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# Project Phase 6: Security Recommendations

**To review our group’s mobile app project through a security lens by answering the following questions:**

a. What is your security recommendation? Why did you choose it?

* The major security recommendation is “The app only requests the minimum set of permissions necessary” in the list of the mobile app security recommendations from the Android App Security Checklist on GitHub.
* This recommendation was selected to ensure that the Tic Tac Toe app respects user privacy and security. By only requesting permissions that are absolutely necessary for the app's functionality, we reduce potential vulnerabilities and build user trust. Unnecessary permissions can lead to privacy concerns and increase the risk of data leakage.

b. Who does the recommendation benefit (end-user, developer, etc.)?

* This recommendation primarily benefits the end-users to protect their privacy and personal data. It also benefits developers by minimizing the risk of mis-use of permissions, which may lead to security vulnerabilities, and ensure compliance with appropriate practices in app development.

c. If the recommendation was found somewhere other than the provided checklist, include a link to it.

* This is a widely accepted appropriate practice in app development, emphasized by many security guidelines, including those by Google for Android Apps and Apple for iOS Apps:
  + <https://developer.android.com/privacy-and-security/security-tips#least-privilege>
  + <https://developer.apple.com/app-store/review/guidelines/#privacy>

d. When would the recommendation have to be implemented (based on how serious the security risk is)?

* This recommendation should be implemented from the early stages of app development. When planning the app's features and relevant functionalities, developers should identify the permissions needed and prevent any permissions are not necessary to the app’s core functionality.

e. Why do you think your project needs your recommendation?

* For a Tic Tac Toe app, the app without user data interaction or complex features, limiting permissions is both practical and essential. This ensures the users will not be asked for granting permissions that are irrelevant (e.g., location access, contacts), that enhance user trust and adhering to privacy standards.

f. How do you think your recommendation could be applied?

* During implementation, which involves carefully analyzing the app's functionality and only including permission requests that are absolutely necessary. For example, a basic Tic Tac Toe game might not need any beyond basic internet access.

i. How feasible would the implementation be?

* In the implementation, which is highly feasible and straightforward. It requires a thoughtful approach during the design and development stages but does not add any additional technical complexity. Indeed, it simplifies the app’s permission management and can streamline the development process.