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Proximity Based Web Application for Connecting Passion

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A B S T R A C T

Our project emerges as a dynamic approach to bridge the gap between virtual communities and actual connections in a world increasingly dominated by digital interactions. Users of this online platform are empowered to discover and join groups centred around their passions and interests. Our project makes sure that community members actually have the same excitement for the group's core point by using a novel quiz-based entrance procedure. The platform enhances the experience with location-based functions, allowing users to connect with similar individuals nearby. Beyond typical social networking, our concept seamlessly incorporates Instagram profiles, allowing for direct interactions between users.Whether trading hobbies, sports interests, or spiritual interests, the platform builds genuine connections that extend beyond the digital realm.Our project accepts email as a substitute providing access to people who do not use Instagram. Our unwavering focus on user privacy distinguishes us, revolutionising the dynamics of like-minded individuals coming together to establish a lively and friendly community. Through our project, you may become a part of the ever-changing social media world and turn your online interests into real, enduring relationships.

Keywords: Geolocation, User experience, Relational Database Management System (RDBMS), Backend logic, Responsive design.

1. INTRODUCTION

This innovative web tool tackles the modern problem of finding like-minded people by effortlessly bringing people together who have similar interests and passions. Our principal aim is to create a vibrant virtual community that offers a forum for people to not only connect but also thrive through their common interests and passions. The main idea is to establish online communities—that is, online areas where people who share interests may gather interact, and connect. Our project invites users to explore and participate in these lively virtual locations by providing a varied selection of communities covering art, sports, food, and other passions. There are two ways you can become a part of our community. The first is to ask our respected community leader, who leads the group, for an exclusive invitation code. Alternatively, you could show off your knowledge and excitement by creating an engaging quiz related to the community's main theme. Members will be really engaged and ready to participate in this entertaining quiz. We go above and above by integrating location services after you're a part of our community. These services let you connect with other members who are nearby. Through the use of this tool, you can establish important connections and have opportunities to participate in real-life events by meeting and connecting with like-minded people in your community. Our goal is to provide an experience that goes beyond the standard web application and immerses users in a vibrant online community. This platform encourages people to band together and pursue common interests by fostering new relationships in addition to connecting people. Our ultimate goal is to provide a welcoming and motivational space where people can connect with one another, share their stories, and set out on a path of personal growth. By empowering people, developing a strong sense of belonging, and cultivating real connections based in shared passions, we hope to rethink conventional notions of social interaction.

2. LITERATURE SURVEY

The paper [1] offer a sophisticated recommendation engine for Location-Based Social Networks (LBSNs). This novel algorithm applies the HITS concept to provide highly tailored suggestions to users based on user hub ratings and Point of Interest (POI) authority scores. But this method goes beyond conventional POI suggestions. We incorporate location-based interactions to create virtual communities that link people who have similar interests and passions.

The paper [2] emphasizes the value of actively adapting to people's changing tastes, in contrast to the constraints of conventional social networks. Our initiative recognizes that interests are dynamic, but our main objective goes beyond simply serving the interests of people who share our objectives. Rather, we want to help people make meaningful connections and encourage community involvement.

The paper [3] offers a new angle on proximity-based mobile social networks by investigating the idea of user similarity discovery. Still, our project differs in that it seeks to pair people according to their interests and pastimes, reducing the need for physical closeness to facilitate user matching.

This paper [4] explores the field of community search within large graphs. Their focus is on developing models and techniques for locating communities in large-scale graphs. As an alternative, our initiative aims to create virtual communities and encourage active user involvement within them, rather than just recognizing community patterns within large-scale graphs.

The paper [5] introduced the novel framework TP-GraphMiner, which revolutionizes the field of data clustering for task-based information networks. While our research includes clustering data, our main aim is to connect individuals who have like interests in order to create experiences that benefit both parties. This sets us apart from TP-GraphMiner, which focuses mostly on relationships based on tasks.

The paper [6] investigate how to enhance private matching in proximity-based mobile social networking. In contrast, the goal of our project is to improve the links between individuals by showcasing their distinctive interests, fostering a strong feeling of community, and encouraging shared experiences.

3. PROPOSED METHODOLOGY

This part provides a thorough explanation of the techniques and procedures that guides the development of our project, outlining the systematic approach and procedural framework that were utilised in its creation. It acts as a guide, shedding light on the calculated actions made to take our project from conception to completion.

3.1 User Management:

- Module 01 - This pivotal module streamlines the user experience by overseeing seamless processes such as registration, login, and password recovery, ensuring a frictionless onboarding and authentication journey for platform users. Its comprehensive features contribute to a user-friendly environment, enhancing the overall accessibility and security of the platform.

3.2 Community Management:

- Module 02 -This module efficiently oversees the entire lifecycle of communities, handling tasks such as registration, verification, and profile management. By enforcing authenticity and organization, it contributes to fostering a vibrant and trustworthy community environment.

- Module 3: Location-Based Services Module: Dedicated to enhancing user connections, this module employs location tracking and proximity notifications to enable real-world meetups among community members. It adds a dynamic layer to community interactions, promoting meaningful connections based on geographical proximity.

3.3 Development Environment:

- The development environment will be established using Visual Studio Code, providing a userfriendly interface for coding and implementing libraries. Git repositories on GitHub will facilitate version control, ensuring a systematic and collaborative development process.

3.4 Testing and Optimization:

- Extensive testing will be conducted to ensure the compatibility of the web portal across different browsers, including Chrome, Firefox, Safari, and Edge.

