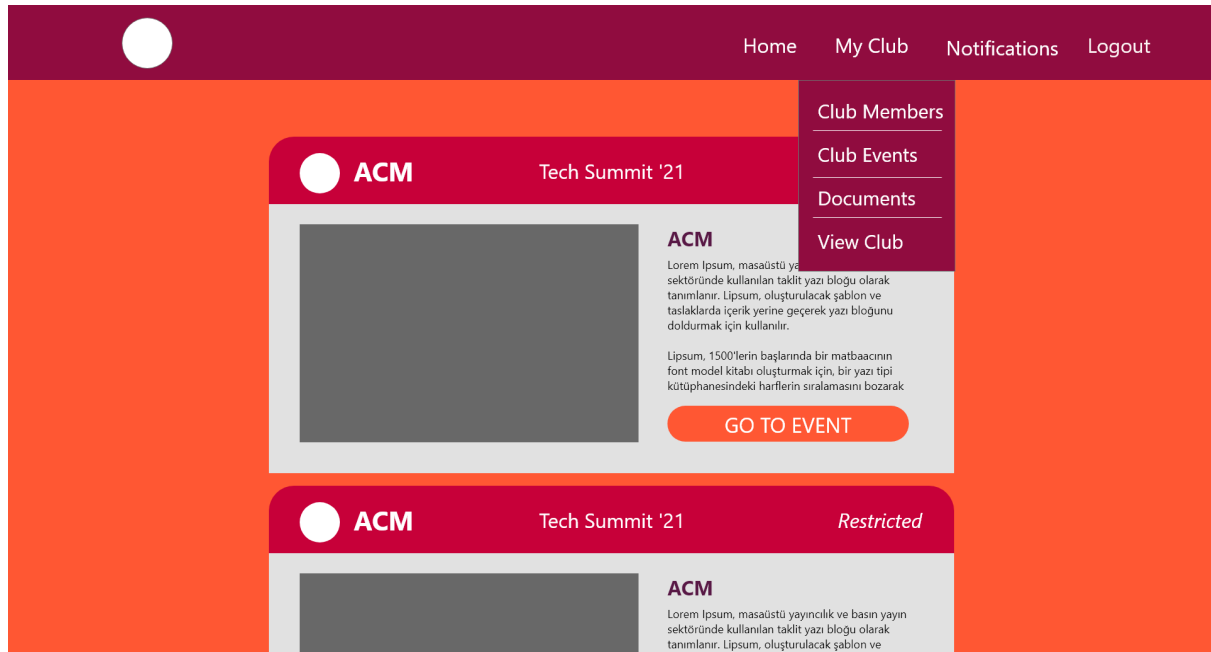
POST

55

When a club is viewing their own profile, “Edit Profile” button is shown. When a club is viewed by a student or by another club, “Go to Club Forum” button will be shown.

