



Project Proposal

Group 17 - CS



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Details of Project Supervisor, Co-supervisor, Advisors, and Clients

Proposed Project Supervisor (Academic Staff of UCSC):

Name of the supervisor: **Dr. B. H. R. Pushpananda**

Signature of the supervisor:

Date: **16.08.2023**

Proposed Project Co-Supervisor (Assigned by Course Coordinator):

Name of the co-supervisor: **Ms. K. D. C. I. Thathsarani**

Signature of the co-supervisor: *chathumini*

Date: **16.08.2023**

Advisors and Clients: None

01) Introduction to the Project

1.1 Project Background

In the context of today's digital environment, the majority of online platforms cater to general purposes like sharing content and communication. However, there exists a gap where certain groups with distinct needs are underserved by these generic platforms. This gap is particularly evident among university undergraduates in Sri Lanka, who face a range of unique requirements throughout their academic journey. These needs encompass various aspects such as event communication, access to relevant information, job opportunities, and inter-student connectivity. In this project, we are exploring a solution to fill these gaps that undergraduates face.

1.2 Problem Definition

The problem identified is the lack of a centralized digital platform that addresses the various needs of university undergraduates in Sri Lanka. Existing platforms fall short in catering to the following crucial aspects:

- Event Engagement:

There's no efficient way for students to discover, post, and actively participate in campus events, including hackathons, workshops, seminars, and cultural activities.

- Knowledge Sharing:

Undergraduates lack a dedicated space to publish and engage with knowledge-based content like blog posts and research papers, limiting their ability to showcase their intellectual potential.

- Opportunity Access:

There's a dearth of easy-to-access job opportunities, scholarships, and internships tailored specifically for undergraduates, making it challenging to kickstart their careers.

- Organization Visibility:

Existing platforms do not adequately spotlight university organizations like IEEE and AIESEC, which play a crucial role in students' personal and professional development.

- Networking:

Undergraduates struggle to connect with peers who have diverse potentials, hindering the formation of meaningful relationships and collaborations.

1.3 Proposed Solution

The proposed solution, **UniHub.lk** is an all-Inclusive Solution for Undergraduate Empowerment.

Navigating the diverse landscape of university life has never been easier. UniHub.lk, the ultimate digital platform tailored exclusively for undergraduates in Sri Lanka.

UniHub.lk is a web platform that is a dynamic hub meticulously designed to cater to undergraduates' every need. It is a place where undergraduates can seamlessly:

- Discover and Engage in Vibrant Events:

With UniHub.lk, undergraduates can effortlessly explore, share, and actively participate in a plethora of events. Undergraduates' campus experience just got a whole lot more exhilarating.

- Showcase Undergraduates' Brilliance:

UniHub.lk lets undergraduates shine by enabling undergraduates to publish and engage with insightful blog posts, groundbreaking research papers, and thought-provoking articles. It's an undergraduates' platform to showcase their intellectual prowess to a wider audience.

- Open Doors to Opportunities:

Unlock your potential with direct access to an array of exclusive job opportunities, scholarships, and internships tailored specifically for undergraduates. UniHub.lk ensures undergraduates are always in the loop, primed for success.

- Connect with Powerhouse Organizations:

UniHub.lk provides a dedicated space to interact with influential university organizations like IEEE and AIESEC, where undergraduates can collaborate, learn, and grow.

- Forge Meaningful Connections:

Networking is key to personal and professional growth. With UniHub.lk's intuitive features, undergraduates can effortlessly connect with fellow undergraduates, build lasting relationships, and collaborate on exciting ventures.

UniHub.lk acts as an undergraduates' passport to an enriched university experience. Whether the undergraduate is an aspiring entrepreneur, a dedicated scholar, or a dynamic event enthusiast, UniHub.lk caters to their unique aspirations and aspirations. It's time to break free from limitations and embrace a new era of undergraduate empowerment.

2.4 Brief Introduction

Numerous web platforms help people share content and communicate with one another in the modern world. These platforms, however, do not cater specifically to a target population. Furthermore, their content is frequently scattered and includes a mixture of informational and non-informational stuff for users.

Sri Lankan undergraduates experience a variety of requirements, including numerous aspects, as they progress through their undergraduate studies. These include the need to spread information about or engage with events, access knowledge repositories like blogs, research papers, and "kuppi," find job opportunities and scholarships, showcase university organizations, and connect with other undergraduates who have a variety of potential.

Our web platform, UniHub.lk, responds by emerging as a complete solution, precisely meeting these varied undergraduate demands. UniHub.lk provides a straightforward way to meet these demands without wasting too much time or requiring complicated navigation because it operates as a space and a network of interconnected universities.

A platform for a university student hub that is expanded with a variety of features, UniHub.lk also expands its usability. Beyond assisting individual students, this platform takes on a significant societal function, assisting in the identification and development of promising undergraduates and thereby advancing the country.

Therefore, the developer team at UniHub.lk will research these students' demands and set up a unique university student hub to meet them.

02) Project Goal

The main goal of the project is to introduce a comprehensive and user-friendly web platform for Sri Lankan undergraduates that meets their diverse needs, such as the need to spread information about or engage with events, access knowledge repositories, find job opportunities and scholarships, showcase university organizations, and connect with other undergraduates.

03) Scope of the Project

3.1 In-Scope

This website will not only expand its capabilities but also serve as an additional networking and social media platform exclusively for Sri Lankan undergraduates.

3.1.1 Actors

1. Unregistered User:

Unregistered Users are the users who visit our website without creating profiles. They can be school students, university students, or any other user.

2. Registered User:

A registered user is basically an undergraduate student who has registered to the system by providing their university email address.

3. University Representative:

The university representative is also similar to the organizational representative, which can upload events organized by the relevant university. Each and every university can have a university representative.

4. Organizational Representative:

An organizational representative is also a registered user who is assigned to a specific organization, such as IEEE, AIESEC, etc., at each university. They can upload events organized by the relevant organization. As an example, there is one representative for IEEE at the University of Colombo, and there can be another representative for IEEE at the University of Moratuwa.

5. Website Admin:

The website admin is the one who manages the website.

Events/ jobs/ organizations/ knowledge base.

3.1.2 Features

- User registration and login:

Users can register and log in using their university email addresses. The system will automatically validate the email domain to ensure that it is a valid university email address in Sri Lanka. Google authentication will also be used to validate the user's identity. Passwords will be hashed to store them securely and allow for quick access.

- Profile Management:

Users can create professional profiles by adding data such as personal bio-data, experiences, education, licenses and certifications, and volunteering. This is a great way to showcase their potential to society. The system provides facilities to update their profiles and more interesting features to enhance their personal profiles.

- Portfolio Generating:

The system can generate a portfolio for each user based on their profile data. This includes their work experience, education, licenses and certifications, and volunteer work. The portfolio can be customized by the user to add additional information, such as projects they have worked on, skills they have learned, and awards they have won.

- Build connections with fellow undergraduates:

Registered undergraduates can follow other undergraduates and maintain connections with them. Users can connect with other users by sending them friend requests. If the other user accepts the friend request, they will be able to see each other's profiles and contact information. For example, if one of your followers publishes a new knowledge post, the system will send you a notification. These features can help you to build strong connections with fellow undergraduates.

- Event posting and participation:

This platform makes it easy for users, including organizations and individuals to create, discover, and engage in events on campus. Users can post events with details such as title, description, date, time, location, and attachments. Other users can mark them as interested, or browse events by category, date, or location. This can help students to connect with their university community and find events that they are interested in.

- Job and Scholarship opportunities posting and participating:

Our platform will provide a space for external entities like companies to post job opportunities and scholarships. Undergraduates can filter the opportunities and easily apply for them. We will only allow undergraduates to apply for the opportunities, which will ensure that all applicants are verified undergraduates in our system. In the same way, undergraduates can find students with good potential to start new ideas like startups.

- **Showcasing University Organizations:**

UniHub.lk will offer a comprehensive feature that allows organizational representatives to create and maintain their organization profiles. Representatives can change the content related to their organization and manage their positions within it.

- **Automated Reminders:**

UniHub.lk will implement automated reminders to facilitate users. By using the Google Calendar API facility for events and jobs they can put reminders on them. Users can add event categories to their profiles. If someone uploads an event under that category, the system will automatically send an email notification to the user. If someone marks interest or participates in an event, the system will send notifications about the remaining date. This will keep users up-to-date on university events. They won't have to come to the website to check for updates. The system will also send reminders to users about deadlines and other important information for opportunities they have expressed interest in. Additionally, if a follower posts content on the site, the system will automatically send notifications to users who are following that publisher.

- **Participation count gathering and user interaction tracking:**

Registered users can mark their participation or interest in events and jobs. They can also react to knowledge base materials. This will help users to get an idea about the user interaction on events, jobs, and knowledge materials. It will also help publishers to get an idea about user interaction on published materials. The system will track the participation and reaction counts for events, jobs, and knowledge materials. This data can be used to see which content is most popular and to improve the user experience.

- **Recommendations:**

The platform can recommend events, jobs, and knowledge base materials to users based on their past event history and interests. This can help users to discover new content that they might be interested in. The system will track the events that users have participated in, the jobs that they have applied for, and the knowledge base materials that they have viewed. The system will use this data to create a profile of each user's interests and then recommend events, jobs, and knowledge base materials to users that are likely to be of interest to them.

- **Event Ratings and Reviews:**

Registered users can rate and review events and knowledge base materials. This will help other users to get an idea about the quality of the content. Users can rate events and knowledge base materials on a scale of 1 to 5 stars. They can also write reviews to provide more detailed feedback. The ratings and reviews will be visible to other users so that they can make informed decisions about which content to consume. This feature can help users to find high-quality content and to avoid wasting time on content that is not worth their time.

- Polls to Collect Recommendations:

Under the event section, the system facilitates publishing polls to gather user opinions on different events. This will help event organizers to get a better idea of user interaction at those events. Users can vote on polls and provide feedback on events. This feedback can be used by event organizers to improve their events and to make them more relevant to the interests of their audience.

- Secure validation process:

The system uses string pattern matching algorithms to validate the hyperlinks that users provide. This ensures that the hyperlinks are related to verified websites. If the hyperlinks are not on the verified website list, the system will automatically send a request to the admin to review the content. After reviewing the content, the admin can decide whether to add the website to the verified website list. This feature helps to ensure that the content that is shared on the platform is accurate and reliable.

- Report problems:

Registered users can report problems with shared content on the platform. This includes misleading information, harmful content, and technical problems. The admin will review the reports and take appropriate action. This could include removing the content, banning the user, or fixing the technical problem. This feature helps to ensure that the platform is reliable and safe for all users.

- Well-organized user-friendly interfaces:

Categorized, user-friendly interfaces are designed to make it easy for users to find the information and features they need. Our system uses categorized, user-friendly interfaces to organize the interface into four sections: Events, Organizations, Opportunities, and the user hub. This makes it easy for users to find what they are looking for and improves the user experience.

The Events section allows users to find and participate in events that are relevant to their interests. The Organizations section allows users to find and connect with organizations that they are interested in. The Opportunities section allows users to find and apply for jobs, scholarships, and other opportunities. The User Hub section allows users to manage their profiles, view their activity, and connect with other users.

3.2 Out of Scope

- New event **requests** should be reviewed manually by the university representative.
- Reports against website contents should be reviewed manually by the website admin.
- Marketplace (Expect to include in future)
- Advertisement spaces. (Expect to include in future)

04) Objectives & Strategies of the Project

4.1 Objectives

1. A vibrant platform where undergraduates can actively shape, explore, and participate in events, nurturing a lively community spirit. Gain entry to a comprehensive knowledge repository that enriches academic journeys.
2. Stay current with the latest updates relevant to Sri Lankan undergraduates, ensuring timely and relevant content.
3. Forge connections with external entities effortlessly. Unlock streamlined pathways for job opportunities and scholarships, providing trust and efficiency in engagement.
4. Amplify campus organizations through dedicated profiles. Seamlessly connect with these groups, fostering meaningful engagement.
5. Facilitate communication between students and organizations.
6. Create a dedicated space to showcase your university journey, enabling connections with fellow students possessing diverse potential.
7. Act as an inter-university network space, encouraging positive social media habits and meaningful connections.
8. Update undergraduates with new opportunities, minimizing the chance of missing out on valuable prospects through automation.

4.2 Strategies

1. Analyze the problems that Sri Lankan undergraduates face, because of the lack of a centralized digital platform for them.
2. Develop an idea to gather all their requirements on one platform.
3. Define a clear scope for the system.
4. Gather, discuss, and review the requirements to fulfill the end goal
5. Do a social feasibility test according to our proposed solution within a survey.
6. Design the system architecture.
7. Design a user-centric interface with a good user experience.
8. Develop the back end of the system.
9. Implement measures for data security and privacy.
10. Connect the front and back ends to build a functioning web application.
11. Integrate outside services such as an email service, Google calendar service, and Google map service.
12. Conduct testing to assure proper functionalities to meet undergraduate students' requirements.
13. Test the quality of the platform including usability, performance, and security.
14. Deploy and launch the web platform.
15. Maintain the platform with the help of user feedback.

05) Project Feasibility

5.1 Scheduling Feasibility

We assess whether the proposed project can be completed within a specified timeframe. Given the extensive scope and features of UniHub.lk, scheduling feasibility involves

1. breaking down tasks
2. assigning durations
3. considering dependencies
4. resource availability

It's important to ensure that the project timeline is realistic and accounts for potential delays, testing, user feedback, and iterations. We use the iterative waterfall model to effectively manage the project.

We have divided the total time for the projects evenly among the 4 members of the team. Shown below is how we have done that.

Working hours per week per member	= 13 hours
Working hours for 36 weeks per member	= 13 hours x 36
Total working hours by 1 member	= 468 hours
Total working hours by 4 members	= 468 hours x 4
	= 1872 hours

5.2 Operational Feasibility

We evaluate how well the proposed project aligns with the current practices and operations of the target audience.

1. Familiarity with social media:

The target user base for UniHub.lk is Sri Lankan undergraduates, who are already familiar with social media platforms. This familiarity will make it easier for them to adapt to UniHub.lk and use its features.

2. Revenue generation strategies:

UniHub.lk will generate revenue through advertisements. UniHub.lk can display advertisements to users.

3. Scalability and future expansion: UniHub.lk is designed to be scalable, so it can accommodate a growing user base. The platform will be hosted on reliable servers and use a distributed database architecture to ensure its availability and performance.

The operational feasibility of UniHub.lk is well-supported by the key considerations mentioned above. The platform is designed to be user-friendly and scalable, and it has a

variety of revenue-generation strategies in place. As a result, UniHub.lk has the potential to be a successful and sustainable platform for Sri Lankan undergraduates.

5.3 Legal Feasibility

The legal and ethical feasibility of UniHub.lk is well-supported by the following considerations:

1. Terms and conditions:

UniHub.lk will have a clear and concise terms and conditions agreement that outlines the rights and responsibilities of both the platform and its users. This agreement will help to ensure that users are aware of the platform's policies and procedures and that they are protected from harmful content.

2. Privacy protection:

UniHub.lk will take all necessary steps to protect the privacy of its users. This includes collecting only the data that is necessary for the platform to function and using that data in a way that is consistent with the user's consent.

3. User-generated content protection:

UniHub.lk will respect the intellectual property rights of its users. This means that users will retain ownership of any content that they create on the platform and that UniHub.lk will not use that content without the user's consent.

4. Inclusive environment:

UniHub.lk will be an inclusive platform that is open to all Sri Lankan undergraduates. The platform will not discriminate against users on the basis of their race, religion, gender, sexual orientation, or any other protected characteristic.

5. Compliance with applicable laws:

UniHub.lk will comply with all applicable laws and regulations, including data protection and privacy laws. This will help to ensure that the platform is operated in a responsible and ethical manner.

6. Content moderation and safety:

UniHub.lk will have a team of moderators who will review content for harmful or inappropriate content. This content will be removed from the platform, and users who post harmful content may be banned from the platform.

By taking into account all of the legal and ethical considerations mentioned above, UniHub.lk can be a safe and secure platform for Sri Lankan undergraduates to connect with each other, find events and opportunities, and share knowledge.

5.4 Social Feasibility

To determine the social feasibility of UniHub.lk, a survey was conducted for university students. This survey received 85 responses.

The Surveys conducted can be accessed in [Appendix 12.1](#).

Overall interest in UniHub.lk

The survey results show that there is a high level of interest in UniHub.lk among university students in Sri Lanka. 85% of respondents said they were interested or very interested in the concept of a centralized web platform for university students in Sri Lanka.

Most valuable features

The most valuable features of UniHub.lk that were identified by respondents were:

1. Events organized by universities
2. Organizations (AIESEC, IEEE, Rotaract, etc.)
3. Job opportunities
4. Scholarships
5. Learning materials (blogs, kuppi, research papers)

Challenges in accessing information

The survey also found that students often find it challenging to access information about university events, organization bodies, job opportunities, scholarships, and learning materials. 44.7% of respondents said they find it challenging to access this information, and 27.1% said they find it very challenging.

Previous use of similar platforms

Only 21.2% of respondents said they had previously used or heard of a web application specifically for university students. This suggests that there is a need for a centralized platform like UniHub.lk to provide students with access to information and resources that are currently scattered across different websites and platforms.

Importance of email alerts

Respondents were also asked how important they would find email alerts sent in real time about newly added events. 38.8% of respondents said they would find this feature very important, and 42.4% said they would find it somewhat important. This suggests that students would appreciate being notified about new events and opportunities as soon as they are added to the platform.

Willingness to contribute

94.1% of respondents said they would be willing to contribute to UniHub.lk by adding and updating information about events, organizations, job opportunities, scholarships, or sharing learning materials. This is a very encouraging response, as it suggests that students are willing to be active participants in the platform and help to make it a valuable resource for their peers.

User-friendliness

Respondents were asked to rate how user-friendly they would like the UniHub.lk platform to be. 60% of respondents said they would like the platform to be very user-friendly, and 35.3% said they would like it to be somewhat user-friendly. This suggests that students are looking for a platform that is easy to use and navigate.

Likelihood to recommend

87.1% of respondents said they would be likely to recommend UniHub.lk to other university students. This is a very positive response, and it suggests that students believe UniHub.lk would be a valuable resource for their peers.

Additional features

Respondents were also asked to suggest additional features or functionalities that they would like to see incorporated into UniHub.lk. Some of the suggestions included:

- Integration with Google Calendar
- Information about all the events that happened in every university categorized by the university as well as the club/society
- Higher study opportunities for any bachelor's degree
- New technology updates
- Tips for improving soft skills
- Filter using the deadline
- Recommendations

Overall, the survey results suggest that there is a high level of interest in UniHub.lk among university students in Sri Lanka. The platform would provide students with access to a wide range of information and resources that are currently scattered across different websites and platforms. Students also expressed a desire for a user-friendly platform that is easy to contribute to. The suggestions for additional features and functionalities are also very encouraging, and they suggest that students are looking for a platform that can be a valuable resource for their academic and professional development.

5.5 Economic Feasibility

5.5.1 Cost Analysis

1. Development Costs:

We will use free and open-source applications as much as possible to reduce the initial development expenses. However, there may be some costs associated with development tools and infrastructure, such as web development software, hosting services, and domain registration.

2. Maintenance Costs:

We will be responsible for ongoing maintenance of the platform, including bug fixes, updates, and server maintenance. These costs will be relatively low, as the platform will be built on open-source software.

3. Revenue Projections:

We plan to generate revenue mainly from advertisements and third-party ads. We are planning to conduct a market analysis to estimate the potential revenue from each source.

4. Customer Support Costs:

We will provide customer support to users through a forum and email. The costs associated with customer support will be relatively low, as the team will be able to handle most queries themselves.

5.5.2 Periodic Evaluation and Adjustment:

As the project is still in its early stages and as this is a learning project we will evaluate the economic feasibility of the project on a regular basis. We will be reviewing the cost and revenue projections, as well as the customer base, to ensure that the project is on track to be profitable.

5.6 Technical Feasibility

Familiarity with the technology:

As the project team we have prior knowledge and experience with the technologies that will be used to build the platform, including HTML, CSS, JavaScript, Java, and MySQL. This will significantly contribute to the successful implementation of the platform. We are also quite familiar with the latest trends in web development. This will help the team to build a platform that is up-to-date and user-friendly.

Use of trending technologies with growing support:

The technologies that we plan to use are all trending and have growing support from the community. This means that there are a lot of resources available to help us with development, such as documentation, tutorials, and forums. The use of trending technologies also means that the platform will be future-proof. As new technologies emerge, the platform can be easily updated to take advantage of them.

Overall, the technical feasibility of our project is high. As the project team we have the necessary knowledge build the platform, and we are using trending technologies with growing support.

06) Deliverables of the project

- Web-based Application
- SRS Document

07) Project Constraints & Assumptions

7.1 Constraints

- Single account per user.
- Restrictions on unregistered users.
- The system's functionality and scalability are dependent on the underlying technology stack, which might have limitations in terms of performance, integration, and compatibility.
- Integrating external services such as Google Calendar, email, and maps relies on the reliability and compatibility of those services, which are beyond the platform's control.

7.2 Assumptions

- The platform assumes that users have reliable internet access to interact with its features and content.
- Users are assumed to have a basic understanding of digital platforms and internet usage for effective engagement with the platform's functionalities.
- The platform assumes that the Google authentication service will remain accessible and functional for user identity validation.
- The system assumes that administrators will actively manage and review the list of verified websites to ensure the accuracy and reliability of shared content.
- The platform assumes that users will actively participate, share accurate information, and maintain respectful interactions with other users.
- The platform assumes a diverse range of events, jobs, and opportunities relevant to Sri Lankan undergraduates will be posted for engagement.
- The platform assumes that users will provide accurate and relevant information when creating profiles, sharing events, and interacting with the platform's content.
- The effectiveness of recommendations and polls assumes that user actions accurately reflect their interests and preferences.

08) Project Requirements

8.1 Functional Requirements

8.1.1 Functionalities

1. User registration and login

- Users should be able to register for the platform using their university email addresses.
- The system should automatically validate the email domain to ensure it belongs to a valid university in Sri Lanka. Only email addresses with recognized university domains should be accepted.
- Users should have the option to authenticate using their Google accounts to validate their identity.
- Passwords entered by users should be securely hashed before storage in the database.
- During registration, users should be required to agree to the platform's terms of use and privacy policy.

2. Profile management

- Registered users should be able to create their professional profiles on the platform.
- Users should be able to provide details in various sections, including personal bio, work experience, education, skills, licenses, certifications, and volunteering.
- The system should allow users to customize the appearance and layout of their profiles to reflect their personal branding.
- Users should be able to edit and update their profile information at any time.

3. Build connections with fellow undergraduate students

- Users should be able to send and accept friend requests.
- The system should notify users about new content from their connections.

4. Portfolio generating

- The system should be able to automatically generate portfolios based on user profile data.
- Users should be able to customize their portfolios with additional information.

5. Event posting and participation

- Users, including organizations and individuals, should be able to create and post events.
- Events should be categorized based on type, topic, or theme to facilitate easy discovery and filtering.
- Users should have the option to set the privacy level of events (public, private, invitation-only).

- Users should be able to register and participate in events they are interested in.
- Users should be able to browse and discover events based on categories, dates, locations, and other criteria.
- Users should have the option to mark events as "interested" to indicate their intention to attend or learn more about the event.
- The system could allow attendees to provide feedback or reviews about the quality and experience of the event.
- The system could feature certain events or highlight trending events based on popularity or relevance.
- For events with limited space, the system could include an RSVP management system to control attendance.

6. Job and scholarship opportunities posting and applying

- External entities (companies, organizations) should be able to create and post job and scholarship opportunities.
- Opportunities should be categorized based on fields, industries, or other relevant criteria to facilitate easy filtering for users.
- Only registered and verified undergraduate users should be able to view and apply for job and scholarship opportunities. This restriction ensures that applications are from genuine undergraduate students.
- The system should send reminders to users about approaching application deadlines for opportunities they have expressed interest in.
- The system could allow users to provide feedback on their application experiences or rate the quality of opportunities.

7. Showcasing university organizations

- Organizational representatives should be able to create profiles for their university organizations.
- Representatives should have the ability to update and manage content related to their organization.
- Representatives should be able to manage positions within the organization, such as adding or removing members, leaders, and advisors.
- Organizations should be able to share events, news, articles, and other content through their profiles.
- Users should have the option to follow organizations they are interested in. Following an organization should provide users with updates on the organization's activities.
- Organizations should have access to analytics that show user interactions with their profiles and content. Analytics could include views, follower counts, engagement rates, and more.
- Organizations should be able to send notifications or announcements to their followers. Notifications could be about upcoming events, news, or other updates.
- The system should have mechanisms for users to report inappropriate content or behavior related to organization profiles.

8. Automated reminders

- Registered users should be able to set up automated reminders for specific events and job opportunities.
- The system should integrate with Google Calendar to allow users to sync events and job reminders with their personal calendars.
- Users should be able to select event categories they are interested in and want to receive notifications for. When an event is uploaded in a selected category, the system should automatically send an email notification to the user.
- If a user marks interest or participates in an event, the system should send notifications about the remaining date. This feature keeps users informed about upcoming events they are interested in.
- Users who have expressed interest in job or scholarship opportunities should receive reminders about approaching deadlines.
- If a user follows a content publisher, the system should automatically send notifications when that publisher posts new content.

9. Participation count gathering and interaction tracking

- Registered users should be able to mark their participation or interest in events and jobs.
- Users should be able to react to knowledge base materials by selecting from predefined reactions (e.g., thumbs up, thumbs down, like).
- The system should track the number of participants and interested users for each event and job.
- Users should have the option to sort events, jobs, and knowledge materials based on participation or reaction counts. This feature enables users to discover the most engaging content.
- The system should provide mechanisms to rank or highlight content based on high participation or positive reactions. This helps promote valuable and well-received content.
- Administrators should have access to detailed analytics on user interactions to identify trends and insights.

10. Recommendations

- The platform should be able to recommend events, jobs, and knowledge base materials to users based on their past event history and interests.
- The system should generate a list of recommended events, jobs, and knowledge base materials for each user.
- It should prioritize recommendations based on relevance to the user's profile.
- System should push email notifications including recommendations for users.
- The system should periodically refresh recommendations to ensure that they remain up-to-date and relevant to the user's current interests.

11. Event ratings and reviews

- Registered users should be able to rate events and knowledge base materials.
- Users should have the option to provide a star rating from 1 to 5, indicating their assessment of the content's quality.
- Users should have the ability to edit or delete their reviews after submission.
- There should be an option to make adjustments or remove reviews if needed.
- Users should be able to read reviews and see average ratings to make informed decisions.
- Users should be able to sort and filter events and content based on their average rating or the number of reviews. This feature will help users find the most highly-rated content quickly.
- Only registered users should be able to submit ratings and reviews.
- Users should not be able to submit multiple reviews for the same event or content.
- The system should allow users to report inappropriate or harmful reviews.
- Administrators should have the ability to review reported content and take appropriate actions.

12. Polls to collect recommendations

- Event organizers should be able to create polls related to specific events to gather user opinions.
- Organizers should be able to set the duration for which the poll will be active.
- Users should have the option to provide additional comments or feedback along with their votes.
- The system could send reminders to users to participate in active polls.

13. Secure validation process

- The system should validate hyperlinks provided by users to ensure they are related to verified websites.
- The system should maintain a list of verified and trusted websites that are considered safe for sharing.
- The system should implement string pattern matching algorithms to analyze the provided hyperlinks.
- If the hyperlink does not match the verified website list, the system should automatically trigger a request to the admin for review.
- Admins should receive notifications about pending hyperlink review requests.
- Admins should have the ability to review the content of the hyperlink and make a decision.
- Users should receive notifications about the status of their submitted hyperlinks (approved, pending review, rejected).
- Admins should periodically review and update the verified website list to ensure its accuracy.

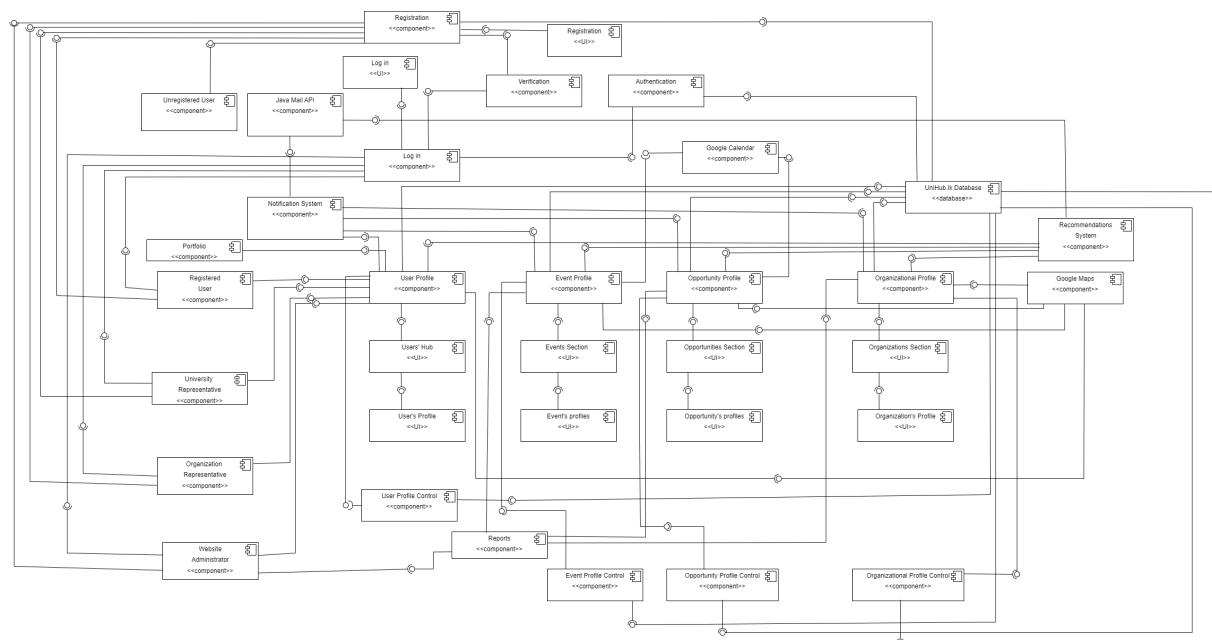
14. Reporting problems

- Registered users should have the ability to report various types of problems with shared content on the platform.
- Optionally, users could have the choice to report problems anonymously to protect their identity.
- Admins should receive notifications about reported problems and be able to review the details.
- Admins should be able to take appropriate actions based on the severity of the reported problem.

15. Well-organized user-friendly interfaces

- The main navigation bar should prominently display the categorized sections: Events, Organizations, Opportunities, and User Hub.
- Each section (Events, Organizations, Opportunities, User Hub) should have its own dedicated landing page.
- The user interface should be designed with user-friendliness in mind, offering intuitive navigation and easy access to features.
- Users should be able to search for content within each section and apply filters to narrow down results.
- The interface should be responsive and adaptable to various screen sizes and devices for a consistent experience.

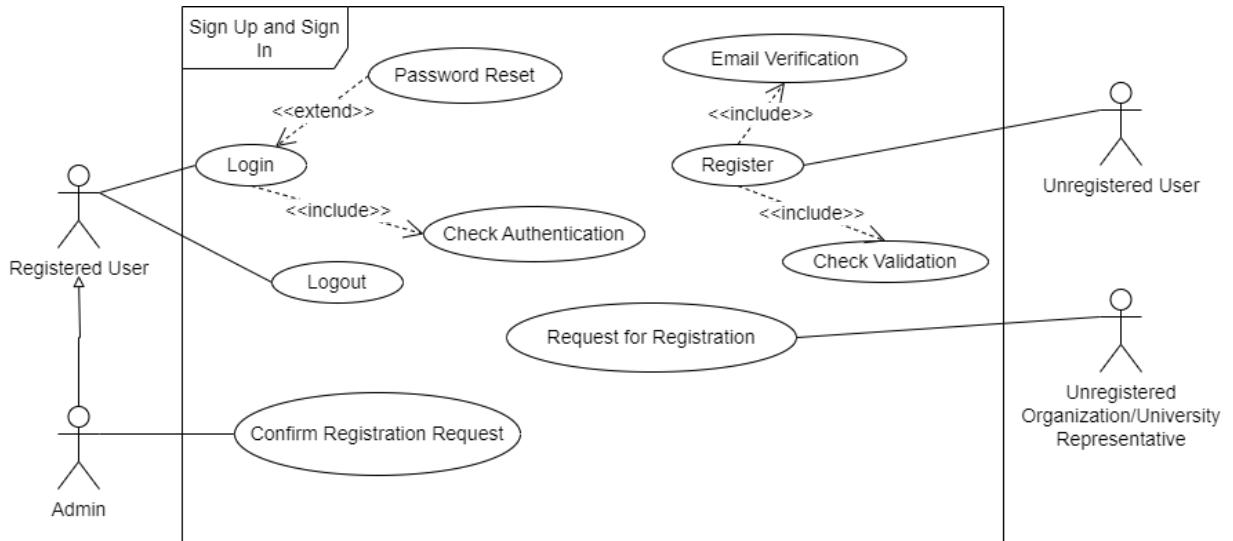
8.1.2 Component Diagram



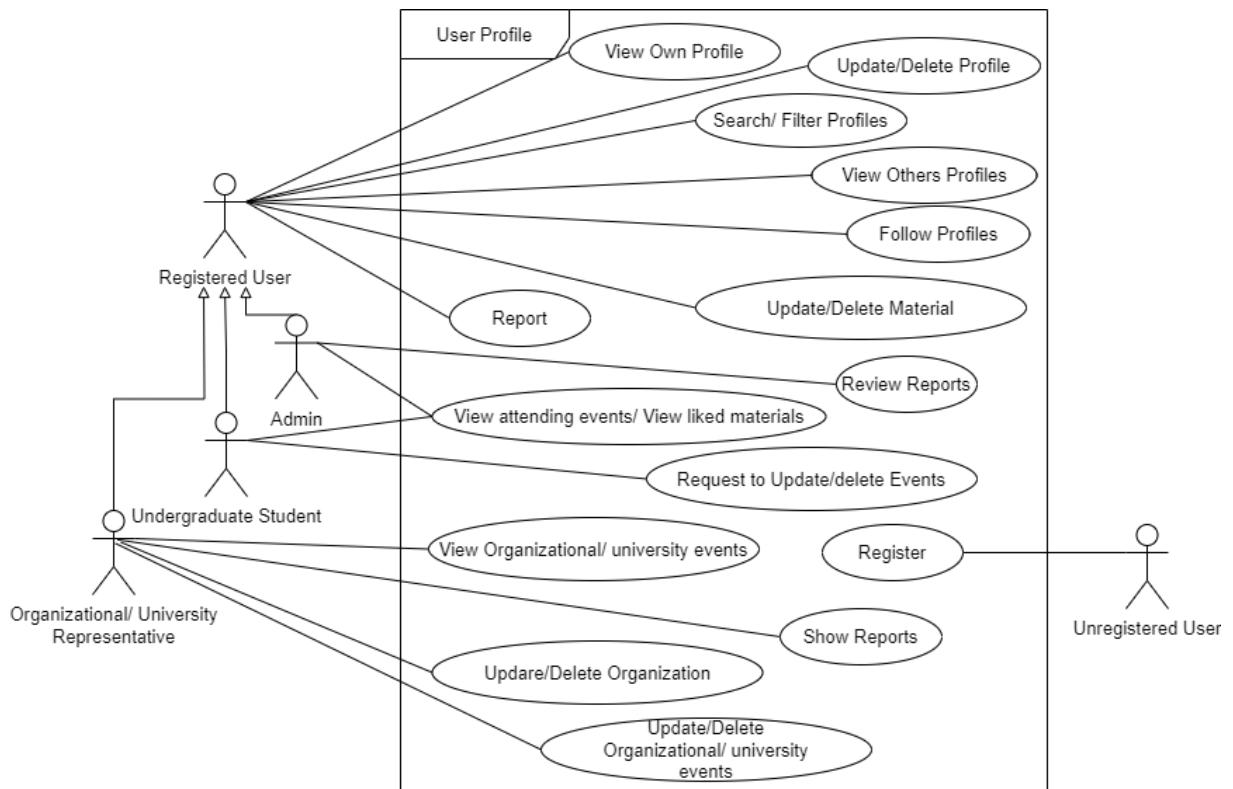
Component Diagram

8.1.3 Use Case Diagrams

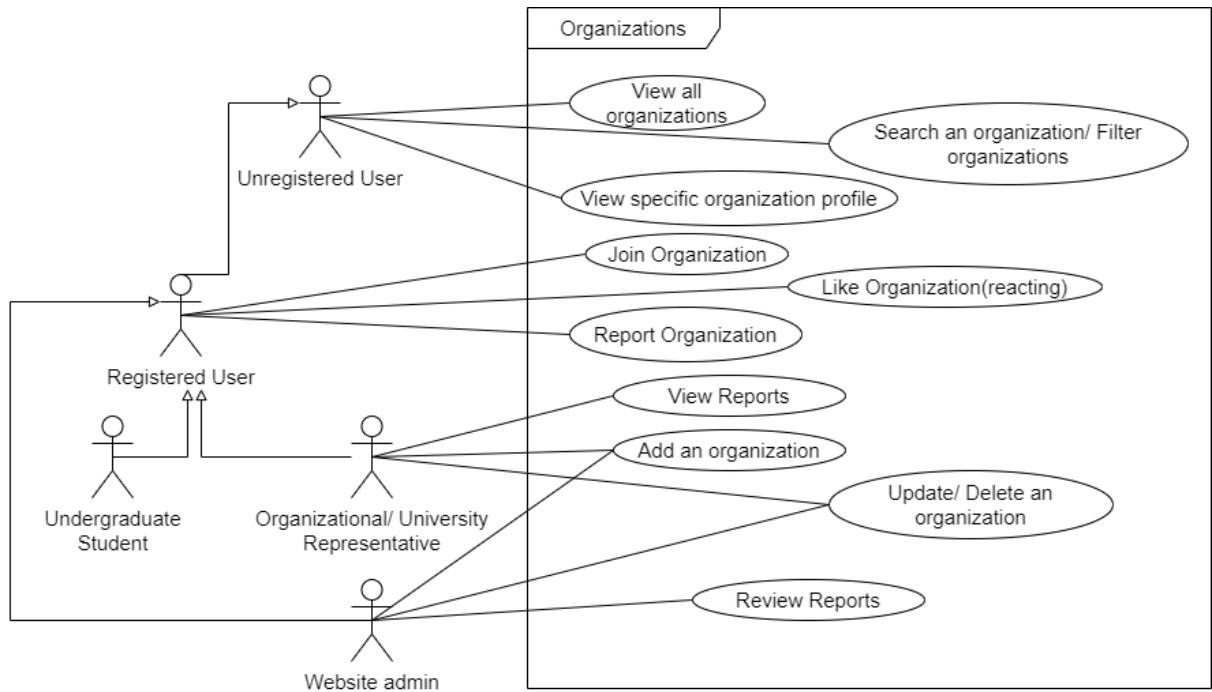
I. Sign Up and Sign In ([Link](#))



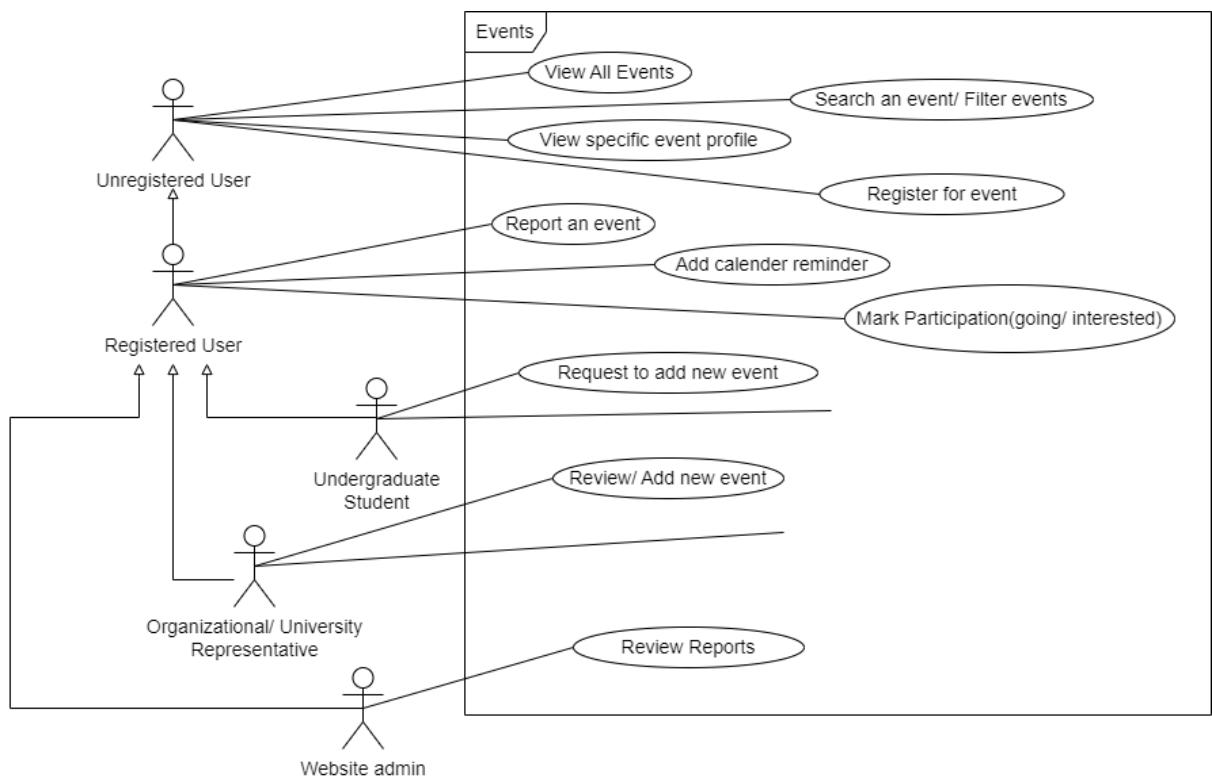
II. User Profiles ([Link](#))



