

ALTERNATIVE SYSTEMS EVALUATION

BY TEAM ASKME

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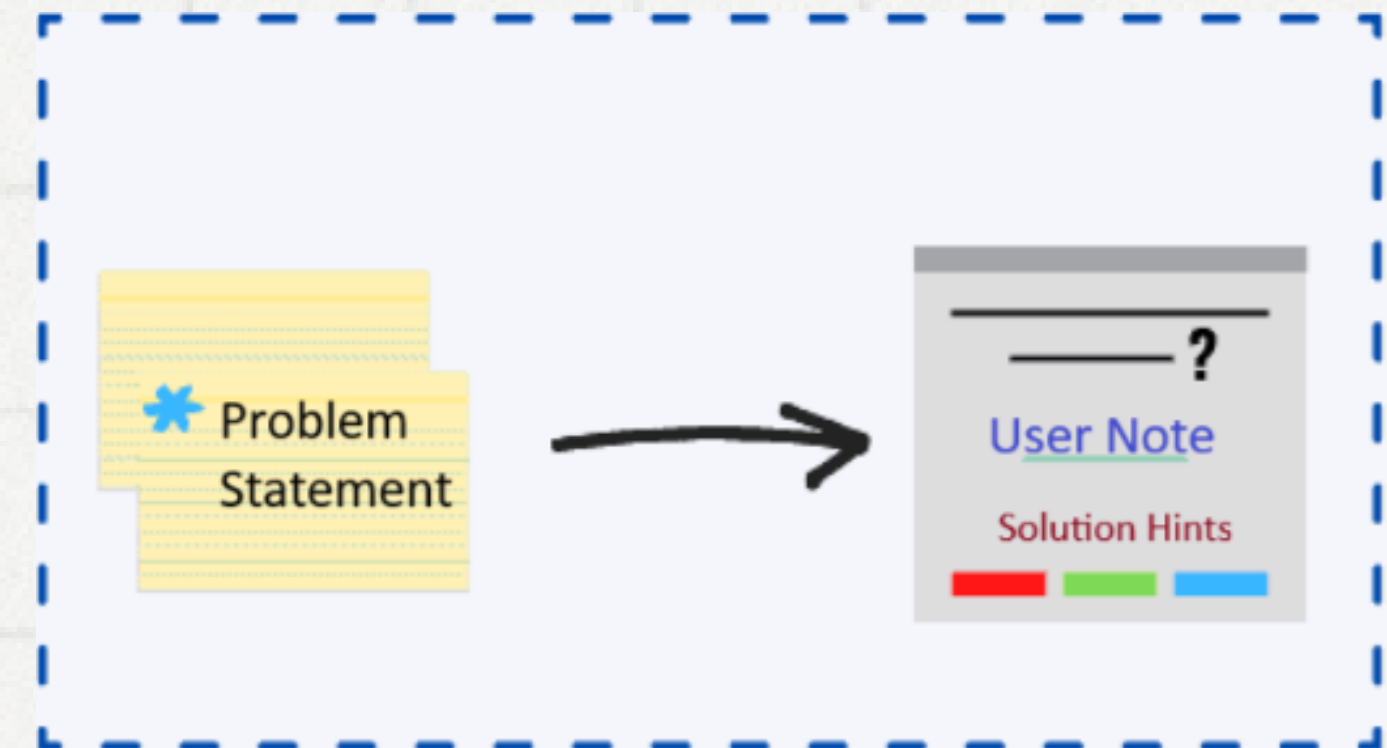
Pros and Cons of Existing Systems Based on Different Parameters

Alternative System Evaluation in a Decision Matrix

Feature	CodeChef	LeetCode	AtCoder	Codeforces
Smart Upsolve	- No triggered upsolving Feature	- No triggered Upsolving Feature	- Submission Rerun available	- Problem Solving Assistant present
Revision Tracker	- Limited Revision History	checkmark Detailed Revision Tracker	- Revision History available	- Limited Revision Tracker
CP Analysis	- Only codeChef Rating System	✓Explore Mode and Problem Sets	✓User Ratings and Contests Analysis	✓Comprehensive User and Contest Analysis
Problem Recommendation	- Limited problem recommendation	✓Explore Mode suggests problems	✓Problem Tags and Recommendations	✓Suggests Problems Based on Submissions
Interview Preparation	✓CodeChef for Schools	✓LeetCode Premium for Mock Interviews	- Limited Interview Preparation	- Limited Interview Preparation
Platform UX/UI	✓User-friendly Interface	✓Clean and Intuitive Interface	✓Minimalistic Interface	✓User-friendly and Intuitive Interface
Language Support	✓Wide Range of Programming Languages	✓Support for Multiple Languages	✓Support for C++, Python, and more	✓Extensive Language Support
Lacking Features/Notes	- Advanced problem recommendation system	- Detailed contest tracking and history	- Extensive educational content	- Limited revision tracking

