

Software Requirements Specification

Connected Hub for ISC

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1. Introduction

The Connected Hub of ISC Platform is a sophisticated web-based solution designed to facilitate meaningful connections and engagement among alumni as well as current students of a renowned school and college. With the objective of fostering a vibrant community, Connected Hub serves as a central hub where students can stay connected, up-to-date and participate in various activities organized by administrators and authorities. This platform offers a seamless and user-friendly experience, enabling users to contribute to their alma mater and build lasting relationships.

Scope

The scope of the Connected Hub Platform encompasses a wide range of features and functionalities aimed at providing alumni and students with a comprehensive suite of tools and resources. Users are able to register on the platform, participate in events, purchase virtual coins for transactions, and access exclusive content. Administrators play a vital role in event approval, ensuring the quality and relevance of the platform's offerings. The platform is accessible to students or ex-students from diverse backgrounds and accommodates a multitude of event types and engagement opportunities.

Objective

The primary objective of the Connected Hub Platform is to create a dynamic and inclusive virtual space where students can connect, collaborate, and thrive. By facilitating seamless communication, the platform aims to promote engagement and interaction among users. Through its features, the platform seeks to empower users to contribute to their alma mater, stay informed about events and notices, and leverage their collective expertise and resources for mutual benefit.

The Connected Hub Platform is envisioned as a transformative tool that goes beyond mere networking, enabling alumni and students to make a meaningful impact within their professional and personal lives. The platform aims to strengthen the bond between users and their institution, fostering a spirit of pride, unity, and continued growth.

In the following sections, we will explore the detailed use cases, system features, user interface requirements, and non-functional requirements that collectively form the foundation of the Connected Hub Platform, embodying its mission to connect, engage the community.

2. Use Case:

2.1. Registration

Story: Alumni and current students initiate the registration process by providing their personal details, contact information, and professional background. They create a unique username and password to establish their account within the system.

Use Case:

Actors	- Alumni and current student (User) - Admin (System Administrator)
Preconditions	The user accesses the Connected Hub website.
Main Flow	<ol style="list-style-type: none">1. The user navigates to the registration page on the website.2. The website displays the registration form, prompting the user to enter their personal information such as name, email address, graduation year(for alumni), student ID, contact details etc.3. The user fills in the required fields and proceeds to the next step.4. The website validates the entered information for accuracy and completeness, displaying any error messages if necessary.5. The user reviews the entered information and confirms its accuracy.6. The website prompts the user to make the required payment to complete the registration process.

	<p>7. The user selects the preferred payment method, such as bKash or any online banking and proceeds to make the payment.</p> <p>8. The website redirects the user to the chosen payment gateway, where they provide the necessary payment details and authorize the transaction.</p> <p>9. Upon successful payment, the website confirms the registration and creates an account for the user.</p> <p>10. The website sends a confirmation email to the user, providing login credentials and a link to verify the email address.</p> <p>11. The user accesses their email inbox, verifies the email address by clicking on the verification link, and confirms their account.</p> <p>12. The user can now log into their account using the provided credentials.</p>
Alternative Flow	<p>If the user encounters any issues during the registration process, such as invalid payment details or a failed transaction, the website displays an error message and guides the user on how to resolve the issue or choose an alternative payment method.</p>
Postconditions	<p>1.The user is successfully registered on the Connected Hub website.</p> <p>2.The user has a verified account and can log in to access the website's features and functionalities.</p> <p>3.The admin has access to the registered user's information for further communication and engagement.</p>

2.2. Registration Approval:

Story: Administrators review the submitted registrations and verify the provided information. They assess the eligibility criteria and approve the registrations that meet the requirements, granting access to the portal

Use Case:

Actors	<ul style="list-style-type: none">- Admin (System Administrator)- Alumni and current student (User)
Preconditions	<ul style="list-style-type: none">- The user has completed the registration process on the website.
Main Flow	<ol style="list-style-type: none">1. The user fills in the necessary information during the registration process, including personal details, contact information, and any other required fields.2. The user submits the registration form.3. The website validates the entered information and checks for any missing or incorrect fields.4. If there are any errors, the website displays error messages indicating the specific fields that need correction.5. The user reviews the entered information, makes any necessary corrections, and resubmits the registration form.6. Upon successful submission, the website sends a notification to the admin about the new registration.7. The admin accesses the admin dashboard or user management section of the website.8. The website displays a list of pending registrations awaiting admin approval.9. The admin reviews the submitted registration details, including the user's personal information and contact details.10. If the information provided meets the required criteria and appears valid, the admin can proceed with the approval process.

