**User Story: Anonymity**

*"As a user (student, professor, administrator, etc.), I want to ask for help anonymously, so that I can alleviate my anxieties and ensure I succeed in the class."*

**Story Tasks**

1. **Research and Requirement Gathering**

* Survey different user categories to understand the need and apprehensions about anonymous communication.
* Study current mechanisms in the system to identify gaps in anonymous communication features.

1. **Design**

* Design an interface where users can opt for anonymous communication.
* Ensure no personal identifiers are visible when the anonymity option is activated.

1. **Backend Development**

* Develop database structures to securely store anonymous queries without linking them to specific user accounts.
* Implement API endpoints to facilitate anonymous communications.

1. **Frontend Development**

* Integrate the anonymous option in the communication interface based on the approved design.
* Ensure users have clear indications when they are in anonymous mode.

1. **Testing**

* Conduct unit tests to verify backend functionalities.
* Perform integration tests to ensure frontend and backend synchronicity.
* Organize user acceptance testing sessions to gauge user experience with the anonymity feature.

1. **Documentation**

* Update system documentation to incorporate details about the new anonymity feature.

1. **Deployment**

* Plan and execute the deployment of the anonymity feature.
* Monitor after the launch for potential issues and gather user feedback.

**Functional Requirements**

1. **Anonymous Mode Activation**

* The system shall present an "Activate Anonymous Mode" button or toggle switch within the user interface.
* The system shall notify users of their active anonymous status, potentially through UI alterations or notifications.

1. **Non-Identifiable Communication**

* The system shall process outgoing communications in anonymous mode by either stripping or substituting any personal identifiers.
* The system shall apply a scanning algorithm to detect and alert users of potential personal identifiers in their communications.

1. **Feedback/Response Mechanism**

* The system shall allocate a distinct, non-personally identifiable reference for each query in anonymous mode.
* The system shall push notifications or alerts associated with this unique reference for user responses.
* The system shall implement end-to-end encryption protocols for safeguarding the confidentiality of communications.

1. **History & Records**

* The system shall curate a record of all communications, ensuring anonymity between content and user identifiers.
* Users shall access a dedicated dashboard for viewing and searching their historical anonymous communications, using the unique reference numbers.

**Non-functional Requirements**

1. **Usability**

* The system shall ensure that activating the anonymous mode is intuitive, with a validation success rate of 95% among users.

1. **Security**

* The system shall prioritize user anonymity, ensuring measures are in place to robustly deter and protect against identity traceability.
* All communications in anonymous mode shall employ standard encryption protocols to minimize the risk of unauthorized data breaches.

1. **Performance**

* Transitioning into or out of anonymous mode shall have a maximum latency of 1 second, 99% of the time.

1. **Reliability**

* The anonymity feature shall be operational with a downtime of less than 0.1% over any given month.
* In the event of any malfunction or downtime, the system shall be designed in such a manner that it defaults to withholding data submission rather than compromising the anonymity or personal data of the user.

1. **Maintainability**

* The system shall be designed such that modifications to the anonymous feature can be made with no more than a 10% change in the underlying codebase.
* The system shall be structured with modular and clean code principles, ensuring that any enhancements or changes to the anonymity feature can be implemented without extensive alterations to the existing framework or underlying codebase.

1. **Accessibility**

* The anonymity feature shall be compliant with the WCAG 2.1 Level AA accessibility guidelines, ensuring that 95% of users, including those with disabilities, can utilize it without hindrance.

**Non-Functional Requirements**

1. Usability
   1. When anonymous mode is enabled, the decision will be remembered and remain enabled until disabled again by the user
   2. When disabling anonymous mode, a pop-up will be generated and shown to the user describing that new posts will be identifiable. The application will not disable the mode until the user acknowledges the pop-up.
2. Anonymity
   1. Anonymous Usernames
      1. When anonymous usernames are to be generated, a random 32 bit sequence will be generated, and the hexadecimal base version will be treated as a string and used as the username.
      2. The generated username will be checked against a database of used usernames, and will regenerate a new username if one is found.
      3. Anonymous usernames will be ‘owned’ in private by the generating-user, and all permissions regarding posts will be transferred through to the owner accordingly.
3. Performance
   1. The switch to anonymous mode will be completed immediately upon activation.
      1. All new posts will immediately begin using anonymous usernames
   2. There will be no perceivable difference in response times between standard and anonymous mode
4. Feedback/Response
   1. Mentions of the user and responses to the user’s posts will notify the user within 30 seconds of the triggering event.
   2. If a user is clicked into a specific post, the maximum time for changes to the post or for any replies to show will be 5 seconds.
   3. Any mentions to anonymous usernames will be re-routed to the original user while adding no more than 1 second of delivery time. The receiving user will also be told that the notification was sent through an anonymous username.
5. History and Records
   1. When a user sees their own post, it will show an icon before the username of the poster.
      1. Any time an anonymous username is used for a post, it will never be ‘de-anonymized,’ even to the original user.
      2. This feature can be disabled by the user through the app settings, and either choice will have no perceivable difference in responsiveness.
   2. Users will be able to view a list of all their posts from a section of the app.
      1. It should take no more than 10 seconds to load one page worth of posts.
      2. When returned and displayed to the user, they will be displayed the way that they are displayed on the main page of the app