- The system will undergo rigorous testing to validate its accuracy, efficiency, and real-time performance. Iterative optimization will be implemented to enhance overall system reliability.
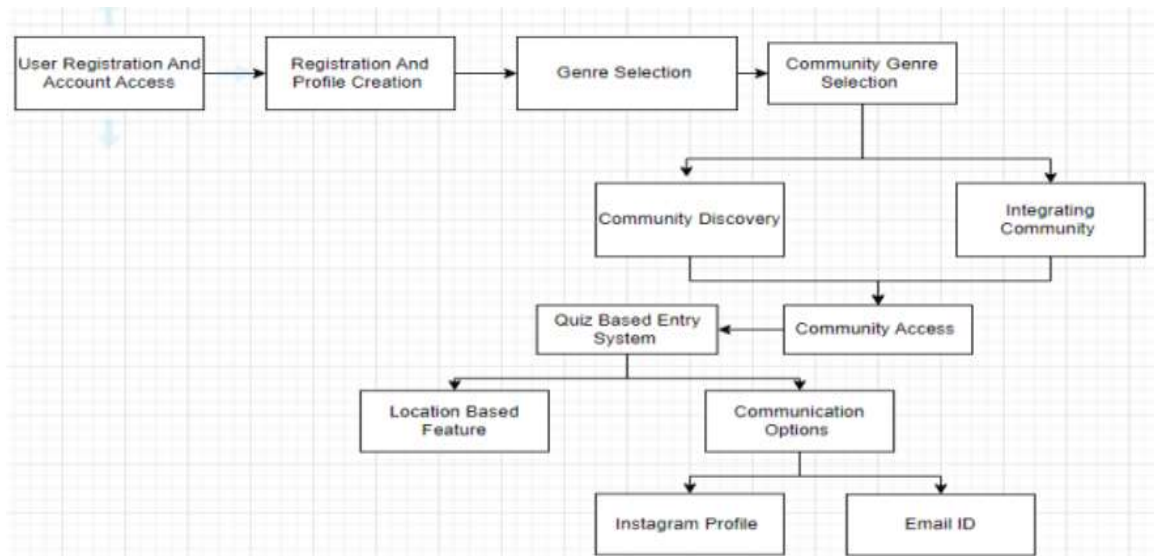
Fig.1. Module 01: Working of the project

4. SYSTEM SPECIFICATION AND WORKING

1. User Registration/Login:

 - If the user selects the "Login" option:

  - Prompt the user to enter their credentials.

  - Authenticate the user's credentials.

  - If authentication is successful, redirect the user to the home page.

  - If authentication fails, prompt the user to try again or sign up.

 - If the user selects the "Sign Up" option:

  - Prompt the user to provide registration details.

  - Validate the provided information.

  - If validation is successful, create a new user account.

  - If validation fails, prompt the user to correct the errors.

  - Redirect the user to the home page after successful registration.

2. Community Selection:

 - Display a list of available communities (e.g., sports, arts, dance, music, technology).

 - Allow the user to select a community of interest.

 - Retrieve and display information about the selected community (introduction, activities, etc.).

 - Provide options to start a quiz related to the selected community or return to the home page.

3. Quiz Process:

 - Retrieve a set of random quiz questions related to the selected community from the question database.

 - Display each quiz question along with multiple-choice options.

 - Start a timer for each question (e.g., 15 seconds).

 - Allow the user to select an option within the given time limit.

 - If the user fails to select an option within the time limit, swap the question.

- Track the number of consecutive swapped questions for each user.

- If the user fails to answer three consecutive questions, block them from the quiz for one minute.

- Repeat the process until all quiz questions are answered.

4. Quiz Evaluation:

- After completing the quiz, evaluate the user's answers.

- Calculate the user's score based on the number of correct answers.

- Determine whether the user passed or failed the quiz based on a predefined passing criteria.

- Notify the user of their quiz result (pass or fail).

5. Interaction with Members:

- Display a list of users who have successfully passed the quiz for the selected community.

- Allow the user to select a member from the list.

- Provide options to get in touch with the selected user via email or check their proximity/location.

6. Email Interaction:

- If the user chooses to get in touch via email:

  - Display a form for the user to compose and send an email to the selected user.

  - Send the email to the selected user.

7. Proximity/Location Interaction:

- If the user chooses to check proximity/location:

  - Retrieve and display information about the selected user's proximity or location.

  - Allow the user to view the location on a map.