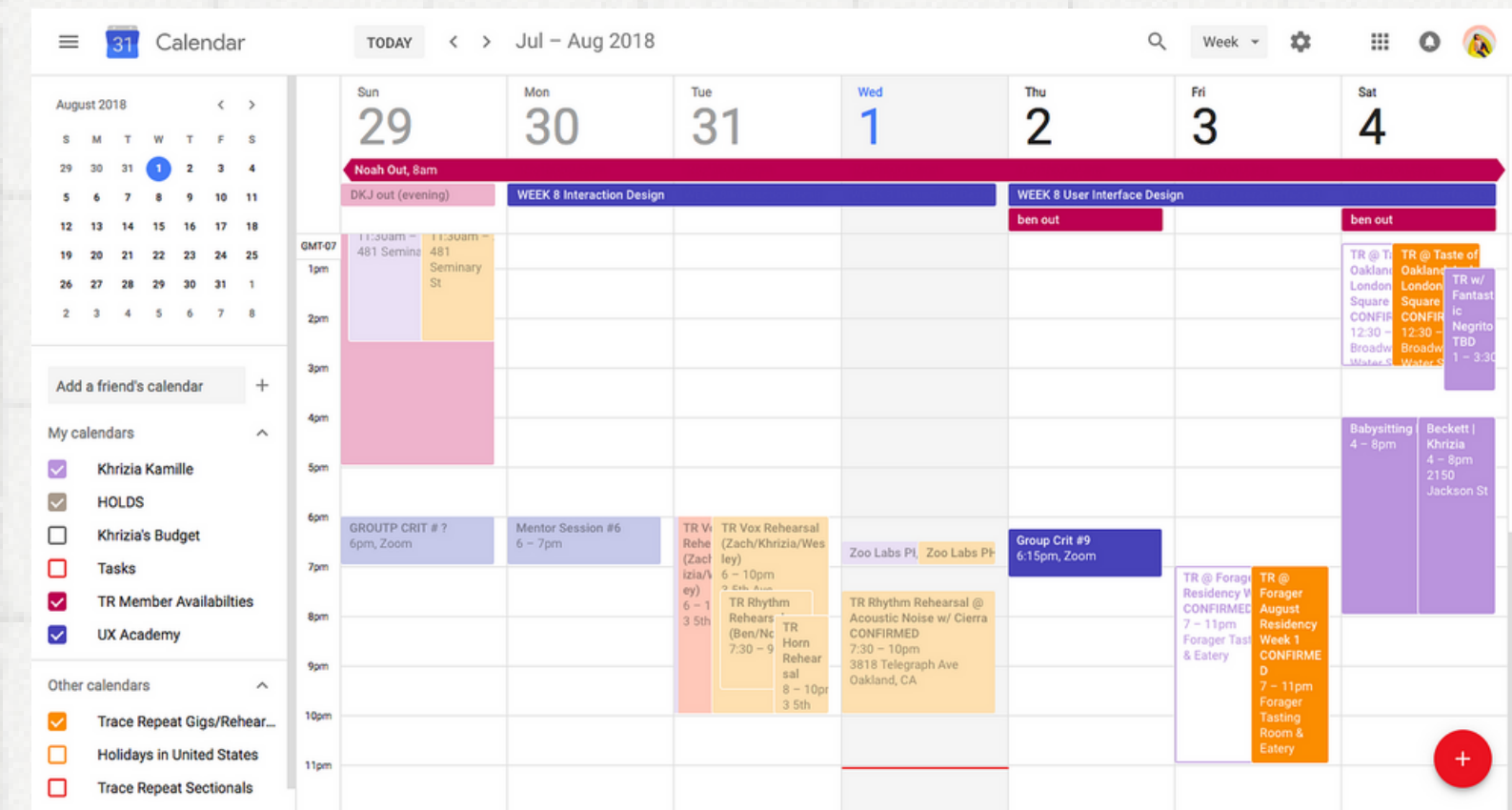
Functionality

- Core functionalities of existing online judges such as solution testing, compiler verdict status
- Smart up-solving system with flashcard integration to nurture the concept of a particular problem
- Coder's calendar to keep track of regular problem solving and better engagement with the community
- Customizable performance analysis information and decision curve to acknowledge current progress



Ease of Use

- User friendly interface, easy to access all features.
- Up-solving with active recall and space repetition method to make learning process efficient.
- Ample events and notifications in one place through coder's calendar



Stakeholders Information

- Beginner competitive programming enthusiasts such as college students.
- Someone who wants to regain his progress in competitive programming.
- Job seekers for big tech industries or any technical interviews.



