1. **PROJECT PROPOSAL:** Inquiro

**1.1 Background to the Problem**

In colleges and universities, students often struggle with doubts while studying. Sometimes they’re too shy to ask teachers or maybe the teacher isn't available. Many try to search online but fail to find clear or reliable answers that match their curriculum or context. Social media groups and chats get messy, full of unrelated content and lack quality control.

The root of this problem lies in the lack of an organized student-friendly platform where academic doubts can be solved easily by peers and educators. Unlike general platforms like Quora or Stack Overflow that focus on broader audiences (coding or general questions) students need a dedicated application matching their academic environment.

This is an important issue because unresolved doubts can build gaps in learning, increase stress, reduce motivation and affect academic performance.

**1.2 Solution to the Problem**

**Project Objective**

Our project- Inquiro, aims to create a web-based platform for peer-to-peer learning and doubt solving. The goal is to connect students with their peers and mentors in a more organized and supportive environment.

**Proposed Solution**

Inquiro will allow students to:

* Post academic questions with text, images or both.
* Receive answers from other students and peer tutors.
* Respond using text, images, videos or YouTube and article links.
* Upvote or downvote answers so that the best responses surface to the top.
* Earn points, rank and appear on leaderboards to motivate users and highlight top contributors.
* Join subject-wise or class-wise forums to keep discussions organized and focused.
* Schedule consulting sessions with peer tutors or mentors for more in-depth help.
* Post and view event notices about academic events or competitions.
* Be part of a moderated community with rules, admin control and user management features (like banning rule violators).

This solution is appropriate because it directly addresses the communication and learning gaps students face. It promotes collaborative learning, uses gamification to encourage participation and maintains quality and safety through moderation.

The solution is technically feasible and aligns with current web development capabilities. Such a platform can be made efficiently using tools like modern frameworks (e.g. React, Node.js) and cloud platforms.

**Key Functionalities**

* Question and answer interface supporting text, images and video.
* Gamification system (points, ranking, leaderboard).
* Forum structure for subject-wise discussion.
* Rule-based moderation system for content safety.
* Real-time consulting session booking system.
* Event noticeboard for student collaboration and engagement.

These features make use of current web technologies and designs to create an impactful educational tool.

**Target Users & Benefits**

Target Users:

* University students
* College students
* Peer tutors and educators

Benefits:

* Get academic doubts resolved quickly and reliably.
* Connect with peers and seniors for learning support.
* Stay motivated through ranking and achievements.
* Join subject-specific groups for organized help.
* Access extra support through consulting.
* Discover academic events and competitions easily.

**Scientific Contribution**

Inquiro promotes collaborative learning and knowledge-sharing culture. It supports active learning, which is more effective than passive methods. The platform documents learning patterns, engagement metrics and can serve as a dataset for educational research in peer learning systems.

**Literature Review**

Several studies have explored the role of peer learning and Q&A forums in education:

* Stack Overflow has shown how technical Q&A can help in skill-building, but it is programming-centric and not student-focused.
* Quora is general-purpose and lacks academic structuring.
* Piazza is used in some universities for academic Q&A, but it’s mostly professor controlled.
* Reddit-style forums have shown the power of community answers but are often unmoderated and unfocused.

Inquiro learns from these models but extends their ideas with:

* Academic structure Q&A and environment.
* Strong focus on peer learning (students helping students).
* Built-in gamification for continuous engagement.
* Moderation tools to maintain quality and safe interaction.
* Additional features like consulting sessions and event boards that current solutions lack.

**Existing Software Solutions**

Some platforms that partially solve parts of this problem:

* Stack Overflow: Great for developers, lacks support for general student academic queries.
* Quora: Broad and general, no academic filtering or control.
* Piazza: Class-based Q&A, but limited access and interaction beyond enrolled courses.
* Facebook/WhatsApp groups: Too informal, unorganized and hard to moderate.

How Inquiro Improves on Them

* Focused only on students and educators.
* Well-structured by class and subject.
* Built-in gamification features.
* Offers direct help from peer tutors through consulting.
* It has a safe and moderated environment.
* Includes event promotion features, helping students stay informed.

In summary, Inquiro is a student-centered learning platform designed to solve real academic problems by making it easier, safer and more motivating for students to help each other. It combines the best features of modern forums, social networks and educational tools into one simple and useful solution.

**2. SOFTWARE DEVELOPMENT LIFE CYCLE**

**2.1 Process Model**

Selected Model: Scrum (Agile Method)

Inquiro is a web-based peer learning and doubt-solving platform which requires continuous improvement, frequent feedback and adaptability according to user needs. Since this project is user-focused, with features like Q&A posting, forums, gamification and session scheduling, it’s crucial that we remain flexible and able to adjust features quickly based on feedback from students and educators.

Among the other methods, we chose Scrum because:

* Scrum focuses on regular feedback and iterative development. Inquiro has multiple user-facing features that need to be built step-by-step, tested frequently and improved based on user interaction.
* Roles in Scrum are clearly defined (scrum master, product owner, scrum team, customer, management), which matches well with our 5-member team. This structure helps keep tasks organized and team collaboration strong.
* The product can be broken down into manageable features (e.g., Q&A system, gamification, forum setup), each delivered in short development cycles called sprints. This will let us test and demonstrate working parts of the system frequently.
* It encourages constant communication, which is suitable for our student team. Regular stand-up meetings and reviews will help track progress and solve blockers quickly.

Scrum’s flexibility, simplicity and user feedback loop make it the best fit for building Inquiro effectively and meaningfully.

**2.2 Project Role Identification and Responsibilities**

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| --- | --- | --- |
| Role | Assigned To | Responsibilities |
| Scrum Master | Arafat Hossain | Ensures the team follows Scrum rules, practices, and values throughout the project. Communicates regularly with the team, customer, and management to keep everything on track. Helps remove any obstacles the team faces. |
| Product Owner | Al Imran Alif | Responsible for managing and prioritizing the Product Backlog. Makes final decisions about what features and tasks to focus on. Acts as a bridge between the development team and stakeholders to reflect the project vision. |
| Scrum Team | Rami Hossain | Responsible for doing the actual development work. Self-organizes to complete tasks in each Sprint. Participates in effort estimation, Sprint planning, reviews and identifying any blockers or improvements needed. |
| Customer | Omur Abu Yousuf | Provides input on which features are most needed. Helps define and clarify Product Backlog items based on their expectations and needs from the system. |
| Management | Rajarshi Mondal | Makes key decisions related to the project’s direction. Helps define project goals, sets expectations, and ensures standards and agreements are followed throughout development. |