This proposed algorithm outlines the logical flow and key functionalities of the entire project, from user registration and community selection to quiz process,and interaction with successful users. It serves as a roadmap for implementing the project's features and functionalities in a systematic manner.
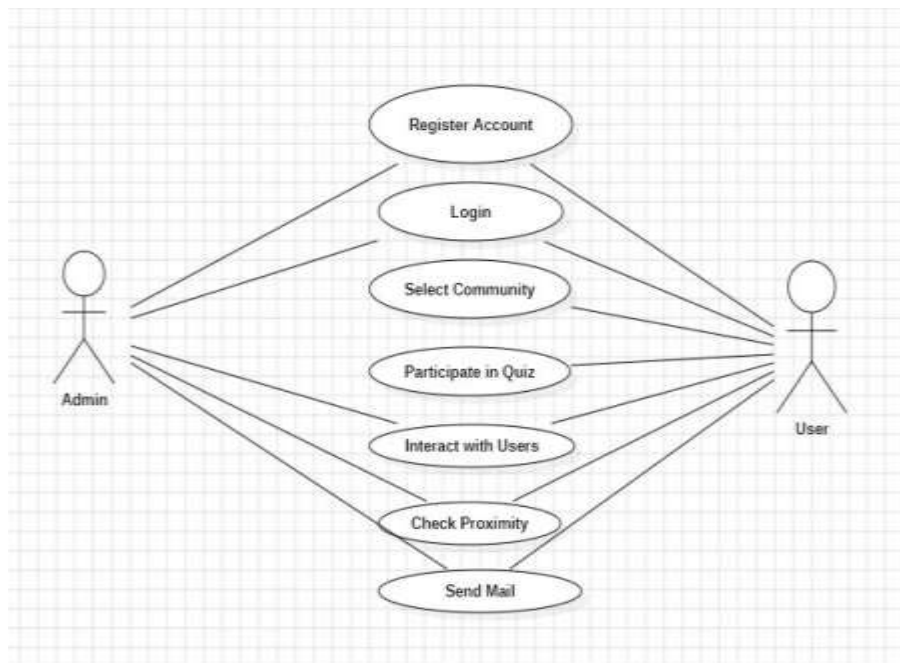
Figure : Use case diagram

FUNCTIONAL MODEL AND DESCRIPTION:
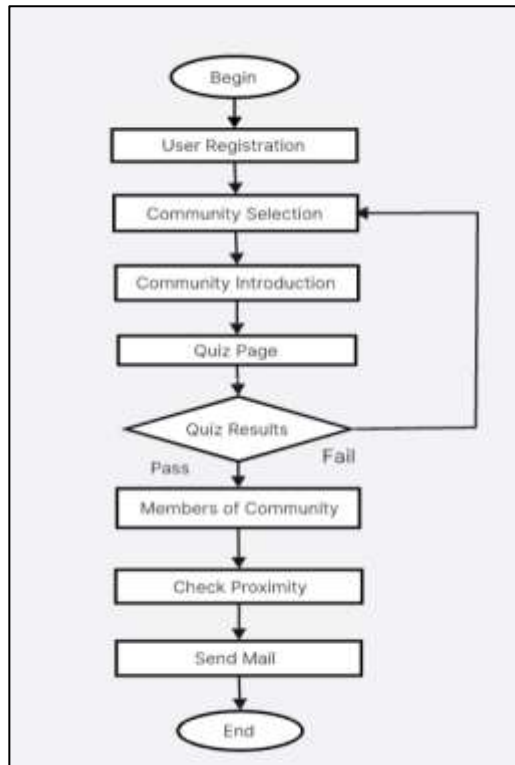
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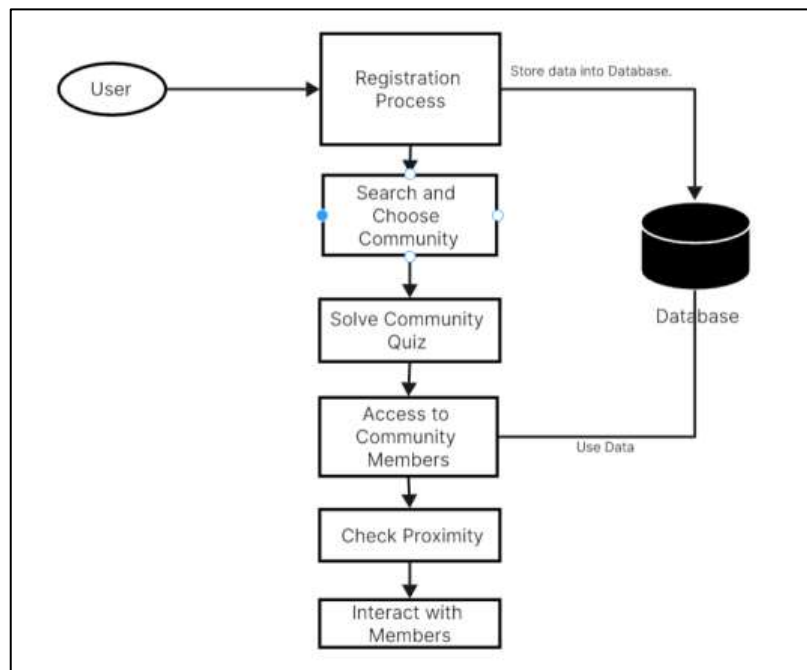

Figure: Flow Chart Diagram

Figure : Data Flow Diagram

Explanatory Description:

Modules:

Module 1 : User Management Module:

- This module will handle user registration, login, and authentication processes.

- Users will be able to create accounts, log in securely, and manage their profiles.

Module 2 : Community Selection Module:

- This module will allow users to explore and select from a variety of communities based on their interests, such as sports, arts, dance, music, and technology.

- Users will be able to view information about each community and join the ones that align with their passions.

Module 3 : Quiz Module:

- The quiz module will provide interactive quizzes related to each selected community.

- Users will have the opportunity to test their knowledge and skills in their chosen areas of interest through a series of quiz questions.

- The module will randomly select questions from a predefined set and provide immediate feedback on users' performance.

Module 4 : Interaction Module:

- This module will enable users to interact with other members of the community.

- Users will be able to connect with successful quiz participants, either through email or by checking their proximity/location.

Module 5 : Email Communication Module:

- The email communication module will facilitate communication between users via email.

- Users will have the option to send messages to other members to establish connections and engage in further discussions.

Module 6: Proximity/Location Module:

- The proximity/location module will allow users to check the physical proximity of other community members.

