

Why I Chose Reduct Nepal:

Forward-Thinking Culture:

A dynamic tech company focused on user-centric design and building global products.

Alignment with Core Values:

The company's emphasis on Self-Leadership, Collaboration, and Impact strongly resonated with the goals of the BIM program.

Hands-on Learning Opportunity:

Association with reputable products like Programiz and Reduct.Video promised meaningful, real-world project experience.

Professional Growth:

An environment that fosters both technical and managerial skills, which is the core of the BIM curriculum.

Core Project: Full-stack development of a Challenges Management System.

Technical Documentation: Documenting multiple GitHub repositories for the client, Programiz.

System Research: Investigating and recommending an alternative ETL tool.

Internal Tool Automation: Creating an automated form for a company event.

Quality Assurance: Assisting in reliability testing for an online compiler.

Agile Collaboration: Actively participating in daily stand-ups and sprint planning sessions.

Objective:

- To build a web-based platform for an educational client to create and manage coding challenges in Python and SQL.

My Key Contributions:

- **Full-Stack Development:** Worked on both front-end and back-end components.
- **Front-End:** Built user interface components for creating and listing challenges using **Next.js**.
- **Back-End:** Designed the database schema and implemented CRUD operations using **PostgreSQL**.
- **Integration:** Integrated an interactive code editor into the platform for a seamless user experience.
- **Documentation:** Maintained the project's GitHub repository with clear documentation for backend logic and front-end components.

Other Key Activities

- **Technical Documentation for Programiz:**
 - Created and updated **README.md** and **Debugging.md** files for over 6 GitHub repositories.
 - Improved project understanding and accelerated the onboarding process for new developers.
- **ETL Tool Research:**
 - Conducted research to find a modern, flexible open-source alternative to Airbyte.
 - Identified and recommended **Dagster** based on client requirements.
- **Automated Google Form:**
 - Developed a custom form using **Google App Scripts** for a subscription giveaway event.
 - The script automated real-time location detection of users, enhancing data accuracy.
- **Reliability Testing:**

- Supported the tech lead in testing an online compiler to improve its stability and security.
 - Helped create client-presentable reports from test data.
- **Full-Stack Development:** Gained practical experience in building a complete web application from front-end (Next.js) to back-end (PostgreSQL).
- **Database Management:** Learned to design efficient database schemas and handle data operations for real-world applications.
- **Version Control Mastery:** Became proficient in using Git and GitHub for collaborative work, including branching, pull requests, and code reviews.
- **Importance of Documentation:** Understood that clear and thorough documentation is critical for team collaboration and long-term project maintainability.
- **System Analysis:** Developed skills in researching, comparing, and recommending technical solutions (like ETL tools) based on specific needs.

Lessons Learned (Professional Skills)

- **Agile Methodology in Practice:** Experienced the real-world application of Agile principles through daily stand-ups, sprint planning, and iterative development cycles.
- **Effective Communication:** Learned to articulate technical concepts clearly and collaborate effectively within a development team.
- **Problem-Solving & Initiative:** Gained confidence in tackling unfamiliar problems, conducting independent research, and proposing solutions.
- **Time Management & Accountability:** Mastered how to manage multiple tasks, prioritize work based on sprint goals, and take ownership of my contributions.
- **Receiving Constructive Feedback:** Learned the value of code reviews and feedback from senior developers for personal and professional growth.

Conclusion

- The internship at Reduct Nepal provided an enriching experience that successfully bridged the gap between academic knowledge and industry practice.
- I was able to contribute to meaningful projects, which enhanced my technical skills in full-stack development and professional skills in communication and project management.
- This experience has solidified my passion for software development and has prepared me for a future career in the IT industry.