Software Development
Coding Assessment

Votem

GOAL OF THIS ASSESSMENT

Before we add a new member to the development team here at Votem, it's important that we have a firm understanding of their technical abilities and how they approach challenges. This coding assessment is structured to simulate the types of products you would be working on at Votem. This challenge is meant to be fun and to help us better evaluate your strengths as an engineer and how you might fit into our team. Please note that none of the code you write will be used for anything other than evaluation of your skills as an engineer.

REQUIREMENTS

As you know by now, Votem is set out to build the next generation of voting systems. We would love to see your approach to building a (very simple) voting system that allows a voter to fill out their ballot online. The voting system should allow for tallying/tabulation, reporting of the final results and keeping a log of all user activity. See attached sample ballot for reference and use in your project.

RULES

- You will have up to 7 days to complete the challenge.
- Use whatever languages, frameworks or technology you think best fits the problem (and you're comfortable with).
- Internet resources are acceptable for reference, but the work must be your own.
- You are welcome to ask for whatever clarification you need.

TIPS FOR SUCCESS

It's not enough that you are technically capable, we are looking for team members who will take ownership of our team's problems and use their own creativity and ingenuity to solve them. To that end, we encourage you to add any features or functionality that you think would be helpful to solve the problem. We've intentionally left the requirements open to leave room for creativity. In other words, this is your chance to show us your abilities (UX, coding, requirements gathering, etc).

- Some baseline checks:
    - Did the solution meet the minimum requirements?
        - Voter Registration & Authentication
        - Ballot Submission with all contest types
            - Ranked Choice
            - Simple Majority
            - Pick Two
        - Viewing of Results
    - Documentation (could someone deploy this without your help?)!
    - Did the solution solve the problem in an intelligent and efficient way?

INSPIRATION FOR BONUS POINTS

Blockchain | Cybersecurity/Encryption | Web accessibility standards| End-to-end verifiability | Voter anonymity and voter identification (zero-knowledge proofs) | Multi-factor Authentication

DELIVERY

When you have completed the challenge, you should deploy the product in an environment in which it can be demonstrated (a video conference demo is acceptable). You should also provide access to the source code of the completed project for review (via GitHub, bitbucket or via email). Upon delivery, we'll set up a call with you to discuss your approach and solution.

Votem Ballot

FEDERAL AND STATE

FOR COMMANDER IN CREAM AND VICE ICE
(RANKED CHOICE VOTING (INSTANT RUNOFF))

Rank candidates in order of choice. Mark your favorite candidate as first choice and then indicate your second and additional back-up choices in order of choice. You may rank as many candidates as you want.

____ Reese WithoutASpoon – Democrat for C.I.C.
Cherry Garcia – Democrat for Vice Ice

____ Choco 'Chip' Dough – Republican for C.I.C.
Carmela Coney– Republican for Vice Ice

____ Magic Browny – Independent for C.I.C.
Phish Food – Independent for Vice Ice

____ _____

FOR CHIEF DAIRY QUEEN
UNEXPIRED TERM (VOTE IN ONE OVAL)

Shall Justice Mint C. Chip of the Supreme Court of the State of Ice Cream be retained in office for another term?

Fill in the oval before the word "YES" if you wish the official to remain in office.

Fill in the oval before the word "NO" if you do not wish the official to remain in office.

◯ YES

◯ NO

FOR STATE REP. DISTRICT M&M
(VOTE FOR TWO)

◯ P. Nut Butter (REPUBLICAN)   ◯ Cream C. Kol (INDEPENDENT)

◯ Marsh Mallow (DEMOCRAT)

◯ _____

BALLOT ISSUE

CONSTITUTIONAL INITIATIVE NO. 116

(VOTE IN ONE OVAL)

MAKE VANILLA (OVER CHOCOLATE) THE OFFICAL BEST FLAVOR

This is a fiercely debated topic and CI – 116 would official enumerate in written legislative text in perpetuity which flavor has favor – namely vanilla is better, unequivocally, than chocolate.

◯ YES ON CI – 116 (FOR VANILLA)

◯ NO ON CI – 116 (NO ON VANILLA)