- Users will be able to view the locations of nearby members on a map and explore opportunities for real-life interactions.
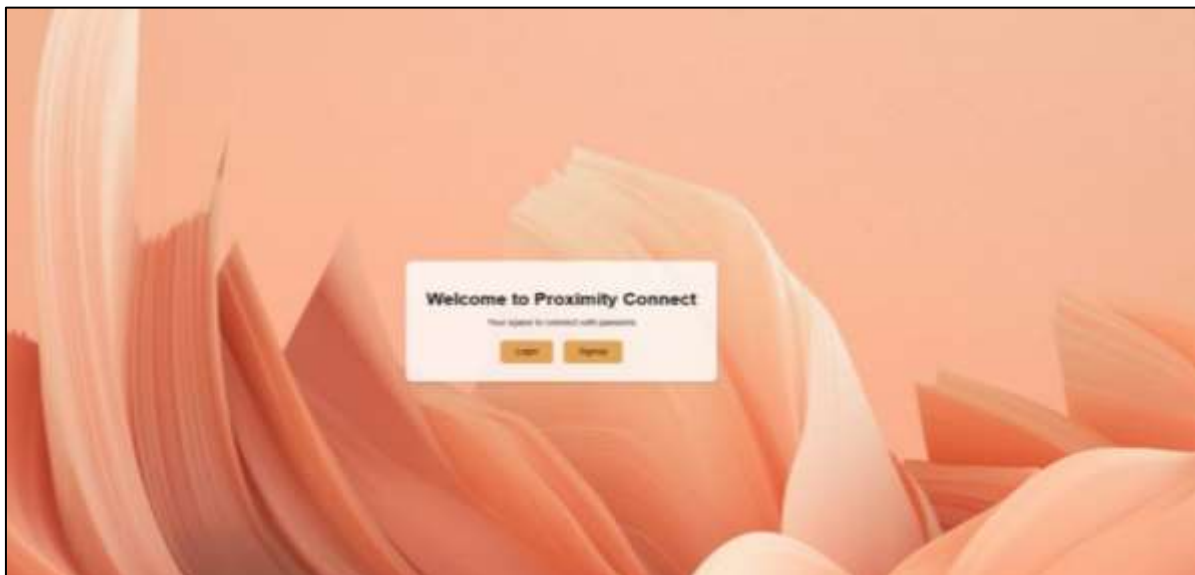
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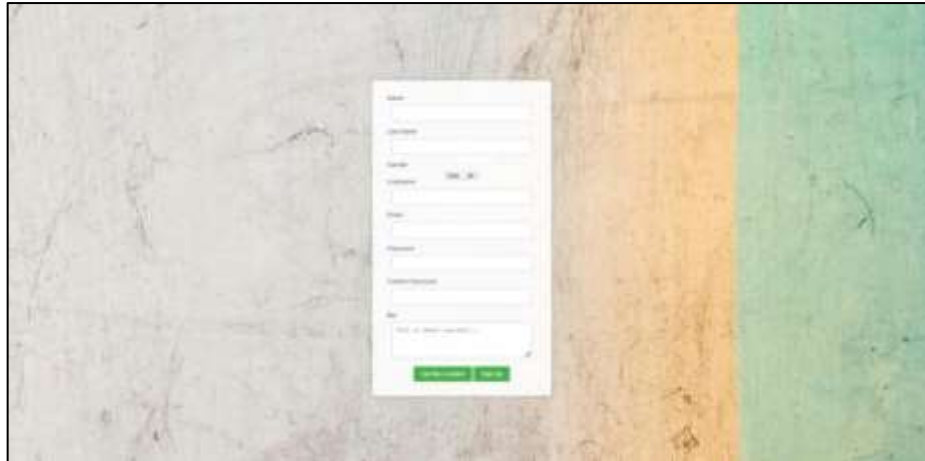