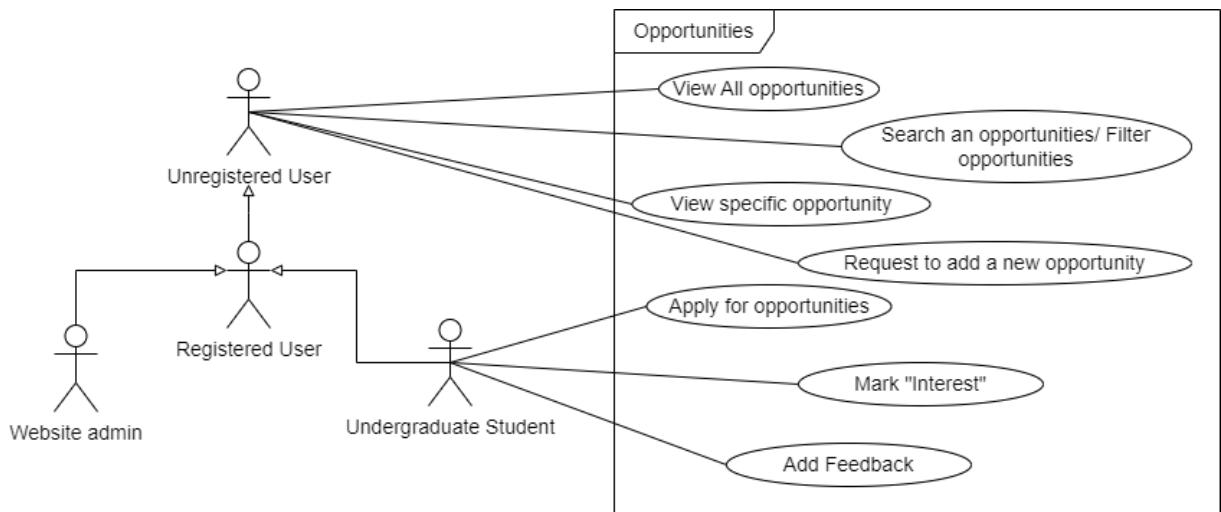
III. Organizations ([Link](#))



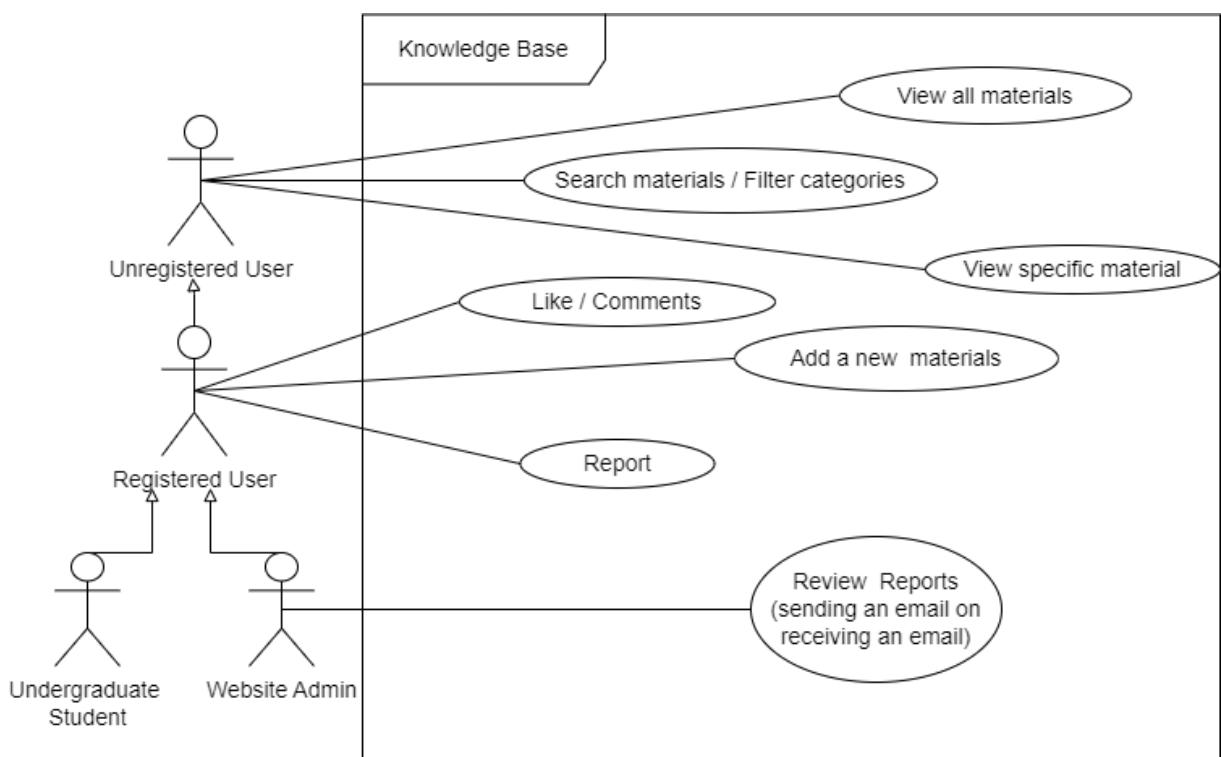
IV. Events ([Link](#))



V. Opportunities ([Link](#))



VI. Knowledge Base ([Link](#))



8.1.4 Use Case Descriptions

I. Sign Up and Sign In

Use Case ID	01
Use Case Name	Register
Primary Actor	Unregistered User (Unregistered Undergraduate Student)
Description	Users have to register to create their own profiles and to add details to the system
Pre-conditions	Users should have their own university email address.
Primary Flow	<ol style="list-style-type: none"> 1. The user clicks on “Register” 2. The system displays registration form 3. Users can enter a university email address and other details such as name, university, etc. 4. Users can set passwords 5. Users can confirm password 6. If the password and confirm password mismatch return to step 4. 7. User can click on “Register” 8. The system verifies the email with the domain of the email. 9. System Validates the email with the support of Google authentication. 10. Show a message saying a verification link will be sent through email, to verify the email address. 11. Users verify the email using the emailed link. 12. System saves data in the database. 13. Show a message saying complete registration.
Include/ Extend	Email Verification, Check Validation
Exceptions	Unregistered users exclude undergraduate students, already registered users, and invalid email addresses provided.
Post-conditions	-

Use Case ID	02
Use Case Name	Email Verification (Include of Register)
Primary Actor/s	-
Description	The email address provided by users should verify before registering with the system.
Pre-conditions	Users should input their email and other details to register and should click on “Register”.
Primary Flow	<ol style="list-style-type: none"> 1. User should have input an email address 2. System should separate the domain of the email address 3. System should compare that domain with the domains of universities which are already stored in the database. 4. If a domain matches the email domain then check if the email entered is valid or not. 5. If a domain match is not found, display a message to the user “Invalid Email Entered” and redirect to the “Register page”
Exceptions	-
Post-conditions	-

Use Case ID	03
Use Case Name	Check Authentication (Include of Register)
Primary Actor/s	Registered User
Description	Check the credentials entered by the user when login is valid or not.
Pre-conditions	The user must be registered by providing details the very first time before login.
Primary Flow	<ol style="list-style-type: none"> 1. The user clicks on “Login” and enters the email address, and password and logs in. 2. System check email and password have been saved in the database. 3. If details are found in the database allow users to log in to the system 4. If not, a message saying Invalid Login.
Exceptions	-
Post-conditions	-

Use Case ID	04
Use Case Name	Password Reset (Extend of Register)
Primary Actor/s	Registered User
Description	Registered users can reset their passwords if they have forgotten the password
Pre-conditions	The user must be registered by providing details the very first time before login.
Primary Flow	<ol style="list-style-type: none"> 1. The user clicks on “Login” and enters the email address 2. The system verifies the email address 3. Users can click on “Password reset” 4. The system emails a link to the ‘New password’ screen to the email address of the user account. 5. User uses the emailed link. 6. User adds a new password.
Exceptions	Unregistered Users
Post-conditions	-
Assumptions	User email address cannot be changed.

Use Case ID	05
Use Case Name	Request for Registration
Primary Actor/s	Unregistered Organizational/ University Representative)
Description	Users have to register to create their own profiles and to add details to the system.
Pre-conditions	Users should have an email address provided by the relevant organization or university.
Primary Flow	<ol style="list-style-type: none"> 1. The user clicks on “Register” and then on “Organizational/University” 2. The system displays a registration request form 3. Users should fill that out and should provide the correct contact details. 4. Users can set a password and confirm it. 5. If the password and confirm password mismatch return to step 5. 6. User can click on “Request to Register”
Exceptions	Already registered organizational/university representative.

Post-conditions	Registration requests should be sent to the website admin.
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Use Case ID	06
Use Case Name	Confirm Registration Request
Primary Actor/s	Website Admin
Description	Website admin has to confirm/deny the registration requests have been sent by unregistered organizational/ university representatives.
Pre-conditions	Admin should log in to the system.
Primary Flow	<ol style="list-style-type: none"> 1. Click on “Handle request” 2. The system displays all the requests 3. Users can view them one by one 4. The user can confirm the request by clicking on the “Confirm” button while the user can deny the request by clicking on the “Reject” button 5. The system sends an email to the relevant email address by mentioning that the request is confirmed or rejected
Exceptions	-
Post-conditions	Registration request should be sent to the website admin.
Assumptions	Website admin is reviewing the request manually by contacting the relevant university or organization.

Use Case ID	07
Use Case Name	Logout
Primary Actor/s	Registered User
Description	Users can log out from the system when they want to leave the website
Pre-conditions	Users should be logged in to the system
Primary Flow	<ol style="list-style-type: none"> 1. The user clicks on “Logout” 2. Redirect to the general homepage.
Exceptions	Unregistered User
Post-conditions	-

Use Case ID	08
Use Case Name	Login
Primary Actor/s	Registered Users (Registered undergraduate student, Registered organizational/ university representative, Website Admin)
Description	Users can log in to the system by providing the required credentials. If the password is forgotten, the user requests an option and the system will email a link to the owner's email account.
Pre-conditions	The user must be registered by providing details the very first time before login.
Primary Flow	<ol style="list-style-type: none"> 1. The user clicks on the “Login” button. 2. User enters email as user Id. 3. User enters the password. 4. User clicks “Login”. 5. Return to step 2 if the email and password are incorrect. 6. Users will be directed to the “Home” page.
Alternate	If users have forgotten the password they can reset the password.
Include/ Exclude	Password Reset (Extend), Check Authentication (Include).
Exceptions	Unregistered users.
Post-conditions	-

II. User Profiles

Use Case ID	09
Use Case Name	View Own Profile
Primary Actor/s	Registered User
Description	The user can view their own profile with their details and the events or materials that they have added to the website.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Click on “My profile” 3. The system will display relevant profile 4. The user can view their own details and the history of the things that have been done like added events and materials etc.
Exceptions	-
Post-conditions	-

Use Case ID	10
Use Case Name	Update Profile
Primary Actor/s	Registered User
Description	Users can update their profile with new details like newly added qualifications.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Click on “My profile” 2. Click on “Edit” 3. System displays profile details in editable mode. 4. User can change profile details(Add new details or edit details already added to the profile) 5. Users can click on “Save Changes” to save the changes that were made. 6. System saves updated data in the database 7. When the user clicks “Done” the system will be redirected to the updated profile
Exceptions	-
Post-conditions	-

Use Case ID	11
Use Case Name	Delete Profile
Primary Actor/s	Registered User
Description	Users can delete their profile if they want.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Click on “My profile” 2. Click on “Delete” 3. Click on “Confirm” to confirm the deletion of the profile. 4. System deletes the relevant profile from the database
Exceptions	-
Post-conditions	-

Use Case ID	12
Use Case Name	Search/Filter Profiles
Primary Actor/s	Registered User
Description	Users can search for others' profiles and also users can filter profiles.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Users can type the name of the relevant profile on the search bar or users can set/undo filters if need 3. Click on the “Search” button 4. Users can view the result set after searching
Exceptions	-
Post-conditions	-

Use Case ID	13
Use Case Name	View Others' Profiles
Primary Actor/s	Registered User
Description	Users can view other users' profiles.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Users can click on "View Profile" in the relevant profile 3. The user can view the materials or events that profile owners have added etc.
Exceptions	-
Post-conditions	-

Use Case ID	14
Use Case Name	Follow Profile
Primary Actor/s	Registered User
Description	Users can follow other users' profiles if there are any important materials added by that person and users can get notifications if that person has added a new item to the website or any other update.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Users can click on "Follow" in the relevant profile 3. The system sends notifications to the user if there is any update in that relevant profile.
Exceptions	-
Post-conditions	-

Use Case ID	15
Use Case Name	Update materials
Primary Actor/s	Registered User
Description	Users can request to update materials in the knowledge base section.
Pre-conditions	User should have logged in to the website
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Click on “My Profile” 3. The system will show all the materials added by the user. 4. Users select the specific material. 5. Show materials request form with already existing data. 6. System request to fill data in relevant fields. 7. Update the data in the fields. 8. Select the “Update Materials” option.
Exceptions	Mandatory fields are not filled properly.
Post-conditions	Send the update request to the relevant university representative.

Use Case ID	16
Use Case Name	Delete materials
Primary Actor/s	Registered User
Description	Registered users can request to delete the materials he/she has uploaded.
Pre-conditions	User should have logged in to the website
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “ My Profile” section. 2. Select “Knowledge Base”. 3. System will show all the materials added by the user. 4. Select the “ Delete Materials” option.
Exceptions	-
Post-conditions	Send the delete request to the relevant university representative.

Use Case ID	17
Use Case Name	Report
Primary Actor/s	Registered User
Description	Users can report accounts if there is any issue.
Pre-conditions	User should have logged in to the website
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Users can click on “Report” in the relevant profile
Exceptions	-
Post-conditions	-

Use Case ID	18
Use Case Name	Review Report
Primary Actor/s	Website Admin
Description	Website admin can view all the reports.
Pre-conditions	Admin should have logged in to the website
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Users can click on “Reports” 3. Users can view all the reports 4. Fill in the field “Action” 5. Click on “Send Report” or “Close” 6. Redirect to the “Report” section.
Exceptions	-
Post-conditions	-
Assumptions	Admin reviews the reports manually

Use Case ID	19
Use Case Name	View attending events/ View liked materials
Primary Actor/s	Undergraduate Student, Admin
Description	Users can view attending events and view materials that they have liked within their profiles.
Pre-conditions	User should have logged in to the website.
Primary Flow	<p>User should visit the profile section of the website</p> <ol style="list-style-type: none"> 1. View attending events <ul style="list-style-type: none"> o Click on “Attending Events” o Display all the attending events o Select an event o Redirect to the page containing details of the relevant event 2. View Liked materials <ul style="list-style-type: none"> o Click on “Liked Materials” o Display all the liked materials o Select a material o Redirect to the page of relevant material exists
Exceptions	-
Post-conditions	-

Use Case ID	20
Use Case Name	View Organizational/ University Events
Primary Actor/s	Organizational/ University Representative
Description	Representatives can view events that they have added to the system on their profile.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Users can view all the events that they have added to the system 3. Users can view events one by one 4. Redirect to the relevant event page.
Exceptions	-
Post-conditions	-

Use Case ID	21
Use Case Name	Show Reports
Primary Actor/s	Organizational/ University Representative
Description	Representatives can view reports on their organization.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Users should visit the profile section of the website 2. Users can click on “Show Reports” 3. Users can view reports and details about those reports
Exceptions	-
Post-conditions	-

Use Case ID	22
Use Case Name	Request to update an event.
Primary Actor/s	Registered Undergraduate
Description	Registered undergraduates can request to update event data.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select “Events” under my profile section. 3. System will show all the events added by the user. 4. Users select the event. 5. Show the event request form with already existing data. 6. System request to fill data in relevant fields. 7. Update the data in the fields. 8. Select the “Update Event” option.
Exceptions	Mandatory fields are not filled properly.
Post-conditions	Send the update request to the relevant university representative.

Use Case ID	23
Use Case Name	Request to delete an event.
Primary Actor/s	Registered Undergraduate
Description	Registered undergraduates can request to delete an event, he already added to the event section.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select “Events” under my profile section. 3. System will show all the events added by the user. 4. Select the “Delete Event” option.
Exceptions	-
Post-conditions	-

Use Case ID	24
Use Case Name	Update Organization
Primary Actor/s	Registered Organizational/ University Representative
Description	Representatives can update their profiles
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Click on “My profile” 2. Click on “Edit” 3. System displays profile details in an editable mode. 4. User can change profile details (Add new details or edit details already added to the profile) 5. Users can click on “Save Changes” to save the changes that were made. 6. System saves updated data in the database 7. When the user clicks “Done” the system will be redirected to the updated profile
Exceptions	-
Post-conditions	-

Use Case ID	25
Use Case Name	Delete Organization
Primary Actor/s	Registered Organizational/ University Representative
Description	Users can delete their profile if they want.
Pre-conditions	User should have logged in to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Click on “My profile” 2. Click on “Delete” 3. Click on “Confirm” to confirm the deletion of the profile. 4. System deletes the relevant profile from the database
Exceptions	-
Post-conditions	-

III. Organizations

Use Case ID	26
Use Case Name	View All Organizations
Primary Actor	Unregistered User, Registered User
Description	These actors can view all the organizations under the “Organizations” section.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Organizations” section. 2. Select the “View All” option.
Exceptions	No organizations to show.
Post-conditions	-

Use Case ID	27
Use Case Name	Search and Filter Organizations
Primary Actor	Unregistered User, Registered User
Description	Users can search organizations by using provided filtering and search bar options.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. These actors can find organizations by using filters and the search bar. 2. Search events according to the data. 3. If there are events that match the given data, the system will show them. 4. Otherwise, the system will show as “No Events”.
Exceptions	No events to show.
Post-conditions	-

Use Case ID	28
Use Case Name	View a Specific Organization Profile
Primary Actor	Unregistered User, Registered User
Description	Users can view data in any specific organization.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Organizations” section. 2. Get organization/s from view all/ search or filtering options. 3. Select the organizational profile. 4. Go inside the profile. 5. View the content of the organization.
Exceptions	The searched/ filtered organization/s are not available.
Post-conditions	-

Use Case ID	29
Use Case Name	Join an Organization
Primary Actor	Registered User
Description	Registered users can join an organization of their choice through the website.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Organizations” section. 2. Get organization/s from view all/ search or filtering options. 3. Select the organizational profile. 4. Go inside the profile. 5. Click on the “Join Organization” button next to the organization they want to join. 6. The user is redirected to a registration form. 7. The system adds the user to the list of people who have joined the organization.
Exceptions	-
Post-conditions	Redirect the user to a given form link.

Use Case ID	30
Use Case Name	Like an Organization
Primary Actor	Registered User
Description	Users can like an organization.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Organizations” section. 2. Get organization/s from view all/ search or filtering options. 3. Select the organizational profile. 4. Go inside the profile. 5. Click on the “Like” button. 6. The system adds the user to the list of people who liked the organization.
Exceptions	-
Post-conditions	<ul style="list-style-type: none"> • Increase the number of likes in the system and show it in the organizational profile. • Add the organization to the liked organizations list in the user’s profile.

Use Case ID	31
Use Case Name	Report an Organization
Primary Actor	Registered User
Description	If there is any problem with the organizational profile, a registered user can report that organization.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Organizations” section. 2. Get organization/s from view all/ search or filtering options. 3. Select the organizational profile. 4. Go inside the profile. 5. Select the “Report Organization” option. 6. Fill in the required fields that are needed to submit a report. 7. Submit the report.
Exceptions	-
Post-conditions	Send the report to the website admin.

Use Case ID	32
Use Case Name	View Reports
Primary Actor	Organizational/ University Representative
Description	The organizational/ university representative can view the reports made by the registered users on their profiles.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select “Show Reports” under my profile section. 3. Users can view reports individually and all the details regarding the reports.
Exceptions	-
Post-conditions	-

Use Case ID	33
Use Case Name	Add an Organization
Primary Actor	Organizational/ University Representative, Website Admin
Description	Users can add an organization to the system by providing an email address provided by the university or the organization and other proof that are necessary.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Organizations” section. 2. Select the “Add Organization” option. 3. Fill in the details and add proof for the required fields in the given form. 4. Click on the “Add Organization” button at the end of the form.
Exceptions	Mandatory fields are not filled properly.
Post-conditions	Add organization to the “Organizations” section.

Use Case ID	34
Use Case Name	Update Organization
Primary Actor	Organizational/ University Representative, Website Admin
Description	Users can update their organizational profile.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select the “Edit” option under my profile section. 3. System displays profile details in an editable mode. 4. User can change profile details (Add new details or edit existing details). 5. Users can click on “Save Changes” to save the changes that were made. 6. The user will be redirected to the updated profile.
Exceptions	-
Post-conditions	The system saves updated data in the database.

Use Case ID	35
Use Case Name	Delete an Organization
Primary Actor	Organizational/ University Representative, Website Admin
Description	Users can delete their organizational profile.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select the “Delete Profile” option under my profile section. 3. Click on the “Confirm” button to confirm the deletion of the profile.
Exceptions	-
Post-conditions	System deletes the relevant profile from the database.

Use Case ID	36
Use Case Name	Review Reports
Primary Actor	Website Admin
Description	Website admin can review the reports made by registered users on organizational profiles and take necessary actions needed.
Pre-conditions	User should be logged into the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select “Reports” under my profile section. 3. User can view all the reports. 4. User can select individual reports and all the details regarding the reports. 5. Fill in the field “Action”. 6. Click on “Send Report” or “Close”. 7. The user will be redirected to the “Reports” Section.
Exceptions	-
Post-conditions	-
Assumptions	Admin reviews the reports manually.

IV. Events

Use Case ID	37
Use Case Name	View All Events
Primary Actor	Unregistered User/ Registered User
Description	These actors can view all events displayed under the event category.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 3. Go to the “Events” section. 4. Select the “View All” option.
Exceptions	No events to show.
Post-conditions	-

Use Case ID	38
Use Case Name	Search events/ Filter opportunities
Primary Actor	Unregistered User/ Registered User
Description	Users can search events by using provided filtering and search bar options.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. These actors can find events by using filters and search bars. 2. Search events according to the data. 3. If there are events that match the given data, the system will show them. 4. Otherwise, the system will show as “No Events”.
Exceptions	No events to show.
Post-conditions	-

Use Case ID	39
Use Case Name	View Specific Event
Primary Actor	Unregistered User/ Registered User
Description	Users can view data in any specific event.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Events” section. 2. Get event/s from View All/ Search or filtering options. 3. Select the event profile. 4. Go inside the event. 5. View the content of the event.
Exceptions	The searched/ filtered event/s are not available.
Post-conditions	-

Use Case ID	40
Use Case Name	Register for event
Primary Actor	Unregistered User/ Registered User
Description	Website users can register with the event.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Events” section. 2. Get event/s from View All/ Search or filtering options. 3. Select the event profile. 4. Go inside the event. 5. Select the “Register” option.
Exceptions	-
Post-conditions	Redirect the user to a given registering link.

Use Case ID	41
Use Case Name	Report an event.
Primary Actor	Registered User
Description	If there is any problem or misleading information with an event, registered users can report that event.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Events” section. 2. Get event/s from View All/ Search or filtering options. 3. Select the event profile and go inside the event. 4. Select the “Report Event” option. 5. Fill in the required fields that are needed to put in a report. 6. Submit the report.
Exceptions	-
Post-conditions	Send the report to the website admin.

Use Case ID	42
Use Case Name	Add Calendar reminder/ Mark Participation
Primary Actor	Registered User
Description	Registered users can add calendar reminders for the events they are interested in. And also they can mark their participation.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Events” section. 2. Get event/s from View All/ Search or filtering options. 3. Select the event profile. 4. Go inside the event. 5. If someone needs to add a calendar reminder to the event, they need to click on the “Calendar Reminder” option. 6. If someone needs to mark participation in an event, they need to click on the “Going/ Interested” option.
Exceptions	-
Post-conditions	<ul style="list-style-type: none"> ● Add a Calendar reminder to the user’s Google calendar. ● Increase the number of Going/ Interest counts in the system and show it in the event profile.

Use Case ID	43
Use Case Name	Request to add a new event.
Primary Actor	Registered Undergraduate
Description	Registered undergraduates can request to add an event in our site.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Events” section. 2. Select the “Request Event” option. 3. Fill in the data for required fields with the given form. 4. Select the “Send Request” option.
Exceptions	Mandatory fields are not filled properly.
Post-conditions	Send the request to the relevant university representative.

Use Case ID	44
Use Case Name	Review event requests.
Primary Actor	Registered University Representative/ Website admin.
Description	Review the event requests.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Go to the “Requests” section. 3. System shows all event requests. (Add/ Update/ Delete) 4. Select an event requested by a user. 5. Select “Accept” or “Reject”.
Exceptions	-
Post-conditions	<ul style="list-style-type: none"> • System updates the database. • Redirect the user to the “Requests” section.

Use Case ID	45
Use Case Name	Add new event.
Primary Actor	Registered University/ Organizational Representative
Description	Actor can directly add an event to our event section.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Events” section. 2. Select the “Add Event” option. 3. Fill in the data for the required fields in the given form. 4. Select the “Add Event” option.
Exceptions	Mandatory fields are not filled properly.
Post-conditions	Add event to the event section.

Use Case ID	46
Use Case Name	Update an event.
Primary Actor	Registered University/ Organizational Representative
Description	Actor can directly update an event in the event section.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select “Events” under my profile section. 3. System will show all the events added by the user. 4. User selects the event. 5. Show the event request form with already existing data. 6. System request to fill data in relevant fields. 7. Update the data in the fields. 8. Select the “Update Event” option.
Exceptions	Mandatory fields are not filled properly.
Post-conditions	Update data of the event in the database.

Use Case ID	47
Use Case Name	Delete an event.
Primary Actor	Registered University/ Organizational Representative
Description	Registered university/ organizational representatives can directly delete the events they added under their university or organization.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select “Events” under my profile section. 3. System will show all the events added by the user. 4. Select the “Delete Event” option.
Exceptions	-
Post-conditions	Update the events database.

Use Case ID	48
Use Case Name	Review Reports.
Primary Actor	Website admin
Description	Website administrator can view all reports and get suitable action for them.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Go to the “Reports” section. 3. Select the report. 4. Manually review the report. 5. Fill the field, “Action”. 6. Select “Send Report” or “Close”.
Exceptions	-
Post-conditions	If the admin selects “Send Report”, the system should send a report>Email to the user who are request that report. Redirect to the “Reports” section.

Use Case ID	49
Use Case Name	Mark Participation
Primary Actor	Registered User
Description	Website users can mark their participation as “Interest” or “Going” on the event profile.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Events” section. 2. Get events by using view all/ search bar/fitter events. 3. Select the event profile. 4. Go inside the profile. 5. Select the “Going” or “Interested” option.
Exceptions	-
Post-conditions	Update the database according to reaction.

V. Opportunities

Use Case ID	50
Use Case Name	View All Opportunities
Primary Actor	Unregistered User/ Registered User
Description	These actors can view all opportunities displayed under the opportunities category.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Opportunities” section. 2. Select the “View All” option.
Exceptions	No opportunities to show.
Post-conditions	-

Use Case ID	51
Use Case Name	View Specific Opportunity
Primary Actor	Unregistered User/ Registered User
Description	Users can view data in any specific opportunity.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Opportunities” section. 2. Get opportunity/s from View All/ Search or filtering opportunities. 3. Select the opportunity profile. 4. Go inside the opportunity. 5. View the content of the opportunity.
Exceptions	The searched/ filtered opportunity/s are not available.
Post-conditions	-

Use Case ID	52
Use Case Name	Search Opportunities/ Filter Opportunities
Primary Actor	Unregistered User/ Registered User
Description	Users can search opportunities by using provided filtering and search bar options.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. These actors can find opportunities by using filters and search bars. 2. Search opportunities according to the data. 3. If there are opportunities which are matching with given data system will show them. 4. Otherwise, the system will show as “No opportunities”.
Exceptions	No events to show.
Post-conditions	-

Use Case ID	53
Use Case Name	Request to add new opportunity
Primary Actor	Unregistered User/ Registered User
Description	External entities like companies can request to add new opportunities into our system.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Opportunities” section. 2. Select the “Add Opportunity” option. 3. Add data into the required fields in the form. 4. Select “Send Request”.
Exceptions	The required fields of requesting form are not filled properly.
Post-conditions	Add request to website admin.

Use Case ID	54
Use Case Name	Apply for opportunities.
Primary Actor	Registered Undergraduate User
Description	Registered undergraduates can apply for opportunities.
Pre-conditions	Login to the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Opportunities” section. 2. Get opportunities by viewing all/ Search/ Filter opportunities. 3. Select the opportunity profile. 4. Go inside the opportunity. 5. Select the “Apply” option.
Exceptions	-
Post-conditions	Redirect the user to the applying link.

Use Case ID	55
Use Case Name	Mark Interest
Primary Actor	Registered Undergraduate
Description	If some undergraduate is interested in any published opportunity, they can mark their interest as “Interest” on opportunities profiles.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Opportunities” section. 2. Get the event by using view all/ search bar/filter opportunities. 3. Select the opportunity profile. 4. Go inside the profile. 5. Select the “Interest” option.
Exceptions	-
Post-conditions	Update the database according to reaction.

Use Case ID	56
Use Case Name	Add Feedback
Primary Actor	Registered Undergraduate
Description	Undergraduates students can add their feedback on opportunities experienced they gained.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Opportunities” section. 2. Get the event by using view all/ search bar/filter opportunities. 3. Select the opportunity profile. 4. Go inside the profile. 5. Add feedback into the feedback section. 6. Select “Add feedback”.
Exceptions	-
Post-conditions	Add feedback to the feedback list.

VI. Knowledge Base

Use Case ID	57
Use Case Name	View All Materials
Primary Actor	Unregistered User / Registered User
Description	These actors can view all materials displayed under the Knowledge Base category.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Knowledge Base” section. 2. Select the “view all materials” option.
Exceptions	No materials to show.
Post-conditions	-

Use Case ID	58
Use Case Name	Search Materials / Filter Categories
Primary Actor	Unregistered User / Registered User
Description	Users can search materials using provided filtering and/or search bar options.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. These actors can find materials using filters and/or search bars. 2. Search Materials according to the data. 3. If the search query matches the data in the system, it will show them. 4. Otherwise, the system will show as “No Materials”
Exceptions	No materials to show.
Post-conditions	-

Use Case ID	59
Use Case Name	View Specific Materials
Primary Actor	Unregistered User / Registered User
Description	Users can view data in any specific materials.
Pre-conditions	-
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Knowledge Base” section. 2. Show all materials. 3. The actor selects specific material. 4. Go inside the selected material and show the content.
Exceptions	The searched/ filtered materials are not available.
Post-conditions	-

Use Case ID	60
Use Case Name	Like/ Comments
Primary Actor	Registered User
Description	The registered user can like and comment on materials.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section 2. Go to the “Knowledge Base” section. 3. Show all materials. 4. The actor selects specific materials. 5. Go inside the selected material and select the “Like/Comments” option. 6. If you like this material, press the like button and/or add a comment, then press the submit button.
Exceptions	-
Post-conditions	Update Database.

Use Case ID	61
Use Case Name	Request to Update Materials
Primary Actor	Registered Undergraduate
Description	Registered Undergraduates can request to update materials on our site.
Pre-conditions	Login with the website
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “My Profile” section. 2. Select “Knowledge Base” under my profile section. 3. The system will show all the materials added by the user. 4. Users select the materials. 5. Show materials request form with already existing data. 6. System request to fill data in relevant fields. 7. Update the data in the fields. 8. Select the “Update Materials” option.
Exceptions	Mandatory fields are not filled properly
Post-conditions	Update data of the materials in the database.

Use Case ID	62
Use Case Name	Request to Delete Materials.
Primary Actor	Registered Undergraduate.
Description	Registered Undergraduates can request to delete materials in our system.
Pre-conditions	Login with the website
Primary Flow	<ol style="list-style-type: none"> 1. Go to “My Profile” 2. Select the “Knowledge Base” under my profile section. 3. The system will show all the materials added by the user. 4. Users select the materials. 5. Select the delete material option.
Exceptions	-
Post-conditions	Update the Knowledge Base database.

Use Case ID	63
Use Case Name	Add New Materials
Primary Actor	Registered User
Description	Registered users can request to add new materials to our system.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “knowledge base” section. 2. Select “Add new materials”. 3. Add data into the required fields in the form. 4. Select “Send Request”.
Exceptions	The required fields of the requesting form are not filled properly.
Post-conditions	Add a request to the website admin.

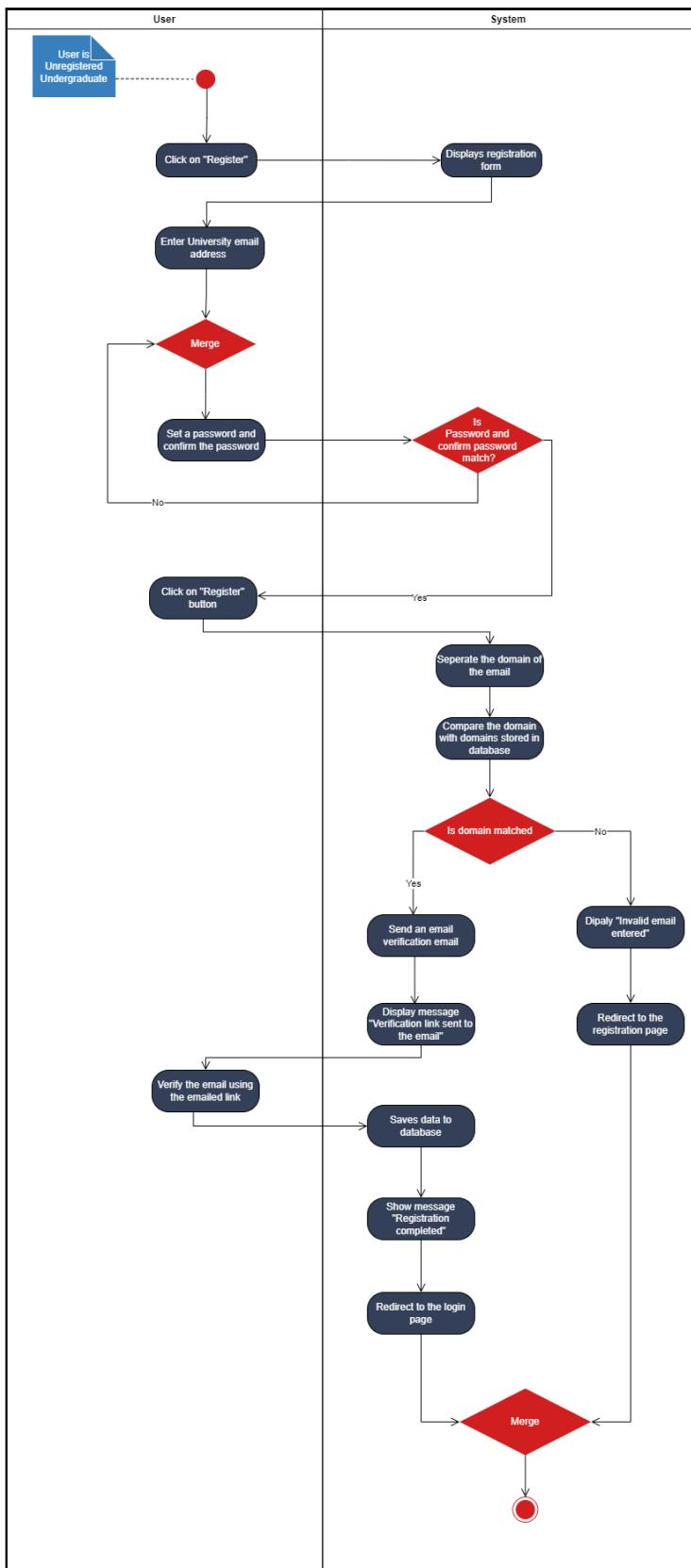
Use Case ID	64
Use Case Name	Report Materials
Primary Actor	Registered User
Description	If there is any problem or misleading information with a material, registered users can report that material.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “Knowledge Base” section. 2. Get materials from view All / Search or filtering options. 3. Go inside the material. 4. Select the “Report Material” option. 5. Fill in the required fields that are needed to submit a report. 6. Submit the report.
Exceptions	-
Post-conditions	Send the report to the website admin.

Use Case ID	65
Use Case Name	Review Reports
Primary Actor	Website admin
Description	Website administrator can view all reports and get suitable action for them.
Pre-conditions	Login with the website.
Primary Flow	<ol style="list-style-type: none"> 1. Go to the “ My Profile” section. 2. Go to the “ Reports” section. 3. Select the reports. 4. Manually review the report. 5. Fill the field, “ Action”. 6. Select “ Send Report ” or “ Close”.
Exceptions	-
Post-conditions	If the admin selects “ Send Reports”, the system should send a report>Email to the user who requested that report. Redirect to the “Reports” section.

