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Progress Report Number: 2

Work Date/Hours Logs

Date	Number of Hours	Description of Work Done
March 16, 2025	3	Finalized documentation for API integration and authentication flow.
March 18, 2025	4	Implemented additional API endpoints and improved request validation.
March 20, 2025	3.5	Refactored authentication flow to enhance security and performance.
March 22, 2025	4	Optimized database queries to improve API response time.
March 24, 2025	3.5	Integrated logging enhancements to track user interactions and API usage.

Description of Work Done

During this period of the Asklytics project, the focus was on enhancing API functionality, optimizing performance, and ensuring secure authentication. Key contributions included:

- **API Endpoint & Validation Improvements:** Added new endpoints and improved validation logic for better API interaction.
- **Refined Authentication Flow:** Refactored authentication logic to improve security and reduce processing time.
- **Database Query Optimization:** Optimized queries to speed up API response times and improve overall performance.
- **Logging & Monitoring Enhancements:** Integrated detailed logging for tracking user interactions and API usage.

Challenges and Solutions

1. **Optimizing Database Queries** – Some queries were slow, affecting response times.
 - *Solution:* Optimized database queries and indexes to speed up data retrieval.

2. **Authentication Performance** – The authentication process was occasionally slow.
- *Solution:* Refactored the authentication flow to make it more efficient and secure.
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Next Steps (Before April 15, 2025)

- **Enhance API Security** – Implement additional layers of security for authentication and API calls.
 - **Fine-tune Performance** – Optimize additional parts of the system for faster API responses.
 - **Prepare for Testing** – Conduct stress testing to evaluate system performance under load.
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Conclusion

This period was dedicated to refining the API's core functionality, improving security, and optimizing database queries. The next steps will focus on additional performance enhancements and preparing for deployment.