Senior Frontend Engineer: Take Home Assessment

Congratulations on considering the Senior Frontend Engineer role at our cutting-edge digital bank. This take-home assessment is designed to evaluate your skills in building a secure and efficient React Native module. The assignment is estimated to be completed within 3 days, but feel free to spend more or less time based on your availability and pace.

Payment Transfer Module with Biometrics Authentication

Objective

Your task is to implement a secure payment transfer module for our digital banking app using React Native and TypeScript, incorporating a biometrics authentication process.

Feature Requirements

1. Payment Transfer Interface

- Create a user-friendly interface for initiating payments
- Include fields for recipient selection/input, amount, and optional note
- Implement current account balance checking and display
- Provide clear error messages for invalid inputs

2. Biometric Authentication

- Integrate device biometric capabilities (Face ID / Touch ID / Fingerprint)
- Biometric should be prompted upon the payment transfer happens for user authentication.
- Implement fallback options for devices without biometric capabilities
- Ensure proper handling of biometric authentication results

3. Transaction Processing

- Simulate API calls for processing the transaction
- Implement proper error handling for various scenarios (e.g. insufficient funds, network issues)
- Display a confirmation screen with transaction details upon successful transfer

4. Performance Optimization

- Optimize rendering of lists
- Implement efficient state management and minimize unnecessary re-renders

Stretch Goal: Recipient Management

If time permits, these are the optional good to have features to implement.

- Allow users to access and select recipient from their contact list
- Display recent transfer history for quick re-sending

Evaluation Criteria

1. Code Quality and Organization
   - Clean, readable, and well-documented code
   - Proper use of React Native and TypeScript best practices
   - Effective component structure and reusability
   - Implement proper separation of concerns
2. Security Implementation
   - Proper integration of biometric authentication
3. User Experience
   - Intuitive and responsive user interface
   - Smooth animations and transitions
   - Clear error messages and user feedback
4. Performance
   - Efficient rendering and state management
   - Smooth scrolling and interaction with large datasets
   - Proper handling of asynchronous operations
5. Error Handling
   - Appropriate error handling throughout the module
6. Creative Problem-Solving
   - Innovative approaches to UX challenges

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        o   Thoughtful considerations for future scalability

Submission Guidelines

1. Provide a GitHub repository URL with the complete React Native project
2. Include a README with setup instructions and any necessary assumptions we might need to run your app and evaluate your work
3. Commit history should demonstrate the development process
4. Include a brief write-up explaining your design decisions and any challenges faced
5. Prepare a demo video in the README to showcase the app

We are excited to see your skills in action and how you approach building a secure and efficient module using React Native. If you have any questions or need further clarifications, do not hesitate to reach out.

Good luck, and we look forward to reviewing your work!