Fig:-Welcome page
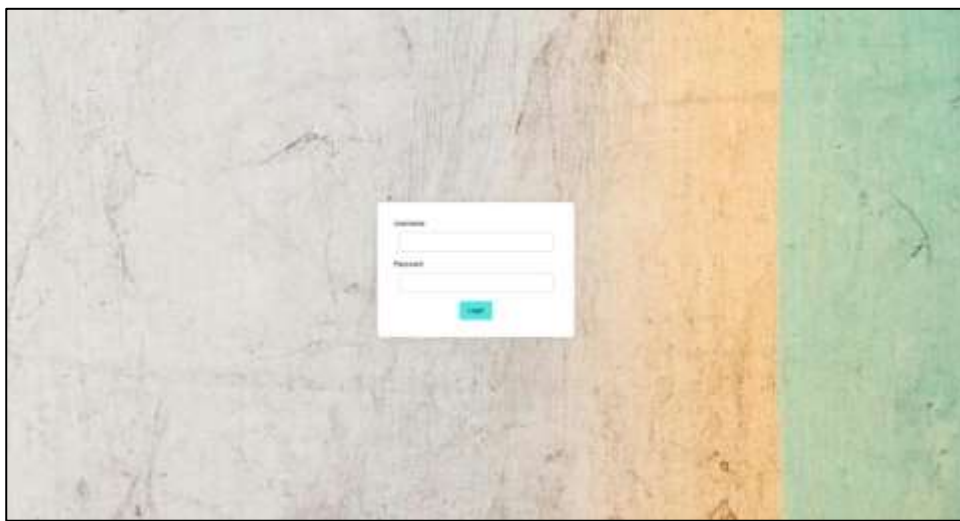
Fig:- User registration page
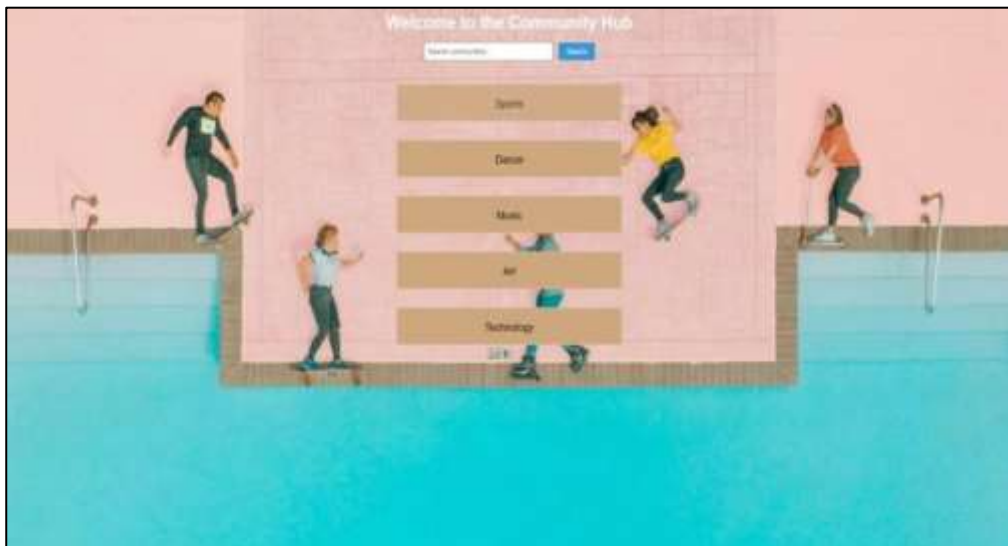