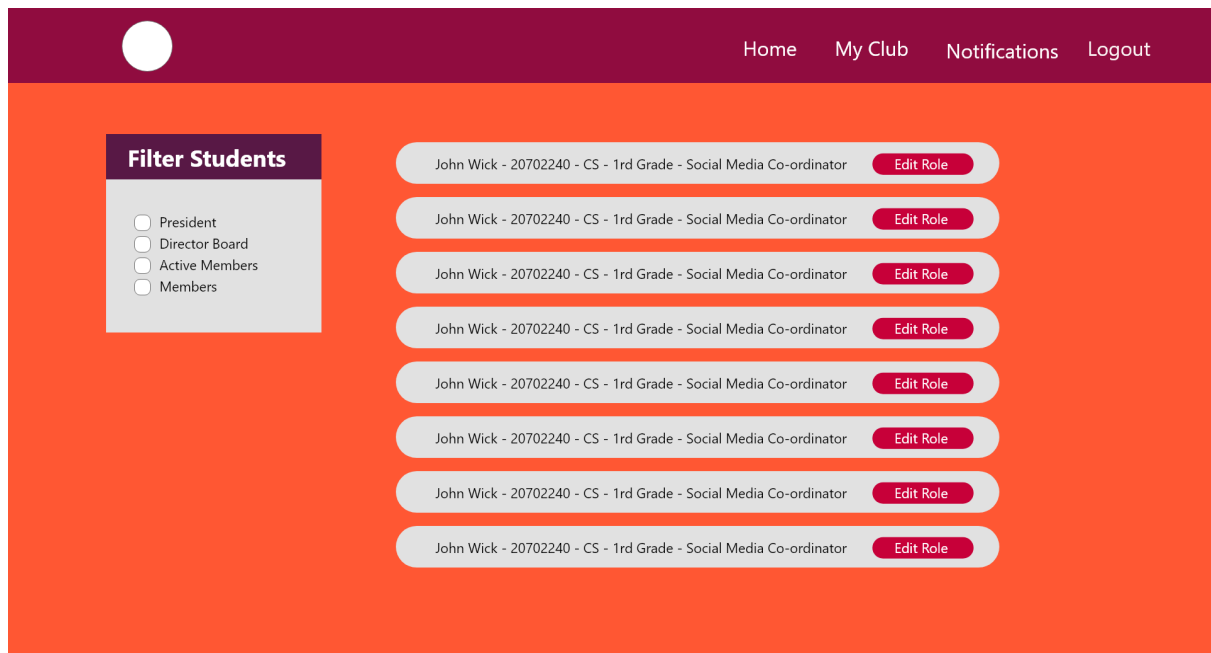
ADVISOR SYSTEM

- Advisor Home Page



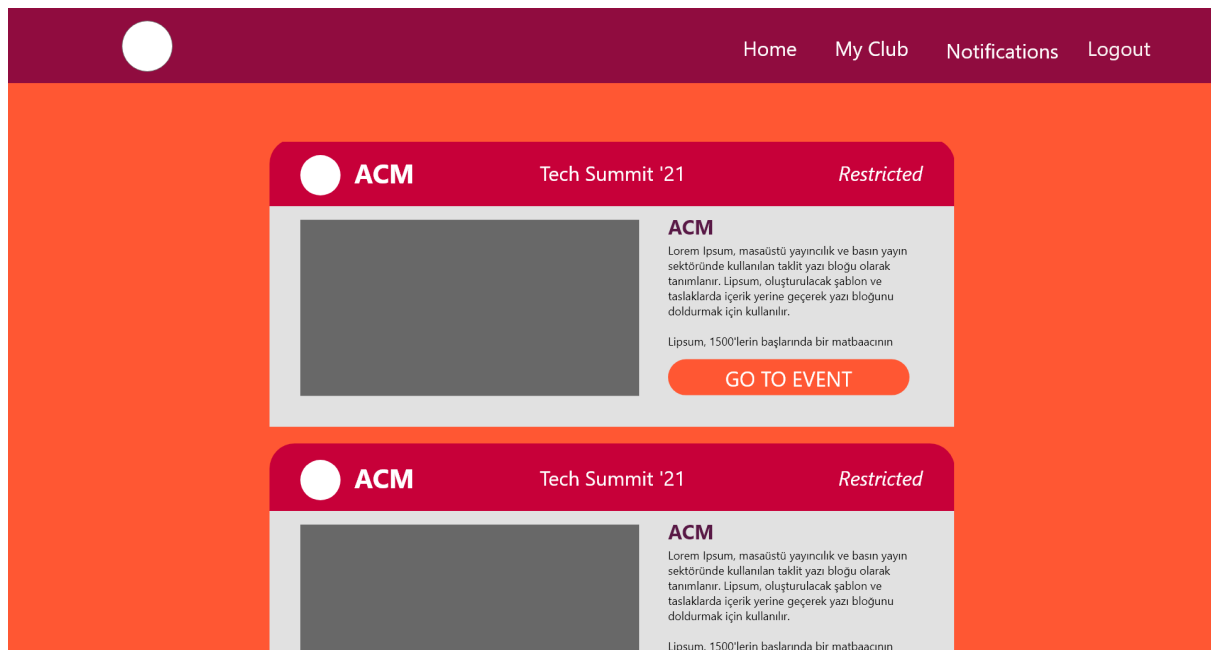
The Home page for the advisor system is shown (Advisor Home Page).