	<p>11. The admin may also request additional information from the user if needed, using the website's messaging or communication feature.</p> <p>12. The admin verifies the membership payment status by checking if the user has paid the required membership fee.</p> <p>13. Once the membership payment is confirmed, the admin approves the registration.</p> <p>14. The website updates the user's status to "approved" and notifies the user about the successful registration approval.</p> <p>16. User receives login credentials (username and password) or a link to set up their login credentials.</p> <p>17. The user can now log into their account and access the full features and functionalities of the Connected Hub website.</p>
Alternative Flow	<ol style="list-style-type: none"> 1. If the admin encounters any issues during the registration approval process: <ol style="list-style-type: none"> 1.1. The admin can communicate with the user to request additional information or clarification using the website's messaging or communication feature. 1.2. The admin may reject the registration if the provided information is incomplete, invalid, or does not meet the required criteria. User is notified about the rejection and the reason behind it. 2. The website provides error handling mechanisms to guide the user in correcting any errors or providing the necessary information for successful registration approval.
Postconditions	<ol style="list-style-type: none"> 1. User successfully completes the registration process. 2. Approved users receive notifications and login credentials to access the Connected Hub website. 3. The user can now log into their account and utilize the website's features and functionalities.

2.3. Creating Events

Story: Administrators can create events by entering event details, including the event type, date, time, location, and description. They may optionally add event images or attachments to enhance event visibility.

Use Case:

Actors	- Admin (System Administrator)
Preconditions	- Admin has access to the event creation feature on the Connected Hub website. - Admin is well known about the event details.
Main Flow:	<ol style="list-style-type: none">1. The admin navigates to the event creation section of the website.2. The website presents a form or section where admin can enter event details, including the event name, description, date, time, location, and event type (e.g., fun, concert, charity, donation or any kind of news).3. The admin fills in the required fields and adds any additional relevant information about the event.4. The website validates the entered information and displays any error messages if necessary.5. Admin reviews the entered information and confirms its accuracy.6. The website saves the event details and adds the event to the list of created events.7. Admin has the option to upload event-related images, videos, or additional documents if necessary.8. If the event type is fun, admin may add details about the activities, games, or entertainment planned for the event.9. If the event type is a concert, admin may specify the artists, bands, or performers who will be part of the concert.

	<p>10. If the event type is a charity or donation event, admin may provide information about the cause, fundraising goals, and any specific donation methods or requirements.</p> <p>11. The admin can preview the event details before submitting it.</p> <p>12. The admin may take appropriate actions based on the type of event (e.g., promote charity events, ensure compliance with guidelines for fun events, coordinate logistics for concert events).</p> <p>13. After submitting the event, the website notifies the admin about the successful creation of the event and the users about the upcoming event details.</p> <p>14. The website may prompt the user to share the event on social media platforms.</p> <p>16. The admin has the authority to publish or unpublish events based on their suitability and adherence to guidelines.</p> <p>18. The website displays the created events on the public event listing, allowing others to view and participate in the events based on their preferences.</p>
Alternative Flow	<p>If the admin encounters any issues during the event creation process, such as validation errors or missing information, the website displays an error message and guides on how to resolve the issue or provide the necessary details.</p>
Postconditions	<ol style="list-style-type: none"> 1. The admin successfully creates different types of events on the Connected Hub website. 2. After reviewing admin takes necessary actions on the created events based on their type and guidelines. 3. The website displays the created events on the public event listing for other alumnus and students to view and participate in.

2.4. Participating in an Event

Story: Users browse the list of events and select the ones they wish to participate in. They view event details, RSVP, and indicate their attendance. They can also engage in event-specific discussions, ask questions, or share their opinions to foster interaction and networking among participants.

Use Case:

Actors	<ul style="list-style-type: none">- Alumni and student (User)- Admin (System Administrator)
Preconditions	<ul style="list-style-type: none">- The user is registered and logged into their account.- An event created by the admin is available on the website
Main Flow	<ol style="list-style-type: none">1. The user navigates to the Events section of the website.2. The user explores the list of upcoming events and selects a specific event of interest.3. The website displays detailed information about the event, including the event description, date, time, location, and any associated fees.4. The user decides to participate in the event and clicks on the "Register" button.5. The website prompts the user to confirm their registration and notifies them about the number of coins required for participation.6. The user confirms their registration and proceeds to the payment step.7. The website redirects the user to the coin payment gateway (e.g., bKash, online bank) to complete the transaction.8. The user makes the payment for the required coins through the chosen payment method.9. Upon successful payment, the website updates the user's coin balance and registers them for the event.10. The website sends a confirmation email or notification to the user, providing event details and any additional instructions.