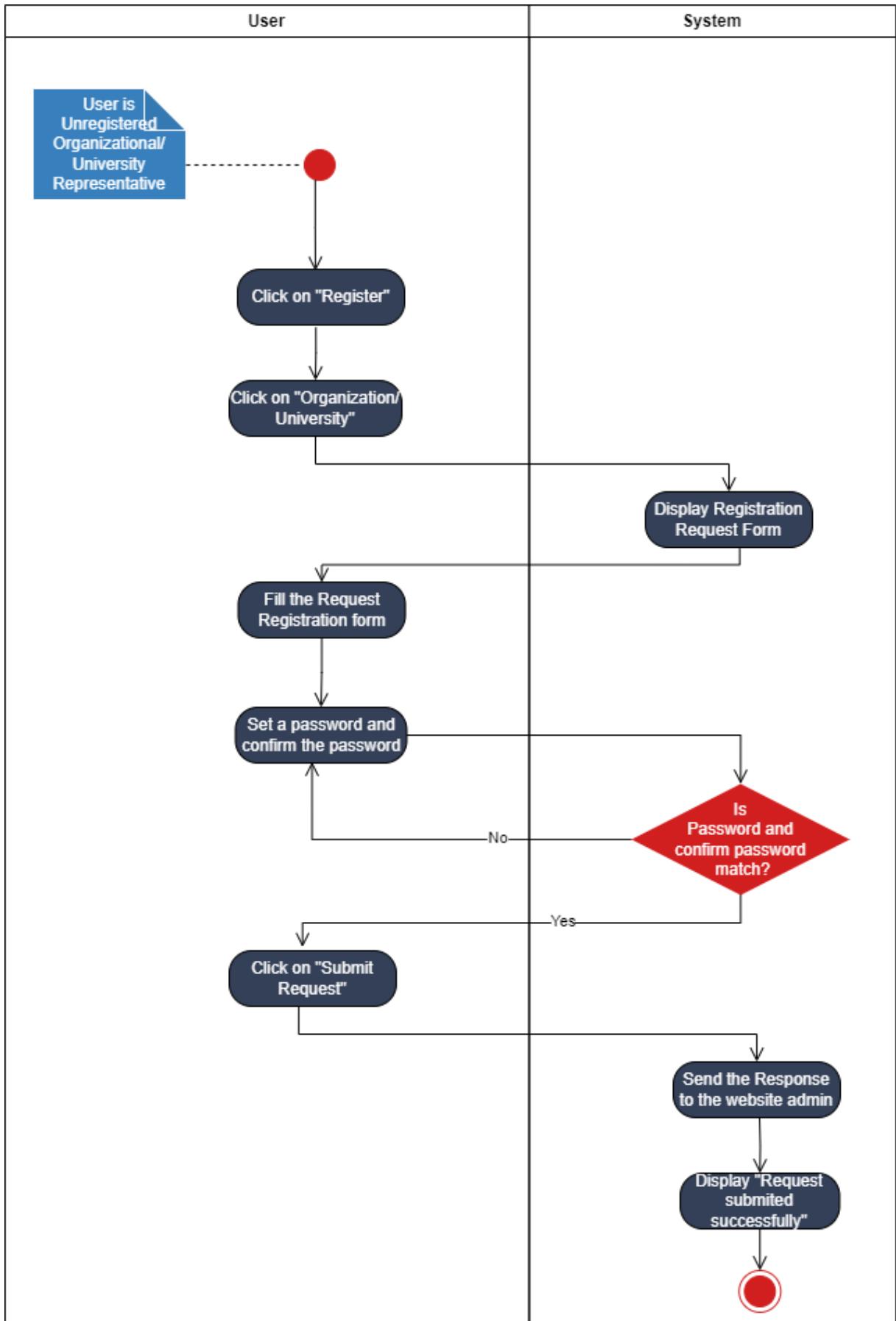
8.1.5 Activity Diagrams

I. Sign Up and Sign In

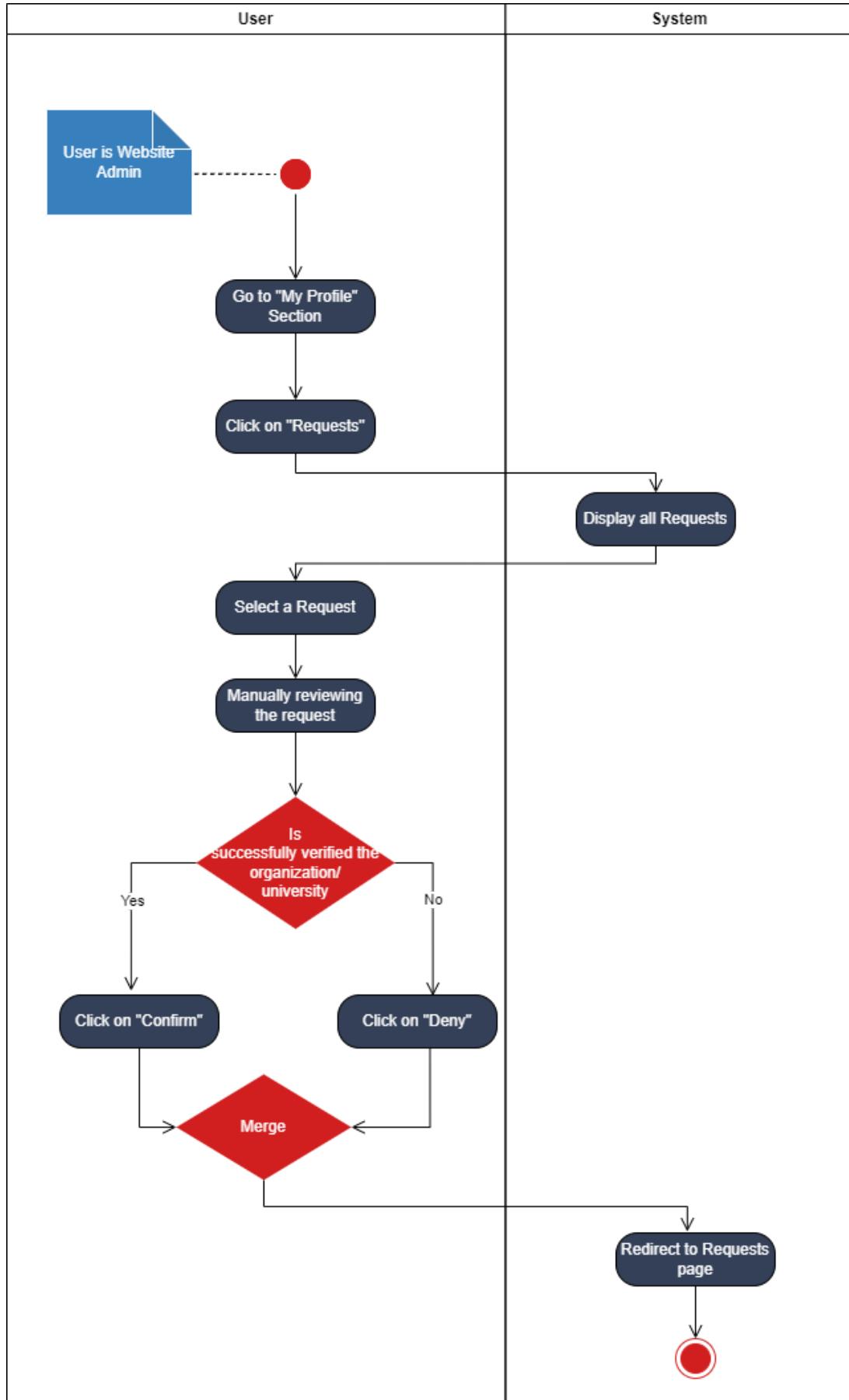
Register



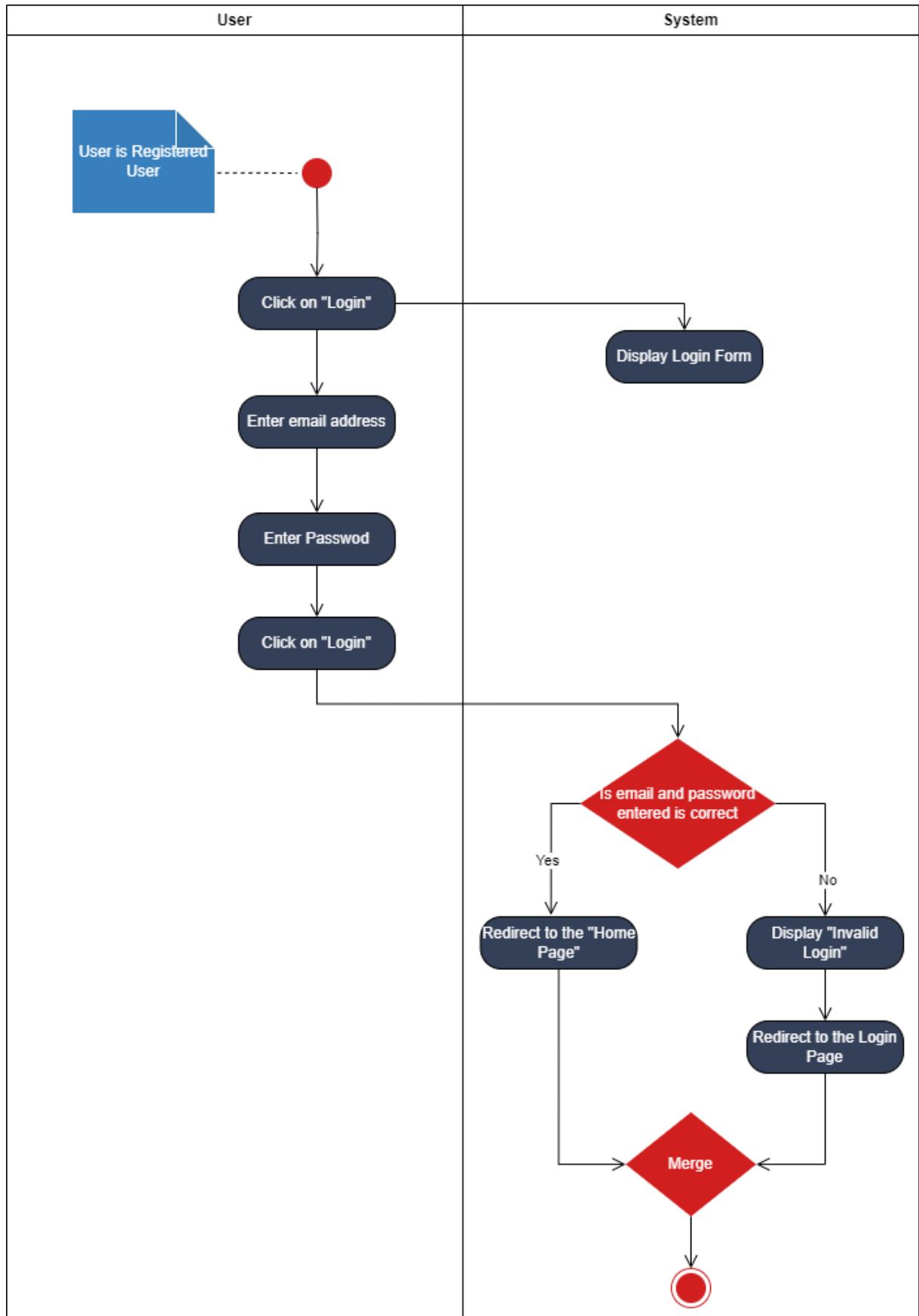
Request for Registration



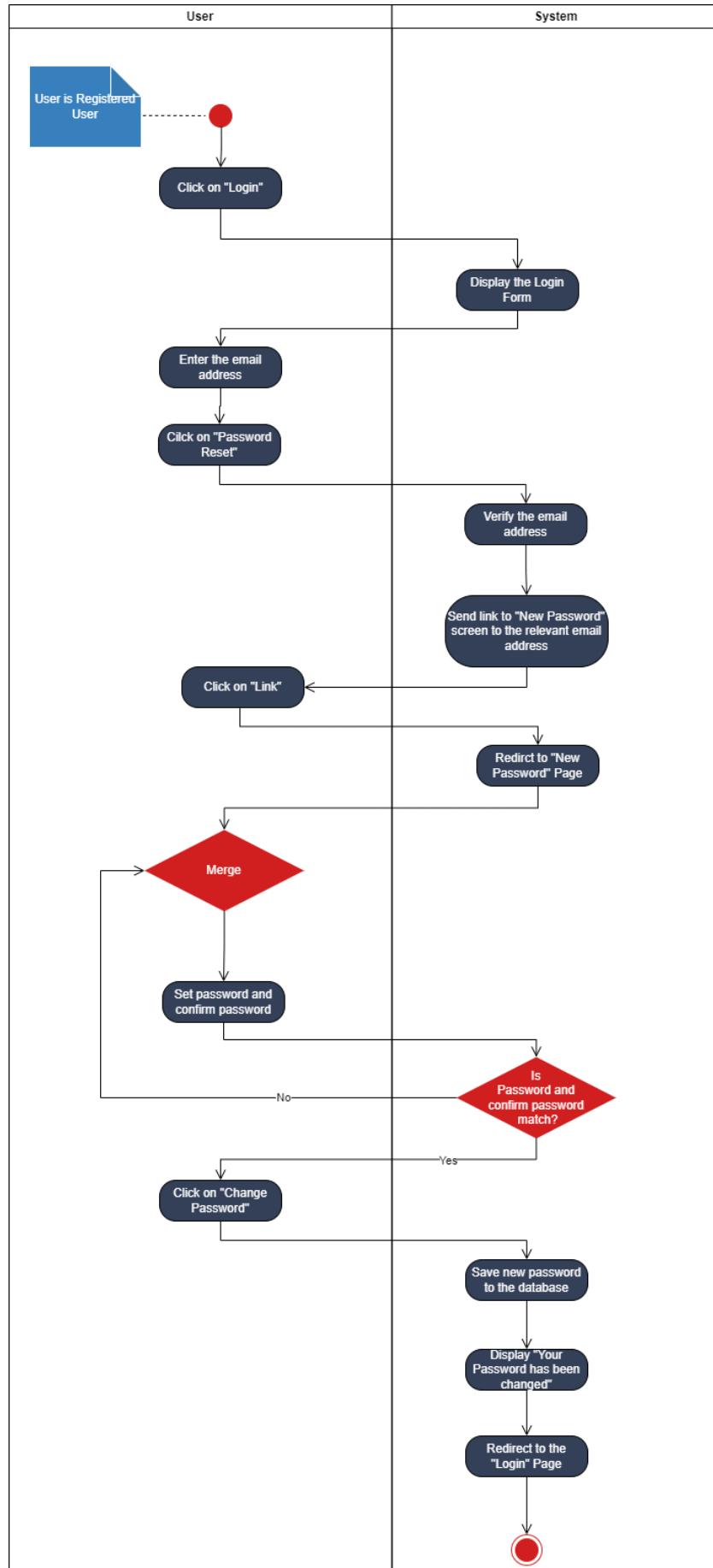
Confirm Registration Request

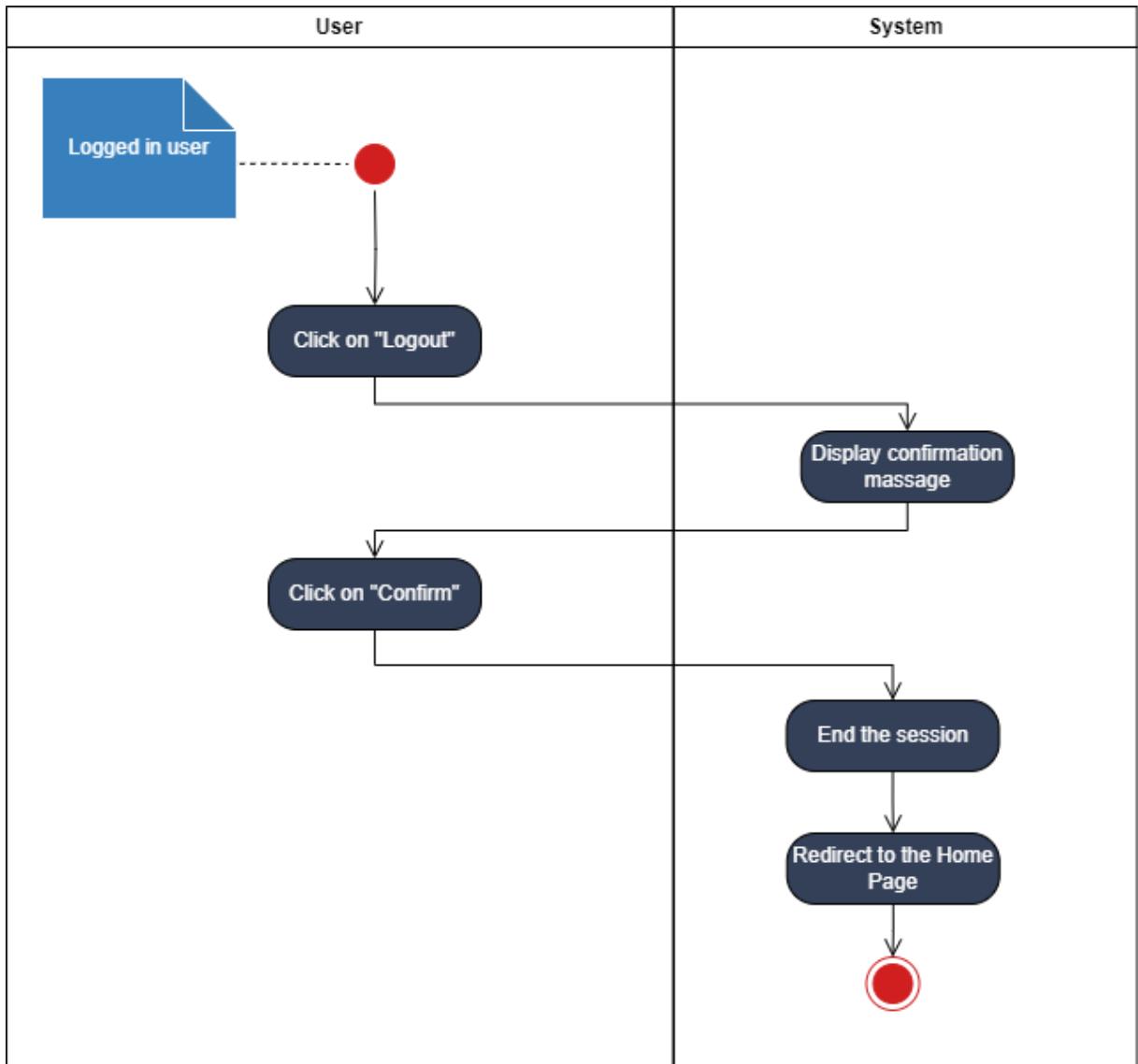


Login



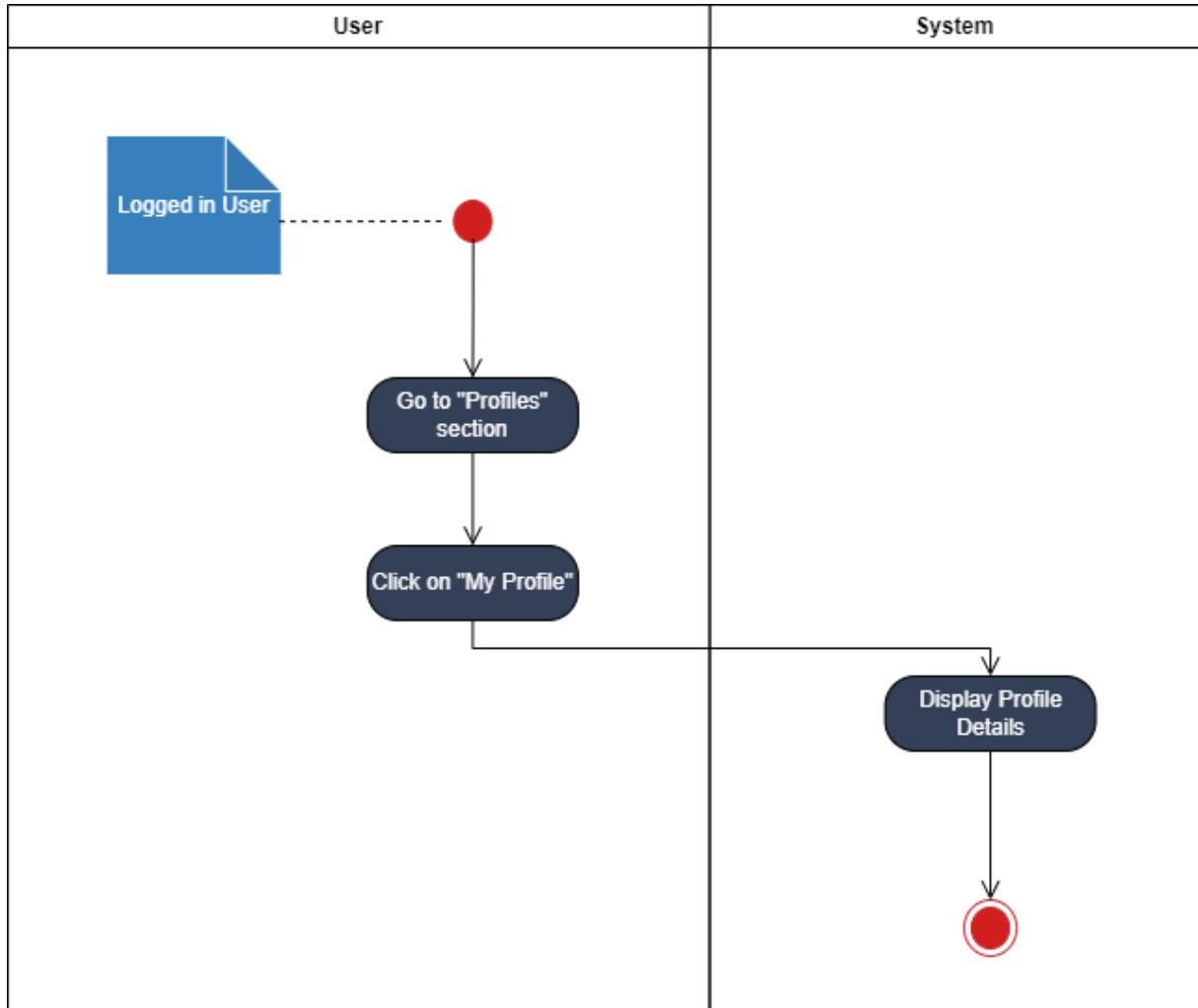
Password Reset

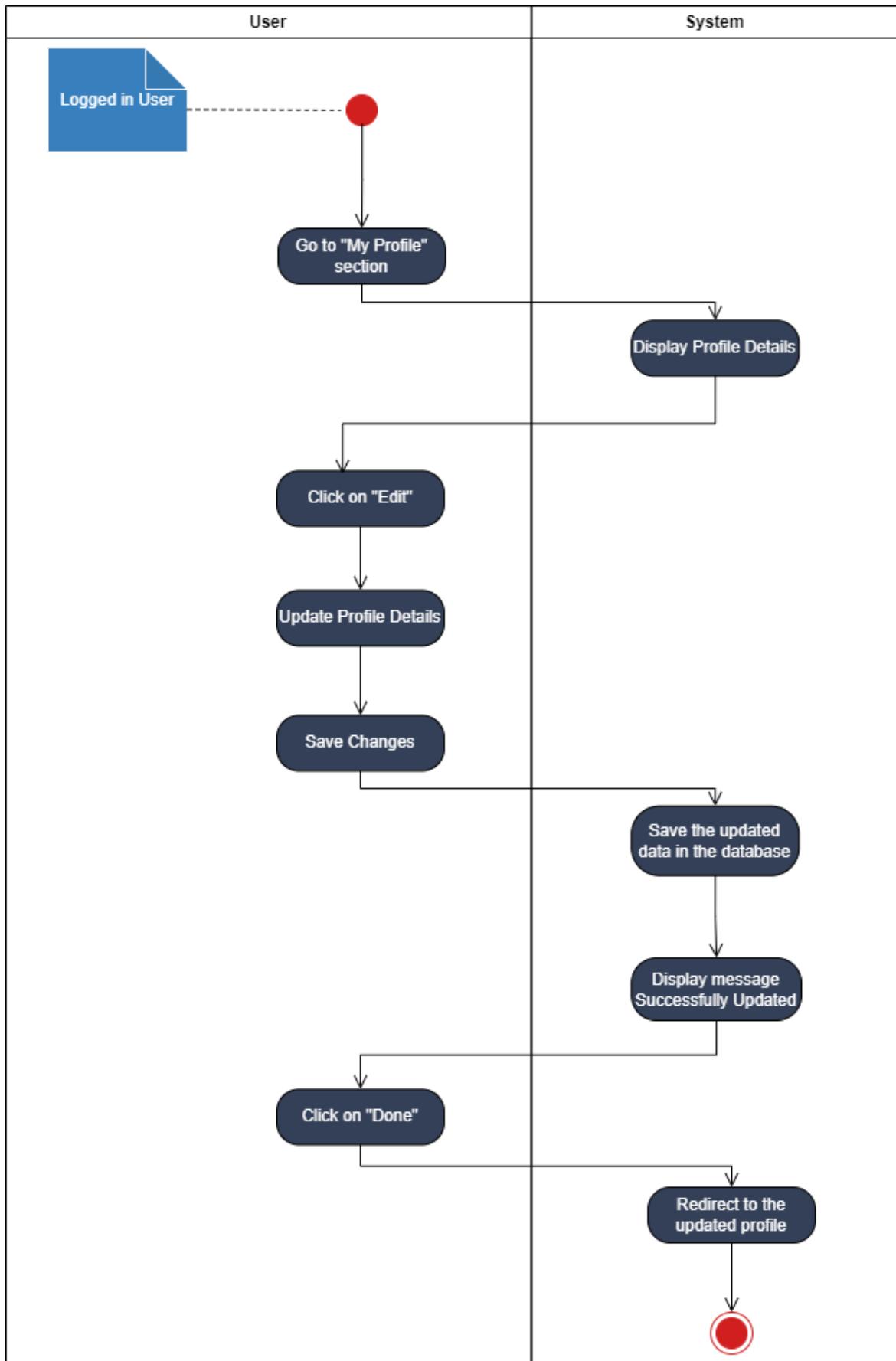


Logout

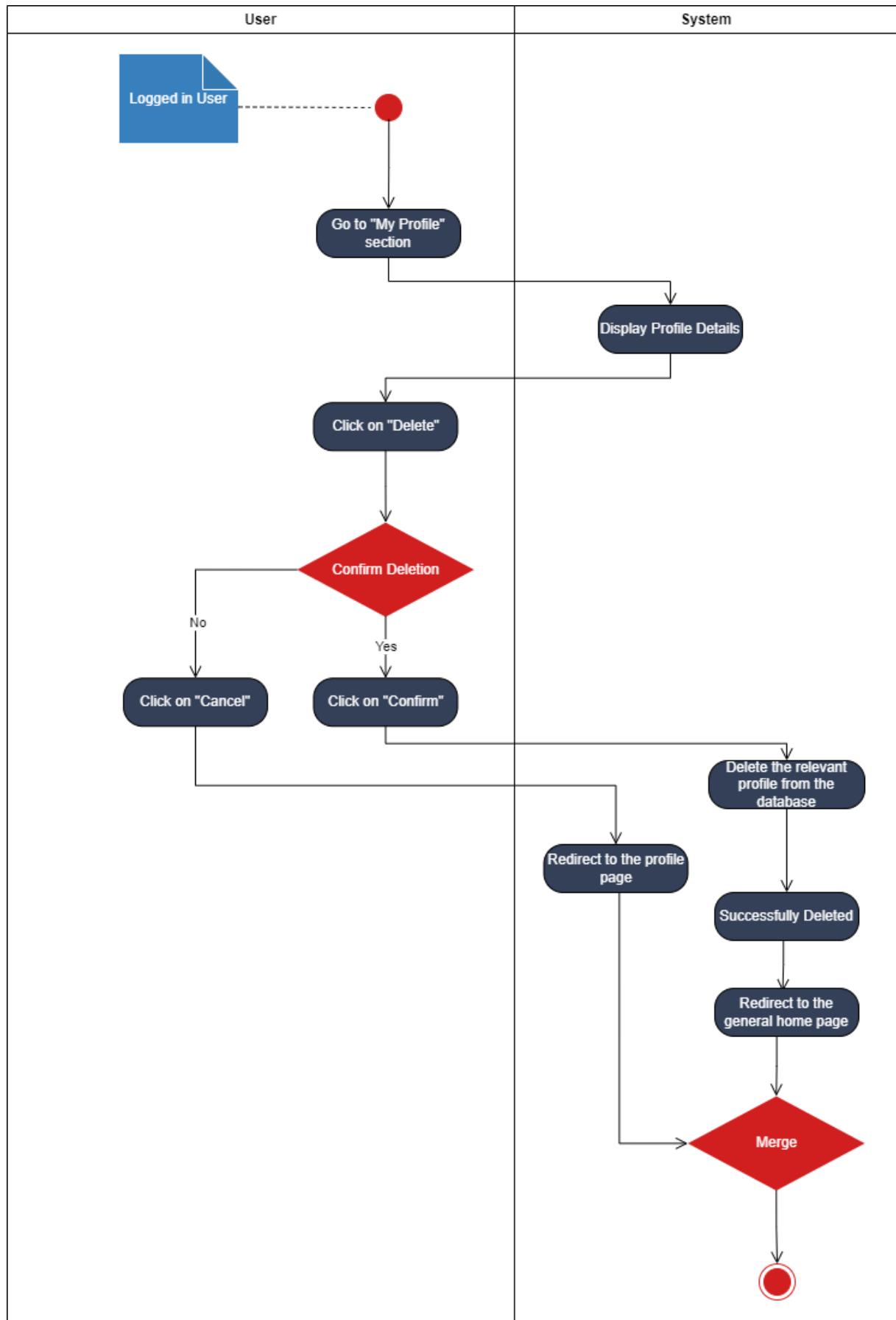
II. User Profiles

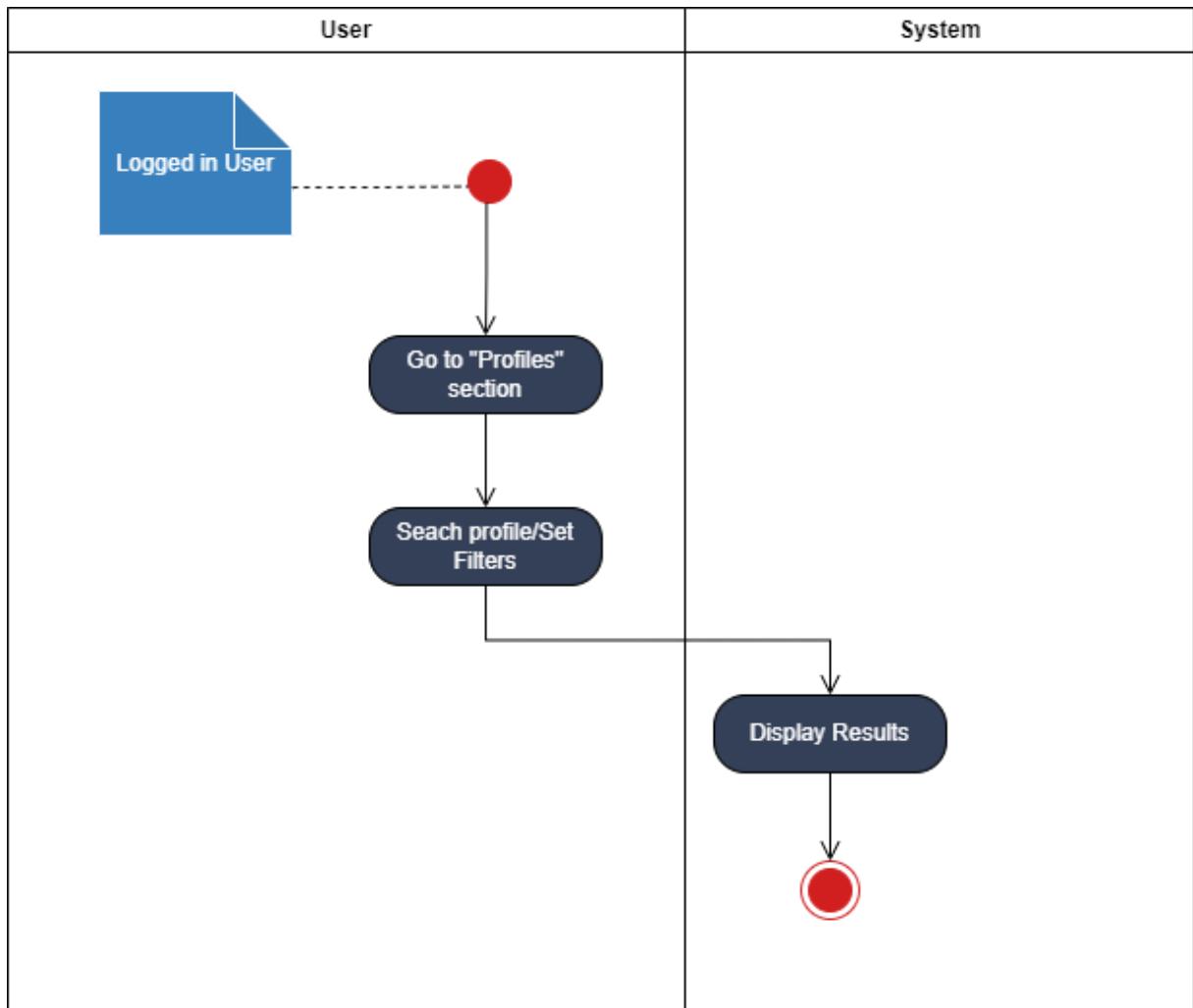
View Own Profile