- Advisor My Club -> Club Members Page



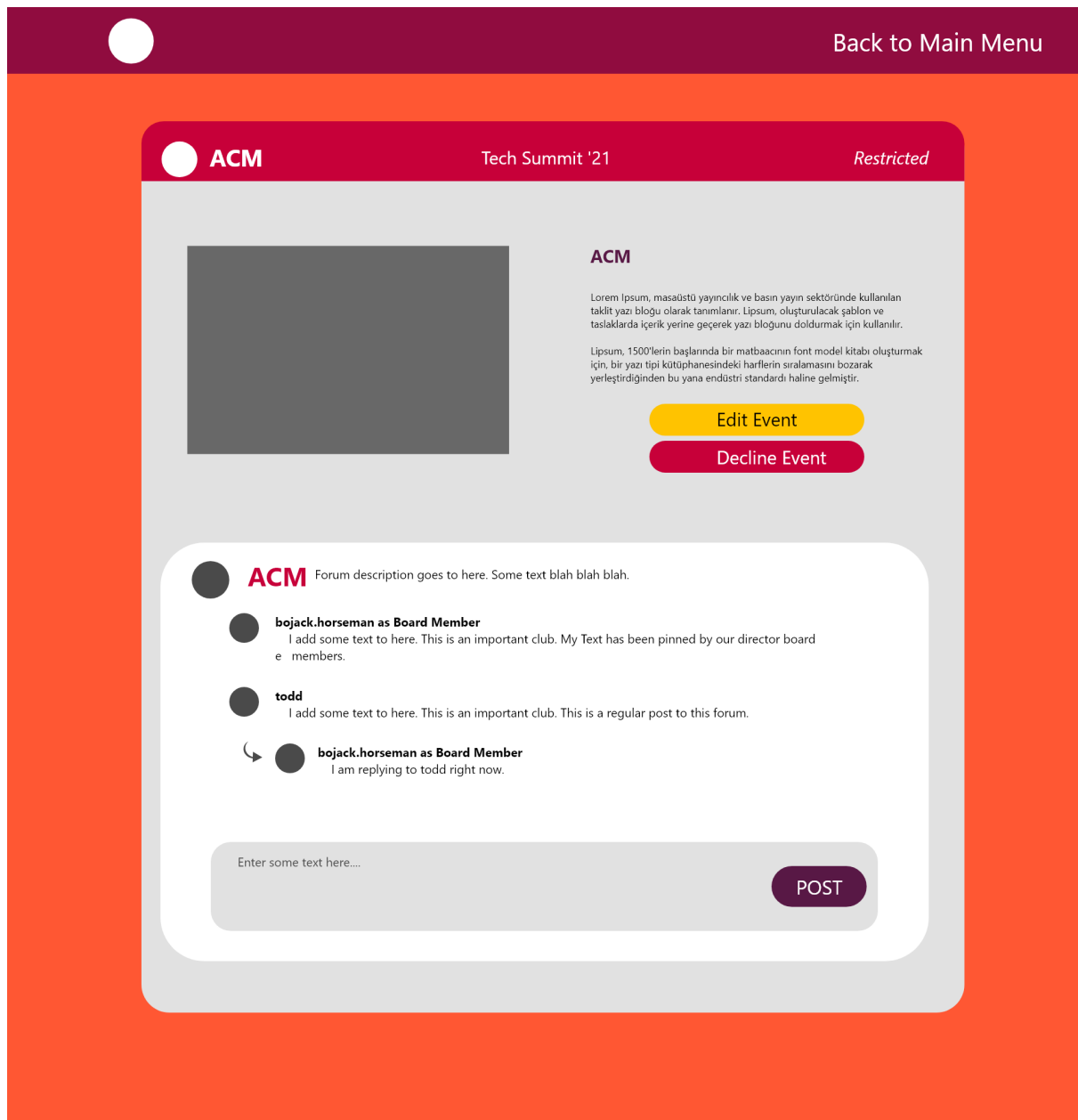
This page is accessible by My Club -> Club Members tab.

- Advisor My Club -> Club Events Page




This page is accessible by My Club -> Club Events tab. When the “Go to Event” button is clicked, the advisor is directed to the “Advisor View Event” page.

- Advisor View Event Page



When the advisor clicks to the “Edit Event” button, he is directed to the “Advisor Edit Event” page.

- **Advisor Edit Event Page**


Oh My Goat

[Back to Main Menu](#)

- **Advisor My Club -> Documents Page**

The screenshot shows a web application interface. At the top is a dark purple header bar. On the left side of the header is a white circular profile picture placeholder. To its right are four navigation links in white text: "Home", "My Club", "Notifications", and "Logout". Below the header is a large orange-red rectangular area. In the center of this area are three yellow rounded rectangular buttons arranged horizontally. The first button on the left is labeled "GE250/251 Points". The middle button is labeled "OR Fest Expenses". The third button is labeled "Meeting Records". To the right of these three buttons is a light gray rounded square button containing a black plus sign (+).

