Title : Online Code Editor

Category

- ➢ Web Application.

Purpose

- ➢ Build an online coding platform for students and learners who don't want to or are unable to install a compiler in their own system.
- ➢ For students and learners who want to test their implementation of data structures, algorithms and coding problems.

Software will be easy to use for faculty and students

Scope

- ➢ For lab courses in colleges and universities which involve evaluation of coding problems.
- ➢ For self learners who want to evaluate their implementation
- ➢ Community discussion platform where people can post their implementation of the problem.

Introduction

- ➢ Existing System
  - Existing systems like leetcode, geeksforgeeks are general public coding platforms.
  - Online compilers like GDB,W3Schools don't provide the facility of testing the implementation of the algorithms.
- ➢ Proposed System
  - We are building general public specific solutions.
  - We will provide a general code editor as well as a problem solving platform.
  - Public will be able to share their implementation.
  - Unique user profile for each user.
  - Problems with difficulty tag (Easy, Medium, Hard) and topic tag. Users will be able to search problems based on these tags.
  - Users will be able to look at other user profiles.
  - Ratings will be given to each based on their performance.
  - Heatmap for past submissions to keep track of consistency.

Advantages

- ➢ For students and self-learners
  - Students and self-learners will be able to code on every laptop irrespective of the presence of compilers on their system.

- Students will have the knowledge about the edge cases on which their code might fail.

Functional Requirement

- ➢ Users will be given valid user id and password by the admin creating their individual profile.
- ➢ Users will be able to check and evaluate their implementation.
- ➢ Users will be able to ask for help from peers by taking part in discussion forums.

Non-Functional Requirement

- ➢ **Security** - Access to user id password to administration only.
- ➢ **Scalability** - Software can be scaled if required.
- ➢ **Usability -** Software will be easy to use for faculty and students

Software Tools

- ➢ Client - Any web Browser.
- ➢ Development tools - HTML, CSS, Node JS, Express JS, Multer, MongoDb, SPOJ API.
- ➢ Docker (Optional).

Deployment Tools

- ➢ **Platform** - HeroKu, GitHub.
- ➢ **Operating System** - Windows, Linux, MAC

Hardware Specification

- ➢ **RAM** - 4 GB
- ➢ **Processor** - i3 and Above
- ➢ **Hard Disk** - 256GB