	<p>11. On the day of the event, the user attends the event at the specified location and time.</p> <p>12. After the event, the user may have the opportunity to provide feedback or rate their experience through a feedback form on the website.</p> <p>13. The admin can access the event participation data, review feedback, and take necessary actions for future event planning.</p>
Alternative Flow	If the user does not have sufficient coins to register for the event the website prompts the user to purchase additional coins through the coin payment gateway before proceeding with the registration.
Postconditions	<p>1. The user is successfully registered for the event and can participate in it.</p> <p>2. The user's coin balance is updated based on the coins deducted for event registration.</p> <p>3. The admin has access to event participation data and any feedback provided by the user.</p>

2.5. Coin Purchase and Wallet Top-up

Story: Users have the option to purchase virtual coins through designated payment gateways, such as bKash or any kind of online bank. They initiate the coin purchase process, select the desired coin package, and complete the transaction securely. The purchased coins are then added to their digital wallet within the platform, enabling seamless coin-based transactions for various activities.

Use Case:

Actors	<ul style="list-style-type: none"> - Alumni and student (User) - Admin (System Administrator) - Payment Gateway (bKash, online bank)
Preconditions	<ul style="list-style-type: none"> - The user is registered and logged into their account on the Connected Hub website. - The user has a bKash account or access to the bKash payment gateway. - The user can have any online bank account and sufficient balance.

Main Flow	<ol style="list-style-type: none"> 1. The user navigates to the wallet section of the Connected Hub website. 2. The user selects the option to purchase points or top-up their wallet balance. 3. The website displays the available coin packages and their respective prices. 4. The user selects the desired coin package and quantity. 5. The website presents the payment options, including bKash, online bank account for completing the transaction. 6. The user chooses the payment option. 7. The website generates a unique transaction ID and provides the user with the instructions to make the payment through the bKash payment or online banking gateway. 8. The user initiates the payment through their bKash account or online bank account by following the provided instructions. 9. The selected payment gateway processes the payment, can send verification code or OTP ensuring the transaction and verifies its completion. 10. The payment gateway sends a payment confirmation notification to the Connected Hub website as well as user's personal inbox. 11. The website updates the user's wallet balance by adding the purchased coins to their account. 12. The user receives a notification confirming the successful purchase and wallet top-up. 13. The admin may review the transaction details and user's wallet balance for auditing purposes.
Alternative Flow	<ol style="list-style-type: none"> 1. If the user encounters any issues during the payment process: <ol style="list-style-type: none"> 1.1 The website provides error handling mechanisms and guides the user on how to resolve the issue or seek support if needed. 2. If the payment gateway fails to process the payment:

	<p>2.1. The user can try again or choose an alternative payment method.</p> <p>2.2. The website provides error handling mechanisms to handle payment failures and notifies the user about the issue.</p>
Postconditions	<ol style="list-style-type: none"> 1. The user successfully purchases coins or tops up their wallet balance using the payment gateway. 2. The website updates the user's wallet balance by adding the purchased coins. 3. The user receives a notification confirming the successful transaction and wallet top-up. 4. The user can now use the purchased coins for various activities and transactions within the Connected Hub website.

3. System Features (Functionalities)

3.1. User Registration:

- Allow users to register on the website by providing necessary personal information.
- Verify the necessary payment through a payment gateway for confirming registration.
- Validate and store user registration data securely.

3.2. Login and Authentication:

- Provide a secure login mechanism for registered users.
- Authenticate user credentials to ensure secure access to the website.

3.3. Event Management:

- Allow admin to create and manage events.
- Provide event creation forms with fields for event details such as name, description, date, time, location, and event type.
- Display event listings for users to view and participate in.

3.4. Notification and Messaging:

- Send notifications to users regarding events, updates, and other important announcements.
- Enable users to communicate if any other information is required within the website.

3.5. Membership Management:

- Enable users to pay membership fees through supported payment gateways (e.g., bKash, online bank account) to access premium features.
- Track membership payment status and update user accounts accordingly.

3.6. Coin System:

- Introduce a coin-based transaction system for users to perform various activities on the website.
- Allow users to purchase coins through supported payment gateways (e.g., bKash, online bank) and add them to their wallets.
- Deduct coins from user wallets for activities such as event participation, accessing premium content, or sending messages.

3.7. User Profile:

- Provide user profiles with fields for personal information, contact details, and other relevant data.
- Allow users to update their profiles, including profile pictures, and manage privacy settings.

3.8. Event Participation:

- Enable users to response for events and manage their event participation status.
- Allow users to view event details, including date, time, location, and event organizers.
- Allow users to make secured payment transaction for attending any event.