Scalability

01

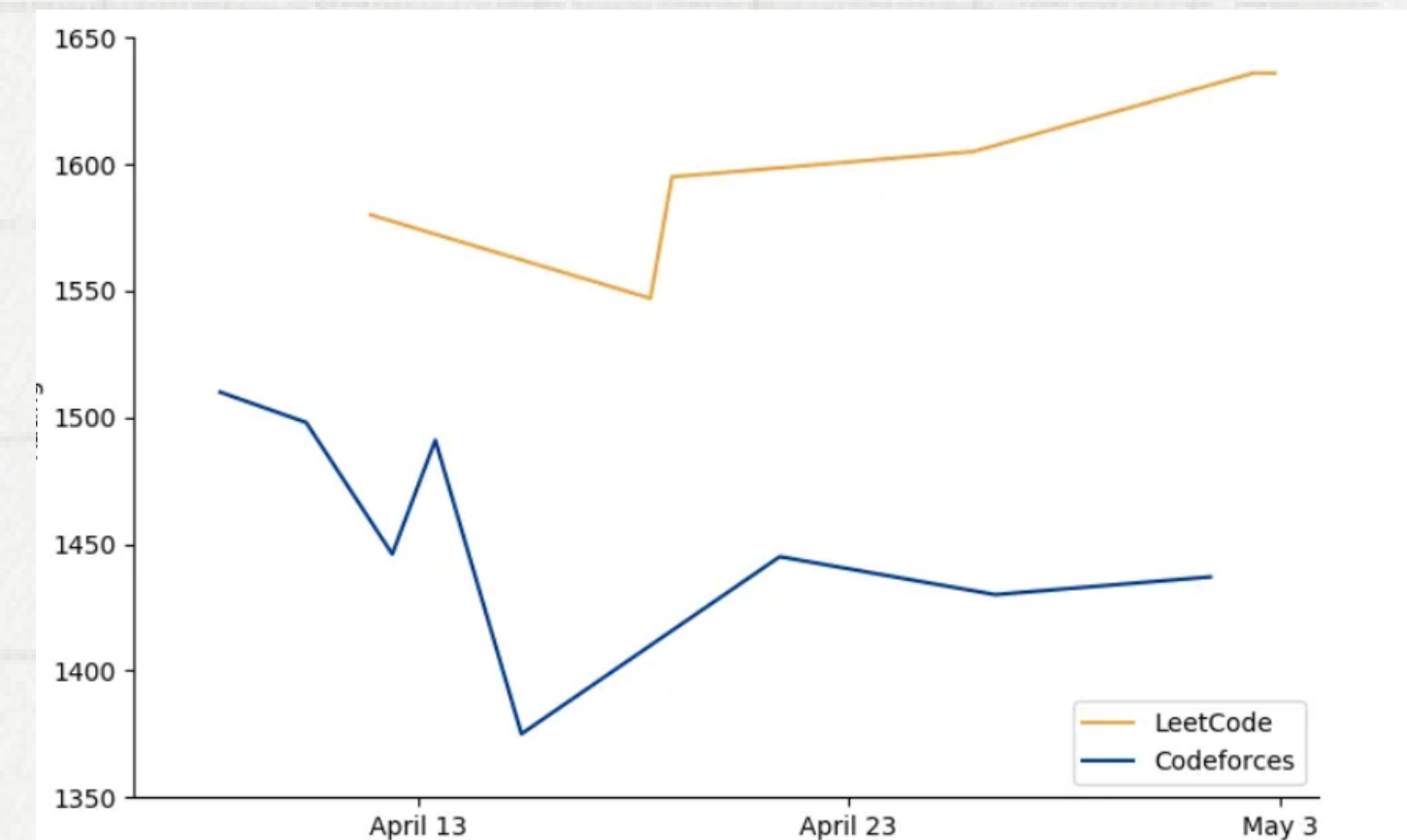
Design efficient database schema to handle large number of user and requests that we face in contests.

02

Solve streak counter encouraging participation in regular basis and small reward system (Merchandise and promo offers of different sites. This side opens the door of digital marketing too.).