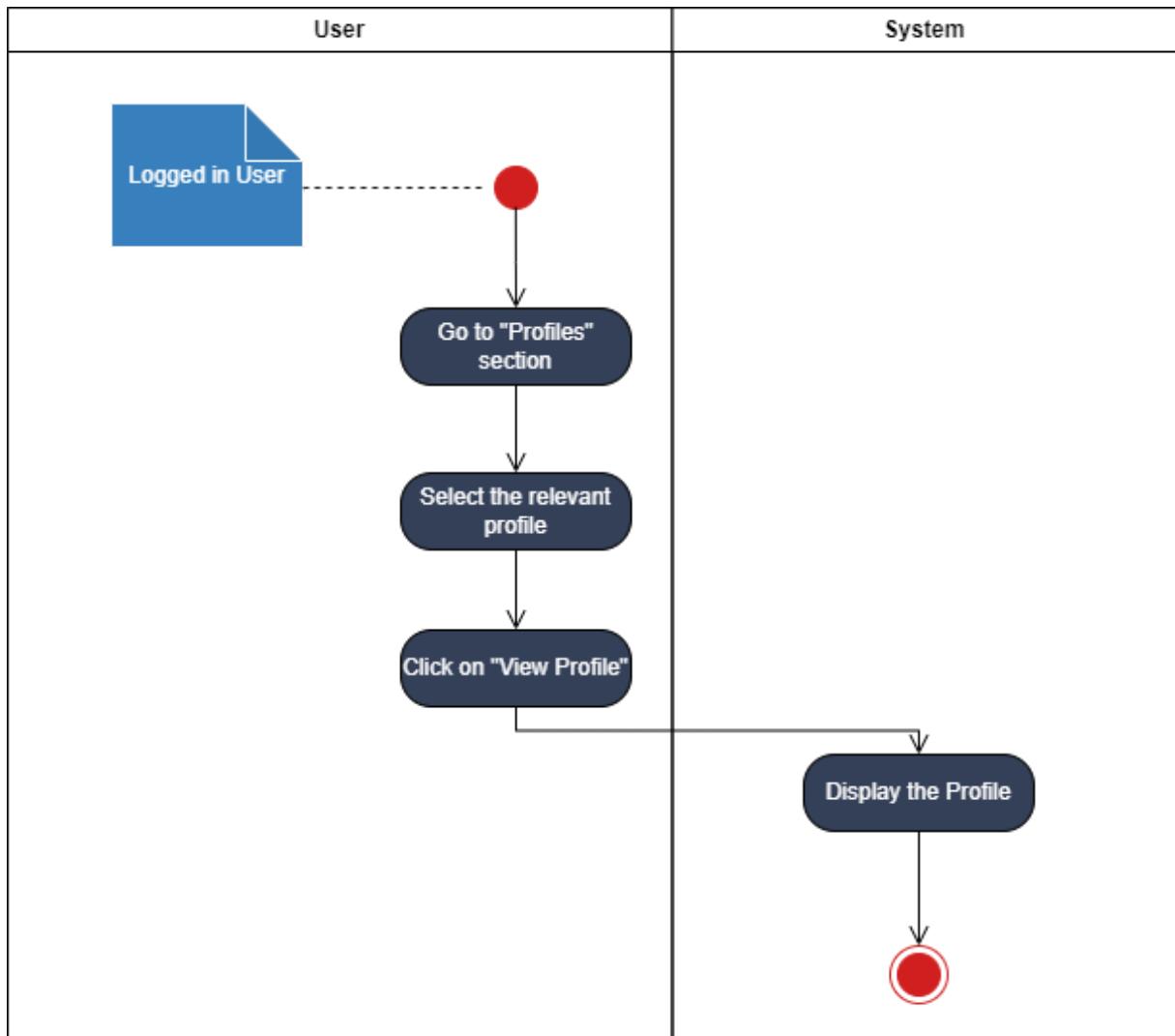


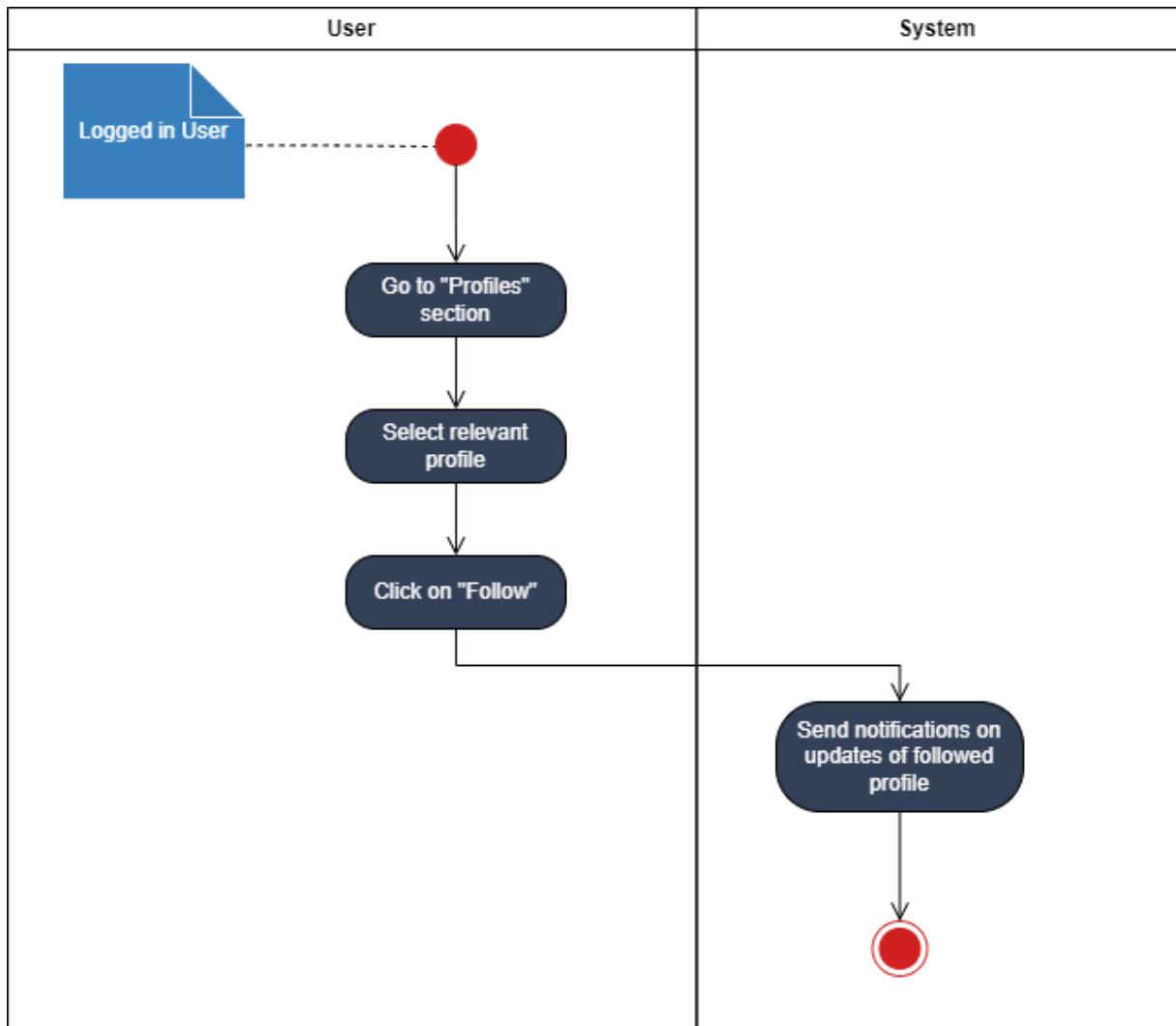
Update Profile

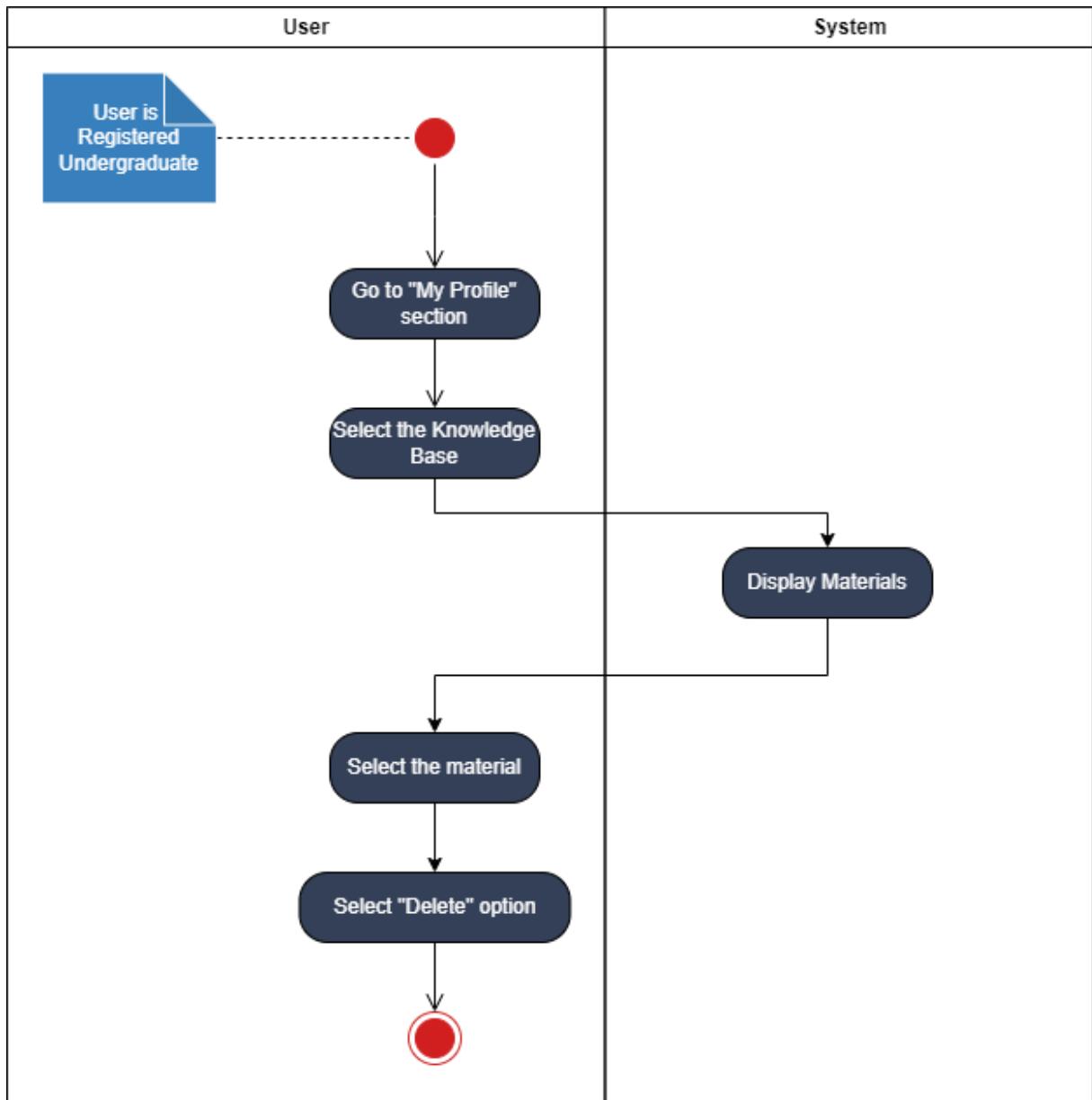
Delete Profile

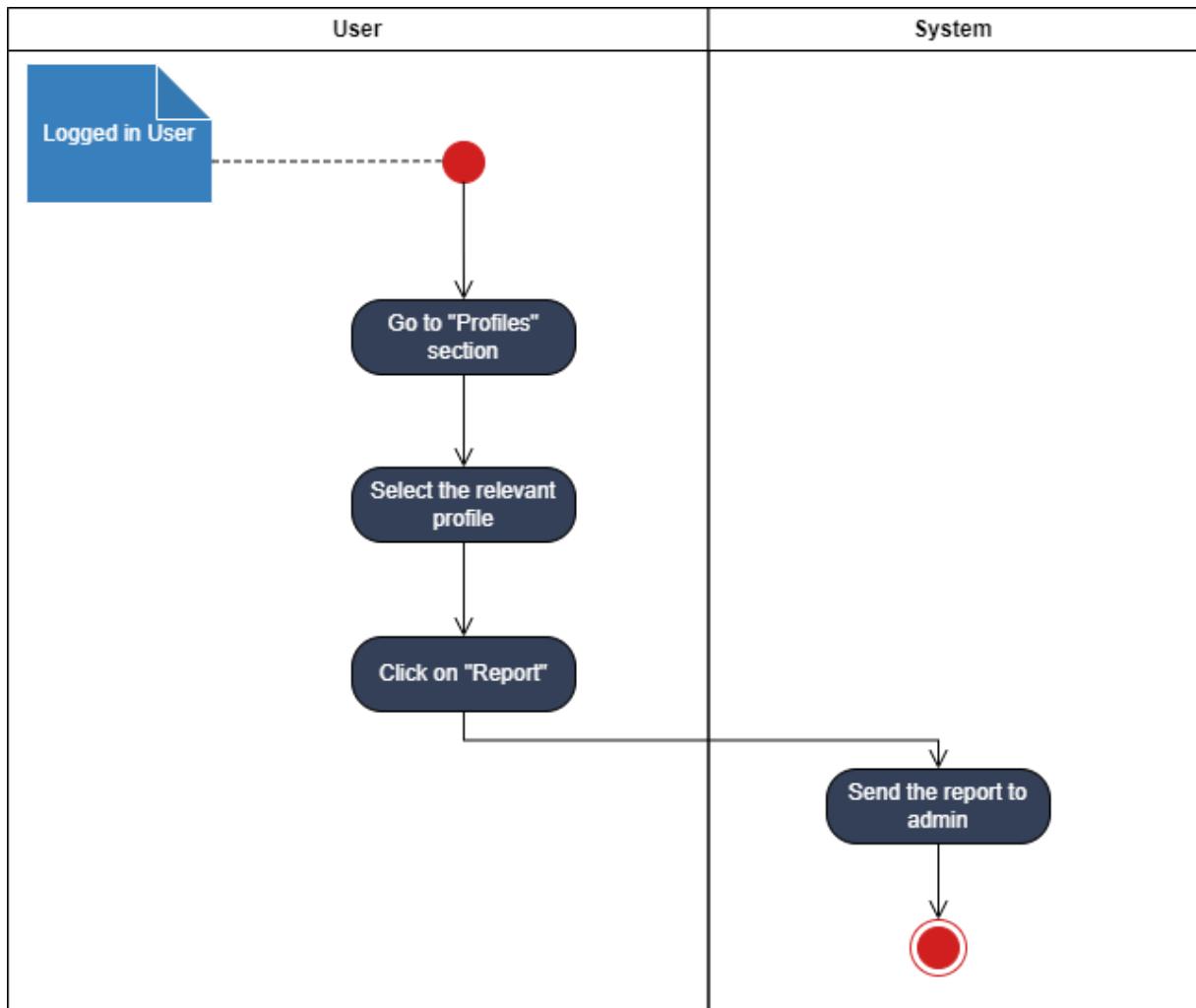


Search/Filter Profiles

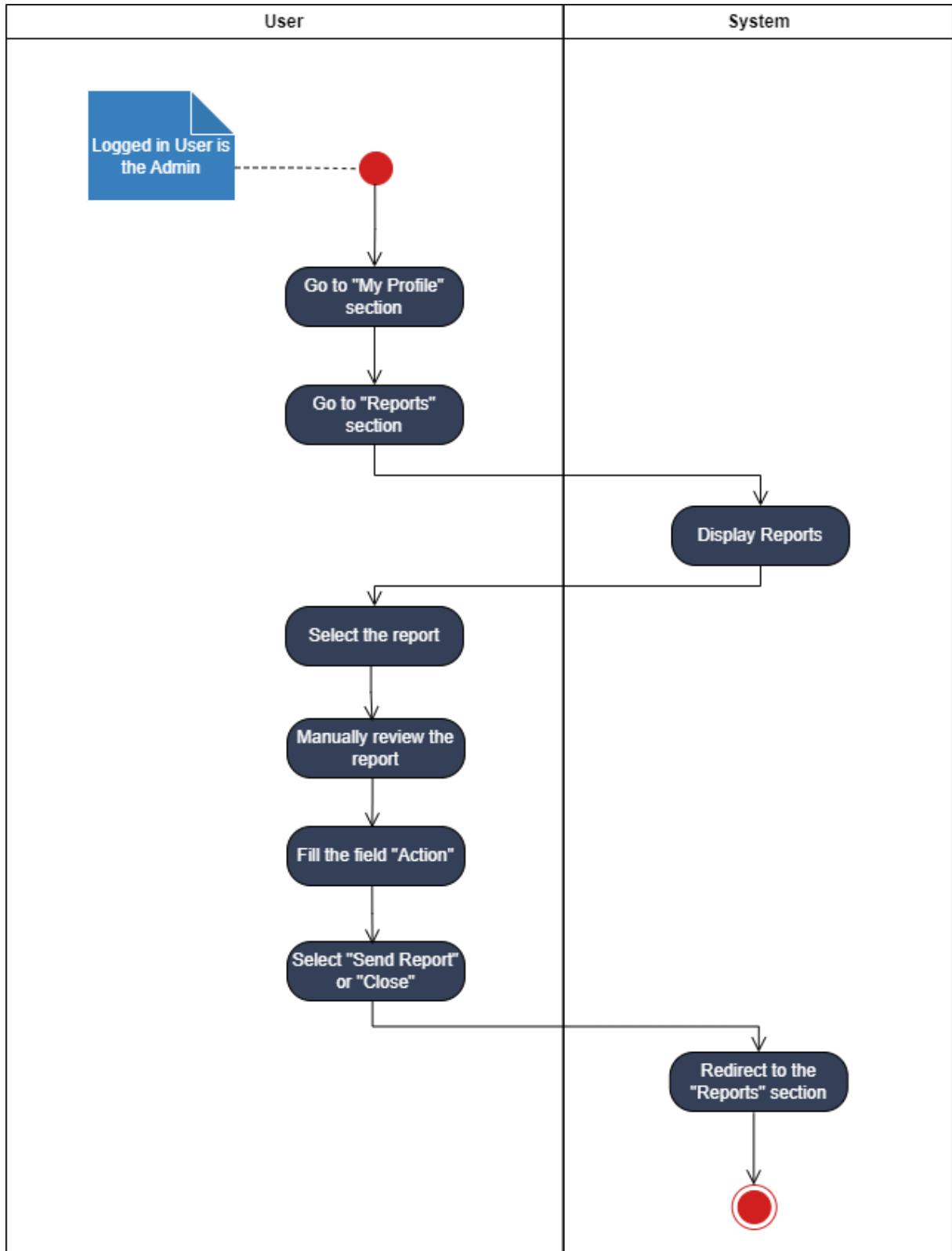
View Others' Profiles

Follow Profile

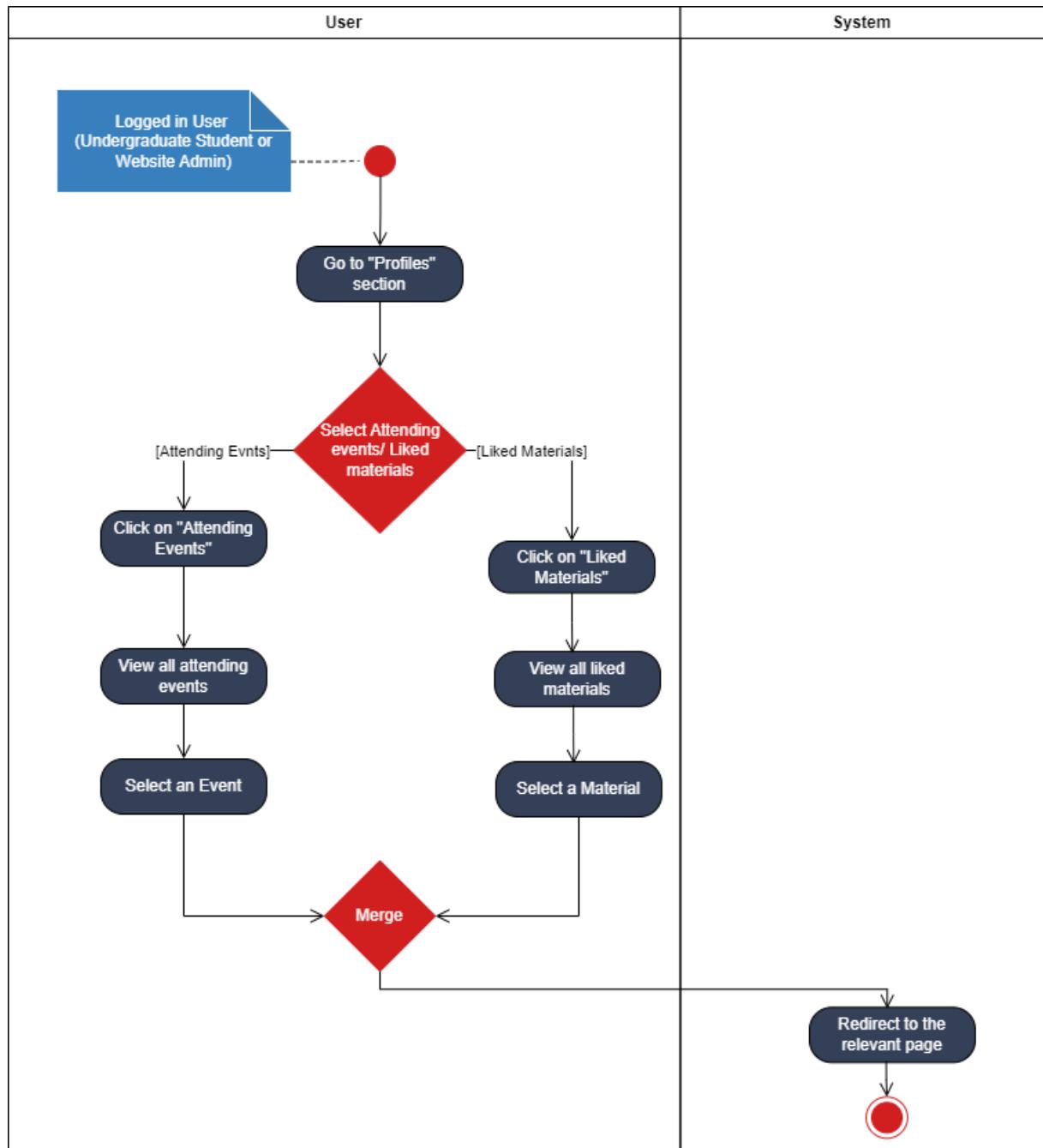
Delete Materials

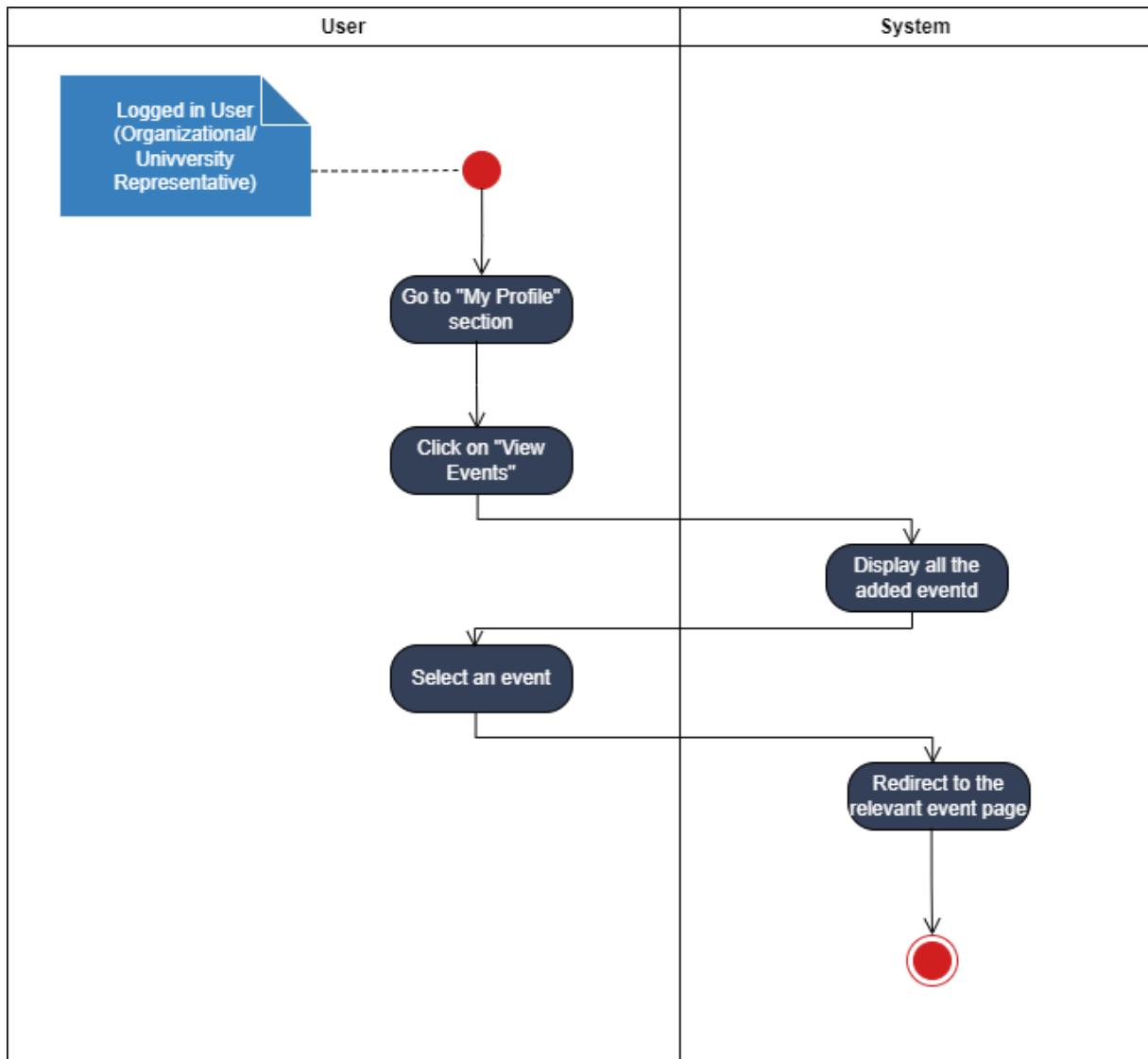
Report

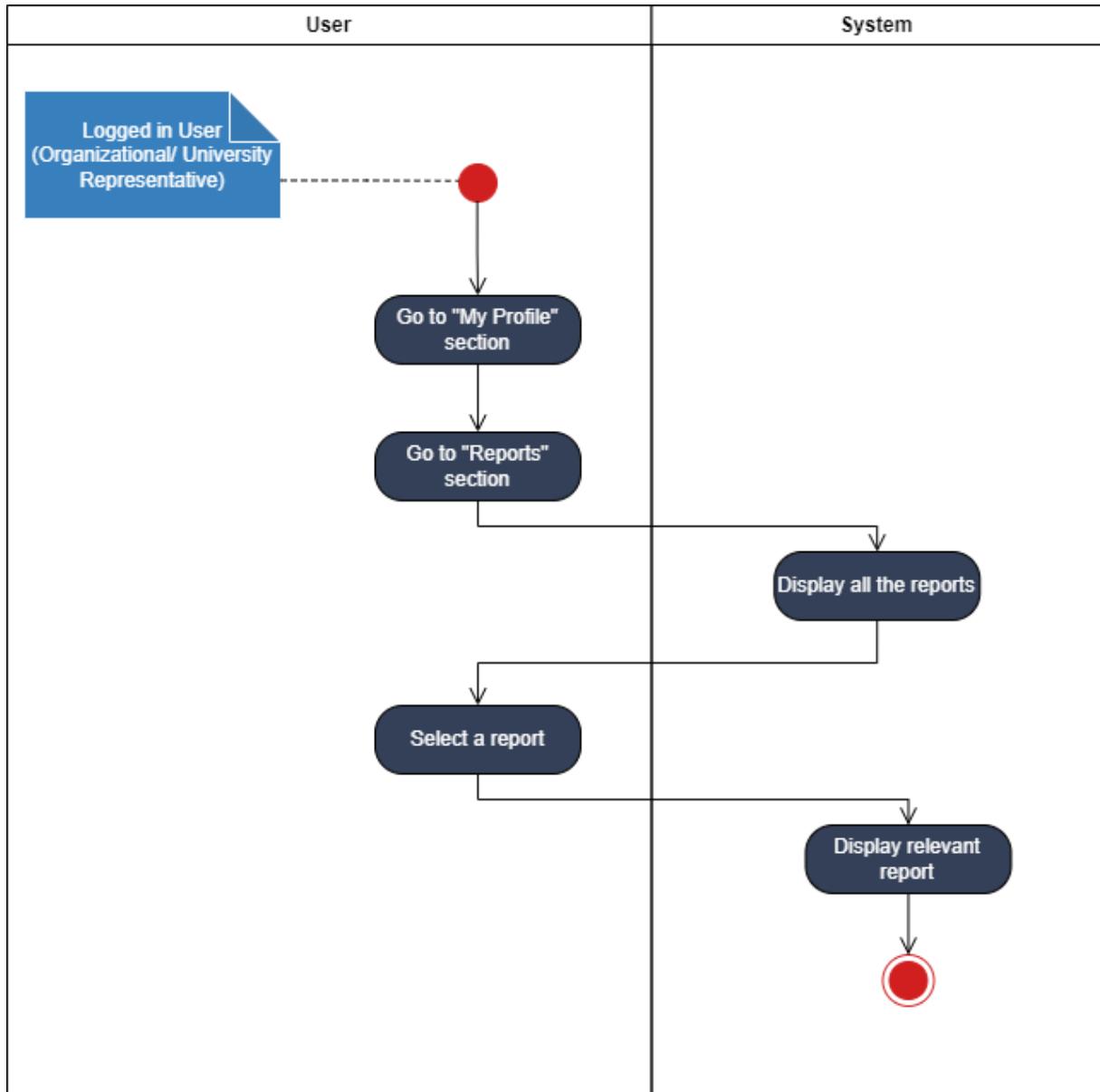
Review Report



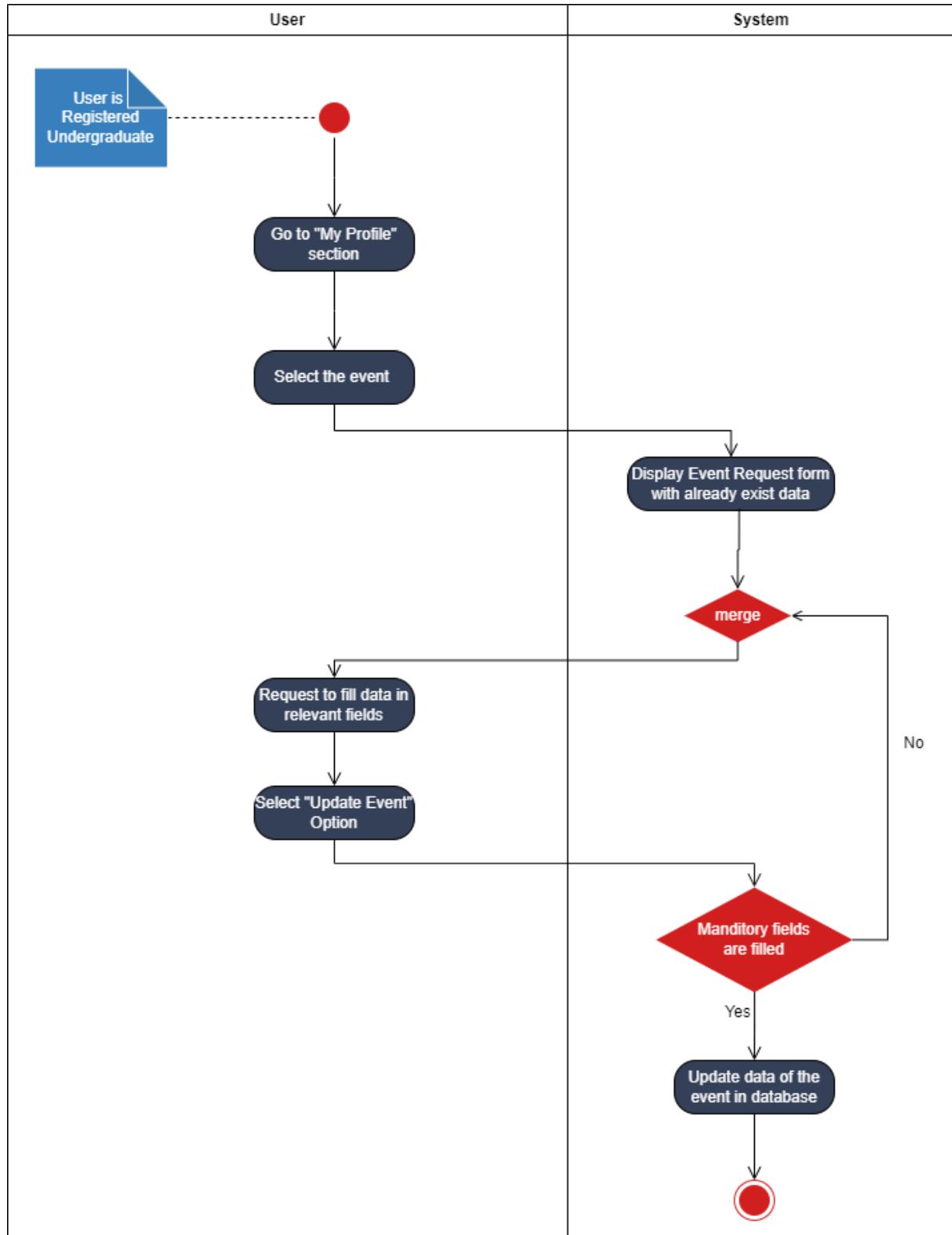
View attending events/ View liked materials

