CodeArena - A Programming Platform

Department of Information and Communication Technology

Presented By :-

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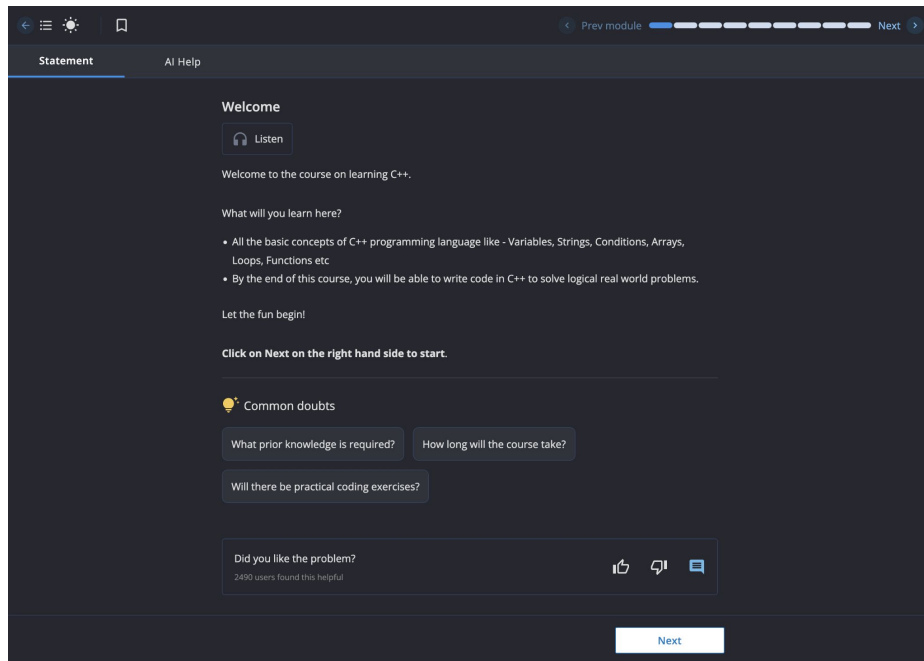
The Challenge: A Disconnected Learning Experience


CodeChef
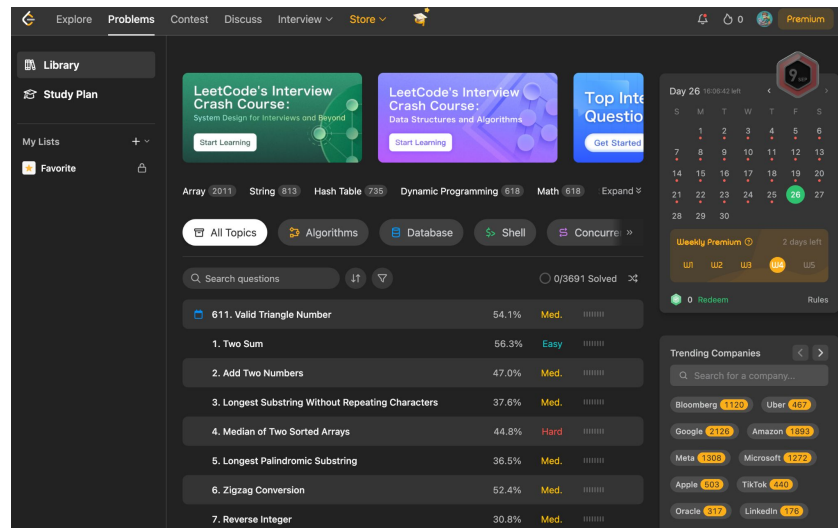
Leetcode

Our Solution: CodeArena

Key Benefits:

- **For Students:** Centralized, curriculum-aligned practice.
- **For Faculty:** Powerful tools for content management and student analytics.
- **For the University:** A direct bridge to industry-readiness.

Technical Highlights

Key Technologies Listed:

- **Frontend:** React.js
- **Backend:** Laravel (PHP)
- **RCE Engine:** Judge0 (Secure & Containerized)
- **Infrastructure:** Docker
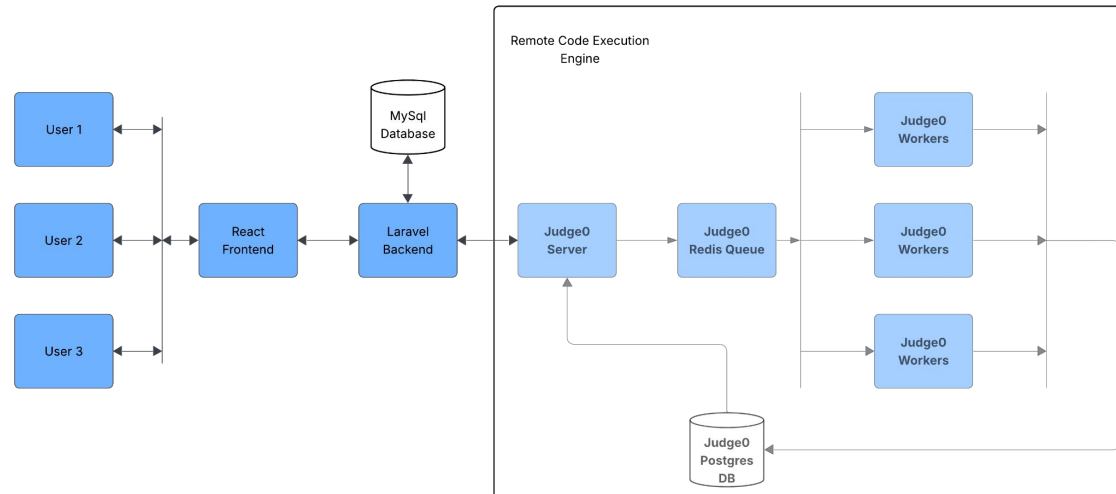
Impact & Future Work

Project Impact:

- **Students:** Improved skill development and industry readiness.
- **Faculty:** Time saved via auto-grading and data-driven teaching insights.
- **University:** Enhanced academic quality and student placement outcomes

Future Work:

- **AI Learning Path:** Implement a true ML model for personalized problem recommendations.
- **Plagiarism Detection:** Integrate a module to ensure academic integrity.
- **Public Cloud Deployment:** Migrate to the university VPS for public access.

THANK YOU