

The Online Judge

Tech Stack:

- MERN
- AWS/Docker for Deployment
- JWT for authorization

High Level Design:

1. Database Designing:

- **Collection 1: Problem**

Document Structure (Schema Structure)

Problem_id:String(unique),

Problem title:String,

Problem statement:String,

Problem_setter:String,

Difficulty:string,

Tags:string

- **Collection 2: Submission**

Document Structure

Problem_id:String(foreign key),

code:String,

submitted_by:String,

Verdict:string,

Submitted_at:datetime

- **Collection 3: test cases**

Document Structure

Input:string,

Output:string,

Problem_id:string(foreign key)

- **Collection 4: User**

Document Structure

Username:string,

First_name:string,

Last_name:string,

Email:string,

Password:string,

DOB:datetime

2. User Interface/Design

1. Home Screen

- **login/signup**
- **Problem list**

2. Specific Problem Page

- **Language Selection**
- **Ide section**
- **verdict/submission log**
- **File selection**

3. Leaderboard:

- **List of top performers**