Fig:- Login Page

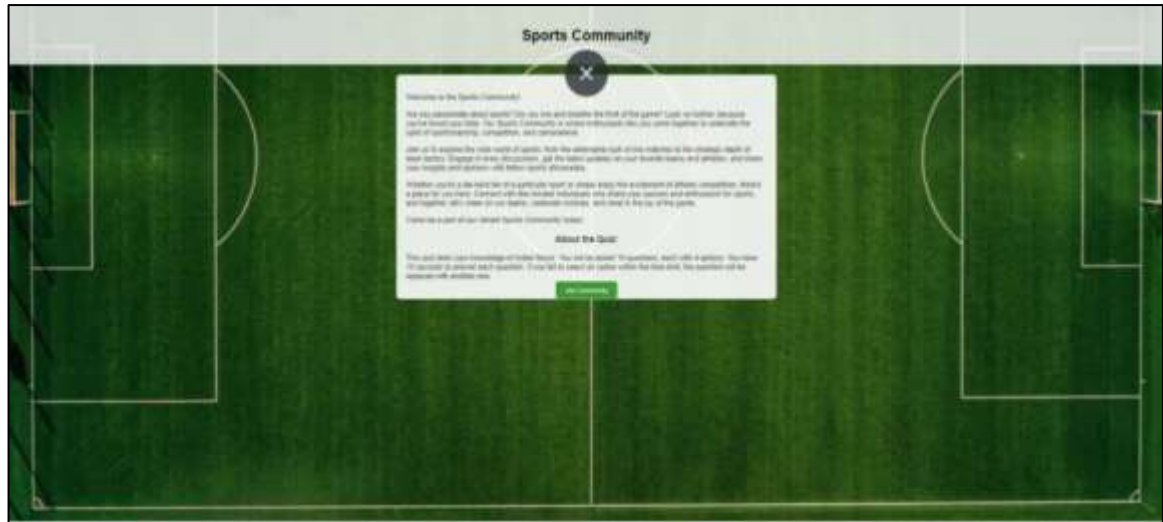Fig: - Home/Navigation Page

Fig: -

Introduction to Sports Community
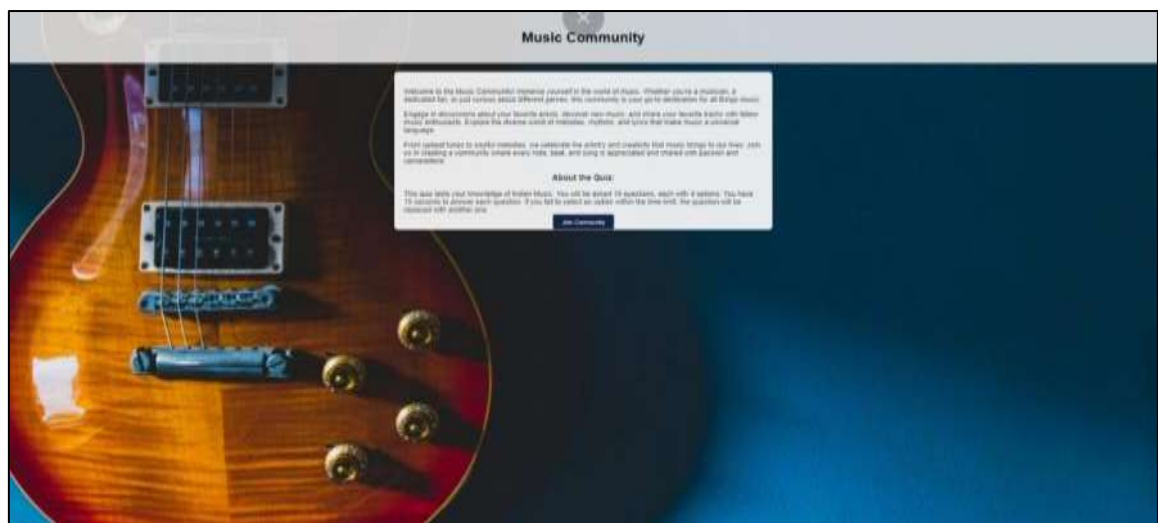

Fig: - Introduction to Dance Community

