**Project title:** Evaluation service by participant voting based on Quadratic Voting

**Project type:** Option 1. Web3 app prototype

**Team name:** QV

**Team members:** Kildong Hong (students), Changkil Kim (auditors)

**Mentor**: Jason Han

It is common for events such as contests and hackathons to be evaluated by external experts. However, it is not easy for them to make an accurate evaluation based on the results in a limited evaluation time. On the other hand, the participants of the event - e.g., event organizers and staff, mentors, and contestants - can complement the external evaluation as peer evaluators because they are involved in the entire process.

This project develops a service that the participants evaluate projects that have participated in a competition. The evaluation method is based on **quadratic voting (QV**) **with the voting credits granted to each participant**. QV subtracts the square of the number of votes cast. For example, if you want to vote 2 votes for a project, you'll need 4 credits, and if you want to vote 3 votes, you'll need 9 credits. This allows people to cast many votes for a project they strongly support, while preventing bias due to overcrowding.

The project implements a **QV-based transparent voting service using blockchain**. Voting credits are implemented as tokens and voting is implemented as a smart contract. To vote, users must first register their wallet address, and then receive voting credit tokens. When users bet voting credits to vote for a project, the credits are sent to the voting smart contract and accumulated. After the voting ends, projects can be ranked according to the amount of voting credit tokens they have.

**The constraints** are as follows.

- The chairperson is in charge of registering voters and conducting the voting phase.

- A whitelist of authorized voters and wallet addresses is provided in an off-chain file.

- Project information and participant category information are provided in an off-chain file.

- Only participants who register during the registration phase (Regs) will receive voting credit tokens. (differential distribution based on participant category)

- Participants can vote on multiple projects until their voting credit tokens are exhausted.

**< Optional Improvement 1 >**

Users can delegate their vote to another person. They send the amount of credit tokens you want to delegate to the person you want to delegate to, and that amount will be automatically delegated.

**< Optional Improvement 2 >**

Provide differential voting credit tokens based on community contribution. Develop a separate smart contract that awards voting credits on a regular basis based on the amount of activity on Discord.