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**Project Step 7**

**Requirements & Use Case**

**1. User Stories**

**As a** Legal Registered Voter over the age of 18

**I need/want**

A secure voting system that frees me from the political backlash and media jargon of candidates lying and trying to stab each other in the back in order to win enough votes to possibly be elected for means other than the best interests of the people they represent. I require a secure system that is free from outside influence where I can place my vote from anywhere and know it will be counted. I need a system that is accurate, counts votes quickly, frees up volunteers and funding. I want a system that is modern and encrypted and prevents other voters from choosing a candidate by their sex, race, success, charisma, skin color, or any other prejudice, and simply vote for the candidate whose political views are most in line with their own.

**So that** voters such as myself can feel safe and secure that my vote will be counted and that I will be safe from oppression.

**So that** I do not have to listen to political campaigns backstabbing each other in the media.

**So that** the hate will stop between voters for their views on their chosen candidates.

**As a** Candidate

**I need/want** a system that is secure and accurate, that can be trusted and prevent recount. I need a system with near real time results. I need a system that voters can access from anywhere including our military members stationed overseas.

**So that** accurate results are received in a timely manner and allow for the most votes to be submitted with world-wide secure availability.

**2. Use Cases**

**Given** an online electronic voting system and database of current world issues and a registry of legal authorized voters

**When** user Registers to Vote

Then the users credentials are stored securely and remotely

**Given** an online electronic voting system, a database of current world issues, and a registry of legal authorized voters

**When** RegisteredCandidates log in

**Then** the candidate is sent to their own form that lists the top 15 most relevant issues affecting the country where they can give their opinion.

**Given** an online electronic voting system, a database of current world issues, and a registry of legal authorized voters

**When** Votes have been submitted

**Then** the votes are tallied securely and results are provided in near real time.

**Given** an online electronic voting system, a database of current world issues, and a registry of legal authorized voters

**When** Authorized Voters are deployed overseas

**Then** they can still access the system and submit their vote.

**Given** an online electronic voting system, a database of current world issues, and a registry of legal authorized voters

**When** a voter goes to submit their vote

**Then** are presented with each candidates views on top 15 political issues affecting the country, without knowing which candidate submitted which set of views.

**Requirements:**

**Non-Discriminatory:** The principle of non-discrimination seeks “to guarantee that human rights are exercised without discrimination of any kind based on race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status such as disability, age, marital and family status, sexual orientation and gender identity, health status, place of residence, economic and social situation”.

**World-Wide Availability:** So that registered authorized voters overseas can accurately and securely submit their vote.

**Accuracy:** The i-vote system does not allow altering or deleting a validated vote and

does not count any ineligible vote in the final tally.

**Democracy:** It allows only eligible voters to vote and allows every voter to vote only

once.

**Privacy:** It does not disclose the votes of the respective voters and does not allow any

voter to prove how he/she voted. This is a fundamental requirement to avoid voter intimidation and vote selling.

**Verifiability:** It allows anyone to verify that all votes were correctly counted. And in

case of electoral disputes, it provides means for rechecking the results.

**Security:** It always satisfies the accuracy, democracy, and privacy requirements and

does not allow inside or outside attackers to undermine these requirements. Additionally, it satisfies reliability, availability, and data integrityrequirements.

**Acceptance:** It is accepted by voters and candidates who believe that the system is fair

and they trust its results. This requirement depends on all above requirements.

**Flexibility:** It can carry out various types of elections for parliaments, municipalities,

student boards, plebiscites, referendums, *etc*. Flexibility provides economic advantage

when the same system is used to conduct multiple electoral processes in a certain country or city. A necessary aspect of the flexibility, which is needed for democracy, is the *universality* in allowing any eligible voter to vote irrespective of her native language, special needs, or literacy level. One more important aspect is the *mobility* in allowing the voter to vote in any voting center that is most convenient to her.

**Cost effectiveness:** It uses economic software and hardware components. This requirement is particularly important for large-scale elections.

**Scalability:** It efficiently enables carrying out various sizes of elections. The election

size can be small (up to few hundred voters, *e.g.*, electing the speaker of a parliament),

medium (thousands of voters, *e.g.*, electing the city board), or large (millions of voters,

*e.g.*, general parliamentary elections). When the system is used in various election sizes, it achieves flexibility, provides better return on investment, and facilitates productizing it in mass quantities.