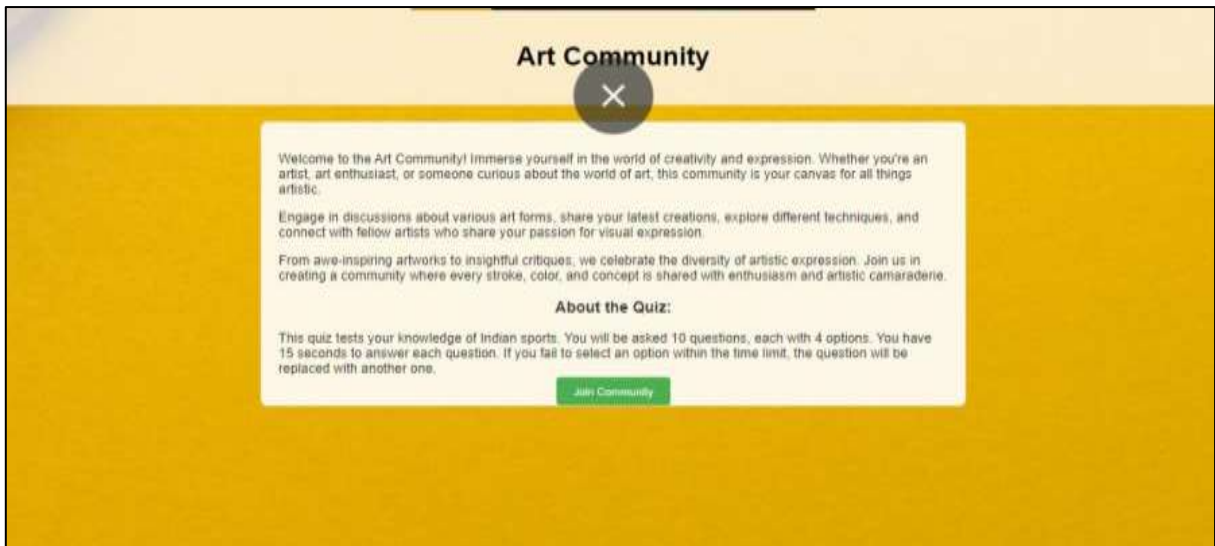Fig: - Introduction to Music Community

Fig: - Introduction to Arts Community
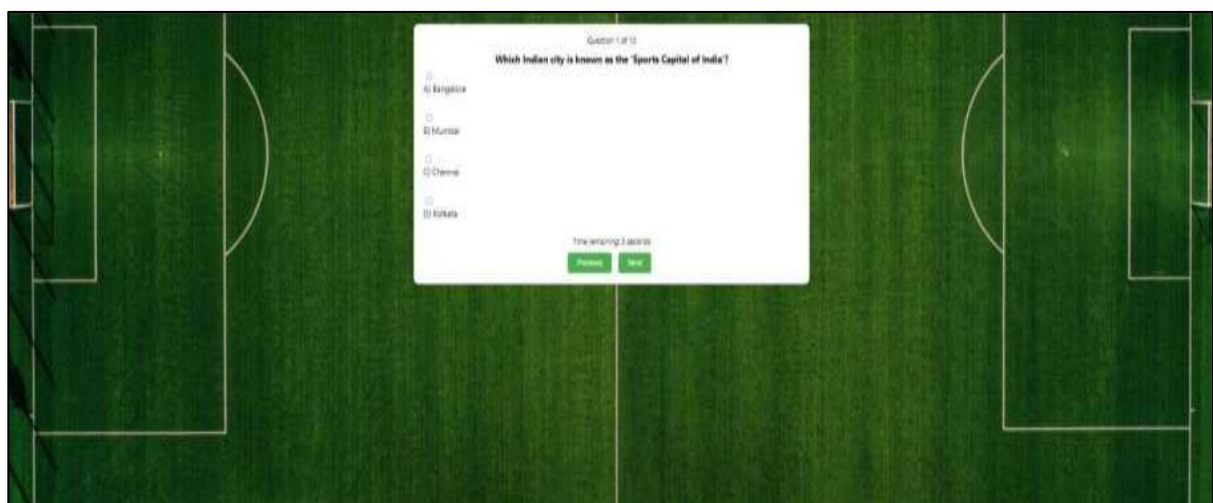

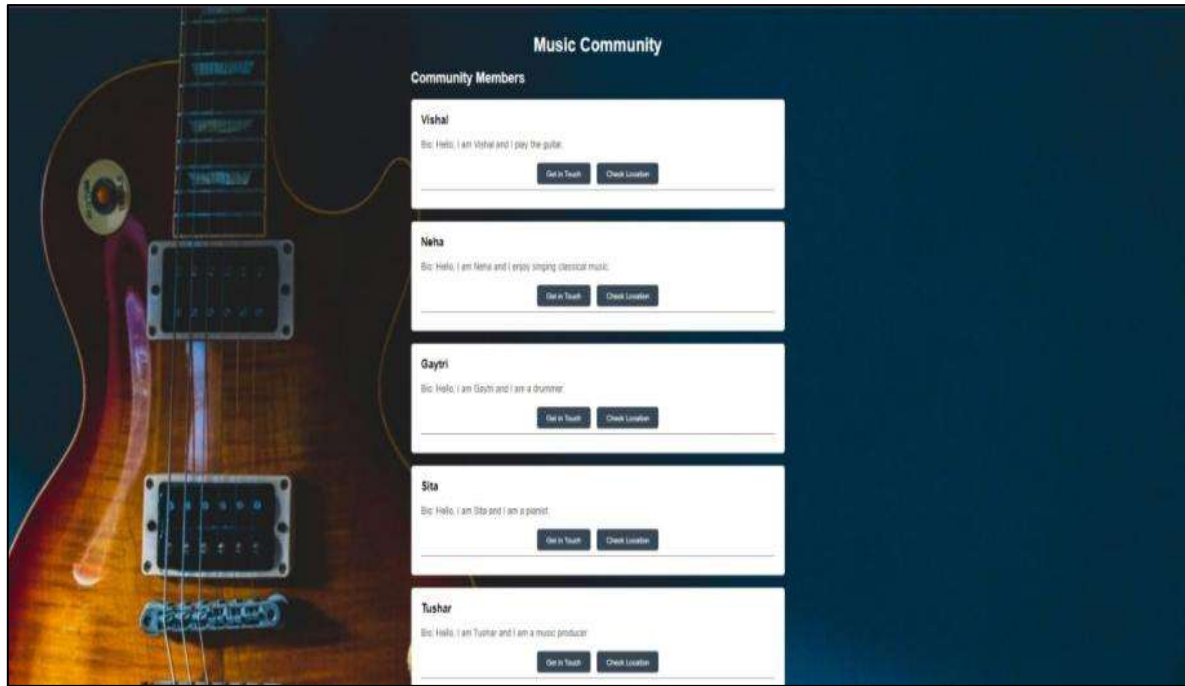Fig:- Introduction to Technology Community

