GeoSync

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Overview

Geosync is a system developed to help user based from all places to gain geological knowledge about places in Nepal specially the Kathmandu Region. It tries to incorporate a community of people driven to share raw geological information about different places. This system not only reduces the reliance on tourist guides but also assists in navigation and overcoming language barriers, catering to a diverse range of users seeking to explore and understand different locations.

Aims

- Share insights, stories, and historical information about specific places.
- Gain cultural knowledge and perspectives from local and foreign users.
- Enhance travel experiences by accessing authentic and personalized information.
- To provide a user-friendly and accessible platform for all users.

Objectives

- To make information about certain places available at all times.
- Contribute local knowledge with each other as a content contributor or Moderator.
- Create a community of people where everyone can contribute something to a certain place and Share information between each other.

Academic Questions

- How does GeoSync encourage community participation in providing geological data, and what effects does this have on sharing of local knowledge?

- What are the technical challenges involved in developing a scalable and reliable web application for crowd-sourced geographic data?

Testing Approaches

- Manual Testing was done using API clients such as postman and insomnia before providing it to the front end
- Test cases were written and executed continuously with the project.
- The focus was on validating functionality, user interface, and overall user experience.
- Automated testing was conducted using library such as cypress and super test both for e2e testing and unit testing.

Literature Review

GeoWiki	Geo-Wiki is a global mapping platform for land cover and land use data, facilitating environmental research and monitoring applications by involving a global community of users.
Laco Wiki	LACO-Wiki is a platform for landscape ecology researchers, practitioners, educators, and enthusiasts to exchange expertise, research findings, and practical insights. It aims to understand the relationships between human activity and the environment.
Wikipedia2json	Web 2.0 applications like blogs, wikis, and image/video sharing sites have increased user participation and knowledge-sharing. Semantic web technologies like SweetWiki combine these trends, making users active providers and consumers of information. SweetWiki improves navigation, search, and usability.
Semantic Wiki	A centralized application improves the user experience by providing a unified and consistent interface across different functions.

Evaluation/Reflection

The final report outlines the development process and components of a community-driven project aimed at providing geological information. Through diagrams and definitions, it elucidates the project's focus on aggregating knowledge from multiple contributors about various locations. Feedback from peers and supervisors facilitated iterative refinement of project components. The project enhanced research, project management, and communication skills while fostering awareness of the intersection between technology, culture, and environmental responsibility. Overall, it has been a valuable learning experience, fostering critical thinking, collaboration, and openness to diverse perspectives.

