UNIVERSIDAD DE LAS AMÉRICAS PUEBLA

Computer systems engineering

Desarrollo de aplicaciones móviles- P25-LIS4012-1

VoteChain Requirements specification

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Description

Voting is an action that has been part of the life of social communities for thousands of years, as it is critical for the opinion of all those involved to be considered and from this decisions are made, which is why there should be a tool with which this action can be carried out easily, quickly and reliably, taking advantage of the great technological advances of our time.

That is why with VoteChain we want to create a voting platform in which any person, institution, company or government can carry out votes guaranteeing privacy, faithful results, accessibility for everyone, avoiding fraud and the long lines that are common in massive votes. To ensure all this, the application will use blockchain technology to make voting safe, as well as user authentication to ensure that all people who vote are real people and are approved to participate in the vote.

The application will allow users to authenticate with a code to participate in voting, ensuring that each person can only vote once and guarantee the security of the process. Different authentication methods will be implemented depending on the type of voting, including the option to request official identification for government elections. The platform will cover a wide range of voting types, from governmental elections to social polls on popular topics. It will function as a social network where users can view and participate in votes created by others. Additionally, there will be verified profiles to ensure the authenticity of certain votes, allowing the community to identify which ones are legitimate. For example, in the case of elections in Mexico, some users might create fake polls, but the community will be able to distinguish them and only respond to those published by the verified profile of the electoral authority. To guarantee transparency and security, the application will utilize blockchain technology, ensuring that each vote is immutable and verifiable. Furthermore, the platform will offer the option to contact specialized companies for managing high impact voting processes.

Goals

- Implement blockchain for a secure voting process and transactions
- Create a cross-platform mobile application for more accessibility, available for Android and IOS
- Create a scalable mobile application that could be capable of hosting national elections.
- Simplify and accelerate the voting process by avoiding queues and wait times.
- Preventing fraud and manipulation before, during and after the voting process
- Ensure compliance with legal and regulatory standards
- Support different voting use cases for different kinds of users

Requirements

Functional requirements

- A user must be able to register using email and password.
- A user must be able to create and configure polls (public or private, category, anonymous, and live results).
- A user must be able to participate in polls.
- A user must be able to view the results of public or private polls in which the user.
- A user must be able to filter polls by name or category.
- A user must be able to share a poll.
- A user must be able to verify their profile.

Non-functional requirements

- Cross platform
- The application must be easy to use and intuitive for any user
- Data encryption
- Blockchain
- Table with description