Blockchain based recruitment management system

IMPLEMENTATION PROJECT – EASY

1   PROBLEM STATEMENT

Create a blockchain based recruitment management system for companies to hire worthy candidates and for candidates to apply for open positions. The platform must be fair and transparent about the status of the candidate recruitment and verifiable on the blockchain (non-repudiation). The platform allows for companies to create a job posting and for candidates to apply to. Posting are typically ordered by timestamp or any other policy your team deems useful for the candidates to apply to. The platform also supports a reward based system where companies can gain points/rewards based on the how fair and good it is with it's placement policies, along with that a candidate can also gain rewards based on the his/her profile as posted on the platform.

2   DELIVERABLES

A github repository containing the code for running and maintaining the recruitment management system along with a project documentation report that list the details on how to use the platform and the features it has. Your team is welcome to come up with a list of policies for the platform, mention the same in your project documentation report explaining the changes.

3   OUTCOMES

Propose and build a blockchain based DApp which will support the following features. This is not an exhaustive list, your team may add more features/modify existing features if necessary.

- Create/Update/Delete a candidate profile.
- Create/Update/Delete a company profile.
- Create/Update/Delete a job posting. (Choose what all must be immutable once the job posting is listed)
- Candidates can apply to 10 jobs at any given point of time.
- Companies can post atmost 10 job roles at any given point of time.
- A candidate must not be able to apply for 2 job roles at the same company.
- A candidate cannot apply to all the job roles present in the platform.
- A job posting may be deemed inappropriate or fraudulent if 2 or more candidates report about the job posting.
- Only authorized personnel from companies can view the list of candidates that have applied for a given role.
- A company must not be able to hire more than 2 people for the same role.
- A company cannot refuse/retract the offer once made publicly available in the blockchain.
- Candidates must be able to contact company SPOC incase of delays in the recruitment process.
- Distribute reward points to companies and candidates based on some policies. (You can implement your own logic for the same)
- Companies must be able to see all candidate profiles and reward points gained by the candidate so far and approach for a job role.
- A candidate cannot view/list other candidates who applied for the same job posting.

4   MINIMUM DELIVERABLES (60 MARKS)

- Create/Delete a candidate profile.
- Create/Delete a company profile.
- Create/Delete a job posting. (Choose what all must be immutable once the job posting is listed)
- Candidates can apply to 10 jobs at any given point of time.
- Companies can post atmost 10 job roles at any given point of time.
- A candidate must not be able to apply for 2 job roles at the same company.
- A candidate cannot apply to all the job roles present in the platform.
- A candidate cannot view/list other candidates who applied for the same job posting.

5   GRADING POLICY

- **80 marks** Build and demonstrate each and every feature of the platform for 30 or more users. (Atleast 10 candidates and 10 companies with more than 10 job postings)
- **20 marks** Demonstrate how your team utilized the underlying blockchain technology to implement some of the features/constraints listed above.
- **20 marks (bonus)** A candidate is notified about new job postings from a company of for a role that he/she has previously shown interest it. Any other "extra" or "useful" feature can also be worthy of bonus points.

6   DISCLAIMER

Before doing anything "extra" (which might fetch bonus marks), first, complete the basic expectations from your implementation.

Software tools are expected to display their results in a user-friendly manner; a user would never like to use a tool that simply spits out a bunch of numbers. So, display the results from your tool suitably possibly in a good web-based UI or the terminal in verbose user-friendly manner.

Discussion is healthy, copying is not. You are encouraged to discuss the projects with your peers, but you must implement the projects by yourself. If any two groups are found with "similar" pieces of code, both of them will be failed (with no concern as to who was the source). Copying from internet sources or open-source github repositories must be refrained from.

TAs may conduct a code-review after every milestone is reached or 15 days (which ever is earlier) so please be careful about plagiarism.