A Large-Scale Study of Mobile Web App Security

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Abstract:- In today's digital world, where we rely on mobile web apps for many things, keeping these apps secure is really important. This paper is about a big study we did to understand how safe these apps are. We looked at a lot of them and found many problems, like ways that hackers can get in and access data. Some common problems we found are things like cross-site scripting, where bad code can be added to a website, SQL injection, which is a way to tamper with databases, and also issues with how data is stored, which makes it easy for bad actors to access.

Our study doesn't just point out the problems; it also gives ideas on how to fix them and best practices to follow. We also talk about how these problems affect things like keeping user data private, following rules and laws, and what it means for the people who make the apps and those who use them. We stress the importance of teaching users about these issues and how to write secure code.

By doing this big study, we want to help the people involved in making and regulating these apps, like developers, organizations, and the people who make the rules, to make smarter choices. We want to make the world of mobile web apps safer. Ultimately, our research is all about building trust and confidence in the digital world, so mobile web apps keep growing and stay useful.

Motivation:- Security is a big worry in the digital world today, and mobile web apps are now a big part of our daily lives. We use them for all sorts of things, like paying bills and managing our health. It's super important to make sure they are safe. There are more and more mobile devices out there, which means there are more ways for bad guys to try and break into our apps. So, we really need to study and understand mobile web app security more than ever before. The motivation behind our project, "A Large-Scale Study of Mobile Web App Security," is rooted in the recognition of this urgency. We aim to address the following key reasons for undertaking this study:

1. **Growing Cybersecurity Threats**: The cybersecurity landscape is constantly evolving, with cyber threats becoming more sophisticated and pervasive. The rise of mobile web applications has made them a prime target for attackers. Our project seeks to uncover the extent of these threats and vulnerabilities, which is crucial for developing effective countermeasures.

2. **User Data Protection**: Mobile web apps often handle sensitive personal and financial information. Safeguarding this data is essential to protect the privacy and security of users. By comprehensively examining the security of these apps, we contribute to the protection of user data.

3. **Knowledge Advancement:** Research in mobile web app security is vital for advancing our understanding of emerging threats and vulnerabilities. The insights gained from this study can contribute to the development of better security practices, tools, and frameworks.

4. **User Confidence:** A secure mobile web app ecosystem fosters user trust and confidence. Our project aims to enhance user confidence in the security of the apps they use, thereby promoting their continued adoption and usage.

5. **Impact on Society:** In an increasingly interconnected world, security is not just a technical issue; it's a societal concern. A robust study of mobile web app security can have a broader societal impact by helping protect individuals and organizations from cyber threats.

References: - http://www.adamdoupe.com/publications/large-scale-study-of-mobile-web-app-security-most2015.pdf