This page is accessible by My Club -> Documents tab.

- Advisor My Club -> View Club Page

HomeMy ClubNotificationsLogout

ACM Bilkent | 192 Members
WhatsApp | Instagram | Twitter
Bio: Select the relevant object on the canvas and apply the color you need from the Property Inspector. To add the color as an asset, select **4 sub-branches | 12 Events**
EDIT PROFILE
ASSIGNMENTS

PINNED by ACM Bilkent
This shout out is customized by clubs. Think here as a white board with pinned texts.

My Events

ACM Tech Summit '21 *Restricted*
ACM
Lorem ipsum, masalaüü yayıncılık ve basın yayın sektöründe kullanılan taklit yazı bloğu olarak tanımlanır. Lorem ipsum, oluşturulacak gablon ve tasarlarda içerik yerine geçerek yazı bloğunu doldurmak için kullanılır.
Lipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak
GO TO EVENT

ACM Tech Summit '21 *Restricted*
ACM
Lorem ipsum, masalaüü yayıncılık ve basın yayın sektöründe kullanılan taklit yazı bloğu olarak tanımlanır. Lorem ipsum, oluşturulacak gablon ve tasarlarda içerik yerine geçerek yazı bloğunu doldurmak için kullanılır.
Lipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak
GO TO EVENT

ACM Forum description goes to here. Some text blah blah blah.

sinan as Board Member
I add some text to here. This is an important club. My Text has been pinned by our director board members.

ipek
I add some text to here. This is an important club. This is a regular post to this forum.

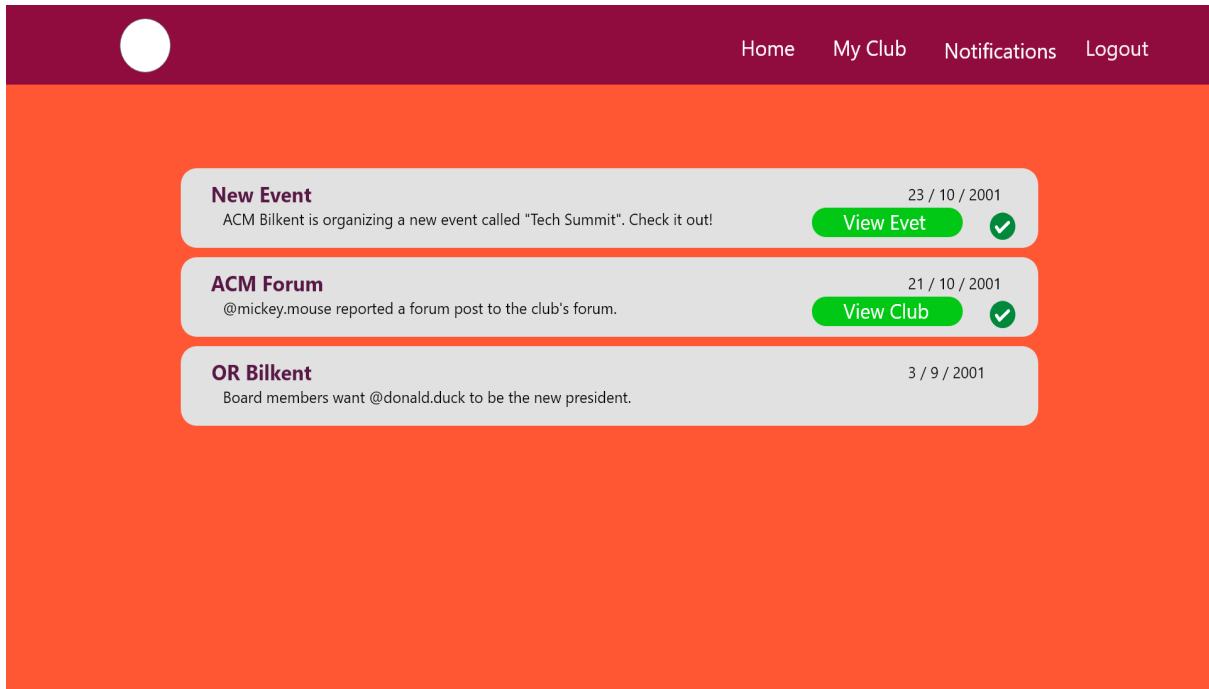
sinan as Board Member
I am replying to ipek right now.