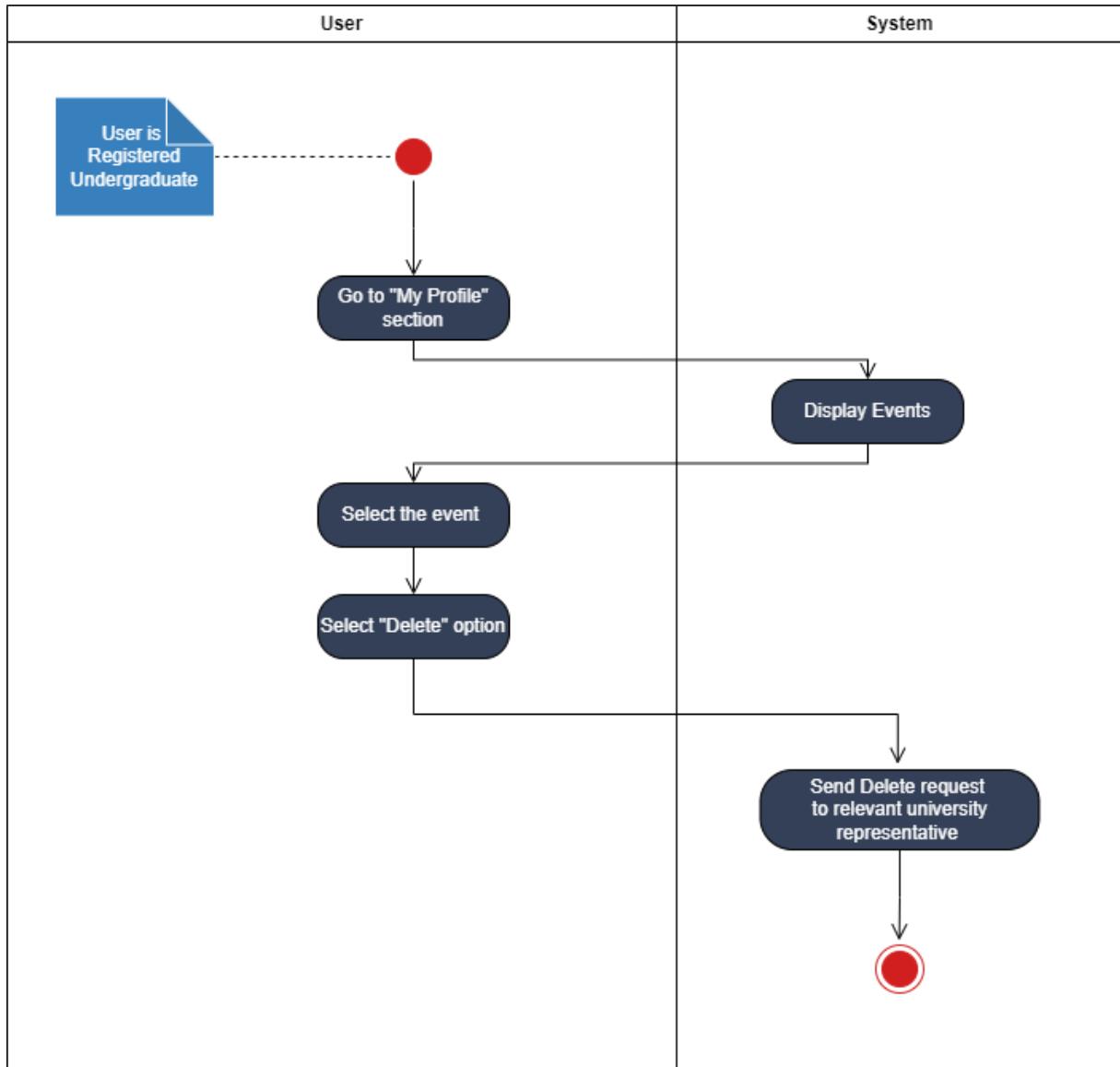


View organizational/university Events

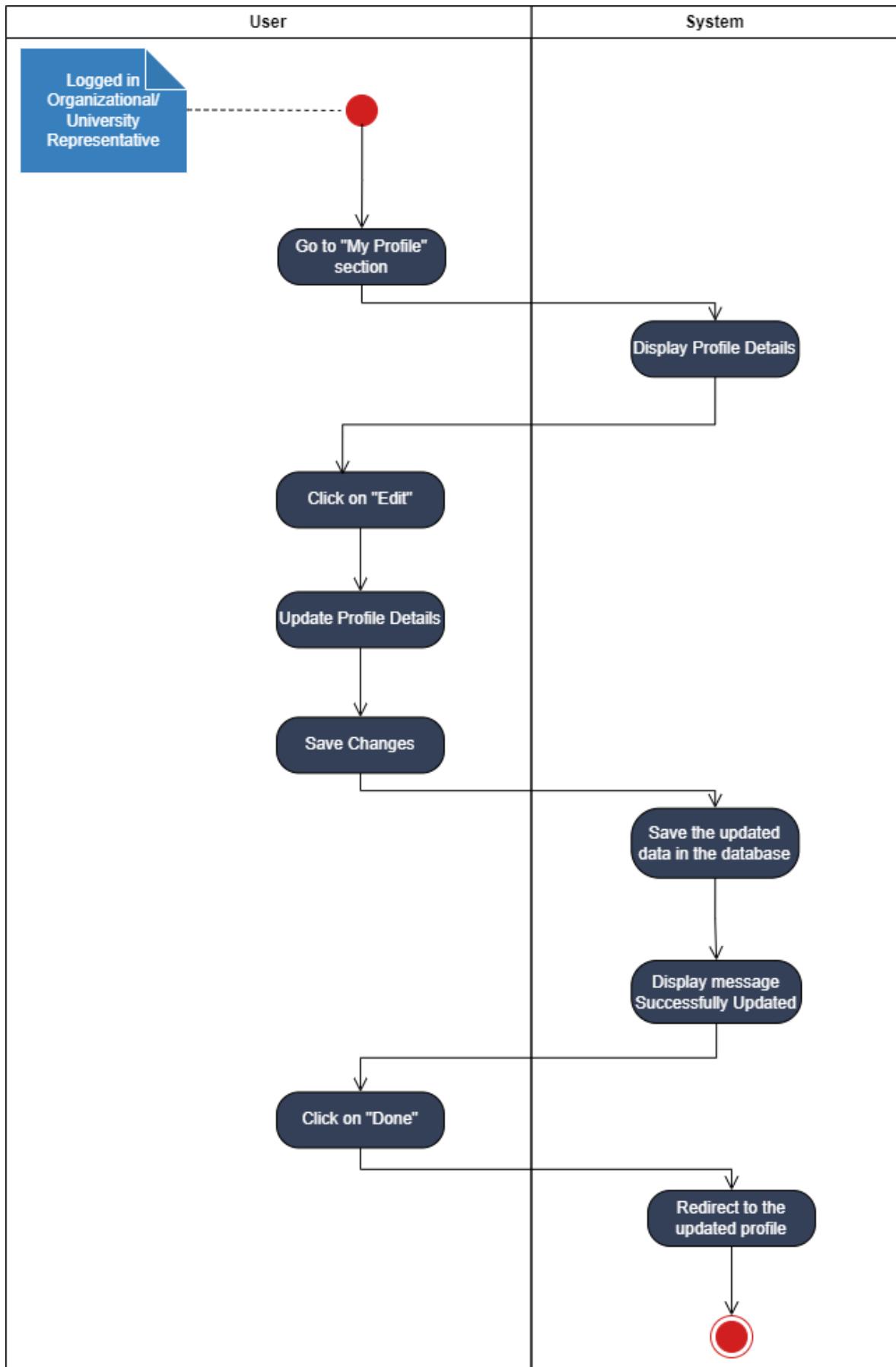
Show Reports

Request to update an event

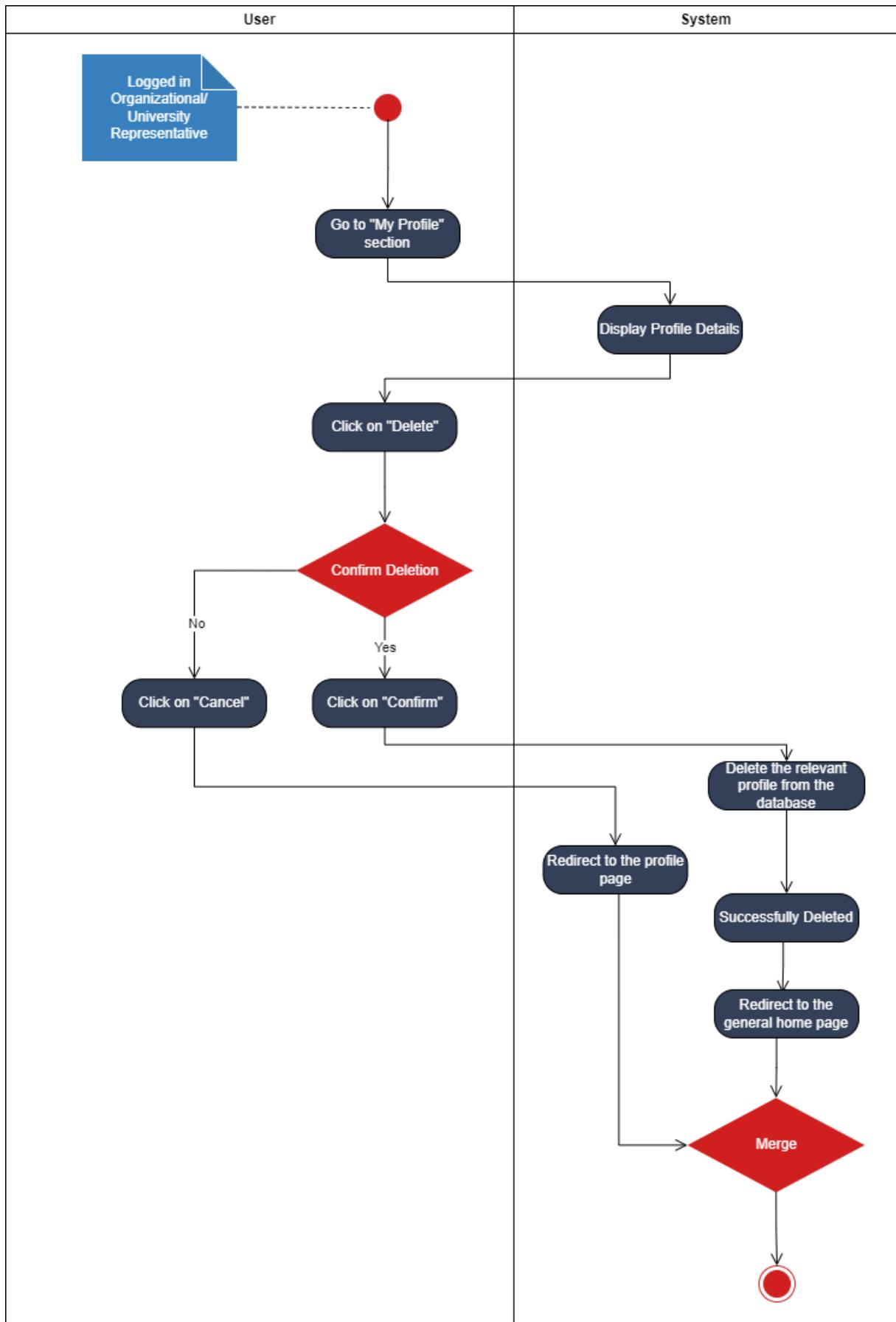


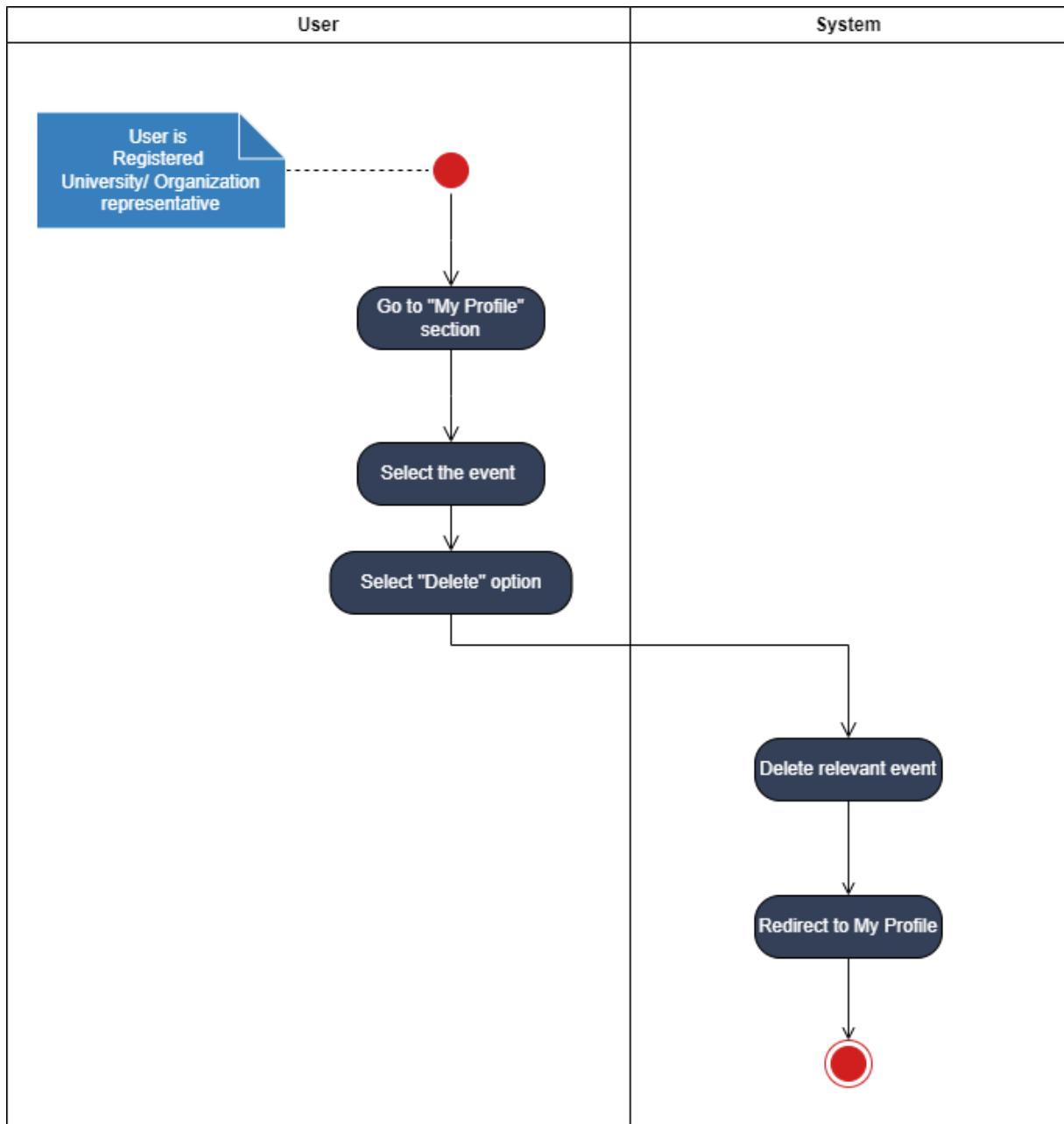
Request to delete event

Update Organization

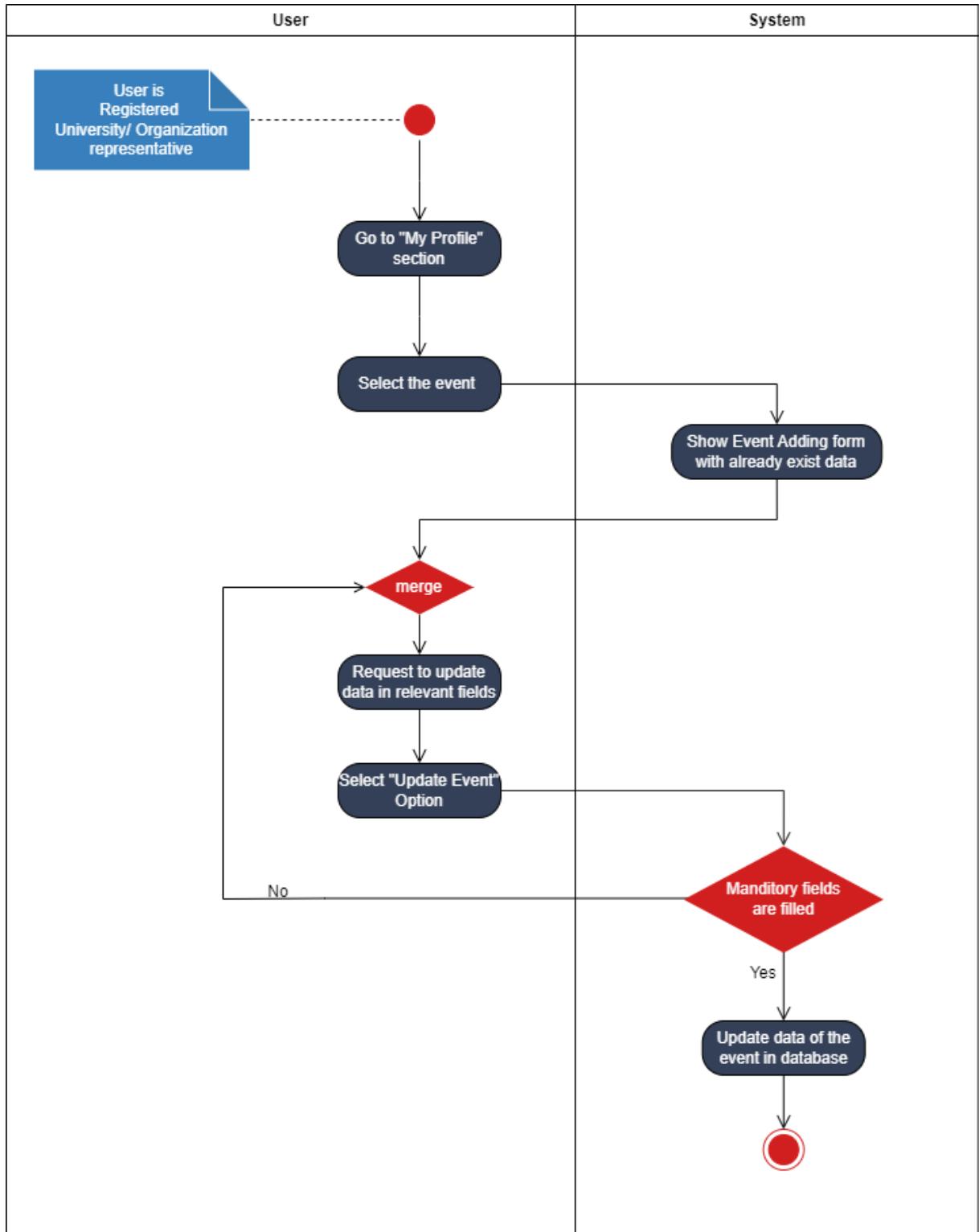


Delete Organization



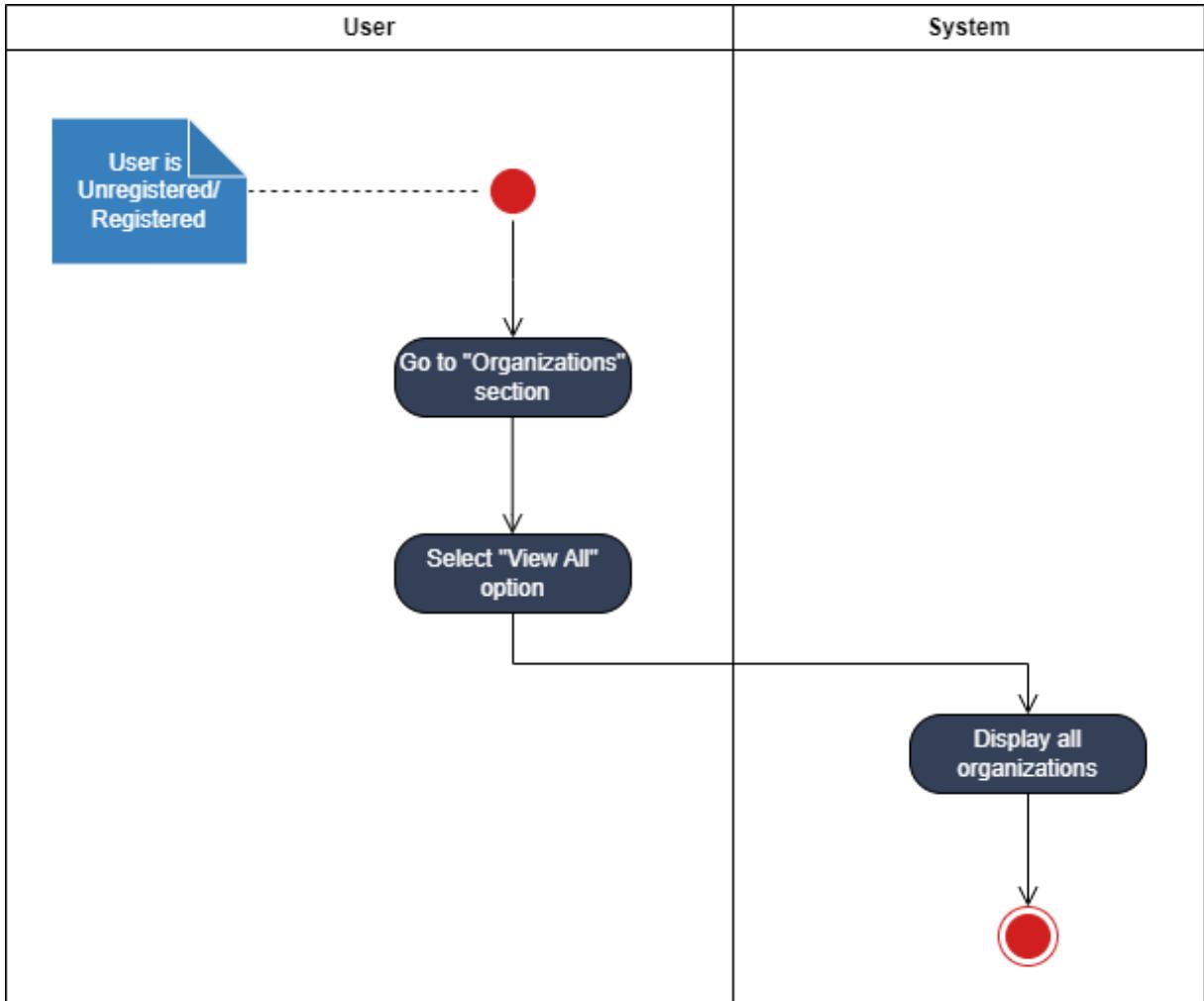
Delete Event

Update Event

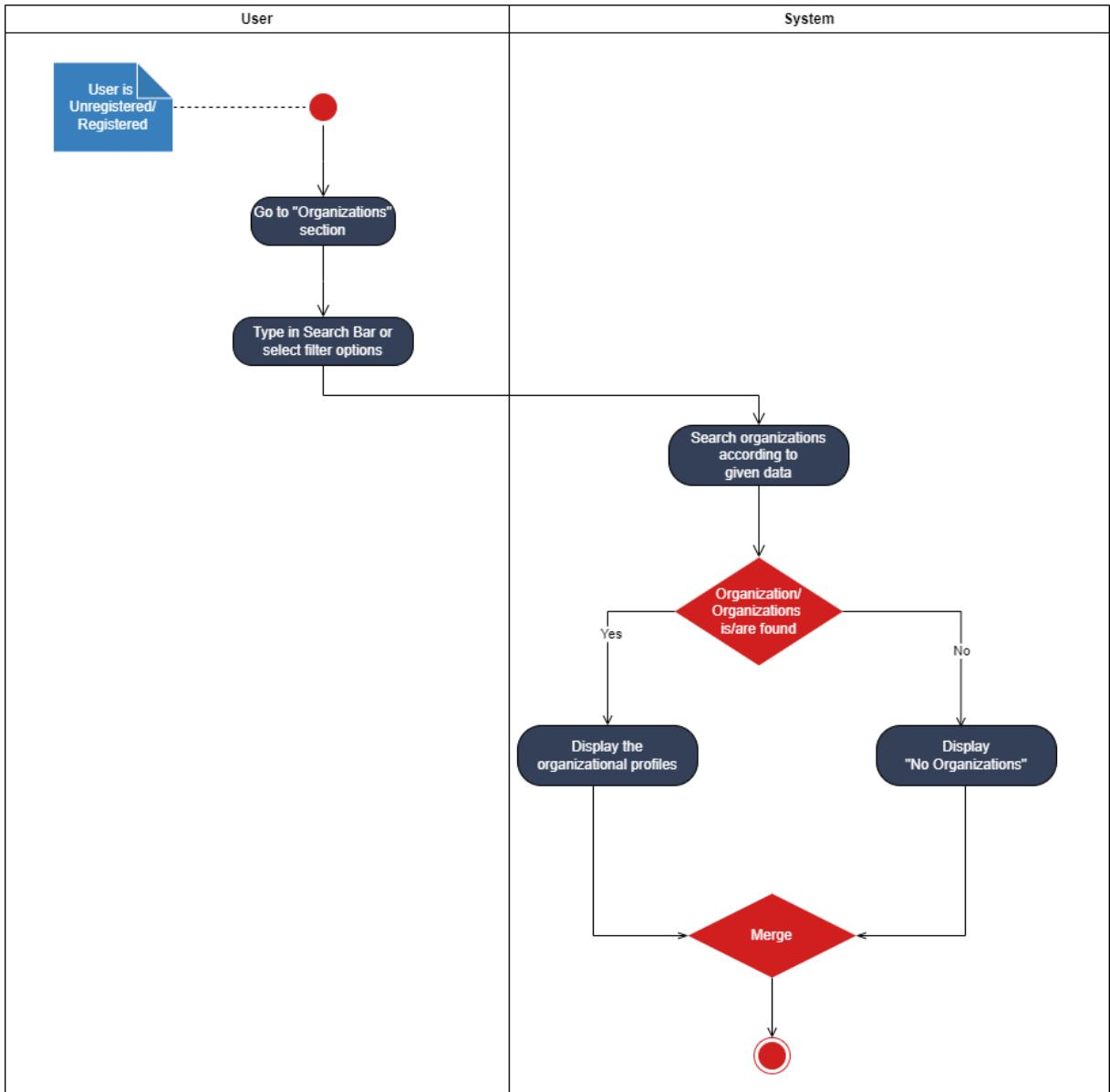


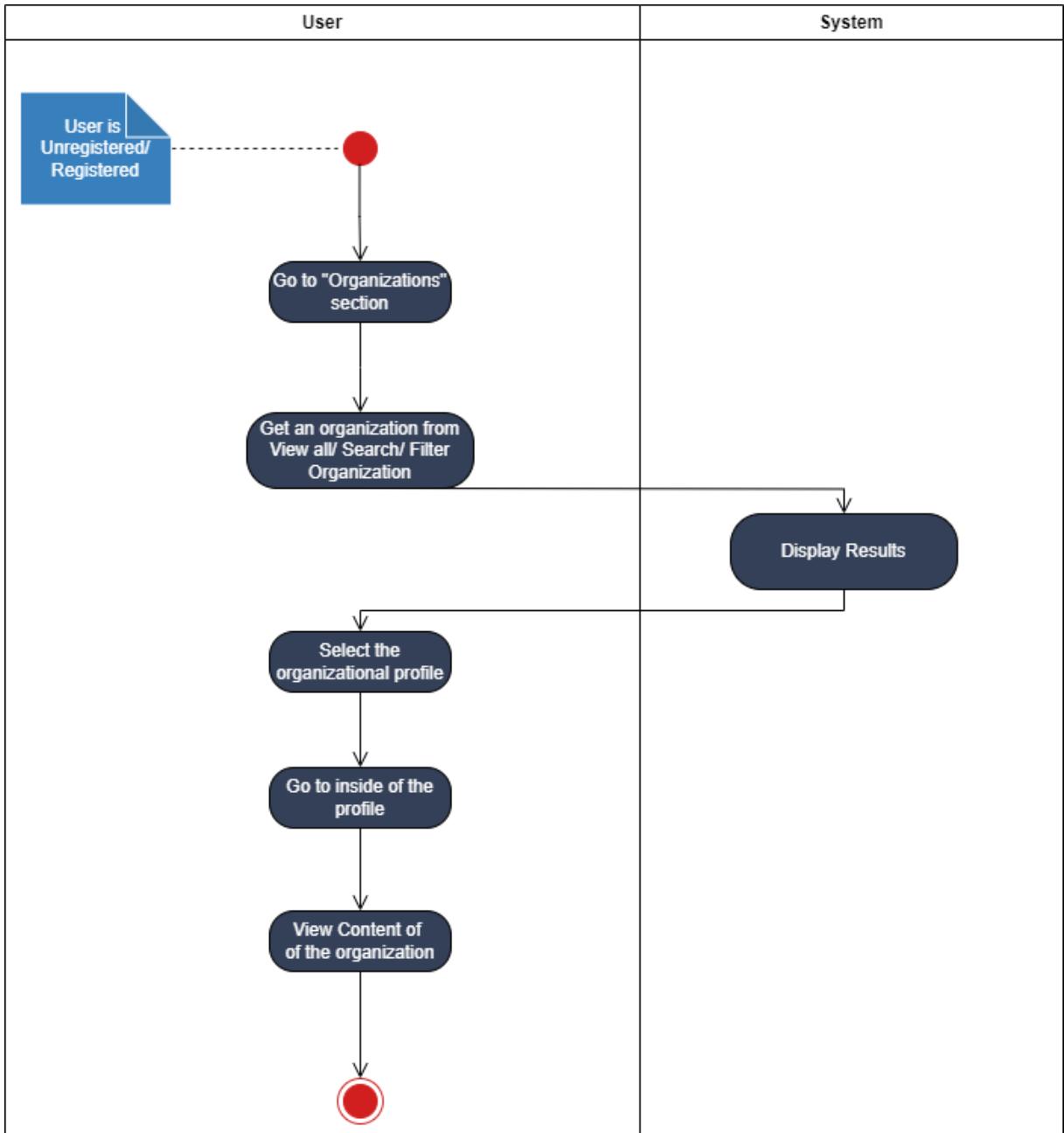
III. Organizations

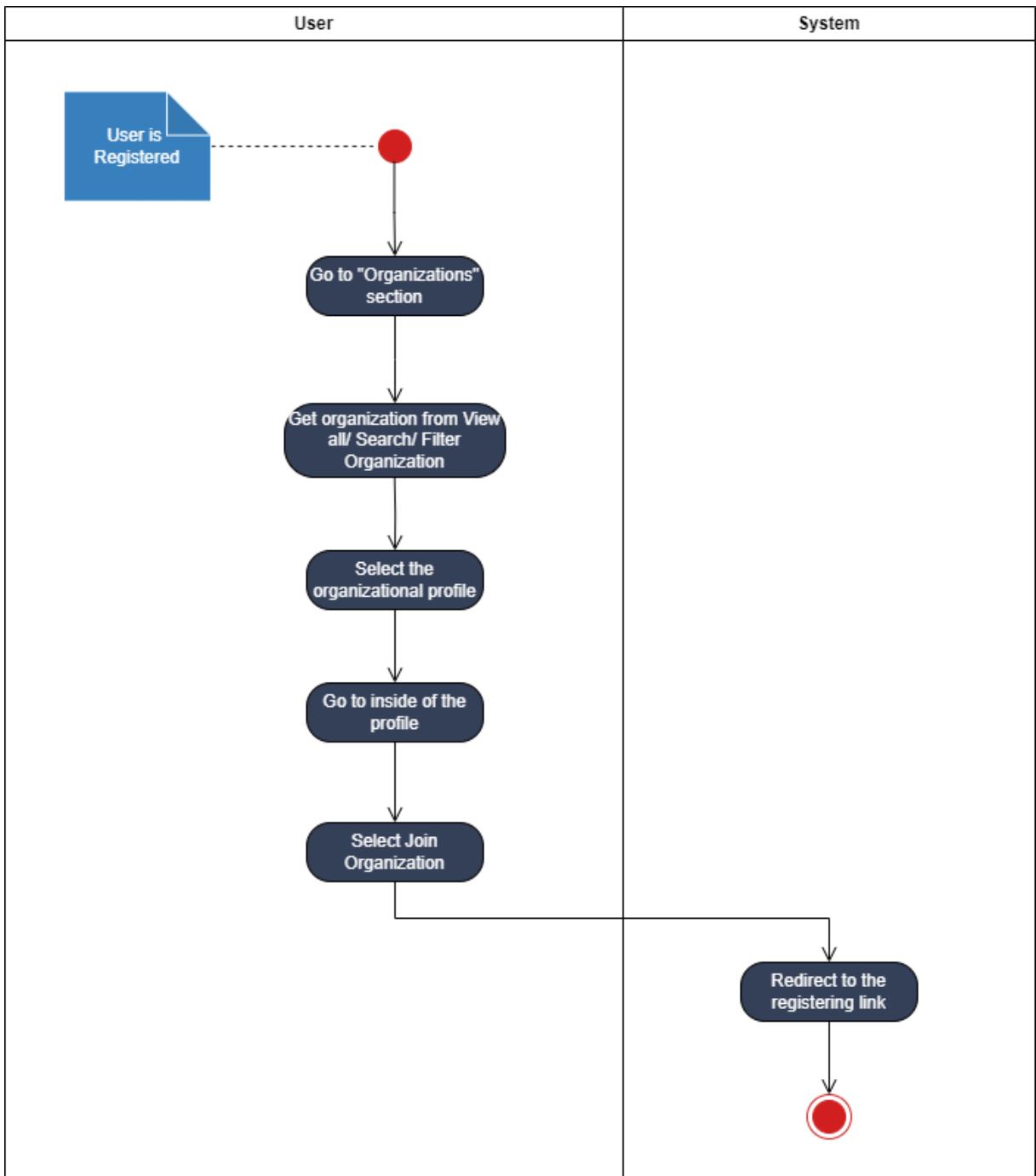
[View All Organizations](#)

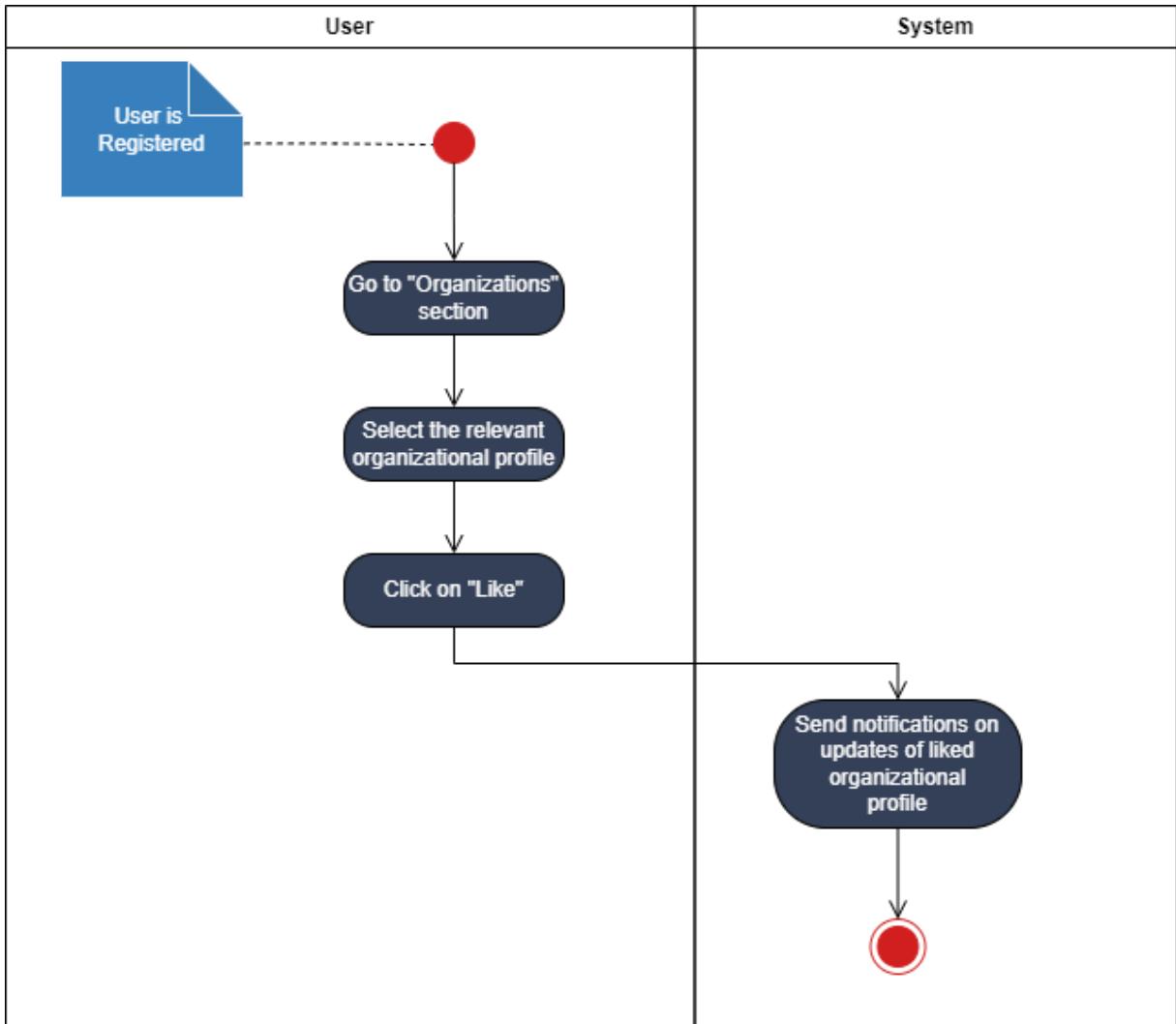


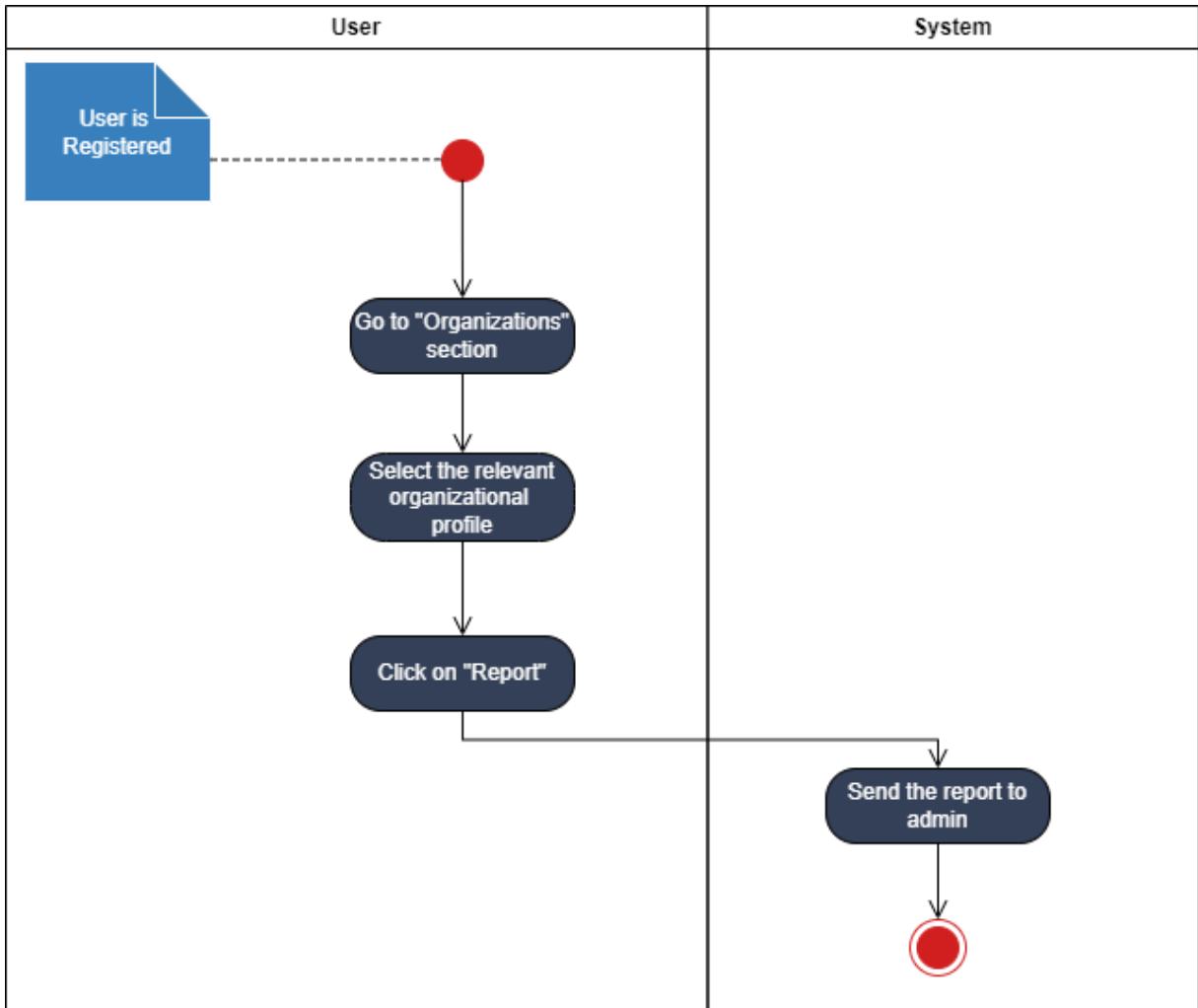
Search or Filter Organizations



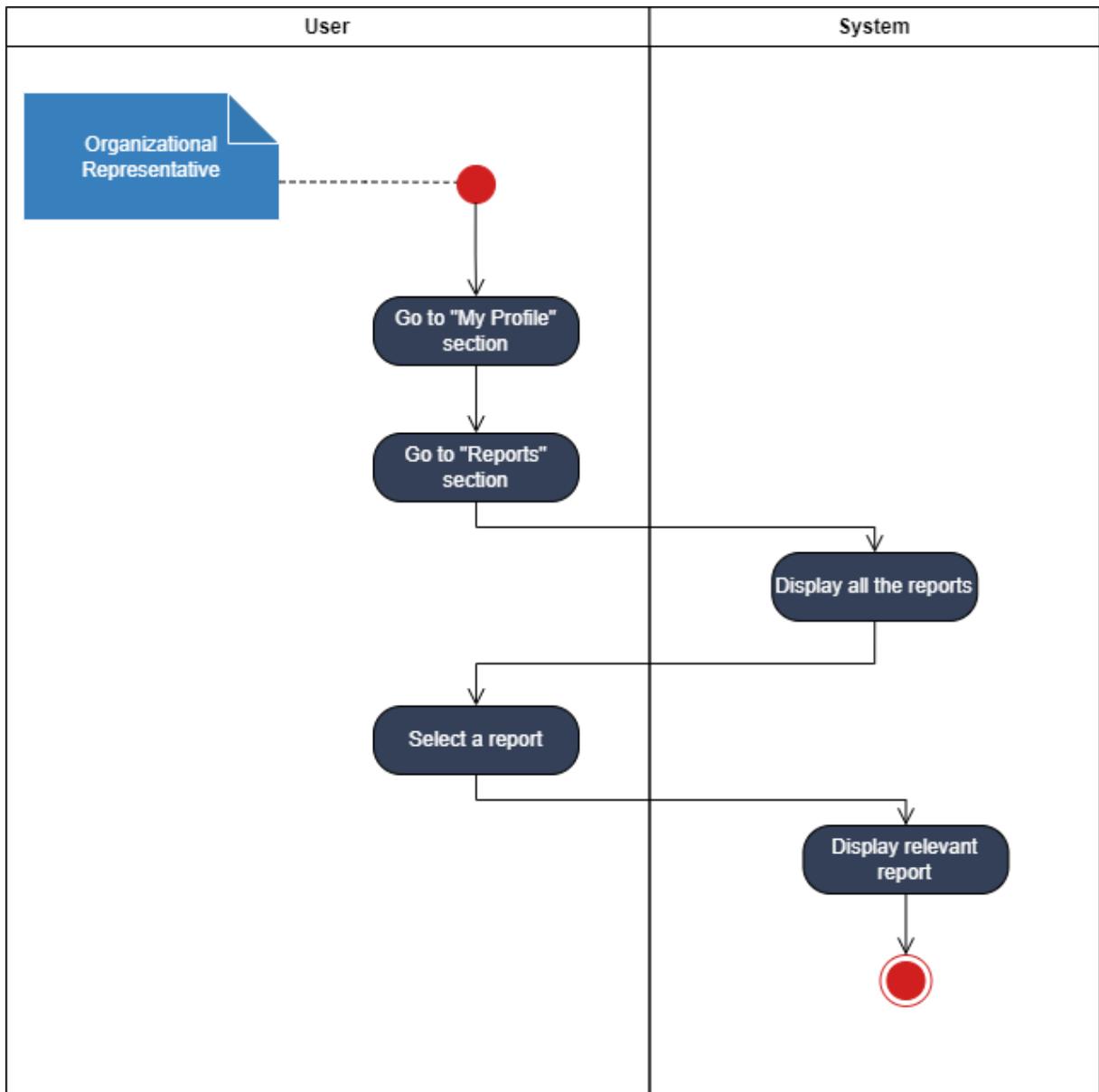
[View Specific Organization](#)

Join Organization

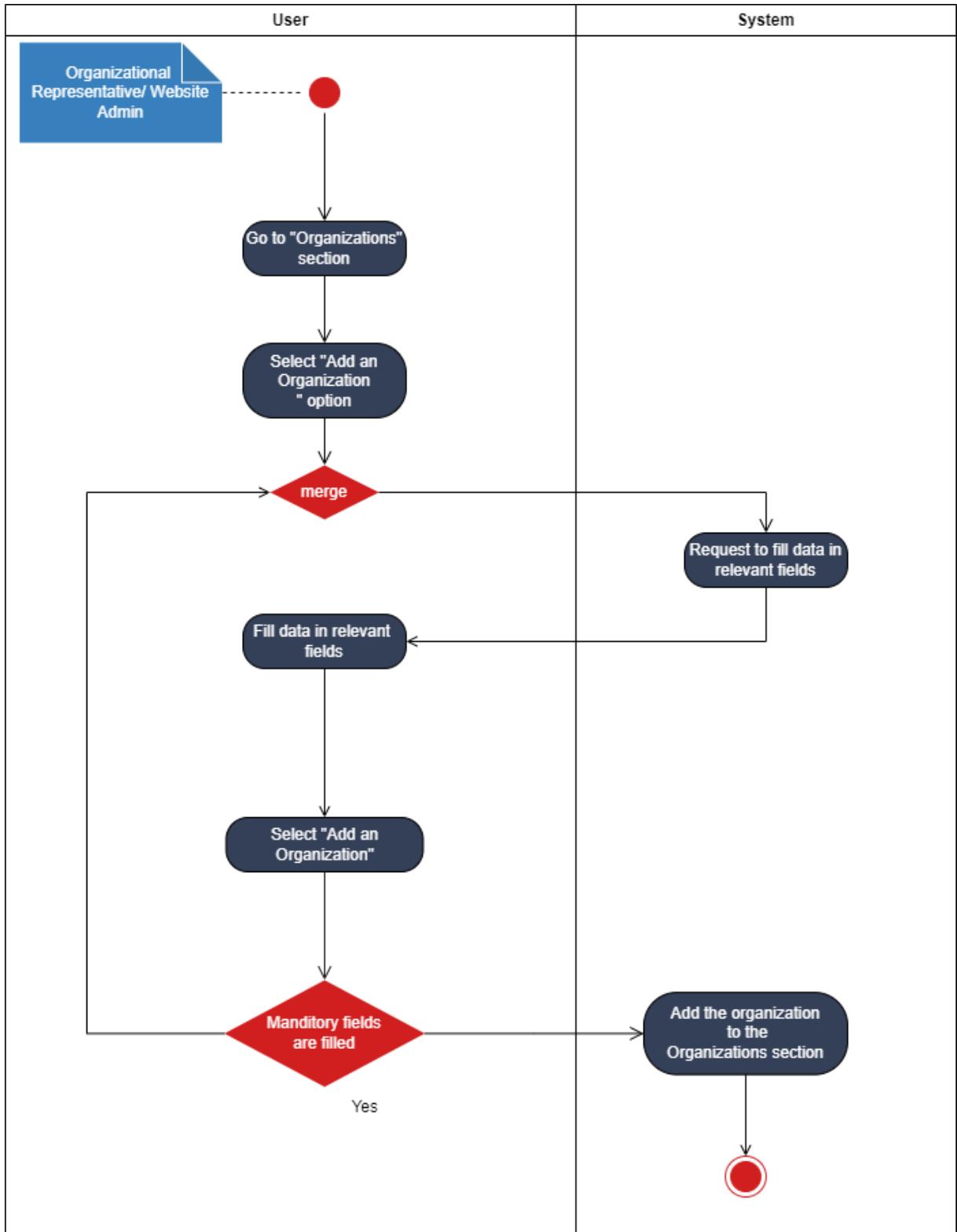
Like an Organization

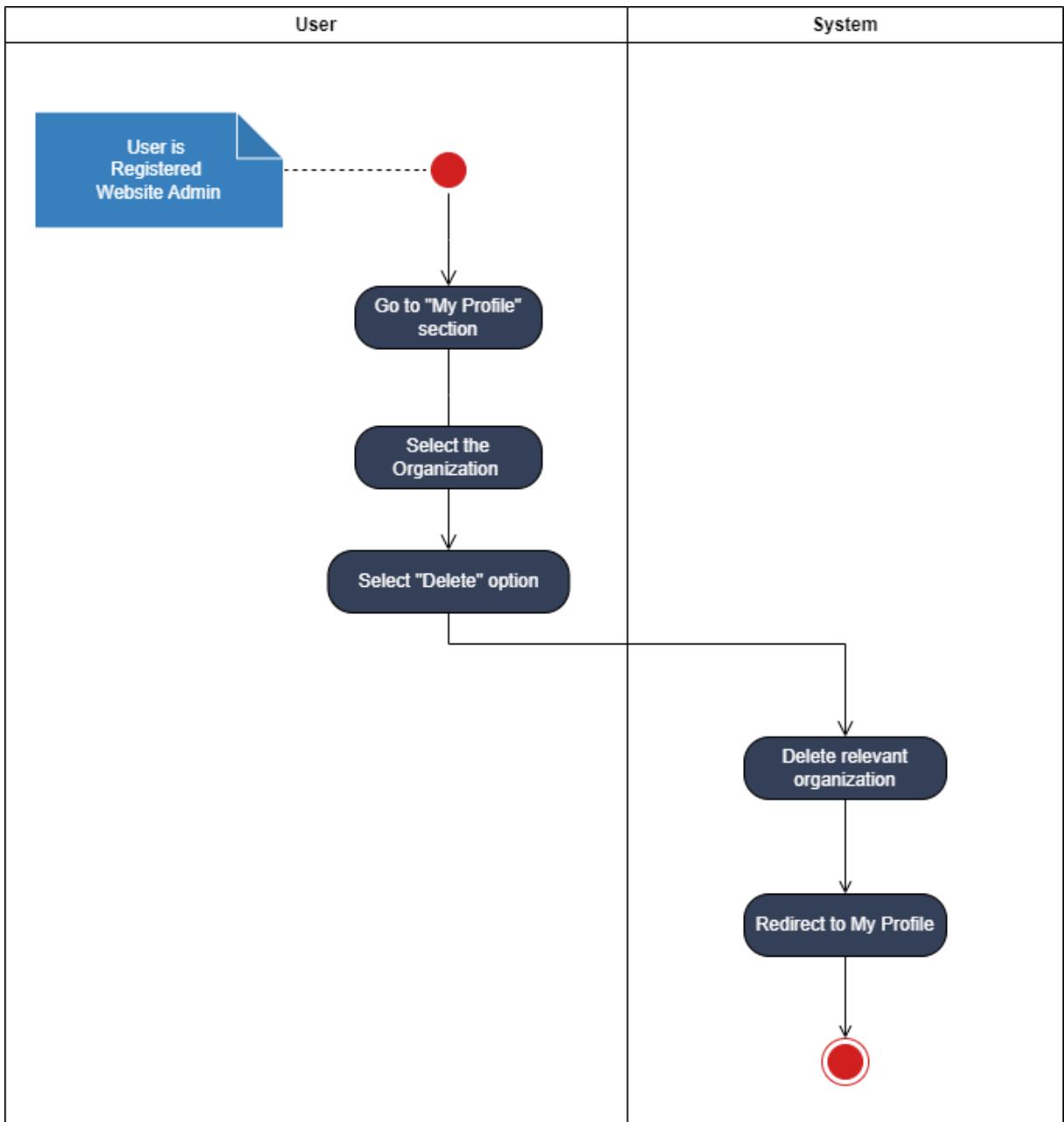
Report an Organization

View Reports

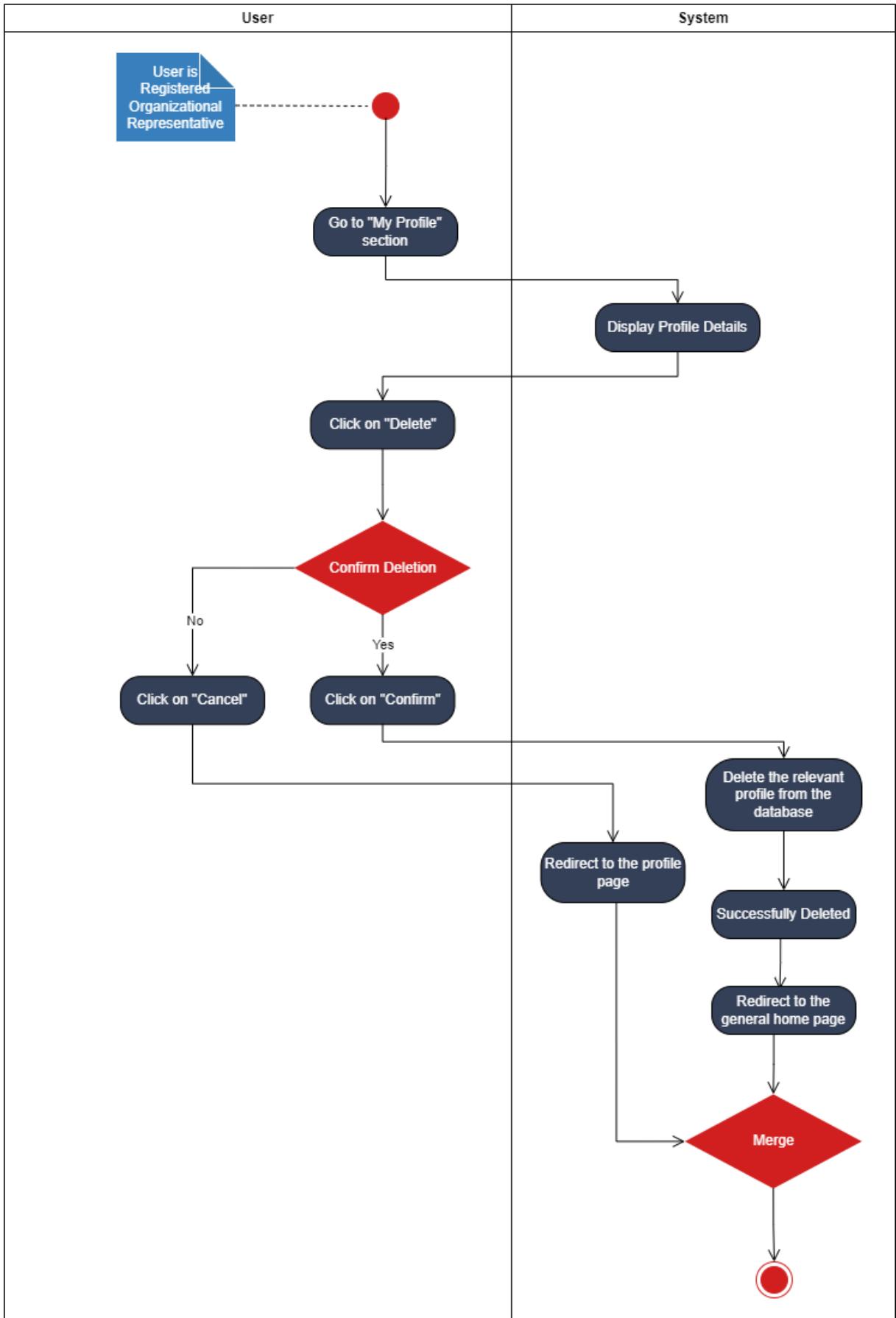


Add an Organization

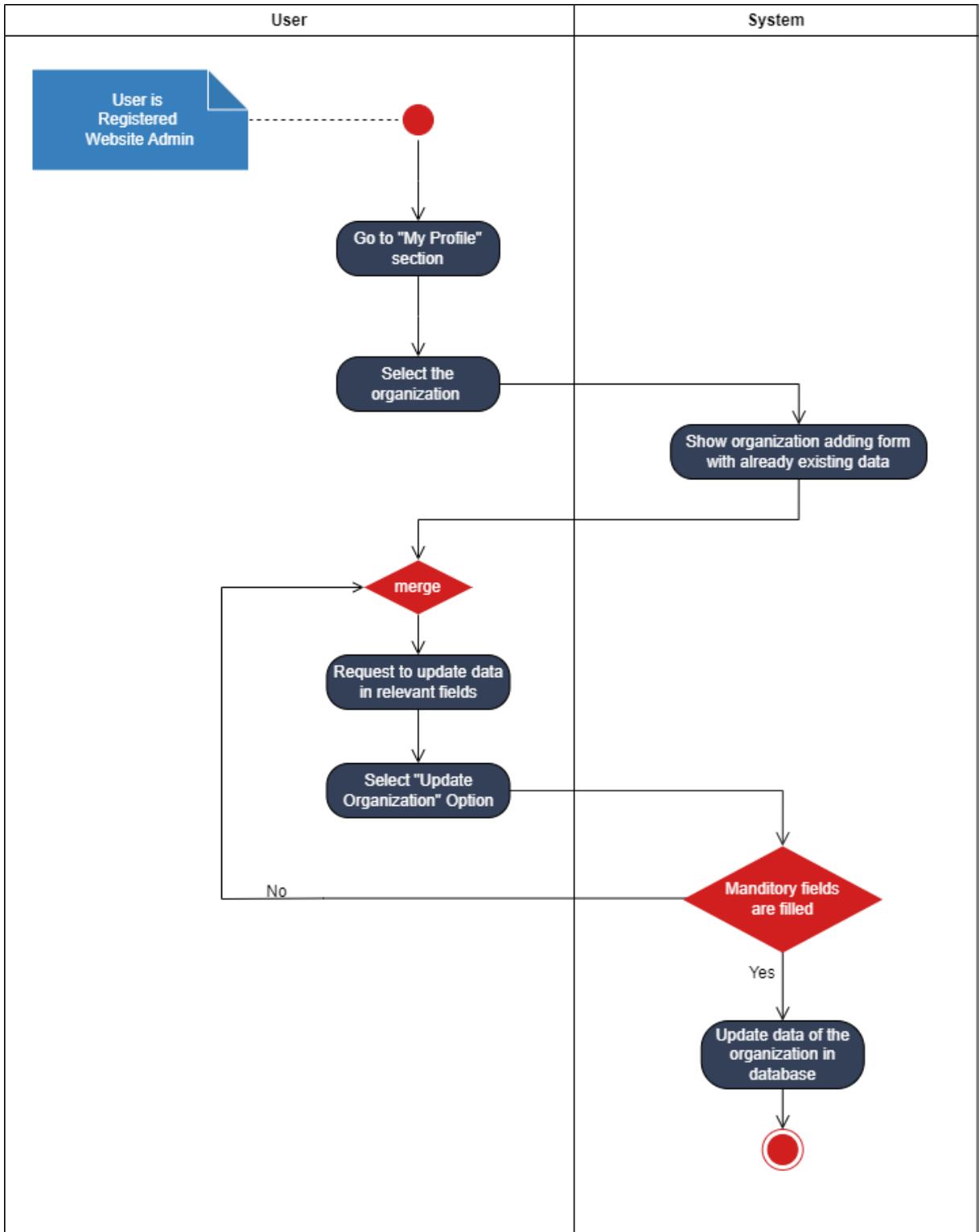


Delete an Organization - Admin

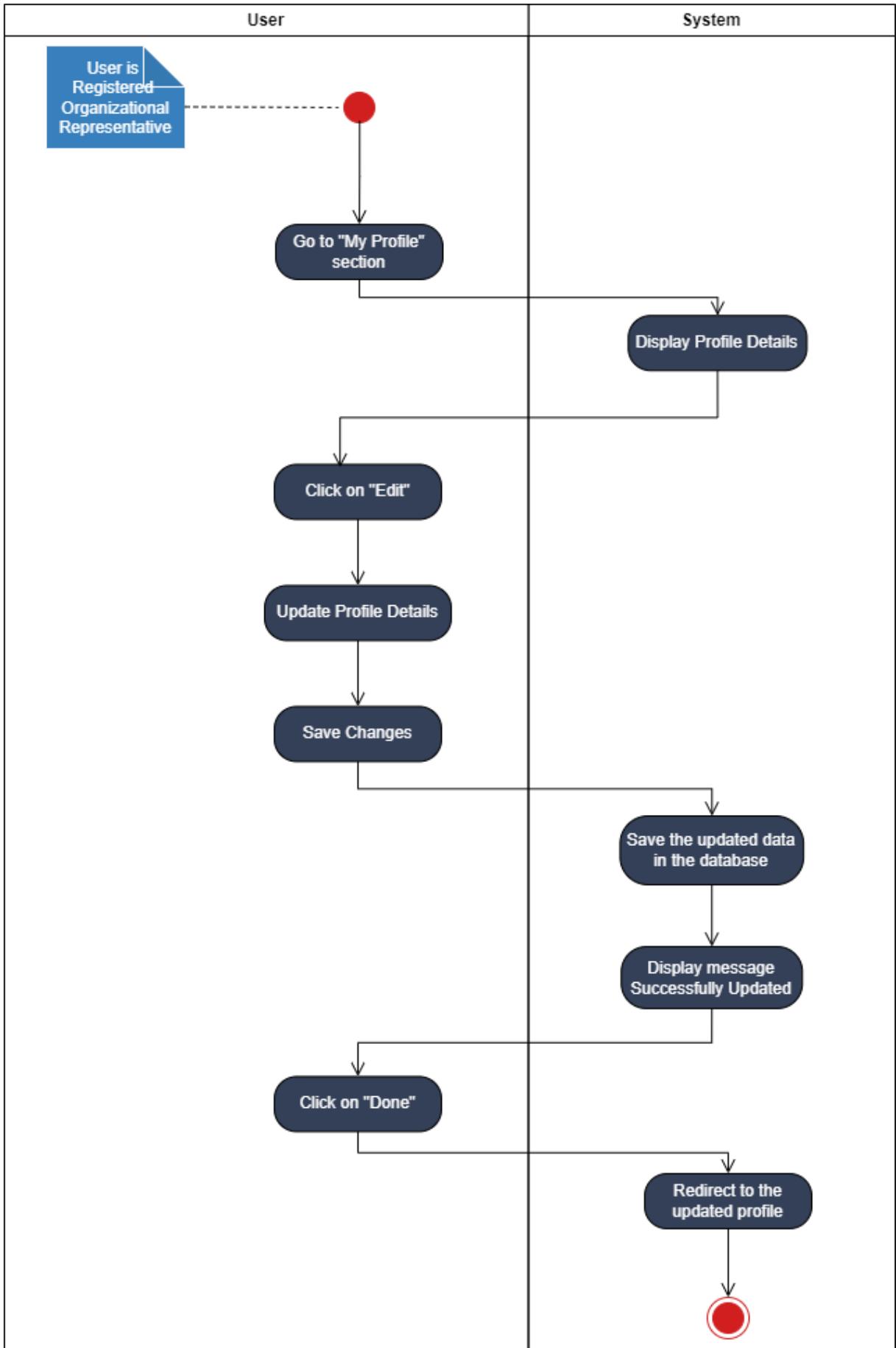
Delete an Organization - Organizational Representative