Gantt Chart
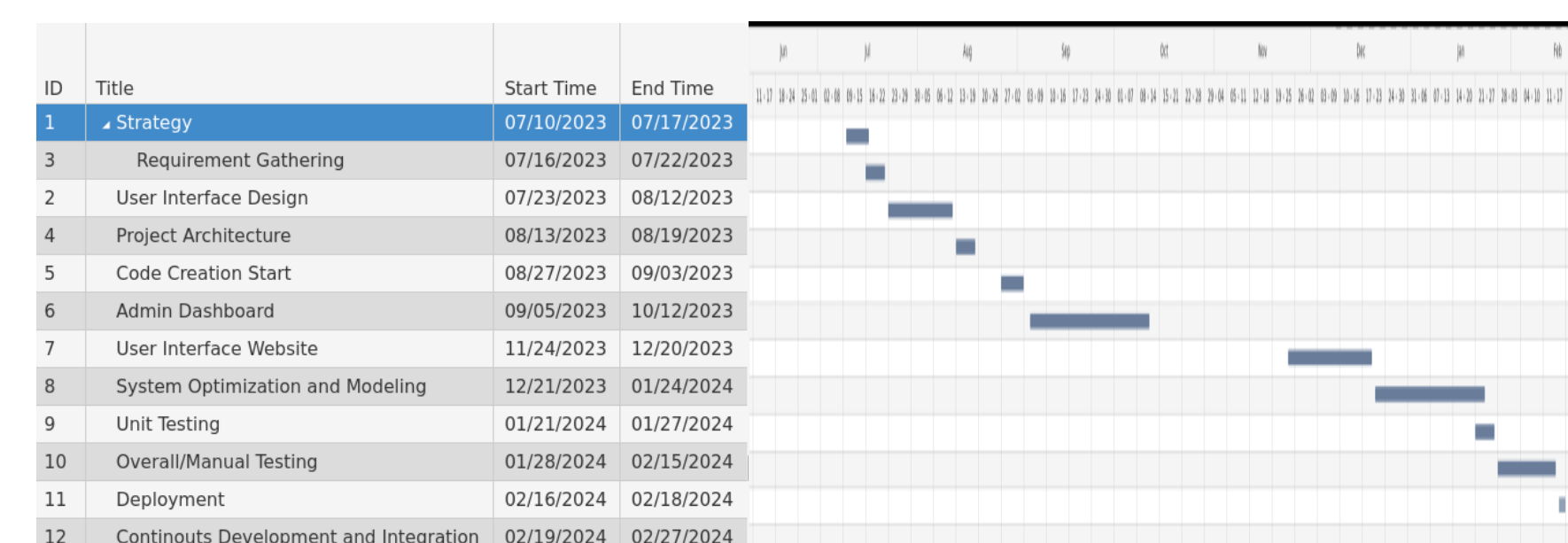
Artifacts

User Management	Manage all the existing users in the system using the admin interface. Admin has access to CRUD all the system components and its contents.
Content Management	Create content for different locations. Validate user submitted content before adding it to the website.
Notification Management	User can received notification about different places they arrive in. Admin can send notification to content moderator and normal users.