POST

60

This page is accessible by My Club -> View Club tab.

- Advisor Notification Page

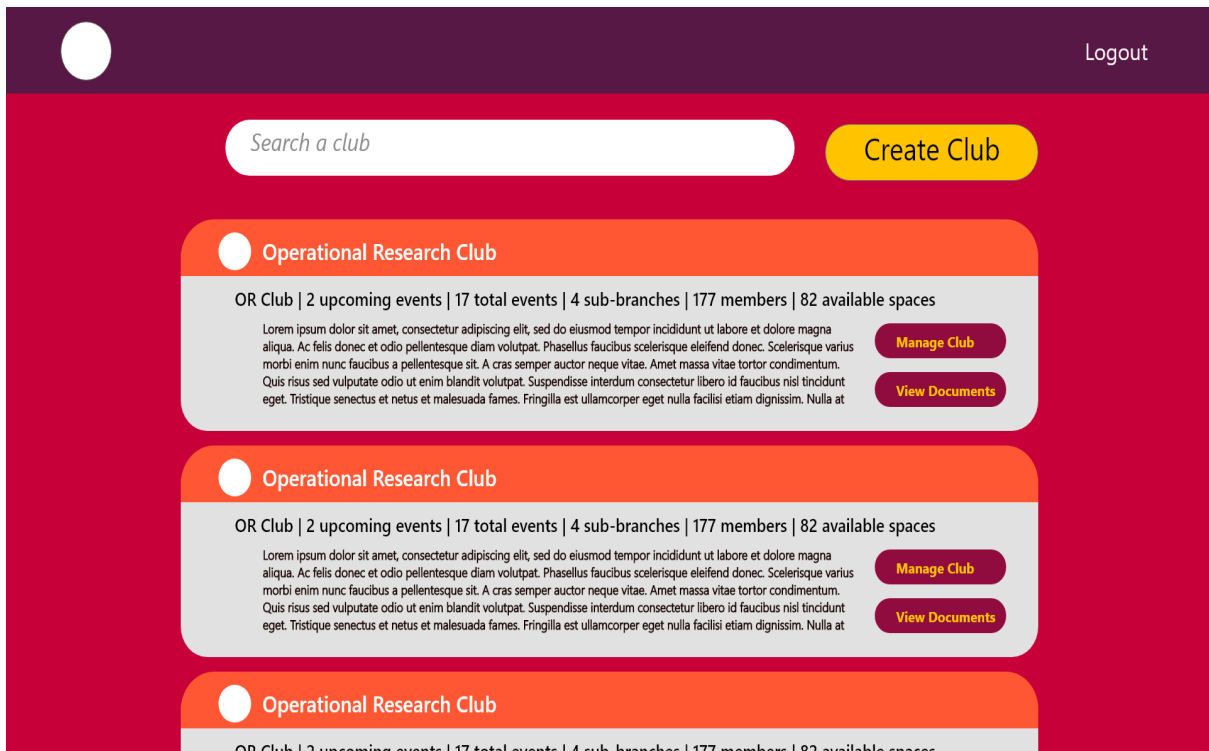


The screenshot shows the 'Advisor Notification Page' with a dark purple header containing a profile icon, 'Home', 'My Club', 'Notifications', and 'Logout'. The main content area has an orange background and displays three notification cards. Each card has a title, a description, a date, and a 'View' button with a checkmark icon.

| Notification Title | Description | Date | Action |
|--------------------|---|----------------|-----------|
| New Event | ACM Bilkent is organizing a new event called "Tech Summit". Check it out! | 23 / 10 / 2001 | View Evet |
| ACM Forum | @mickey.mouse reported a forum post to the club's forum. | 21 / 10 / 2001 | View Club |
| OR Bilkent | Board members want @donald.duck to be the new president. | 3 / 9 / 2001 | |

ADMINISTRATOR SYSTEM

- Admin Home Page



The screenshot shows the 'Admin Home Page' with a dark purple header containing a profile icon and 'Logout'. The main content area has a red background and features a search bar, a 'Create Club' button, and three club cards. Each card displays the club name, statistics, a description, and two action buttons: 'Manage Club' and 'View Documents'.