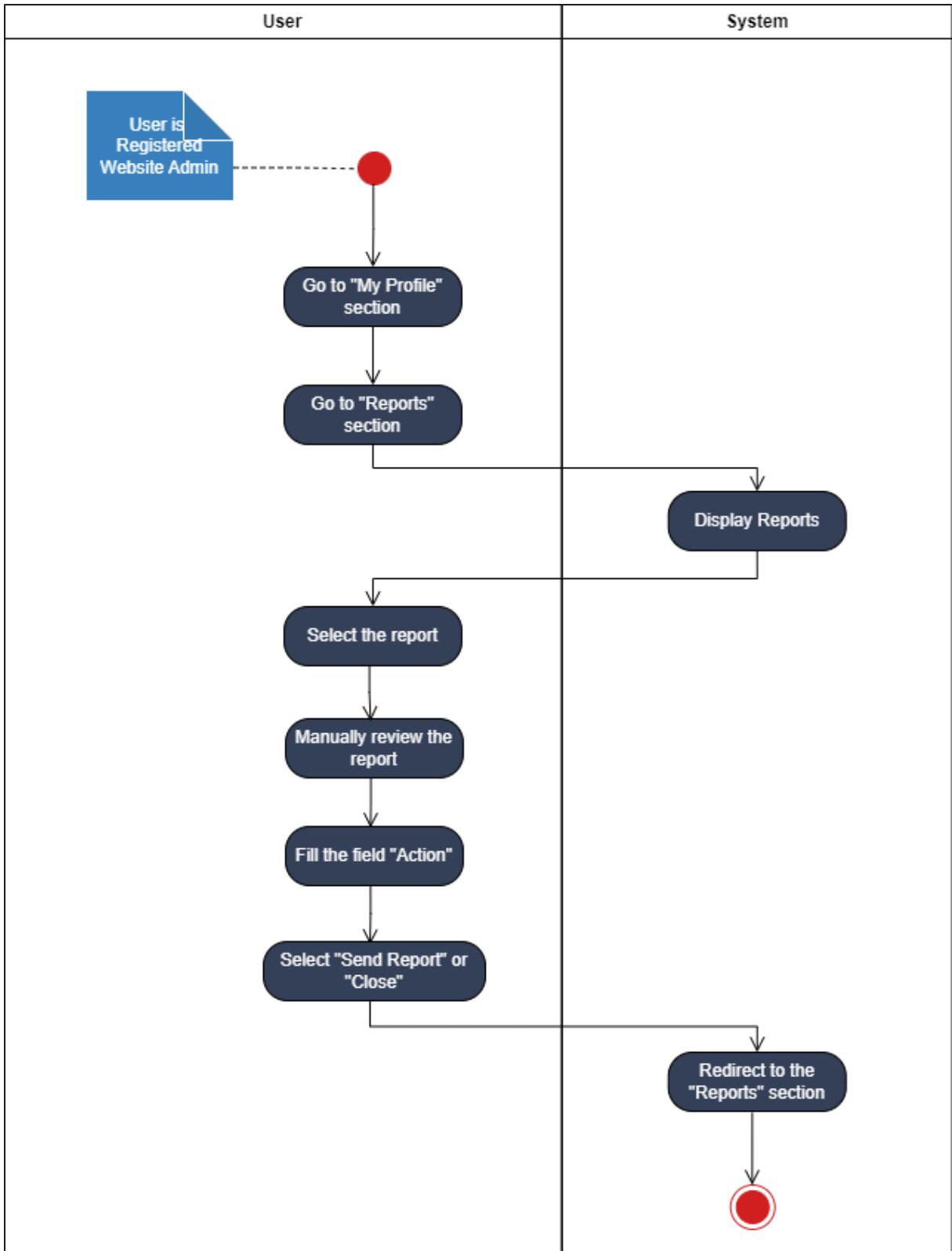
Update an Organization - Admin



Update an Organization - Organizational Representative

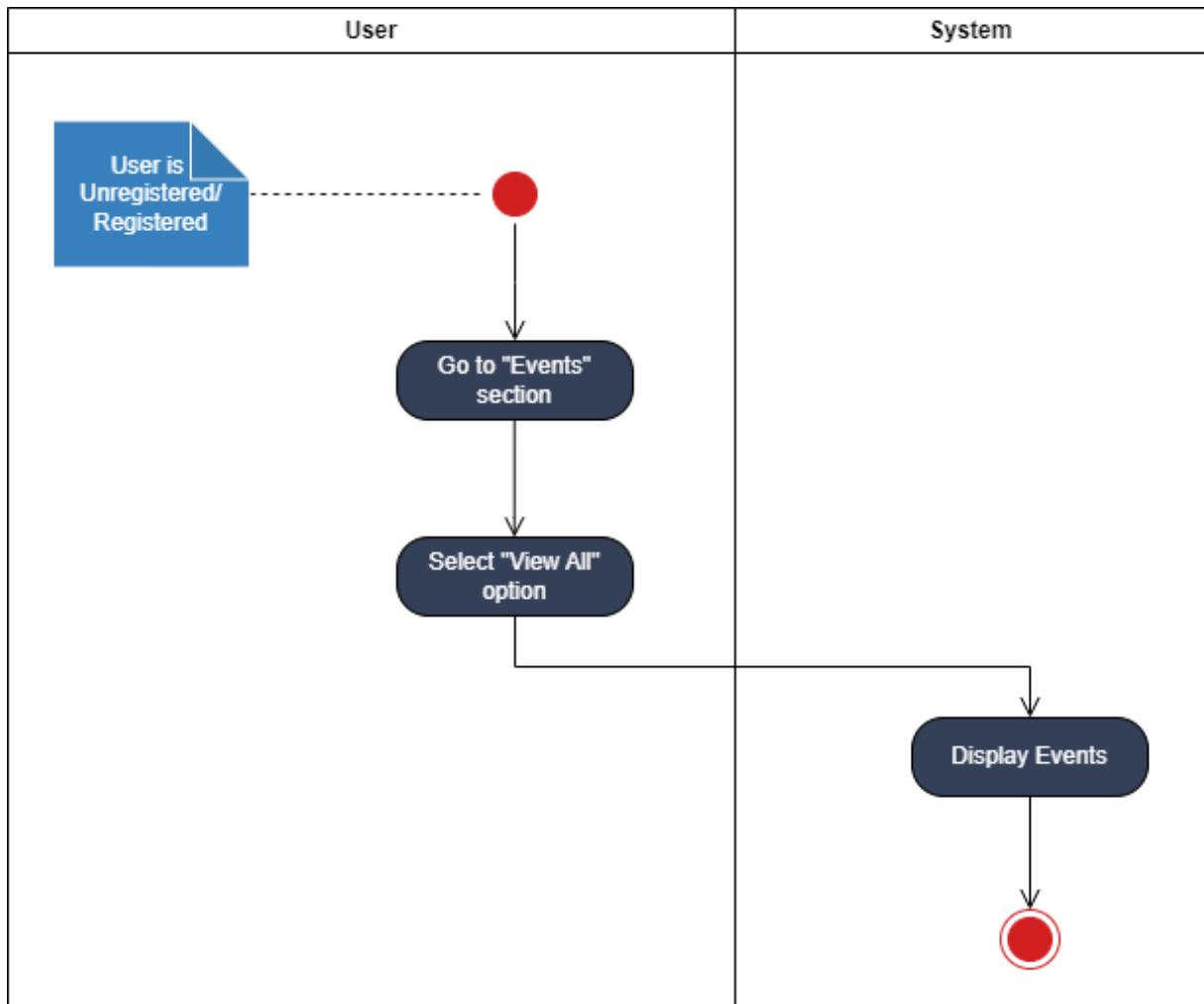


Review Reports

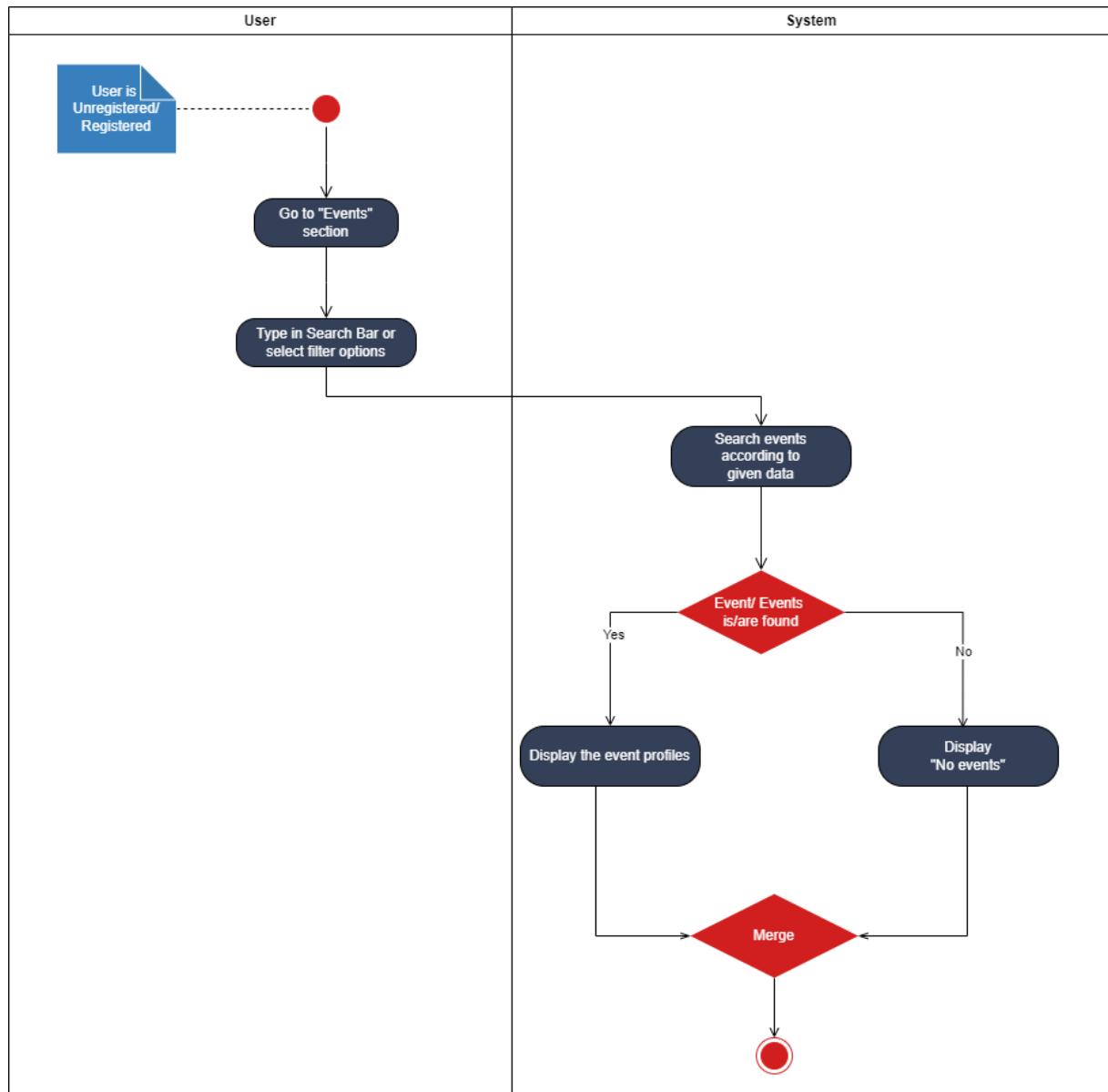


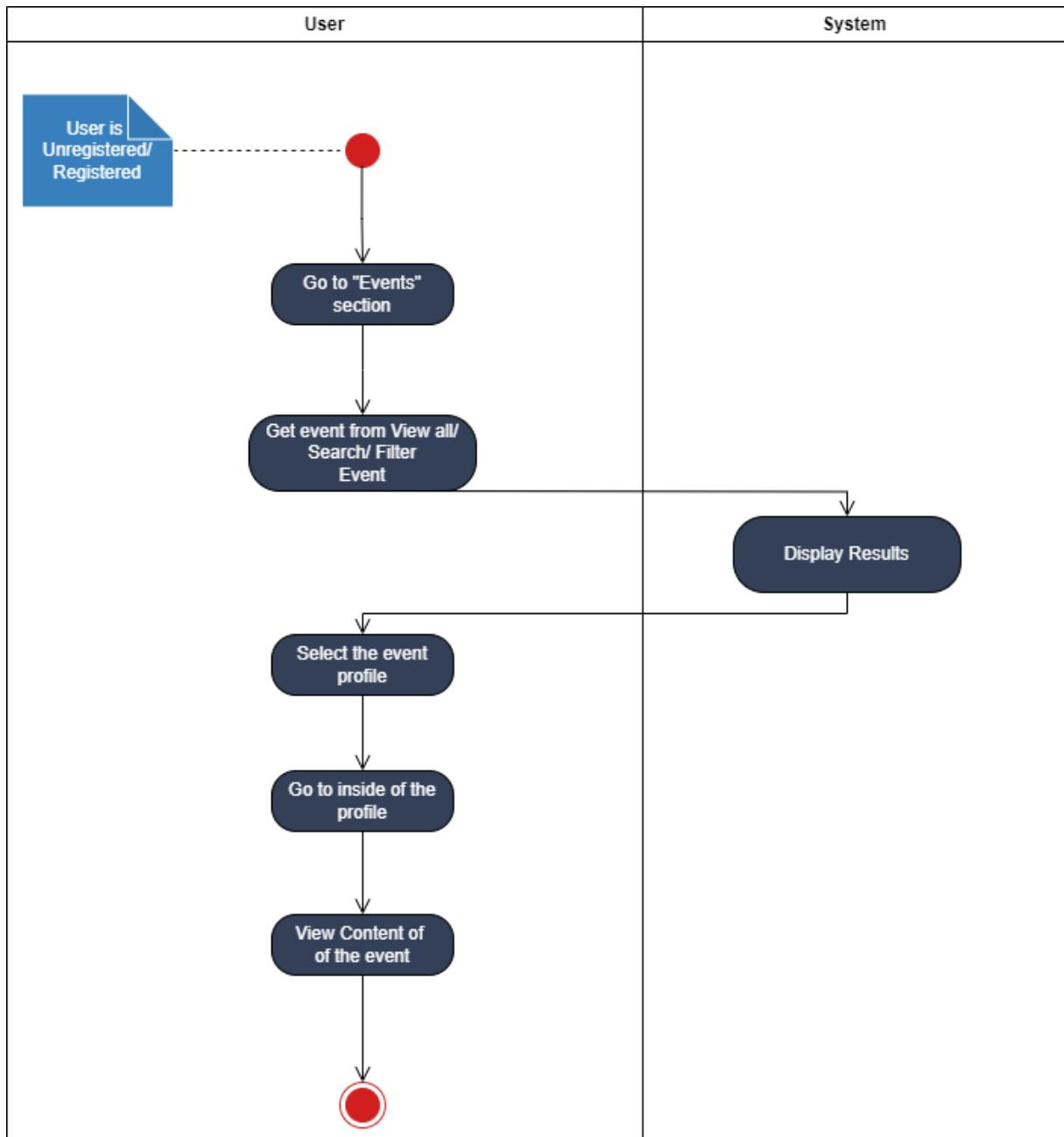
IV. Events

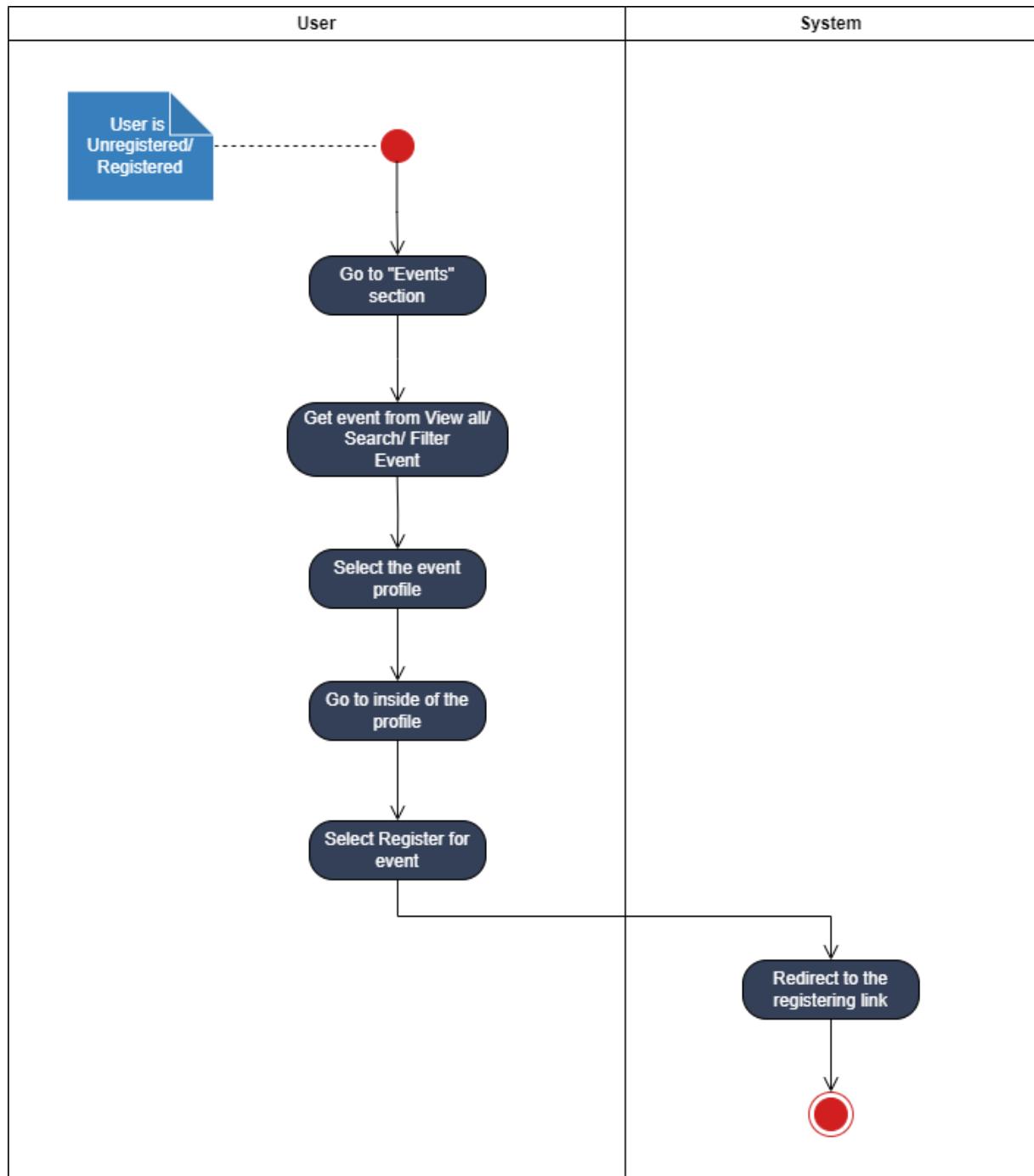
[View All Events](#)