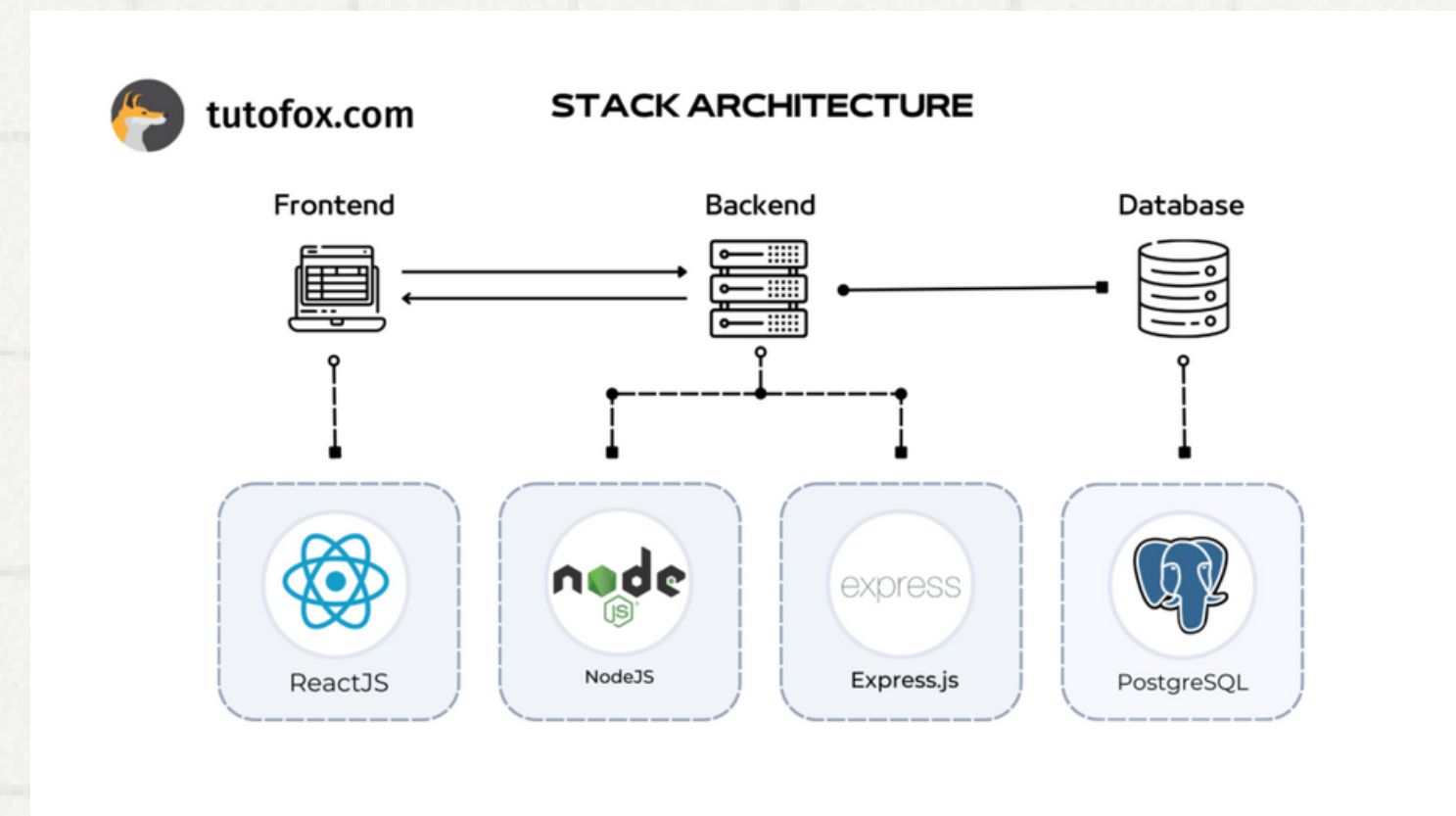
Customizability

- Ability to select different parameters for performance analysis curve.
- Flexible event scheduling considering users daily routine.
- Provide options for personalizing flashcards and frequency as well as time span selection of up-solving problems.



Technology factors and Strategic Goals

- Suitable and standard web development stack uses: React.js for frontend, Node.js for backend and PostgreSQL for relational database.
- Use of necessary RestAPIs.
- Applicable for personal use and any technical interview based guides or mentors



Versus Comparison on Overall Sustainability of Proposed System

Alternative systems(eg: codechef, leetcode) pros vs cons evaluation

Points

Our System Pros

Alternative system characteristics

Smart Upsolve

Smarter upsolve using flash card technique

Inconsistency issues of user experiences and challenges

Revision Tracker

Suitable revision history enabling to track problems solved before

Limited revision history in codechef and codeforces

Performance Tracker

Performance tracker based on different parameters, not only solve count but also different categories and difficulties set

Lack of progress graphs based on a variety of parameters and limited performance analysis

Coder's Calendar

An interactive calendar to store contest events in order to provide an organized view


Contest Tracking is present but lack of a proper view in a personal scheduler

Reward System Samoa

Vouchers and merchandise to motivate users to solve more

Many of the system alternatives lack a reward or recognition system

Justification for Recommended Solution:

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Thank you !!