| Club Name | Statistics | Description | Actions |
|---------------------------|--|---|-------------------------------|
| Operational Research Club | OR Club 2 upcoming events 17 total events 4 sub-branches 177 members 82 available spaces | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ac felis donec et odio pellentesque diam volutpat. Phasellus faucibus scelerisque eleifend donec. Scelerisque varius morbi enim nunc faucibus a pellentesque sit. A cras semper auctor neque vitae. Amet massa vitae tortor condimentum. Quis risus sed vulputate odio ut enim blandit volutpat. Suspendisse interdum consectetur libero id faucibus nisl tincidunt eget. Tristique senectus et netus et malesuada fames. Fringilla est ullamcorper eget nulla facilisi etiam dignissim. Nulla at | Manage Club View Documents |
| Operational Research Club | OR Club 2 upcoming events 17 total events 4 sub-branches 177 members 82 available spaces | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ac felis donec et odio pellentesque diam volutpat. Phasellus faucibus scelerisque eleifend donec. Scelerisque varius morbi enim nunc faucibus a pellentesque sit. A cras semper auctor neque vitae. Amet massa vitae tortor condimentum. Quis risus sed vulputate odio ut enim blandit volutpat. Suspendisse interdum consectetur libero id faucibus nisl tincidunt eget. Tristique senectus et netus et malesuada fames. Fringilla est ullamcorper eget nulla facilisi etiam dignissim. Nulla at | Manage Club View Documents |
| Operational Research Club | OR Club 2 upcoming events 17 total events 4 sub-branches 177 members 82 available spaces | | |

- Admin Manage Club Page

Back to Main Menu

Change Advisor

Delete Club

ACM Bilkent | 192 Members

WhatsApp | Instagram | Twitter
Bio: Select the relevant object on the canvas and apply the color you need from the Property Inspector.To add the color as an asset, select
4 sub-branches | 12 Events

EDIT PROFILE

ASSIGNMENTS

PINNED by ACM Bilkent

This shout out is customized by clubs. Thin here as a white board with pinned texts.

My Events

ACM

Tech Summit '21

Restricted

ACM

Lorem Ipsum, masaüstü yayıncılık ve basın yayın sektöründe kullanılan taklit yazı bloğu olarak tanımlanır. Lipsum, oluşturulacak şablon ve tasarlarda içerik yerine geçerek yazı bloğunu doldurmak için kullanılır.

Lipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak

GO TO EVENT

My Events

ACM

Tech Summit '21

Restricted

ACM

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GO TO EVENT

My Events

ACM

Tech Summit '21

Restricted

ACM

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Lipsum, 1500'lerin başlarında bir matbaacının font model kitabı oluşturmak için, bir yazı tipi kütüphanesindeki harflerin sıralamasını bozarak

GO TO EVENT

ACM

Forum description goes to here. Some text blah blah.

sinan as Board Member

I add some text to here. This is an important club. My Text has been pinned by our director board e members.

ipek

I add some text to here. This is an important club. This is a regular post to this forum.

sinan as Board Member

I am replying to ipek right now.

Enter some text here....

POST

62

Admin is directed to this page when he clicks “Manage Club” on the Home Page.

- **Admin Change Advisor Page**

Change Advisor of ACM

Assign an available advisor or create a new one

Search Advisor

- ☐ eray.tüzün
- ☐ eray.tüzün
- ☐ eray.tüzün
- ☐ eray.tüzün
- ☐ eray.tüzün
- ☐ eray.tüzün

OR

advisor email

Default password will be
oh_my_goat_new_advisor

Change Advisor

Admin is directed to this page when he clicks the “Change Advisor” button located on Admin Manage Club Page.

- **Admin View Club Documents Page**

Back to Main Menu

GE250/251 Points

OR Fest Expenses

Meeting Records

+

Admin is directed to this page when he clicks to the “View Documents” button located on “Admin Home Page”.

3. References

- [1] "Adding Salt to Hashing: A Better Way to Store Passwords", Auth0.
<https://auth0.com/blog/adding-salt-to-hashing-a-better-way-to-store-passwords/>.
[accessed 28.10.2021]
- [2] "SQL Injection", W3Schools. https://www.w3schools.com/sql/sql_injection.asp.
[accessed 28.10.2021]