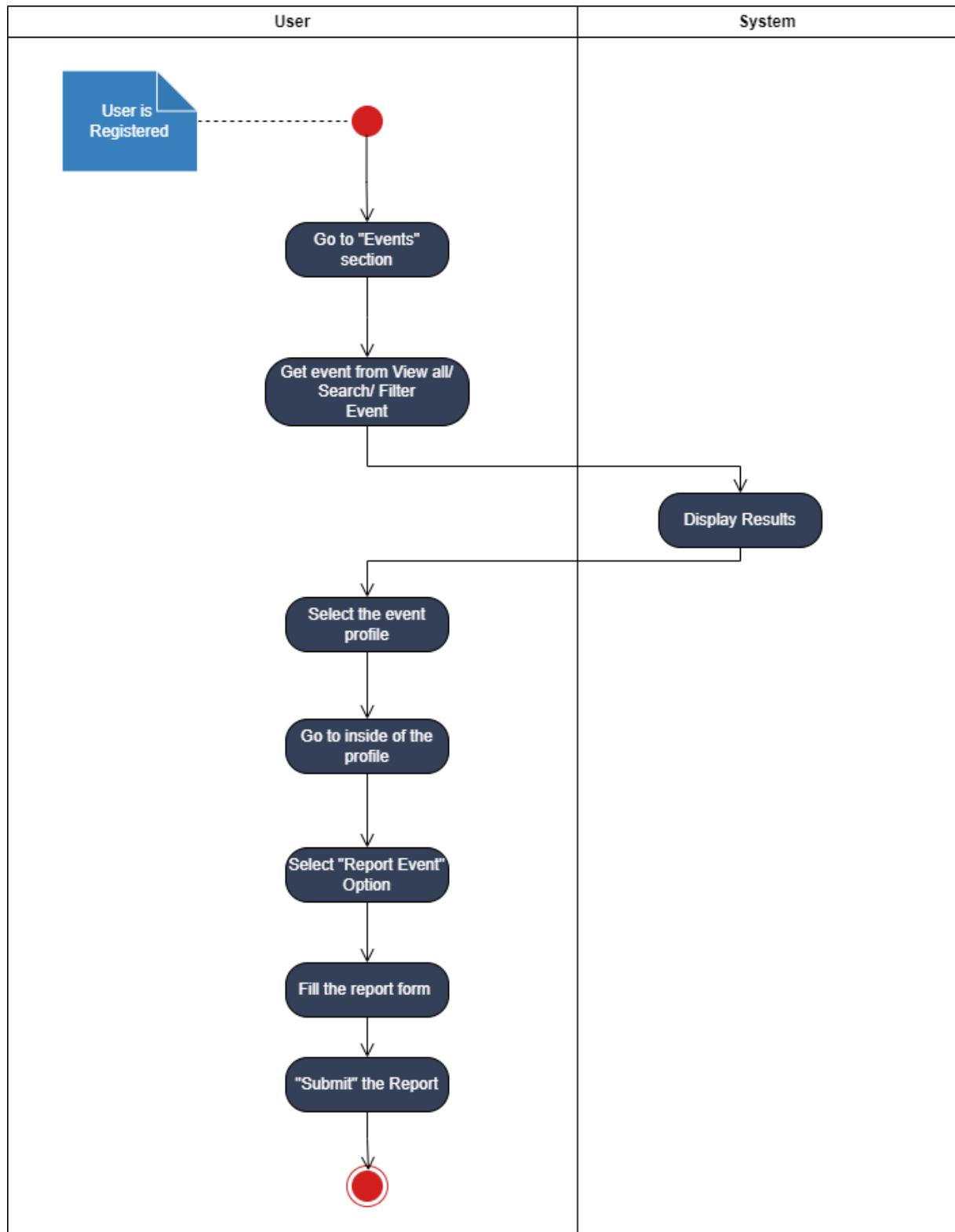


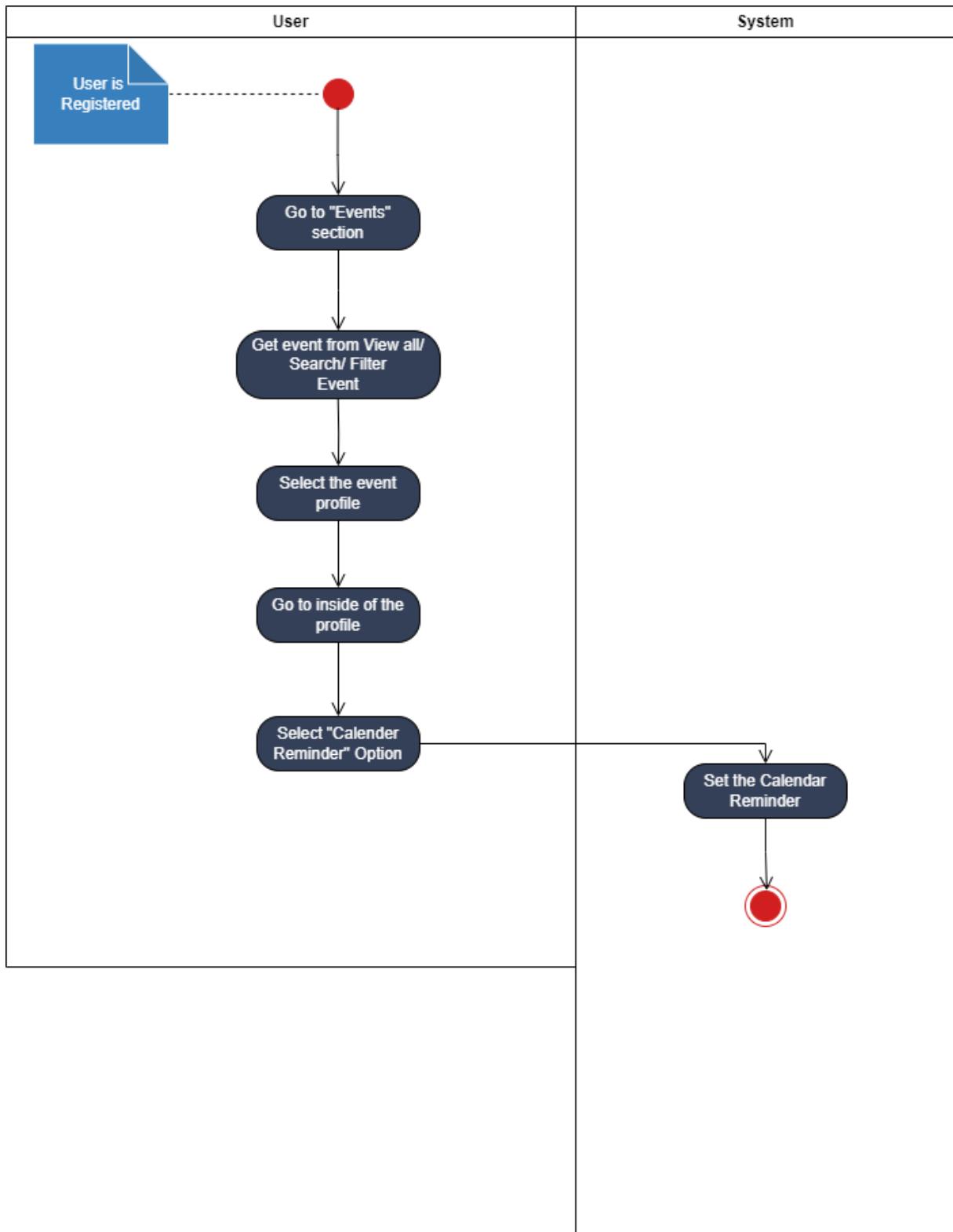
SearchFilter Events



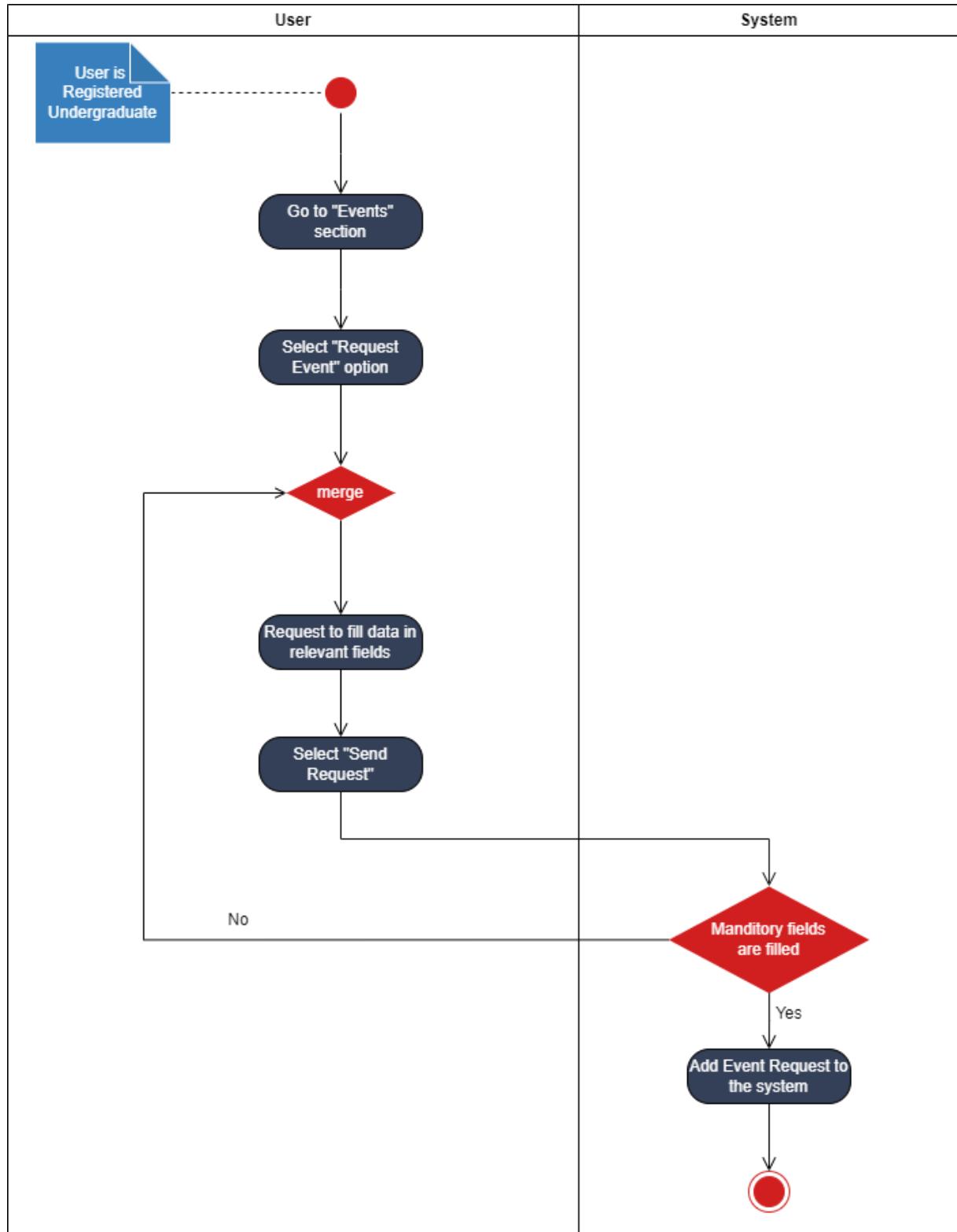
View Specific Event

Register for event

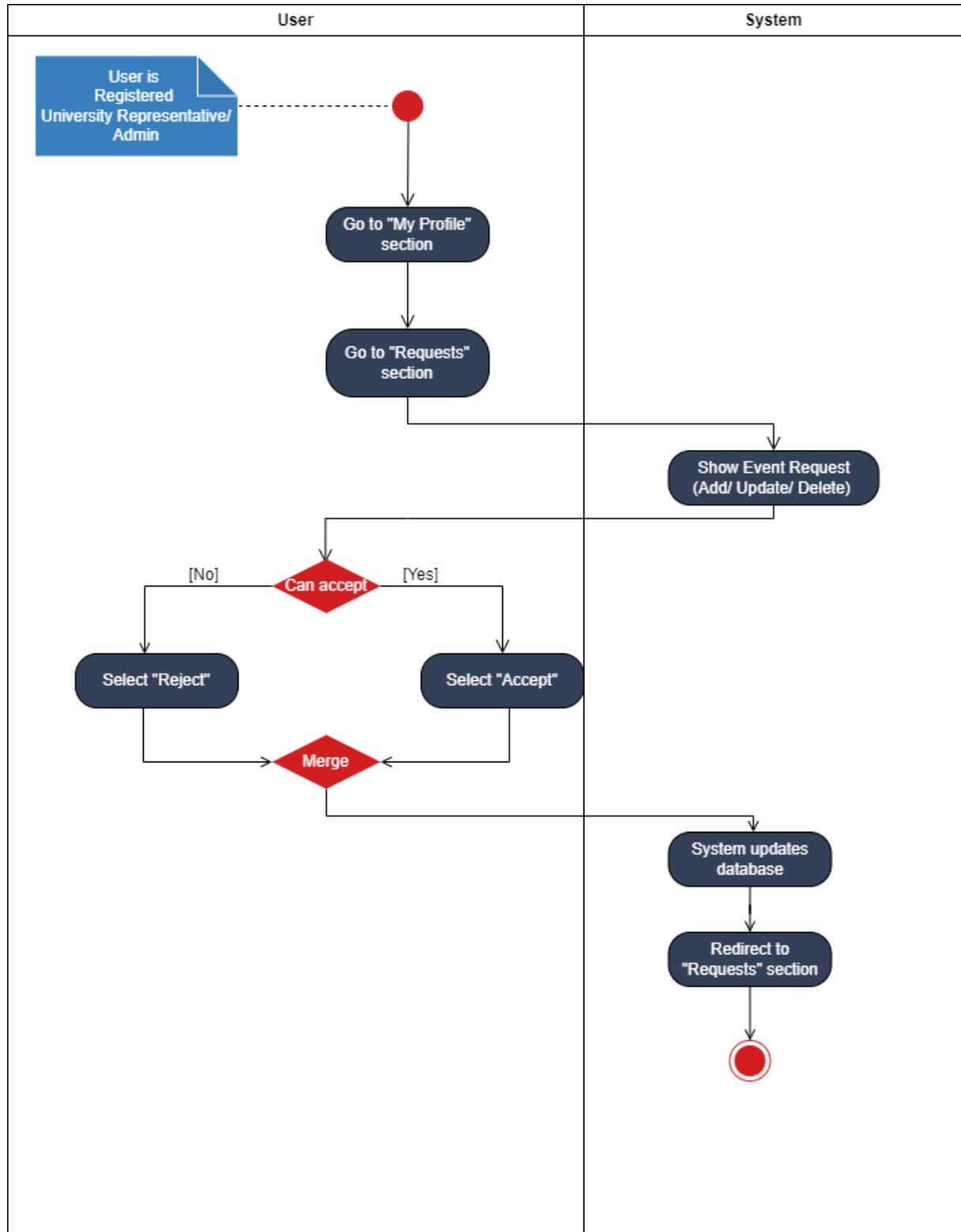
Report an event

Add Calendar Reminder

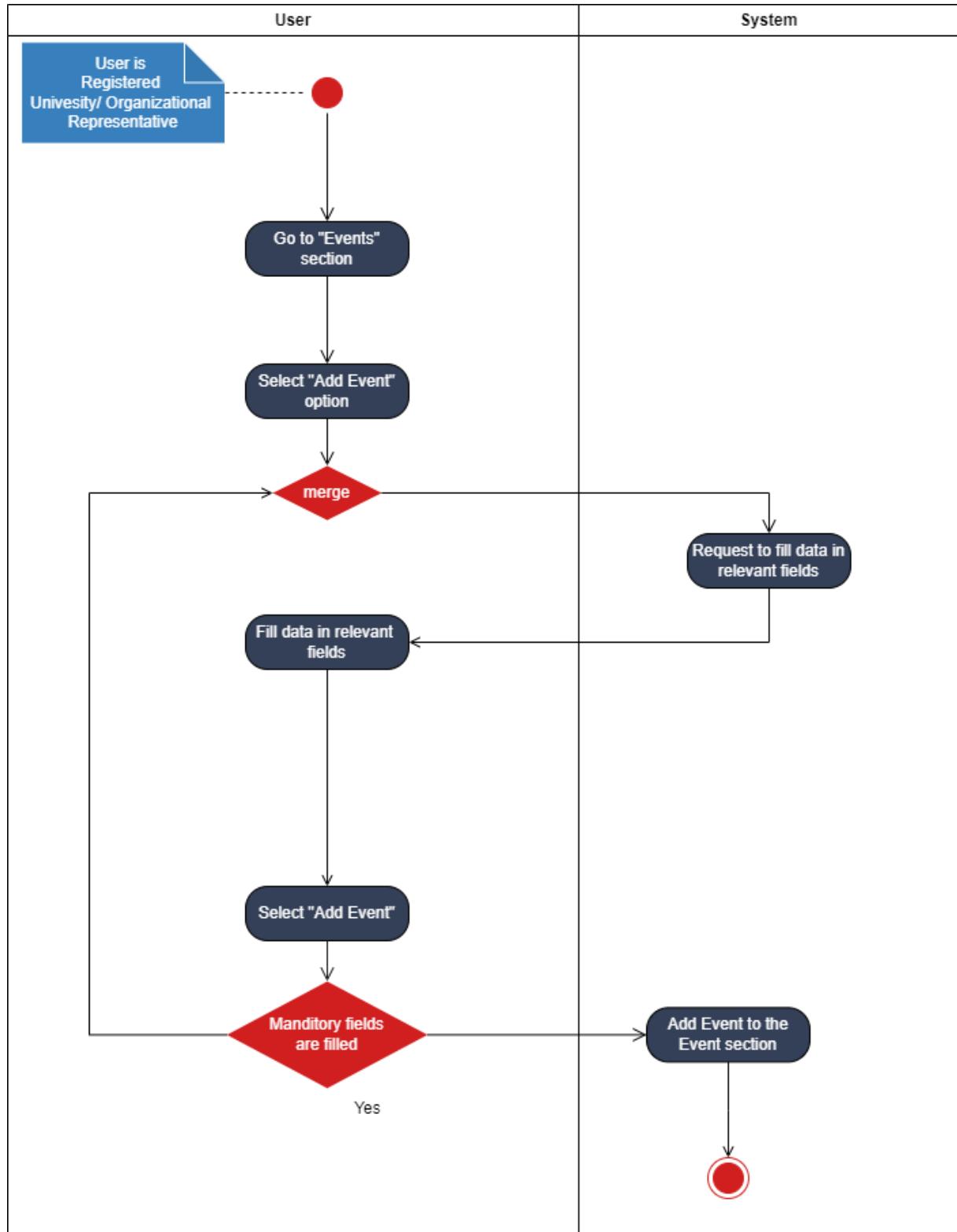
Request to add new event



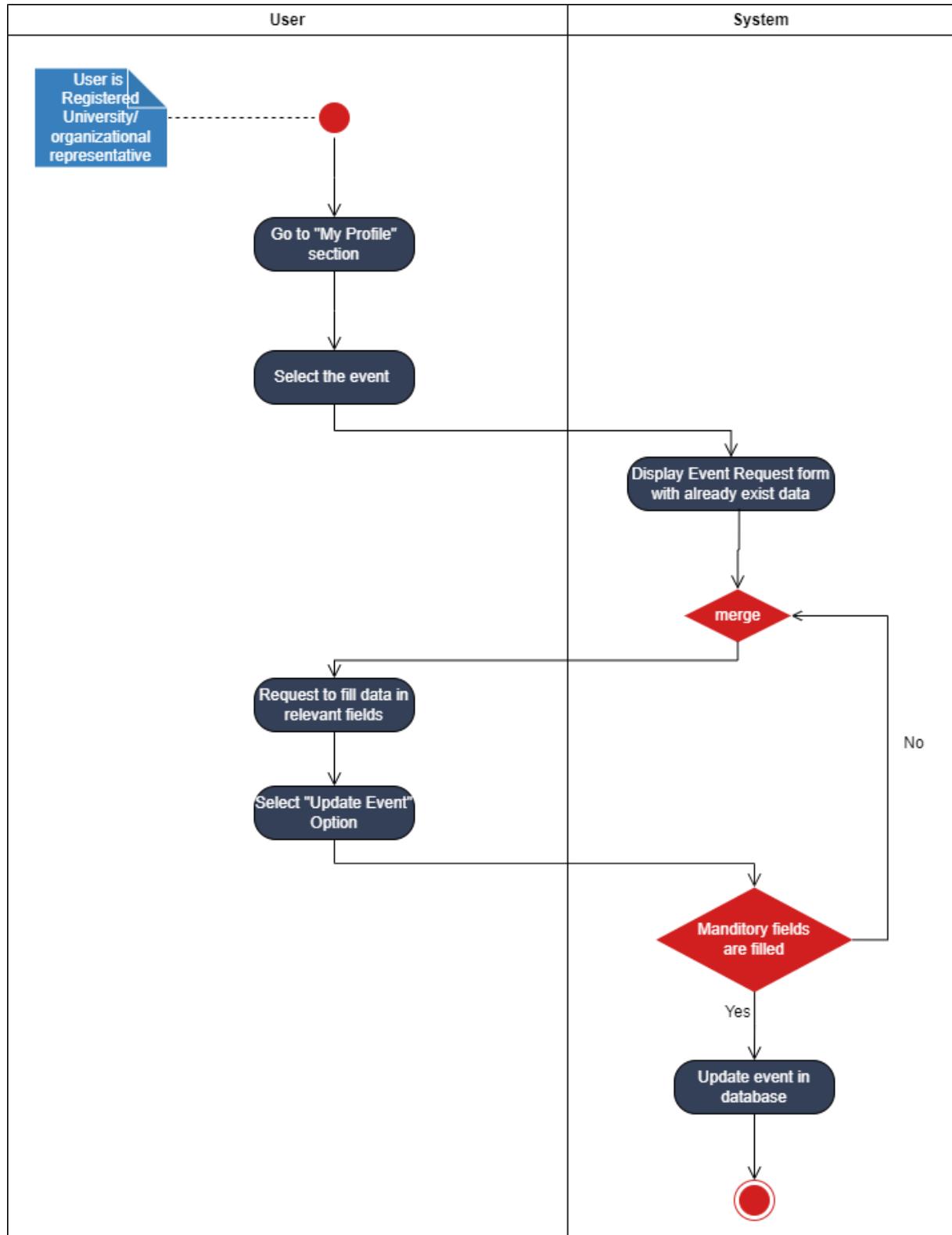
Review Event



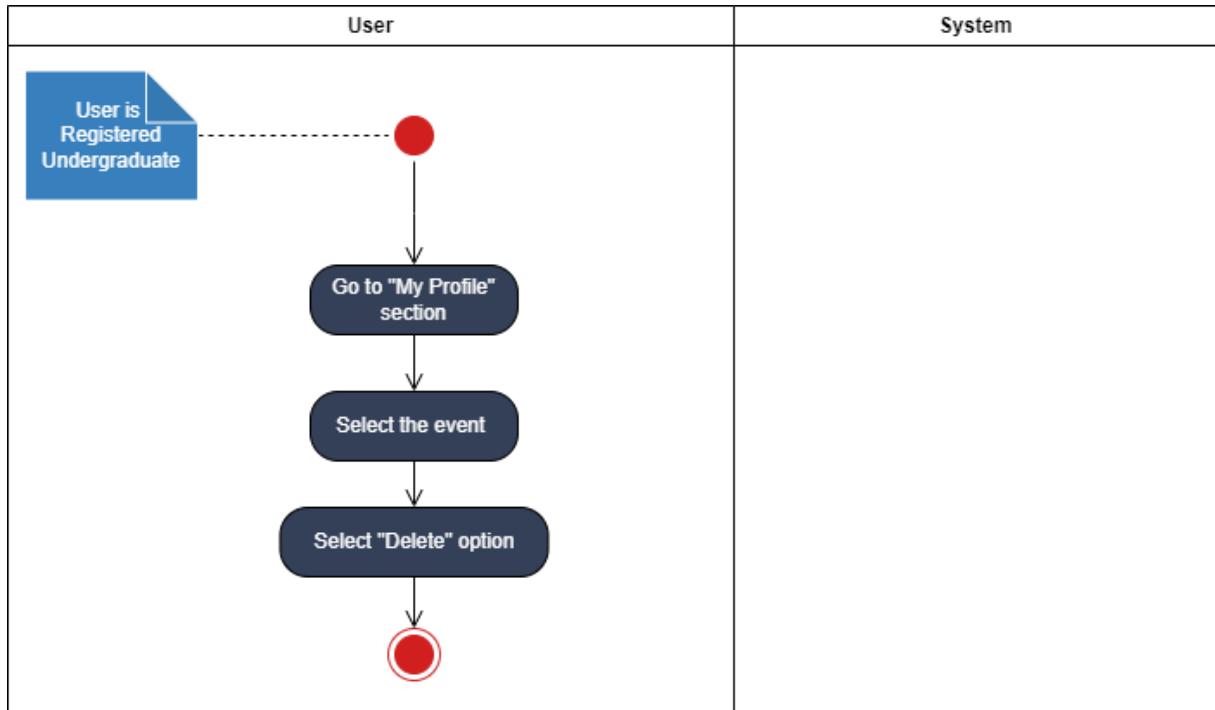
Add new event



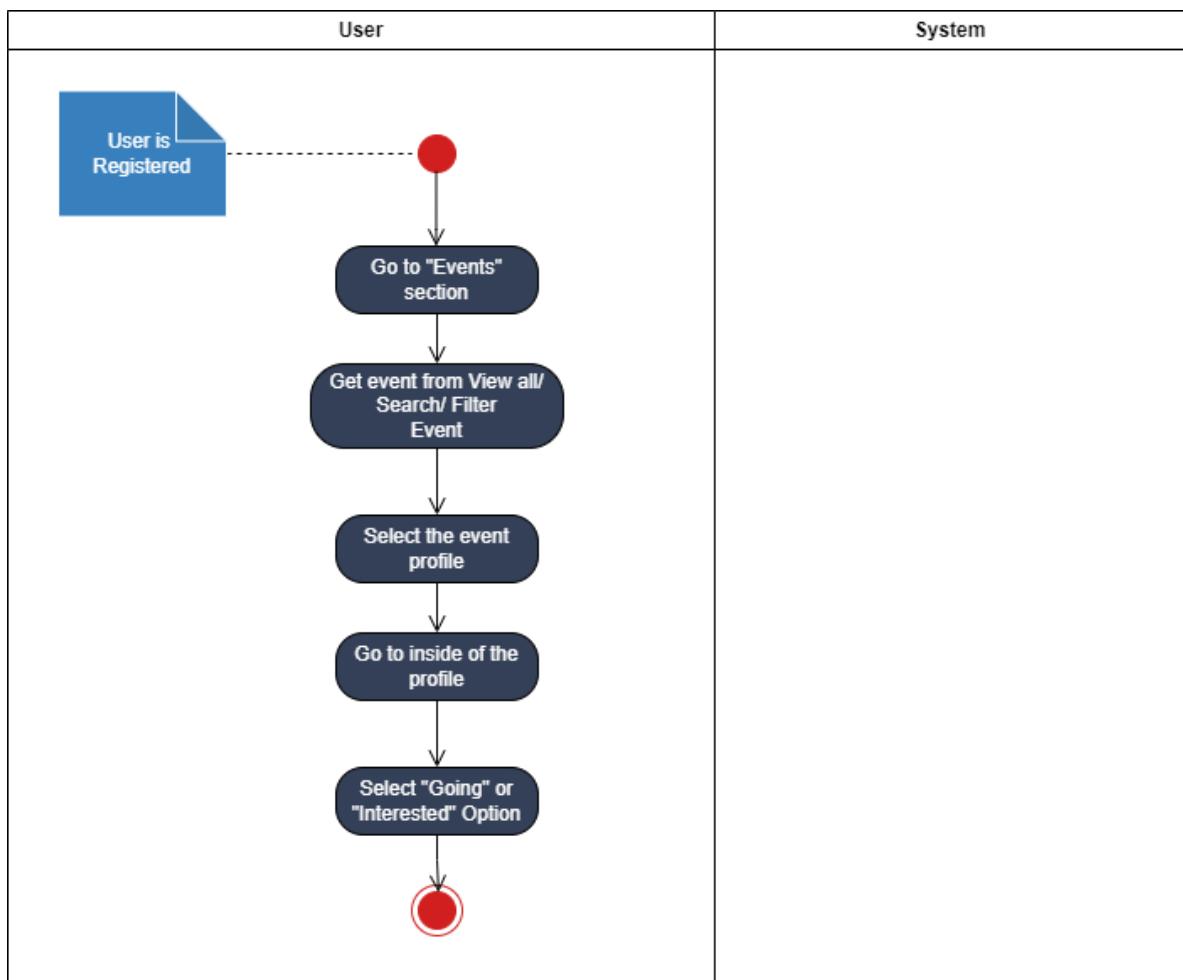
Update an event

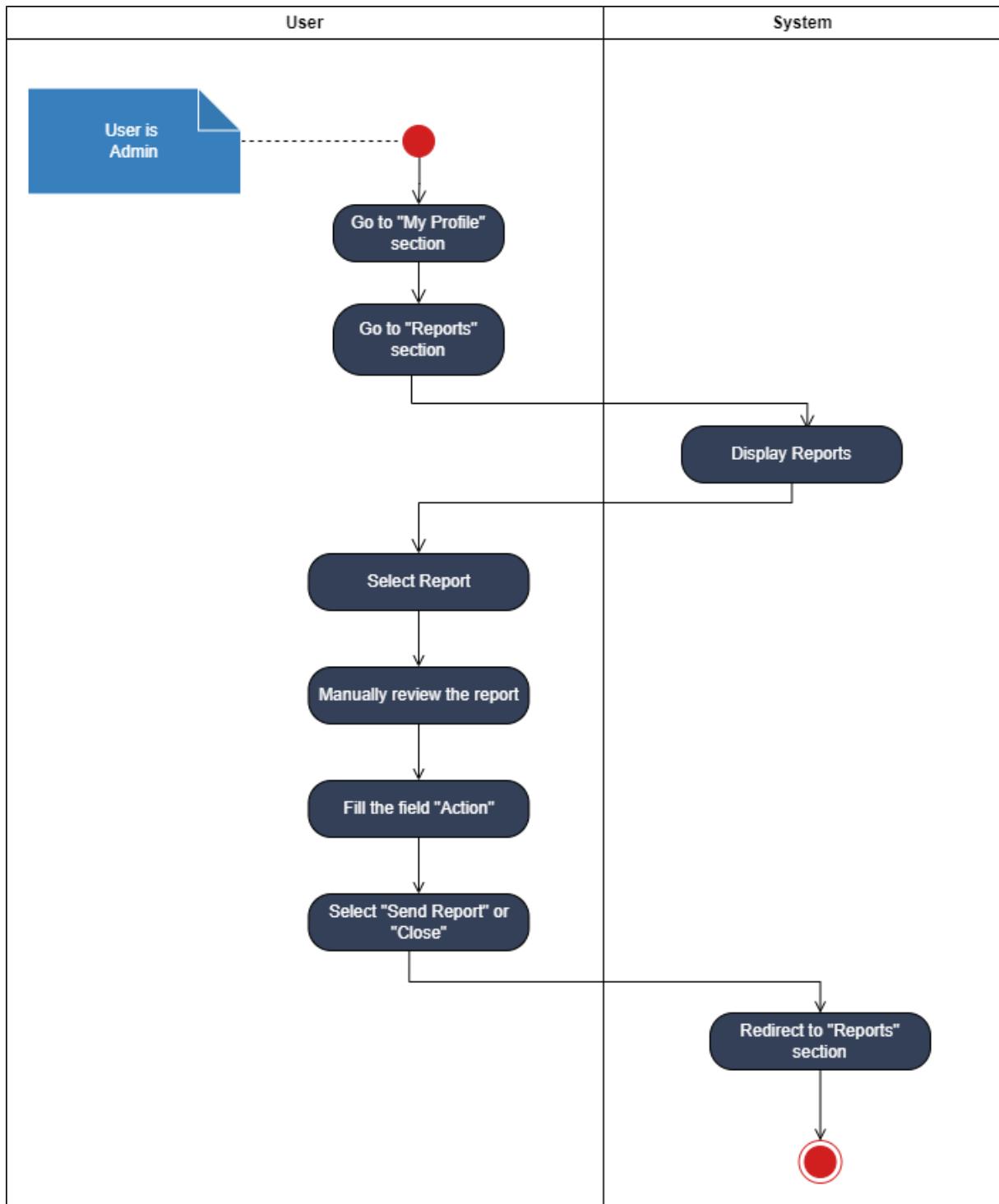


Delete Event



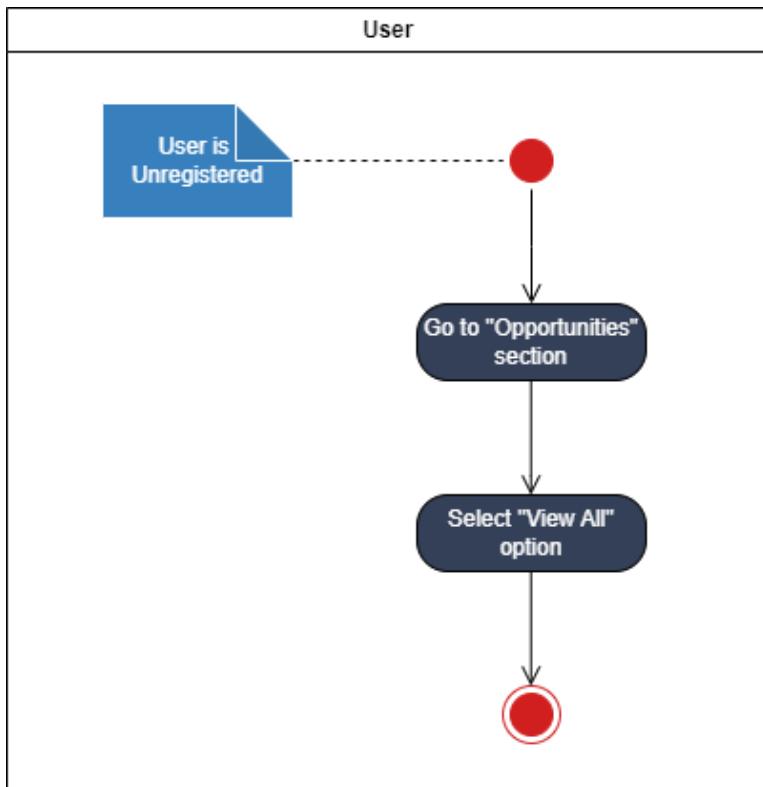
Mark Participation



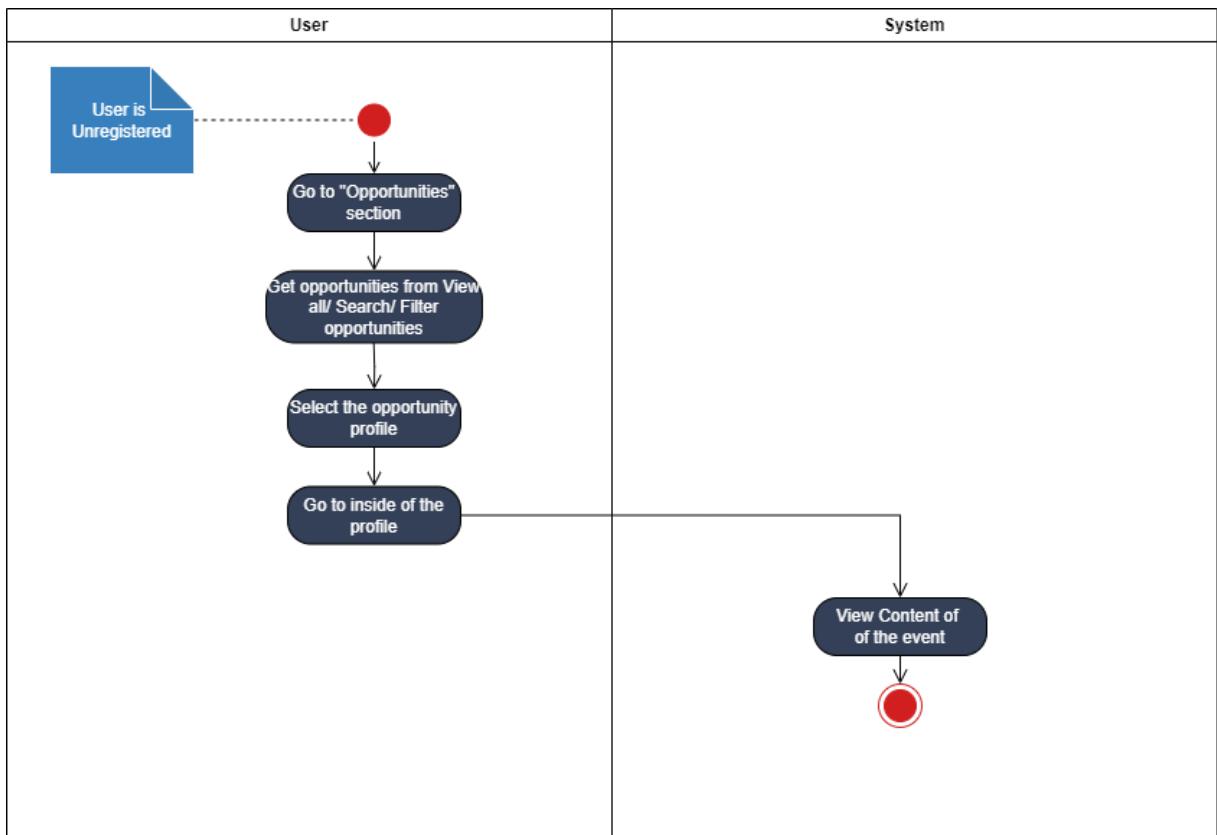
Review Report

V. Opportunities

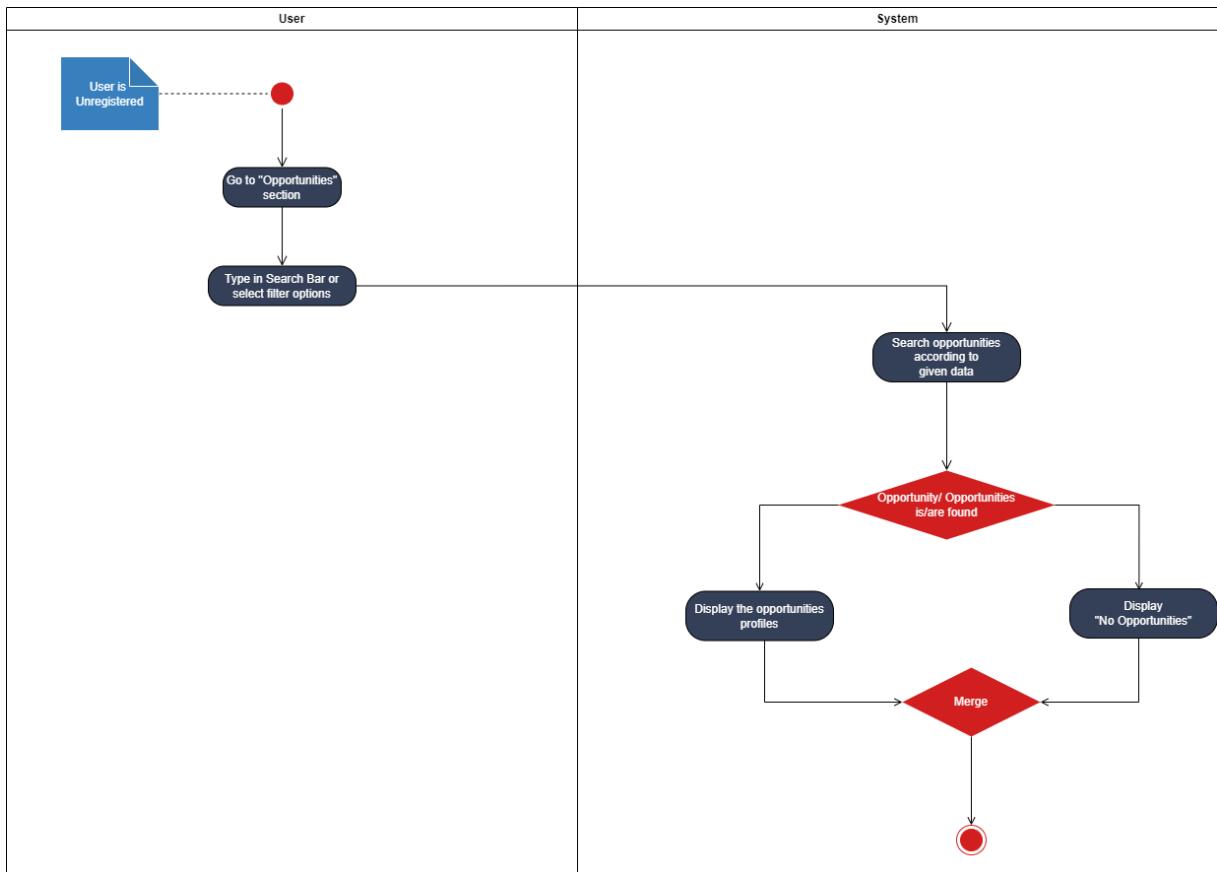
[View All Opportunities](#)



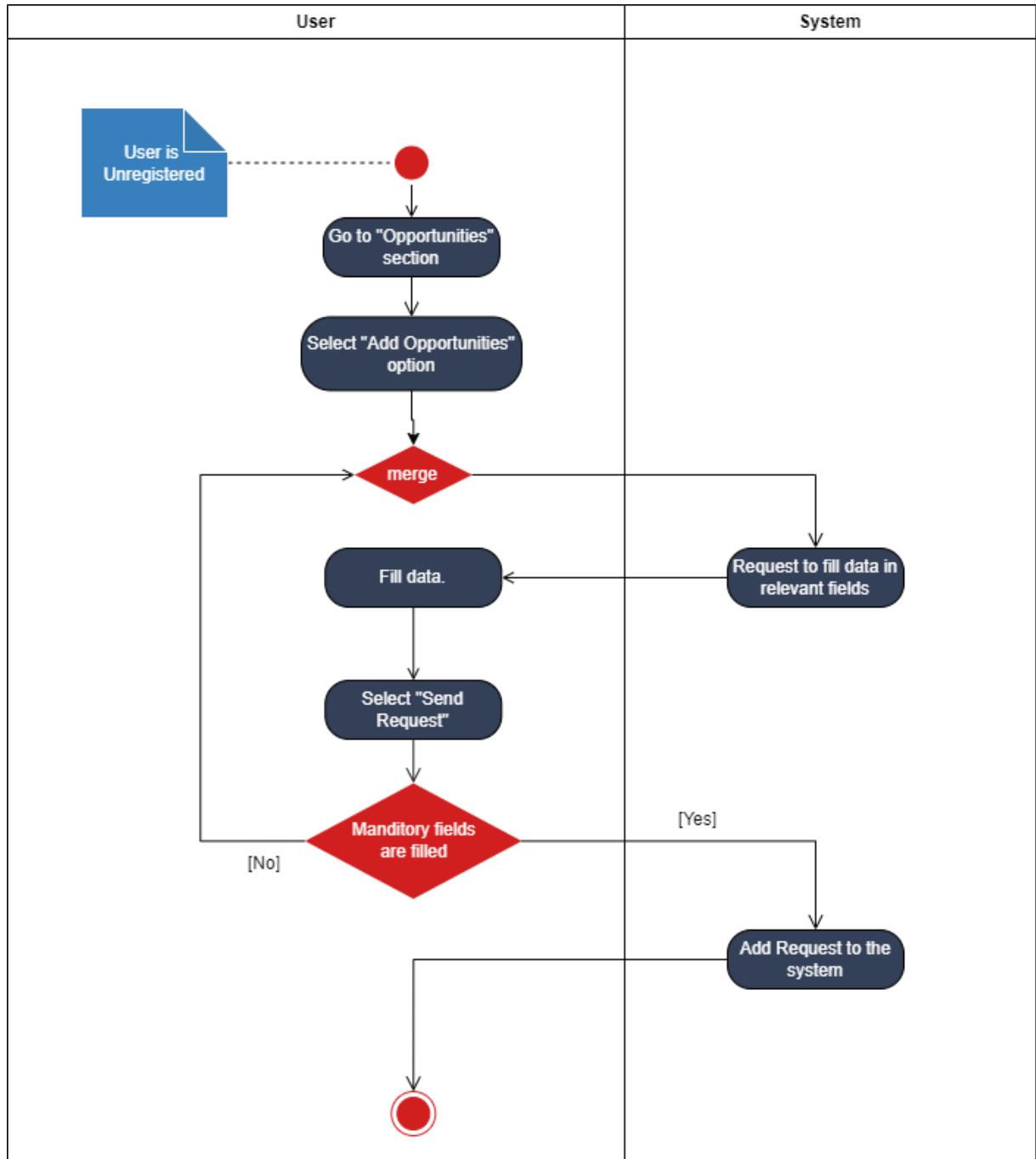
[View Specific Opportunity](#)



