

Title: Competitive Programming and Recruitment Management System

Scope:

The Project will provide a platform where Developers can enhance their Competitive Coding Skills by participating in Contest and Assignments created by Companies and Admins and further Companies can recruit Developers based on their performance in the Contest created by the Companies. Our main task is to maintain database can keep track on the Developers and help the Companies to recruit the developers based on their skill set and performance in the Contests.

Database Requirements:

- Admins and Company can prepare and post a Contest which Developers has to participate in and if they complete it successfully and secure a qualifiable place on scorecard they can be recruited in that particular Company.
- Contest can be conducted by Companies and Admins and all the features of the contest can be set by Company or by admins as per Companies guidance and A company can recruit multiple Developers.
- Company have Name, email, Contact information, Address, Country, Company size and Company type.
- Company Size can be Small, Medium and Large Scale and Company type can be IT based or Non-IT based
- Admin have first name, last name, email and Contact information
- Developers have first name, last name, email, Contact information, Country, Score and Profile.
- Contest which will be created by company or admins will have Contest name, Organizer, Requirements, Scoreboard, Start time date and End time date
- Requirements will have Job title, Job description and eligibility of the candidate appearing for the contest.
- Scoreboard will consist of Scoreboard, Developer information, Score.
- Recruitment will be done on basics of Scorecard and its table will consist of Recruitment Information Company information, Contest information and Developer information.
- Developers can set their profile as per their wish and profile will consist of all the information of the Developers provided by them
- Profile have Biodata, Profile Photo, Qualifications, Current Education, expected year of Qualification and Total Point Secured.
- Developers can have one or more than one Skill sets or Hobbies.
- Admins will also be creating Assignments and Questions which can be solved by the Developers based on their Skills for their practice for the Contests.
- Assignments will consist of Question based on a particular skill and each question will have multiple test cases.
- Questions will consist of Question Title, Question Description, Question Example Difficulty level of a Question and Total Score.

- Questions Attempted by Developer will also be shown by the details of the Questions tried by the developer and will consist of Attempted Question, Question Information, Developer Information, Score Earned and Question Status.
- Test Case consist Input, Expected Output and Question Information.
- Test Case Attempted by the developer will also be shown by having number of test cases attempted, Developer Information and Status
- Certificates will be provided after completion of Contest and that table will have Certificate Information, Contest Information, Developer Information and Scoreboard Information.
- A Developer can create only one Profile and can participate in zero or more Contest and obtain multiple Certificated
- A Profile can consists of many Skills and Hobbies and that can be differentiate by Skill Information and Hobby Information.
- Particular question is based on Single Skill Set and has multiple Test Cases for it.
- A Contest consists of many Questions and Participants and has only one Organiser and Scoreboard related to it.
- Assignment is based on a single Skill Set, managed by one admin and has multiple Questions on it.

Database Queries:

- List the top 3 most comfortable (most solved) Questions base on c++.
- List developer details who have travelling as a hobby and have at least 1000 points in java.
- List Top 10 difficult test cases (Based on people's attempt and unable to save it).
- List developers who were recruited by "xyz" after 2018
- List the top 10 best performers in a contest whose ID is "12345".
- List the top 10 most asked questions in the contests.
- List questions that have a max number of test cases.
- Select the top 10 best performing developers who're skilled in "JavaScript."
- List top five developers who have the highest score.
- List out all the java developers who got selected in particular company from 2015 to 2020.
- Count the developers who has attempted a particular contest.
- List out all the developers whose score is above 1500.
- List out all the developers who has more than five certificates and still not recruited by any company.
- Find out which country has highest developers on our platform.
- Find the company which has recruited highest number of developers from our platform.
- Find developers of a particular country.
- List out the developer, who have earned 5 or additional certificates.
- Retrieve name of developer, who has answered maximum number of questions in Python.
- List out the contest, which had allotted maximum time duration.
- List the name of the subject which, have maximum number of Developers.
- List out the name of developers, who will complete their qualification in or after 2020.