Fig:- Quiz with timer feature.
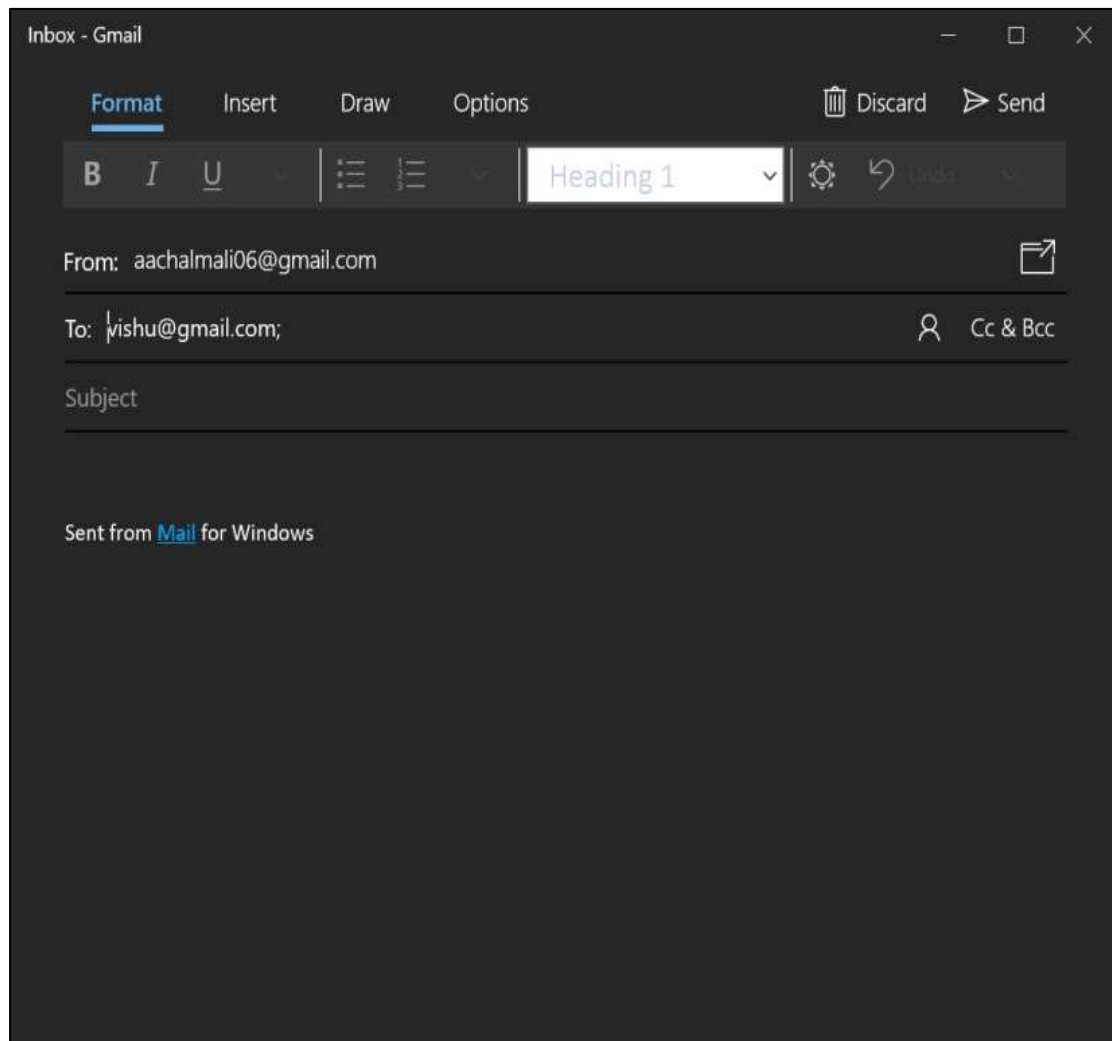
Fig:- Community Members
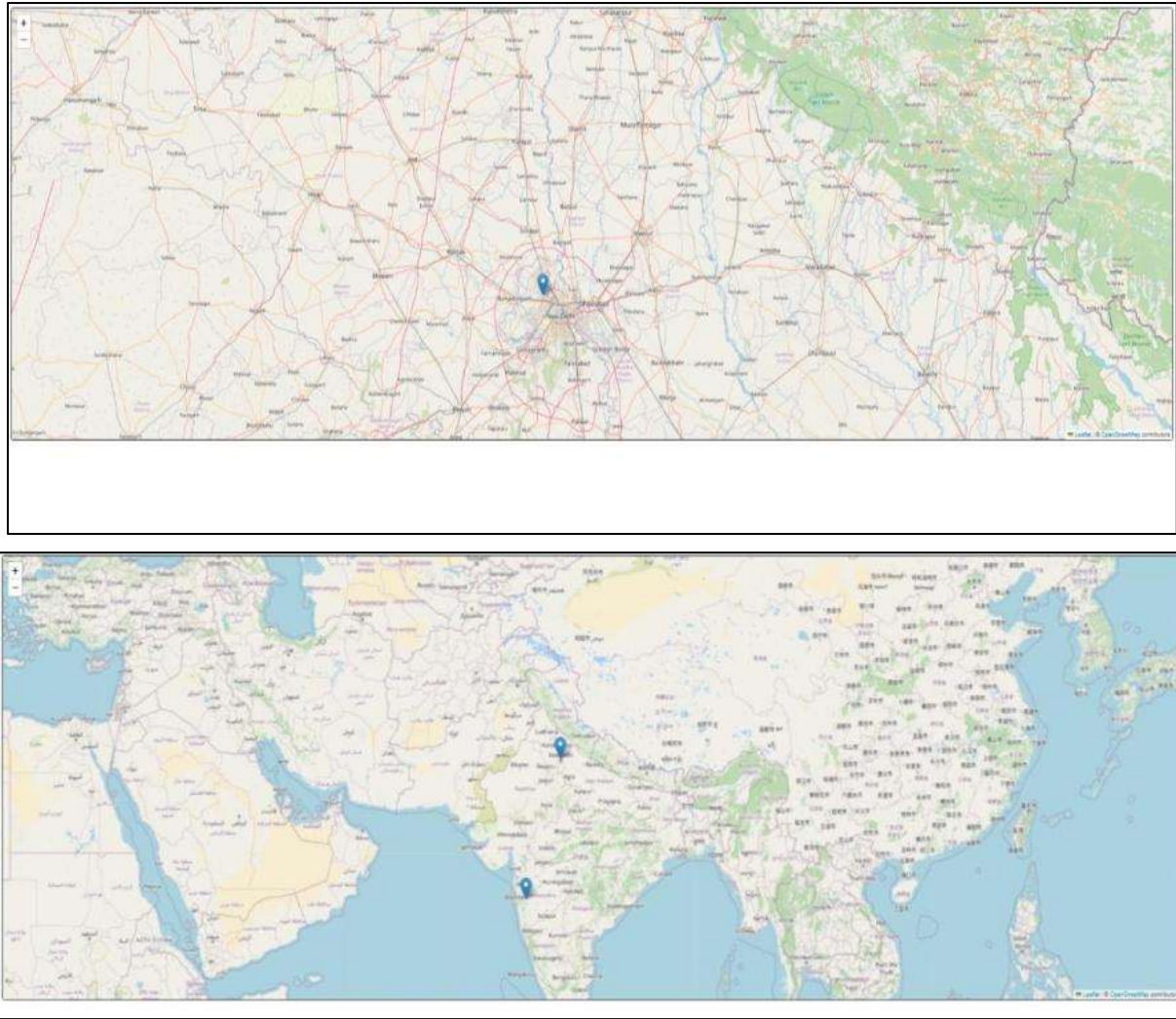

Fig:- User interaction through Email

Fig:- Check Proximity Result.

6. CONCLUSION

With our project, we aim to bridge the gap in creating meaningful connections in our increasingly digital world. Through a carefully selected technology stack, we strive to develop a user-friendly platform with key features like user registration, diverse community building, and an assessment-based admissions process to foster genuine relationships based on shared interests.

Our platform seeks to enhance both online connections and in-person meetings through location-based capabilities and social network integration. Furthermore, our implementation prioritizes user privacy and security, ensuring the transformation of virtual relationships into real friendships.

By nurturing lively communities and empowering like-minded enthusiasts worldwide, our project signifies our commitment to revolutionizing how people connect based on their passions.

Through continuous innovation and user-centric design, we aim to set new standards for community-driven platforms, inspiring meaningful interactions and fostering a sense of belonging on a global scale.

FUTURE SCOPE

- Explore advanced proximity features like real-time location tracking and augmented reality for dynamic connections.

- Utilize machine learning for personalized recommendations and targeted notifications.

- Implement monetization strategies such as premium memberships and sponsored content.

- Forge partnerships with organizations and influencers to enhance content offerings and community events.

- Continuously improve the platform based on user feedback and data analytics.

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