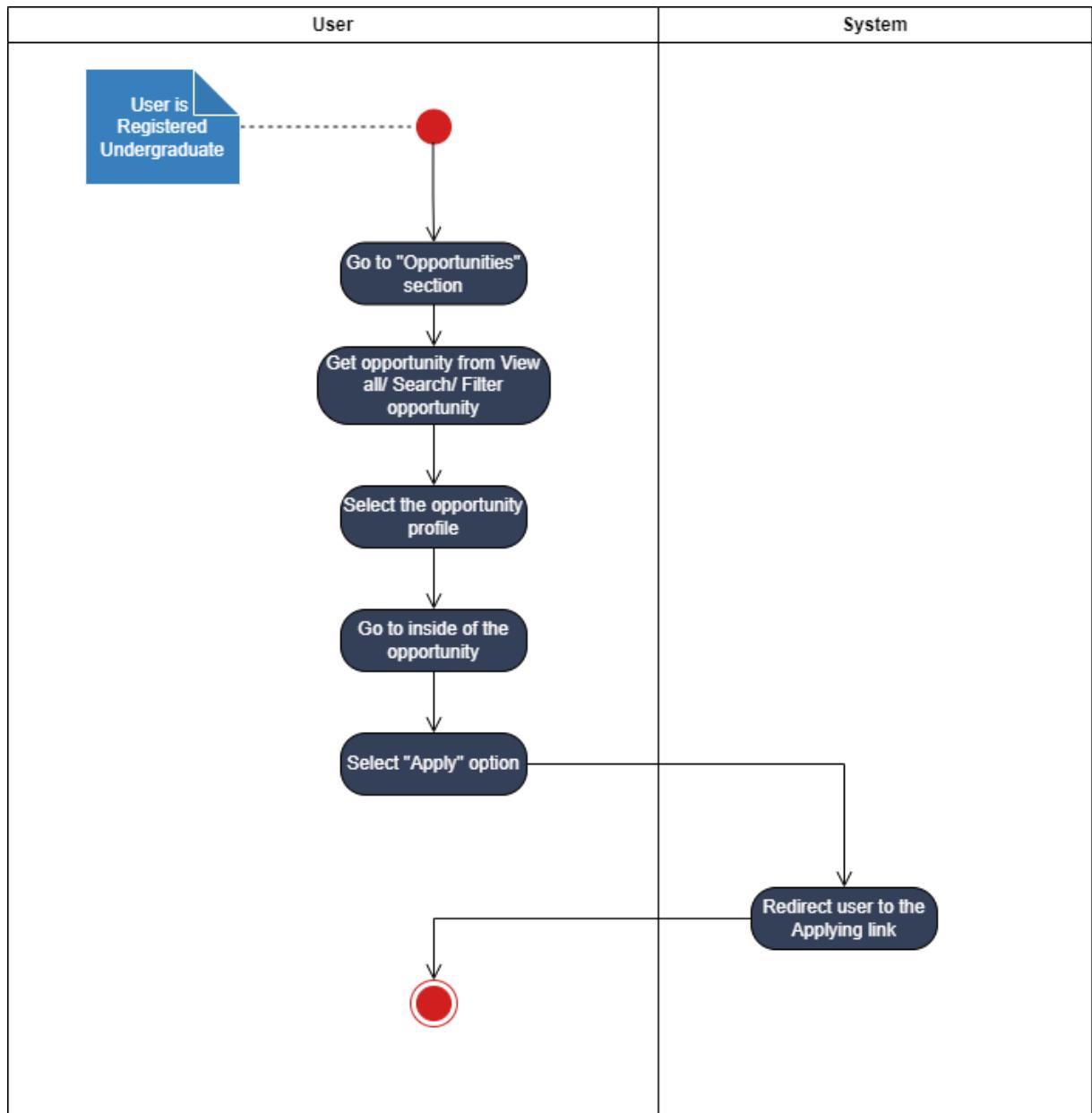
Search Filter Opportunities



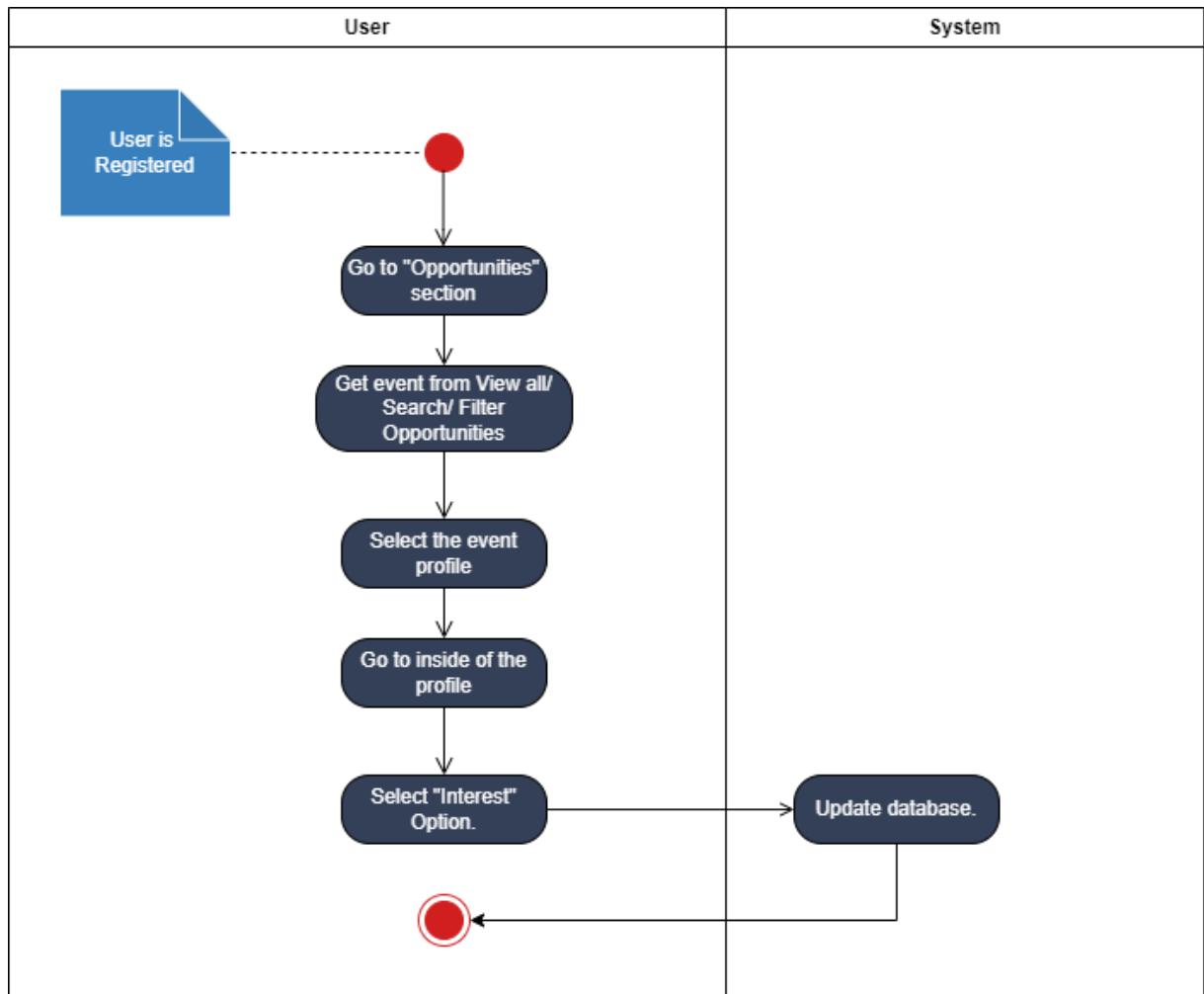
Request To Add New Opportunity



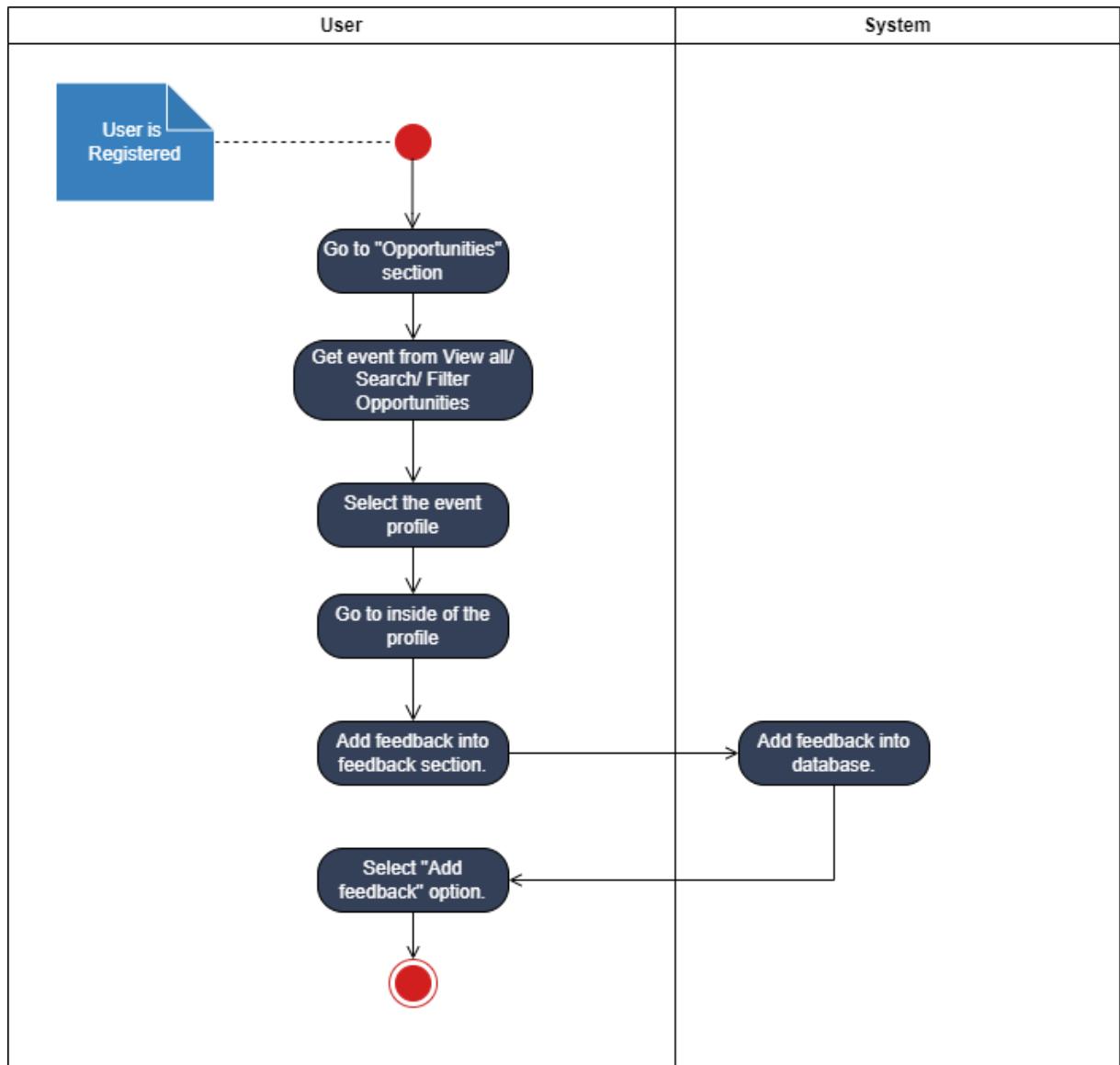
Apply for Opportunity



Mark Interest

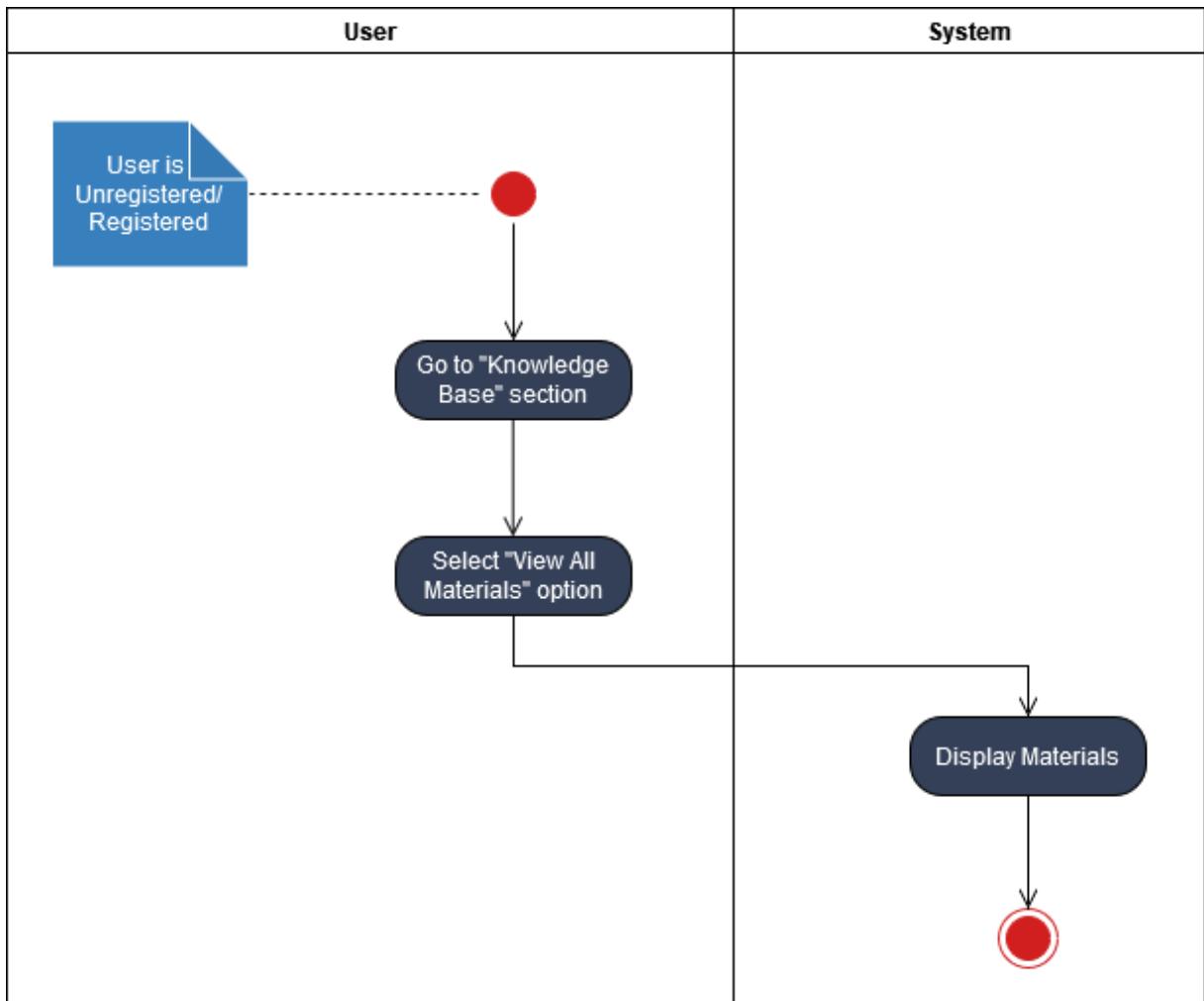


Add Feedback

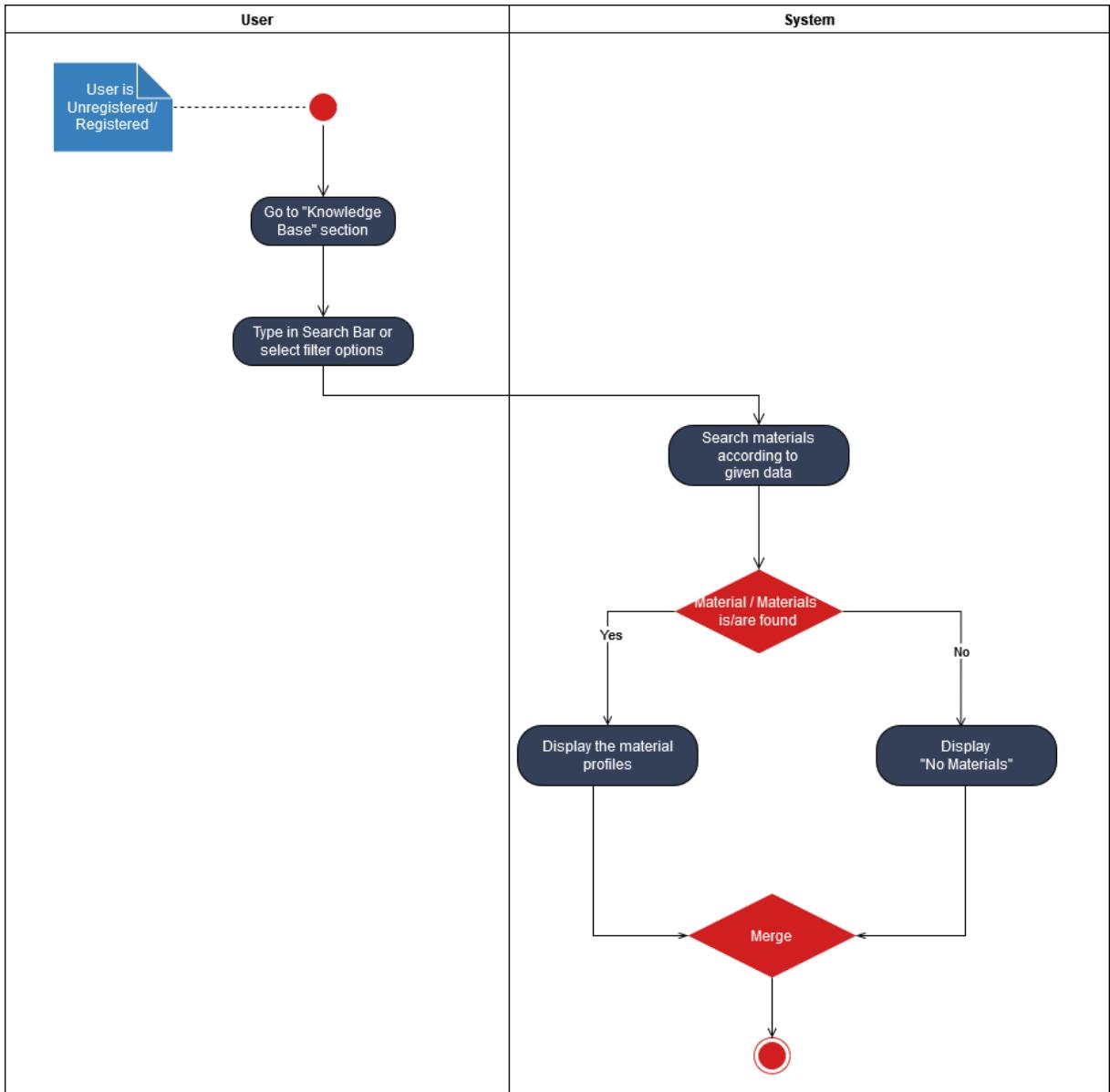


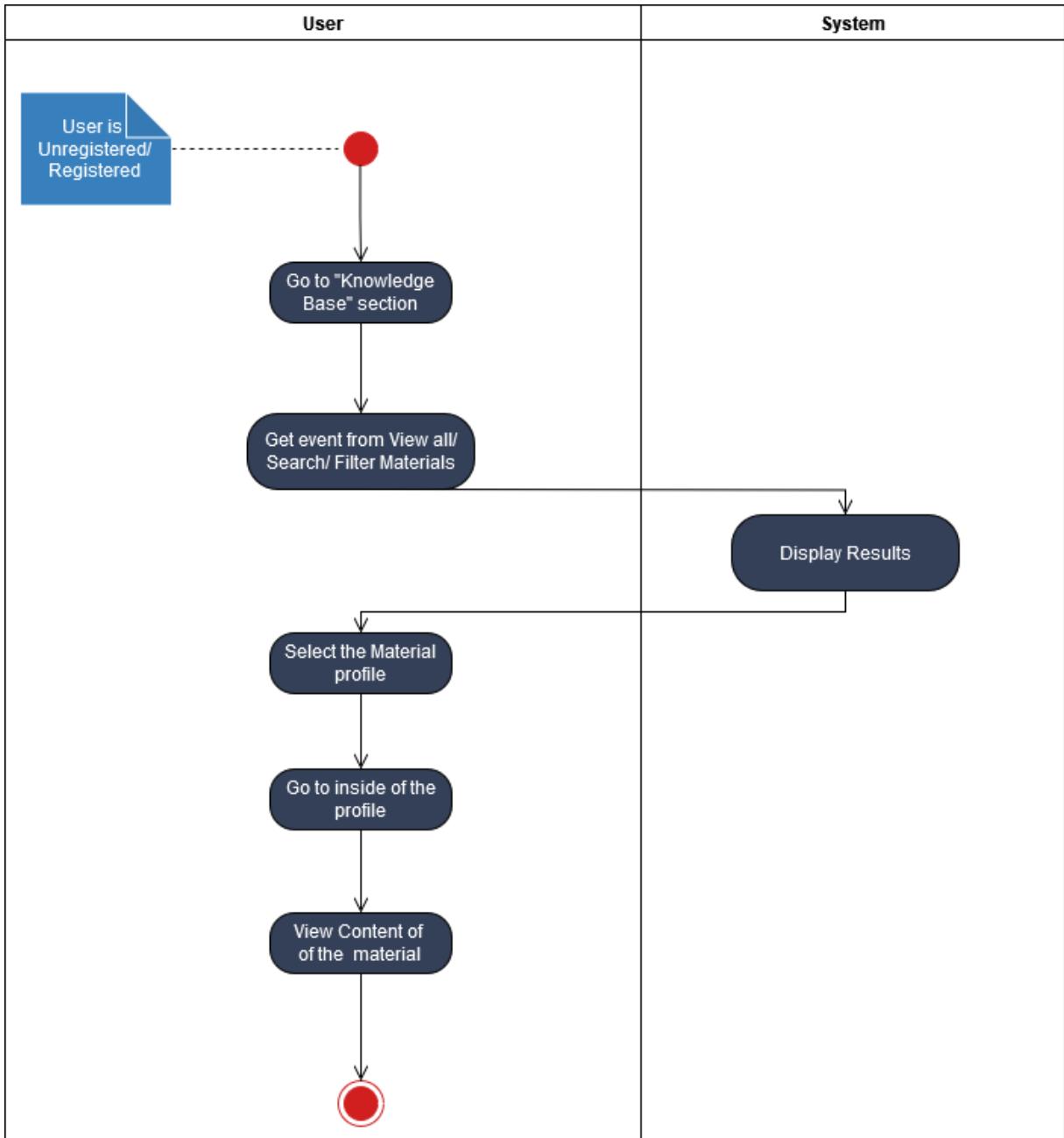
VI. Knowledge Base

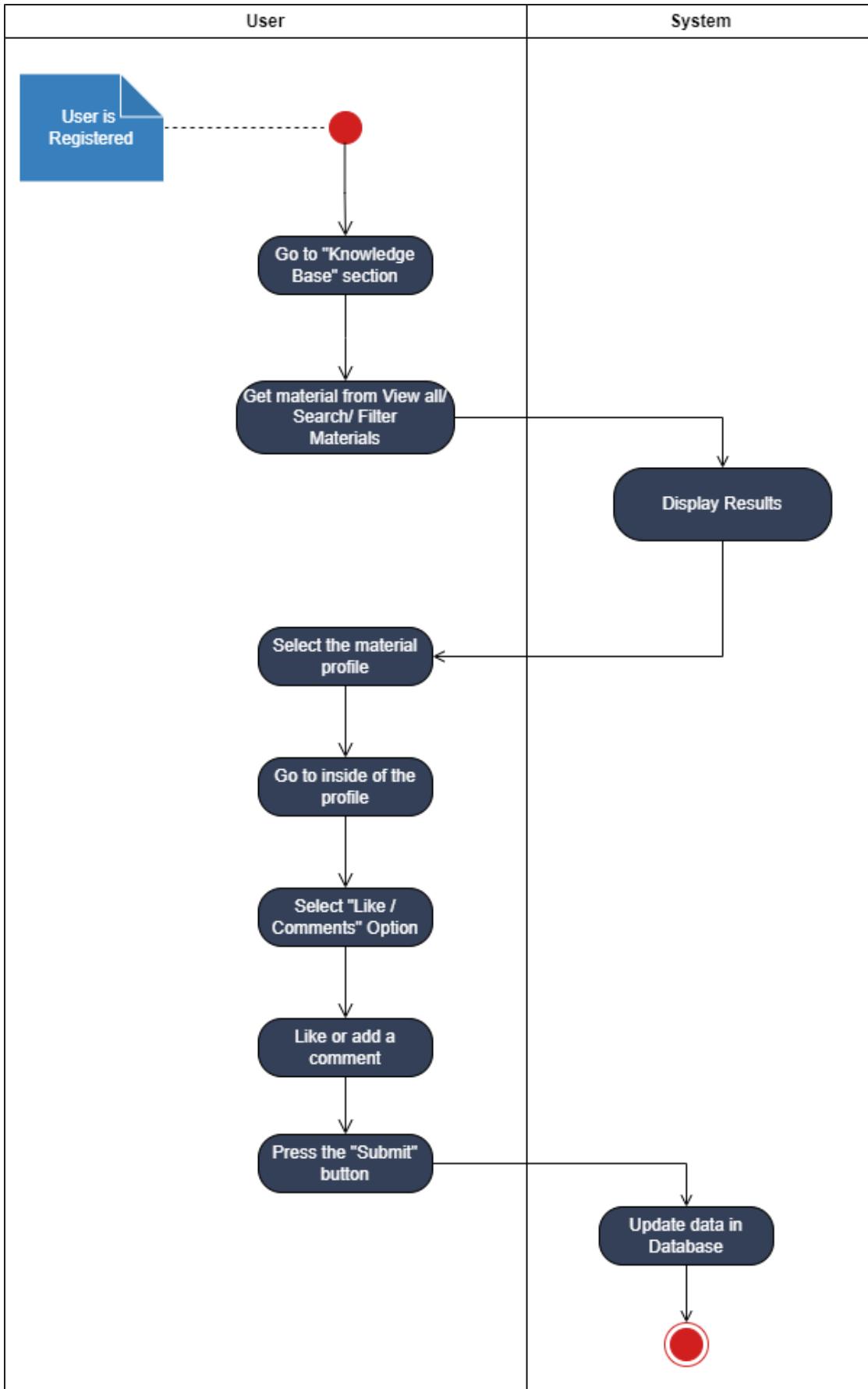
[View All Materials](#)



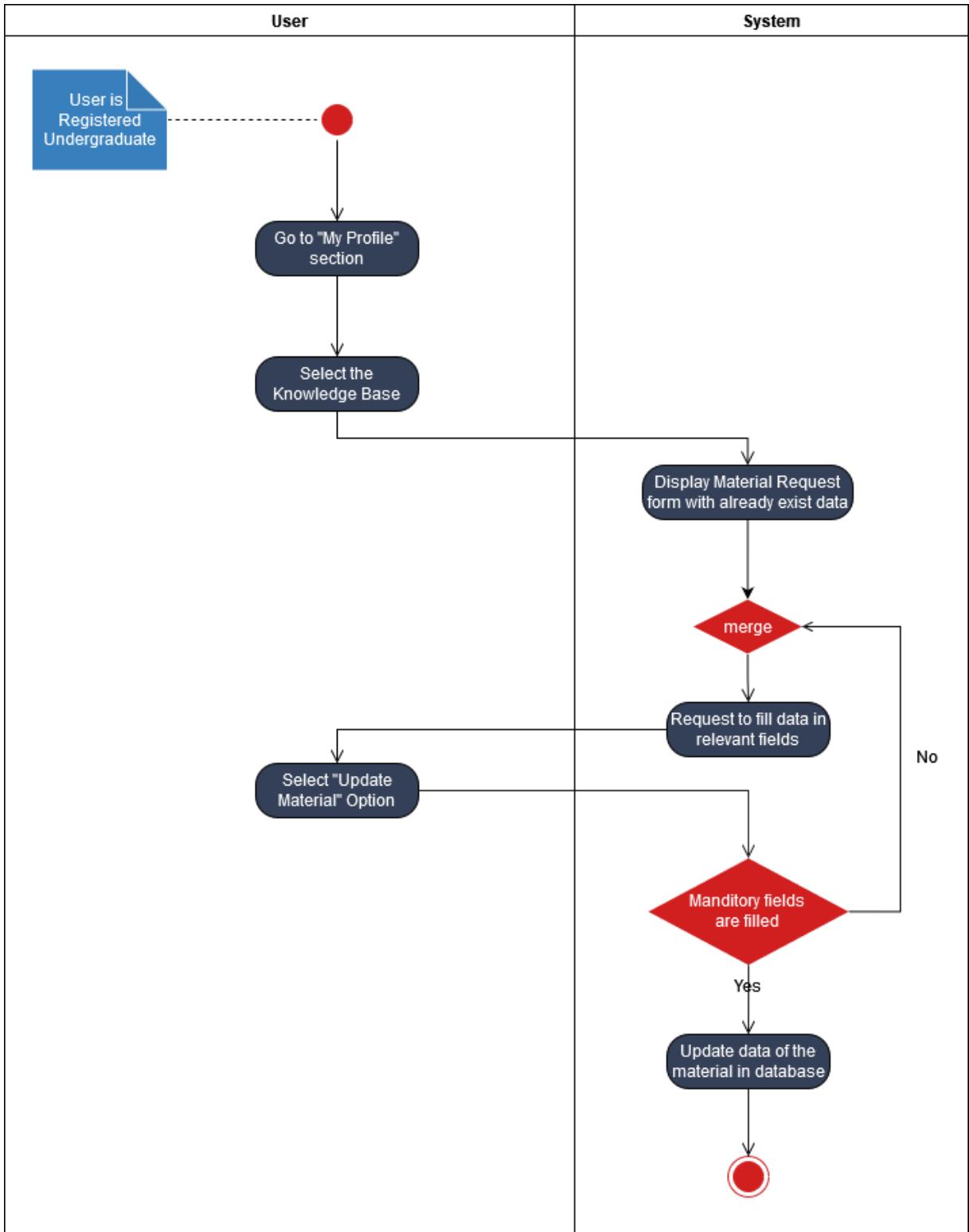
Search Filter Materials



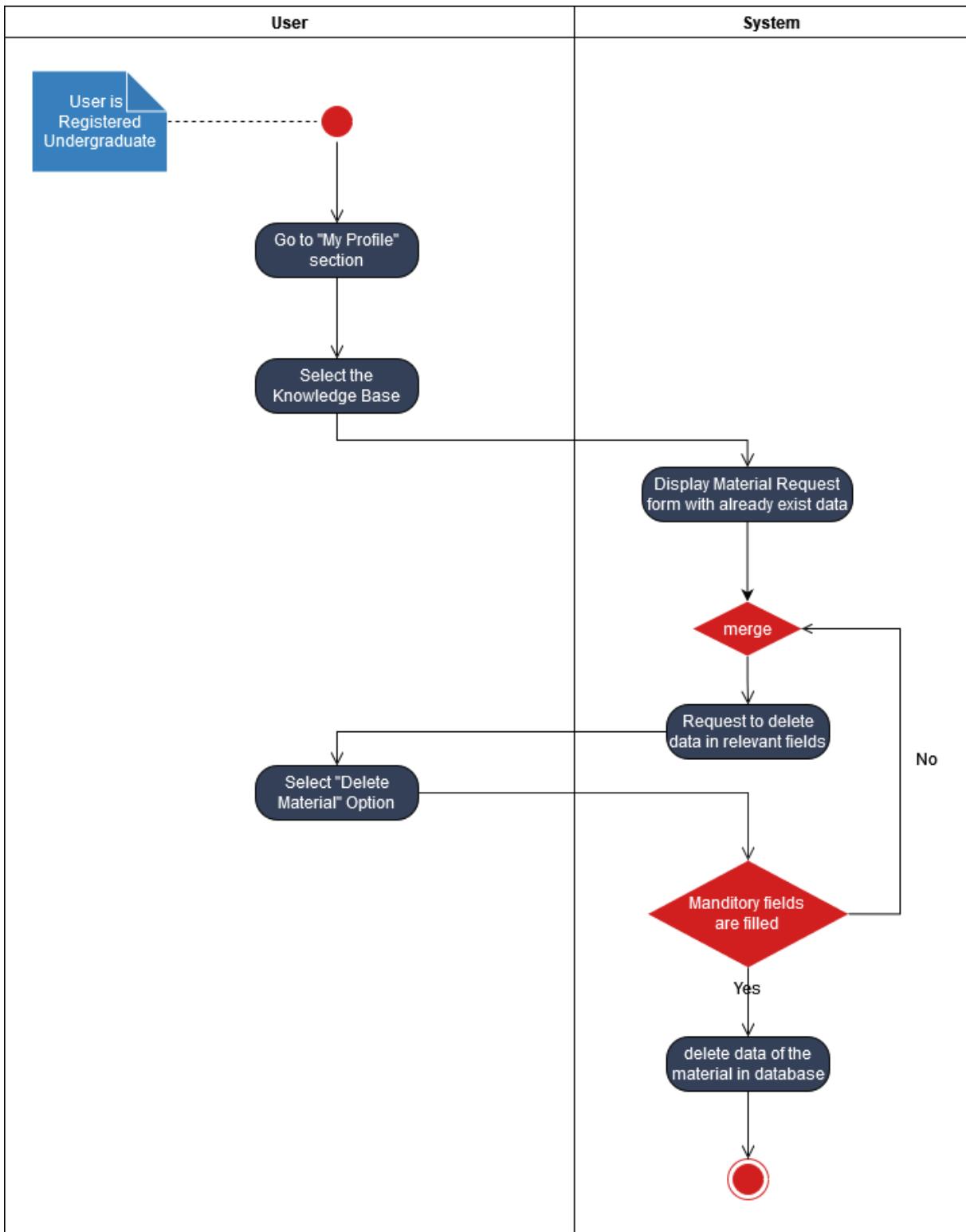
[View Specific Materials](#)

Likes/ Comments

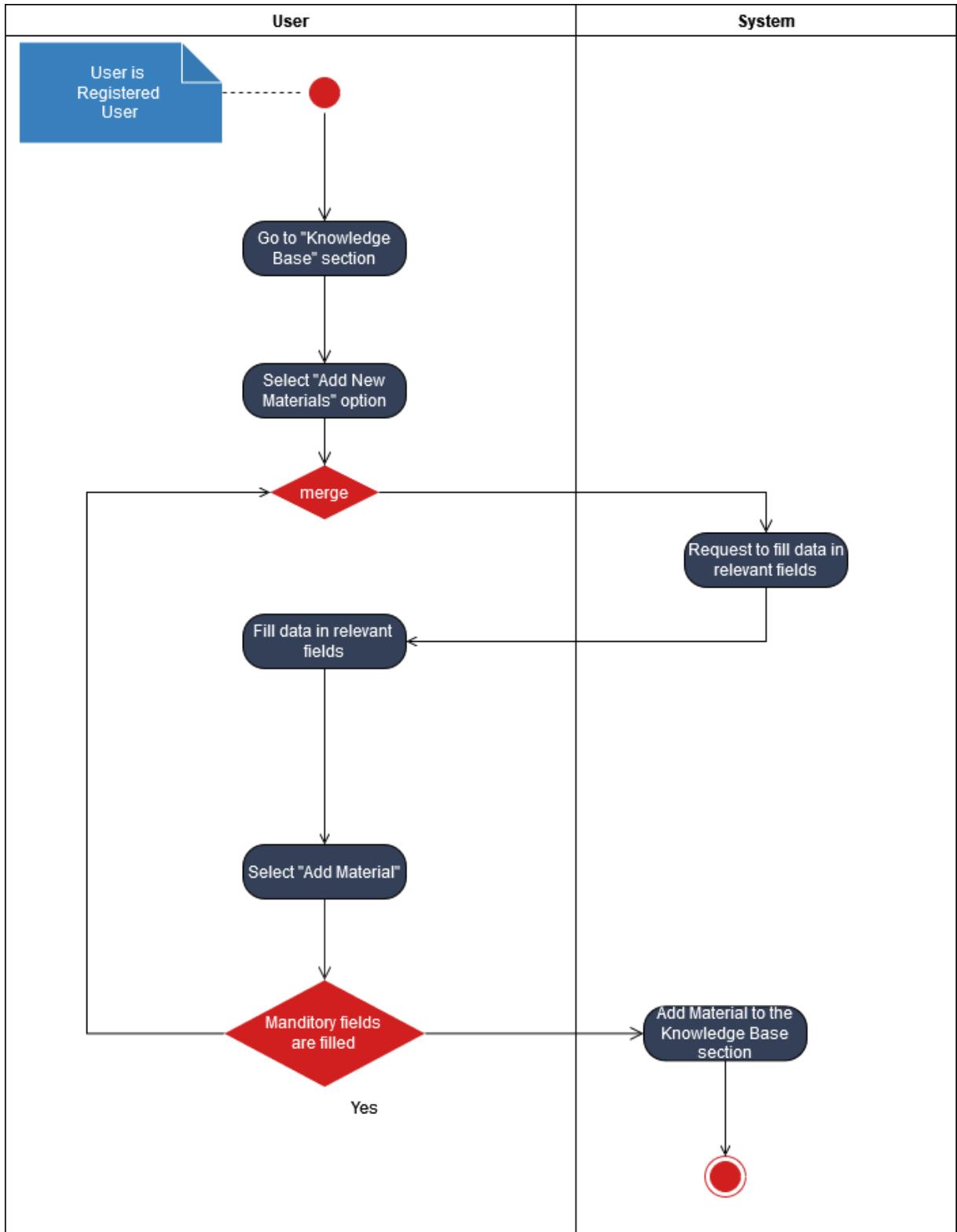
Request To Update

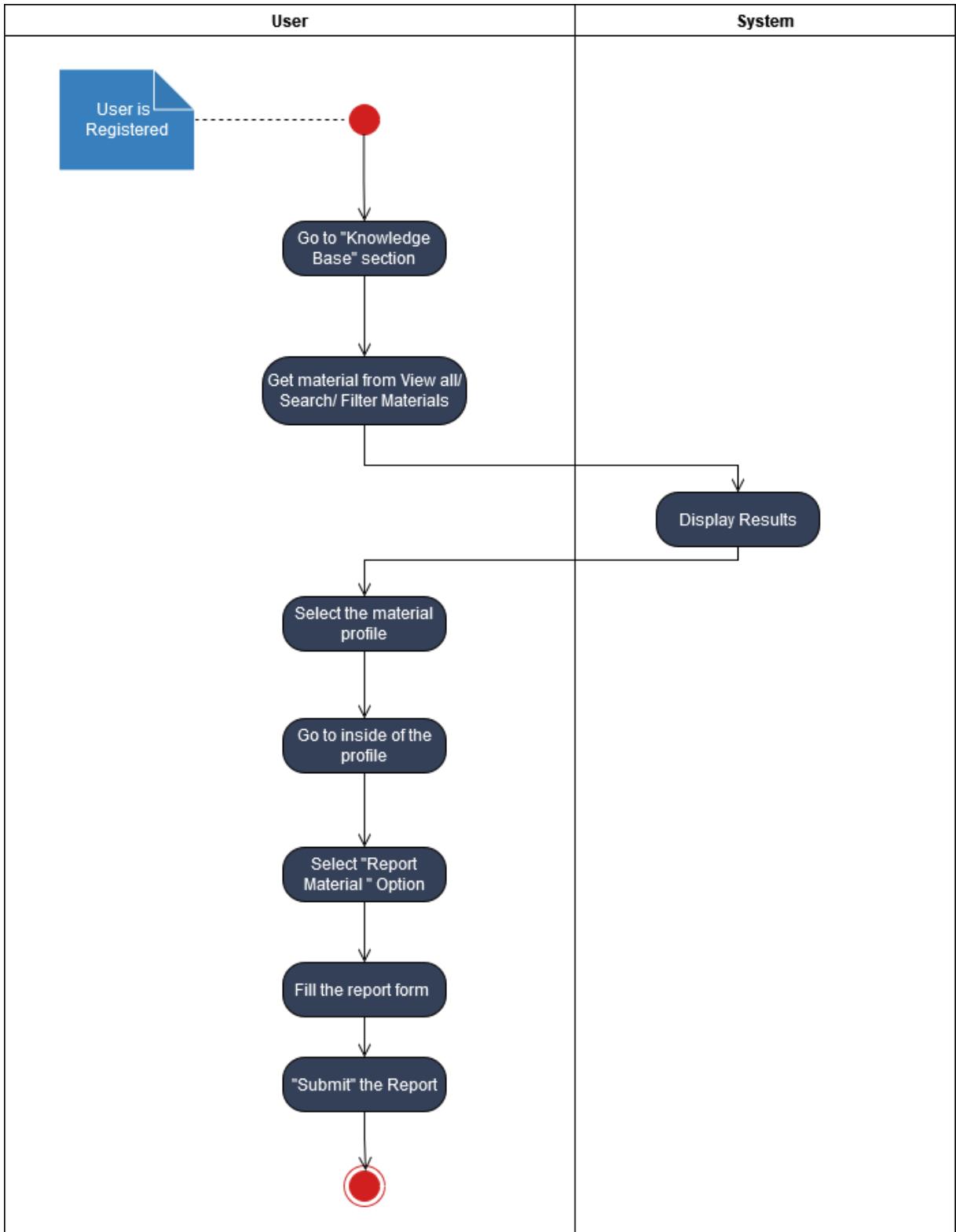


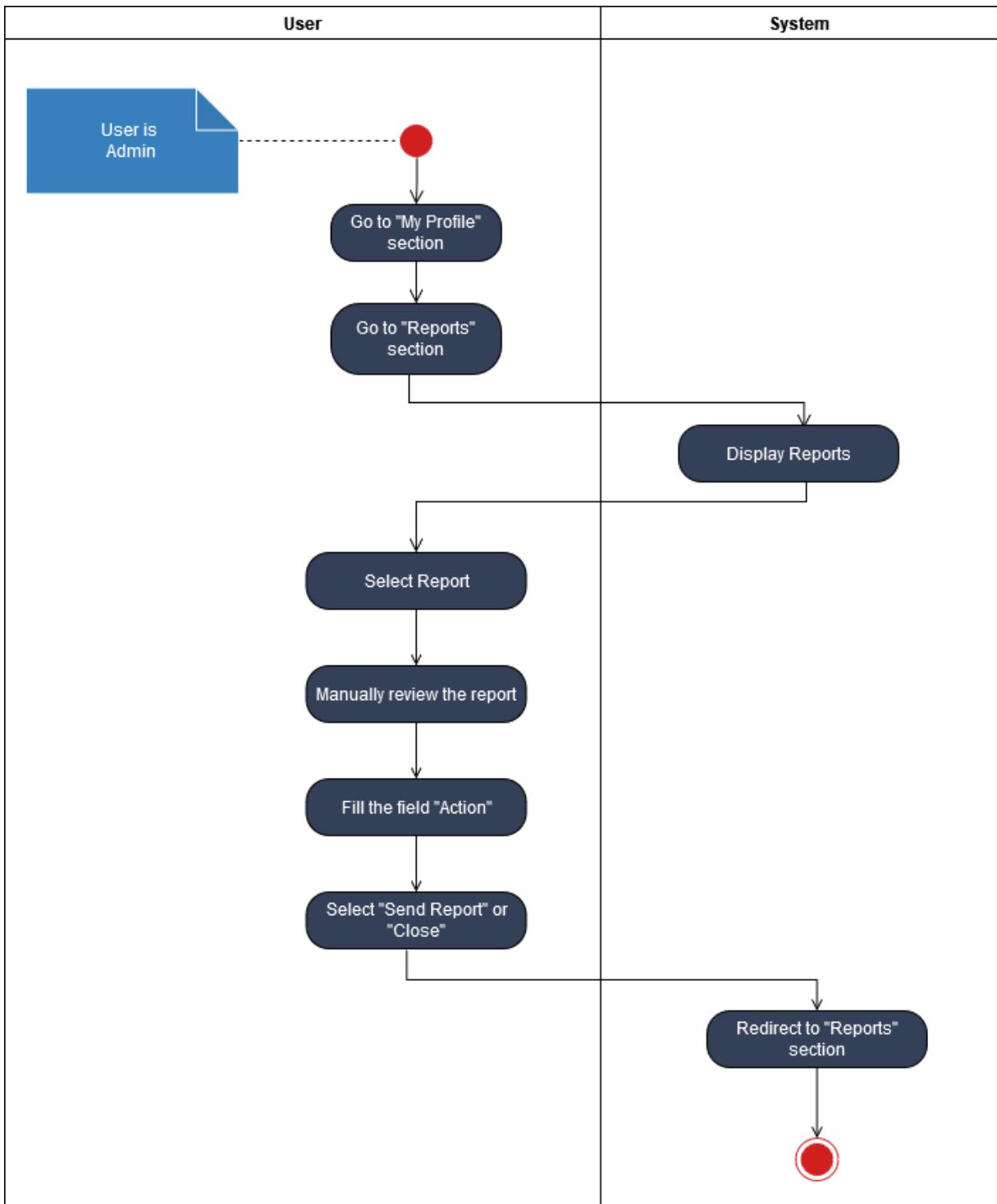
Request To Delete



Add Materials



Report Materials

Review Report

8.2 Quality Attributes

8.2.1 Usability

The platform prioritizes user-friendliness through well-organized and categorized interfaces, ensuring that users can easily navigate and access the various features. Intuitive profile management, portfolio generation, and event creation tools enhance user engagement and streamline content creation. Additionally, personalized recommendations based on user interests enhance content discovery. Polls and interactive features gather user opinions, fostering active participation and community involvement. The system's emphasis on clear, informative event details, reviews, and event ratings contributes to a transparent and trustworthy user experience, promoting informed decision-making.

8.2.2 Security

The platform employs a robust security framework to safeguard user information and interactions. Automated email domain validation ensures the authenticity of university email addresses during registration. Google authentication enhances user identity verification. Passwords are securely hashed for storage, preventing unauthorized access. String pattern matching algorithms validate hyperlinks, preventing the inclusion of potentially harmful or misleading content. A user-driven problem reporting system empowers the community to flag problematic content, while administrative review and action maintain content reliability and safety. These security measures collectively create a secure environment for users to interact and share information.

8.2.3 Scalability

The platform is designed for scalability, capable of accommodating increasing user demand and content volume. As the user base expands, the system can seamlessly handle a growing number of user profiles, connections, events, and opportunities. The use of efficient database structures and optimized queries ensures that data retrieval and management remain smooth even as the platform scales. The incorporation of automated reminders and notifications assists in user engagement without compromising performance. The platform's architecture and infrastructure allow for the addition of new features and functionalities, contributing to its adaptability as user needs evolve.

8.2.4 Availability

The platform ensures that users can always access it by using dependable hosting services and a system that can handle errors well. Automated reminders and notifications keep users informed about events, opportunities, and interactions, contributing to timely engagement. By utilizing load balancing and redundant systems, the platform mitigates the risk of downtime due to server failures or high traffic. Regular monitoring and quick problem-solving help maintain smooth operations.

9) Technologies to be Used

9.1 Main Technologies

Frontend

- HTML
- CSS
- JavaScript

Backend

- Java

Database

- MySQL

9.2 Other Technologies

Web server

- Apache Tomcat

Version control and Repo.

- GitHub

Diagram and modeling

- draw.io

APIs

- Google Calendar API
- Google Maps API
- Google sign-in
- Javamail API

UI/UX and prototyping

- Figma

IDEs and other tools

- IntelliJ IDEA
- Visual Studio Code
- Sublime Text

Project Management

- Jira

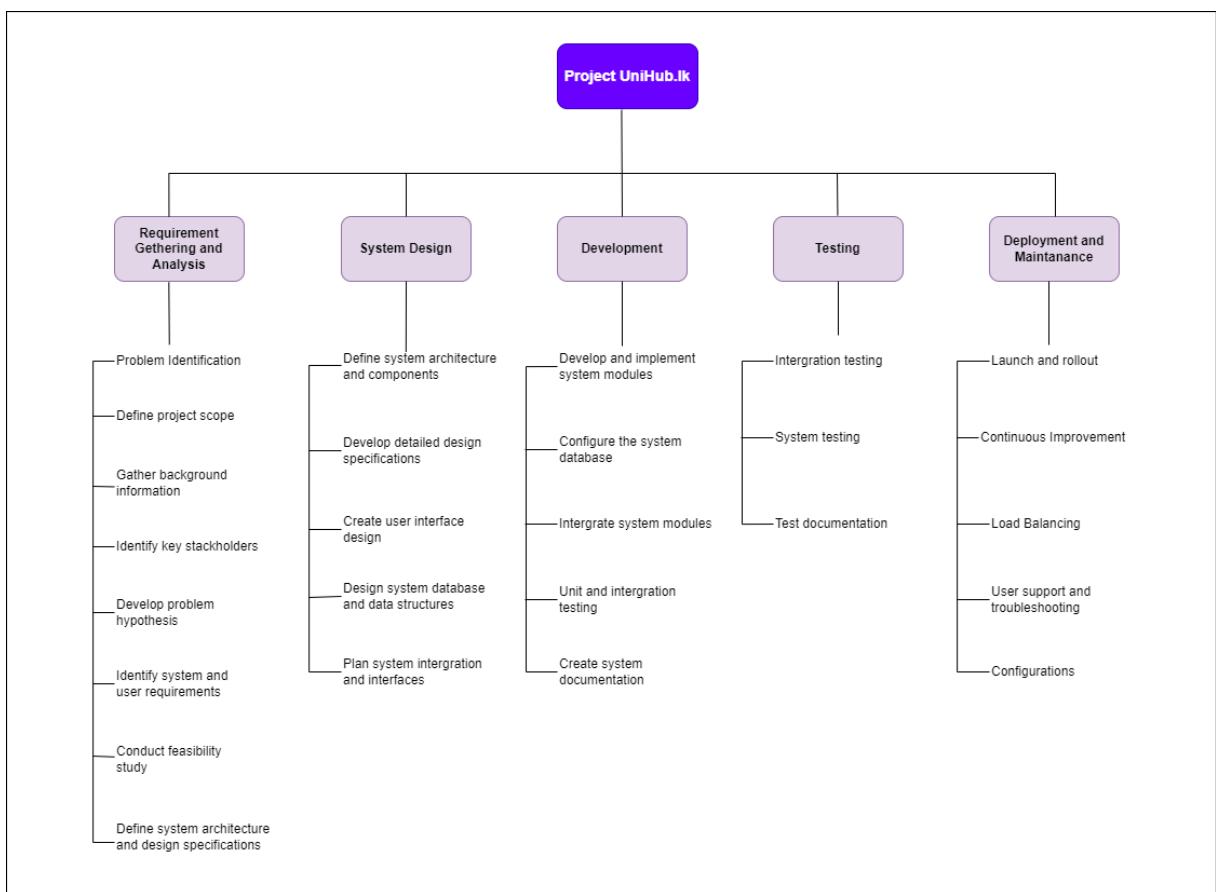
Collaboration

- Zoom
- Google Meet

10) Project Timeline

DETAILS		2023												2024																	
		JUL			AUG			SEP			OCT			NOV			DEC			JAN			FEB			MAR			APR		
PROJECT WEEK:		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Requirement Engineering	- Requirement Gathering																														
	- Requirement Analysis																														
	- Scope Identification																														
	- Feasibility Study																														
	- UML																														
	- Project Proposal																														
System Design	- UI Design																														
	- Database Design																														
	- SRS Document																														
	- Intern Presentation																														
Development																															
System Testing																															
Deployment & Maintenance																															

10.1 Work Breakdown Structure



10.2 Workload Distribution

	Requirement Analysis	Design and Development	Testing	Maintenance
Tharindra		Event Section and Opportunity Section		
Chathuni	Project Scope Analysis UML Diagrams Requirement Analysis Feasibility Study Choosing Technology Stack Project Timeline	Organizations Section User profiles section & Sign up/ Sign in Knowledge Hub Section	Unit Testing Integrate Testing System Testing Alpha Testing Beta Testing	Improve UI/ UX Correct System Faults Further Enhancements Improve System Security
Viruli				
Jananga				

11) Declaration

We as members of the project titled UniHub.lk, Certify that we will carry out this project according to the guidelines provided by the coordinators and supervisors of the course as well as we will not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any university. To the best of our knowledge and brief, the project work will not contain any material previously published or written by another person or ourselves except where due reference is made in the text of appropriate places

Index Number	Name of the Student	Signature
21000654	W. T. G. Fernando	
21001561	C. D. Ranasinghe	
21002142	V. V. Weerasinghe	
21002223	R. D. K. J. Wijewardhana	

12) Appendix

12.1 Responses for the Survey

[Social feasibility survey](#)

12.2 Project timeline

[Project Timeline](#)