System Diagram
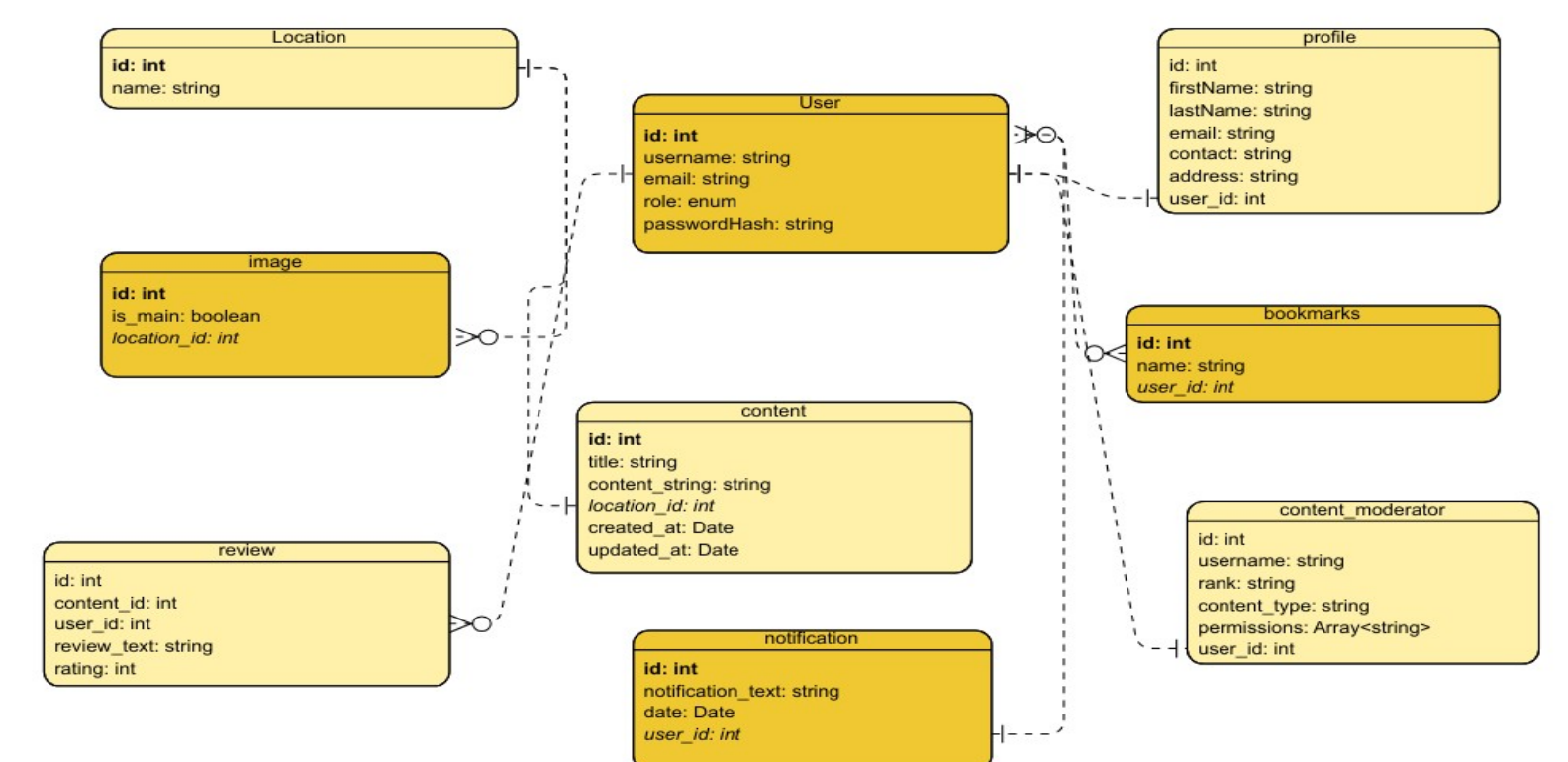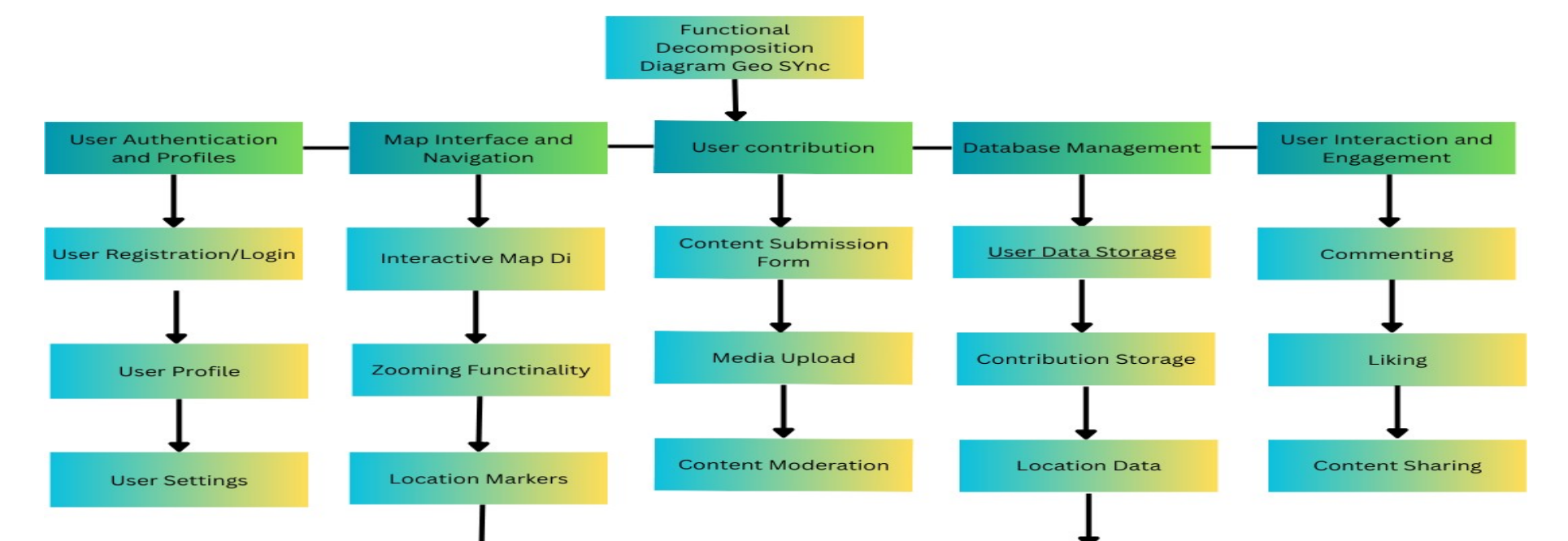
Conclusion

GeoSync, a software, helps local and foreign communities learn about geology and sacred sites, empowering communities and enhancing cultural relevance. The project faces challenges such as data accuracy, content control, and user engagement. The report provides a comprehensive overview of the project, highlighting its achievements and fostering a sense of ownership among locals. The platform's emphasis on user-generated content and educational outreach programs empowers individuals to participate in the preservation and celebration of their unique geological landscape.