3.9. Admin Dashboard:

- Provide an administrative interface for the admin to manage user registrations and other system-related tasks.
- Grant admin privileges to monitor and supervise event activities, user interactions, and system performance.

3.10. Payment Integration:

- Integrate with supported payment gateways (e.g., bKash, online bank) to facilitate secure and seamless transactions for membership fees and coin purchases.

4. UI requirements for the Connected Hub website:

4.1. User-Friendly and Intuitive Design:

- The UI should be visually appealing, professional, and aligned with the branding and purpose of the website.
- Use clear and consistent navigation menus, buttons, and icons to ensure ease of use.
- Provide intuitive user flows and logical organization of content to guide users through the website.

4.2. Responsive Design:

- The UI should be responsive and adaptable to different screen sizes and devices.
- Ensure that the website is accessible and usable on desktops, laptops, tablets, and mobile devices.

4.3. Registration and Login:

- Provide a clear and easy-to-use registration form with required fields and validation.
- Design a user-friendly login interface that allows users to enter their credentials and securely access their accounts.

4.4. Dashboard and Profile:

- Create a user dashboard that provides an overview of important information, such as upcoming events, notifications, and account details.
- Design user profiles that display personal information, contact details, and account settings.
- Allow users to easily update their profiles, upload profile pictures, and manage privacy settings.

4.5. Event Listings and Details:

- Display event listings in a visually appealing manner, including event names, dates, locations, and event types.

- Provide detailed event pages with information such as event description, organizers, response options, and event updates.
- Include event images or banners to enhance the visual representation of events.

4.6. Payment Integration:

- Design a seamless and secure payment interface for users to make membership fee payments or purchase coins.
- Clearly display payment options and guide users through the payment process.
- Provide confirmation and receipt details after successful payments.

4.7. Notifications and Messaging:

- Incorporate a notification system to alert users about event approvals, rejections, updates, and other important information.
- Design a messaging feature or FAQ that allows users to communicate with event organizers or admin.

4.8. Clear Call-to-Action:

- Use prominent and visually appealing buttons or links for important actions, such as event registration, coin purchase, or accessing features.
- Highlight important information or announcements to draw users' attention.

4.9. Consistent Branding:

- Maintain a consistent color scheme, typography, and overall branding throughout the website.
- Ensure that the UI aligns with the branding guidelines and reflects the identity of the Connected Hub platform.

4.10. Accessibility:

- Follow accessibility guidelines to ensure that the website is usable by individuals with disabilities.
- Provide options for font size adjustment, high contrast mode, and other accessibility features.

5. Nonfunctional requirements

5.1. Performance:

- The website should load quickly and respond promptly to user interactions.
- Ensure efficient database queries and optimize server-side processing to minimize response time.
- Support scalability to handle increased traffic and user activity.

5.2. Security:

- Implement robust security measures to protect user data and prevent unauthorized access.
- Use encryption techniques for sensitive information such as login credentials, payment details, and personal data.
- Implement user authentication and authorization mechanisms to ensure secure access to user accounts and sensitive features.

5.3. Reliability and Availability:

- Ensure high availability of the website with minimal downtime or maintenance periods.
- Implement backup and disaster recovery mechanisms to safeguard data and minimize the risk of data loss.

5.4. Compatibility:

- Ensure cross-browser compatibility, allowing the website to work seamlessly on popular web browsers such as Chrome, Firefox, Safari, and Edge.
- Support compatibility with different operating systems and devices, including desktops, laptops, tablets, and mobile phones.

5.5. Accessibility:

- Design the website to be accessible to users with disabilities, following web accessibility standards.
- Ensure compatibility with assistive technologies such as screen readers and keyboard navigation.

5.6. Scalability:

- Build the website in a scalable manner to accommodate future growth and increasing user demand.
- Design the architecture to handle a large number of concurrent users and scale the infrastructure as needed.

5.7. Usability and User Experience:

- Create a user-friendly interface with intuitive navigation and clear instructions.
- Ensure consistency in design elements, terminology, and interaction patterns throughout the website.
- Conduct usability testing to identify and address any usability issues.

5.8. Localization and Internationalization:

- Support localization by providing language options and adapting content based on user preferences.
- Allow for the translation of content into different languages.
- Consider internationalization requirements to support different date formats, currencies, and cultural conventions.

5.9. Compliance and Legal Considerations:

- Adhere to relevant legal requirements, such as data protection and privacy regulations.
- Comply with applicable copyright laws and intellectual property rights.
- Ensure compliance with any industry-specific regulations or standards.

5.10. Documentation and Support:

- Provide comprehensive documentation, including user guides and system documentation, to assist users and administrators.
- Offer responsive customer support to address user queries and issues in a timely manner.