Review of: "A Security Framework for the Mobile Application Using Color Barcode"

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Potential competing interests: No potential competing interests to declare.

1. Authors have presented an authentication method by using a 2D QR code. They have focused on describing its operation. It appears that authors are looking after the ease of using QR codes, and from there, they have highlighted its advantages. However, authors have not showcased what the real issues are that compelled them to manufacture this method.

2. A comprehensive literature survey is missing, and that is a must. There has to be a logical conclusion drawn out of the relevant reviewed papers.

3. Authors clearly need to specify what the problematic areas are in the existing authentication methods, and they need to highlight those after the literature review. Authors could do it by studying the existing articles on QR code-based authentication. They should identify the pros and cons and enlist them to compare their solution in the evaluation section.

4. Authors must highlight the threat model for the existing use cases and then propose their method as a solution. In the security review section, authors could analyze all the loopholes and how the proposed solution is able to plug these loopholes. Since this paper addresses the improvement of authentication, it is essential to provide the threat perception and how this method mitigates them. In the current framework, authors must identify the endpoints at both the client and the server. Endpoints are used as the attack points which an attacker may use to extract information from the system by using advanced fuzzing techniques. They can learn about the behaviour of the system and pin down the exact weaknesses in it. Once the weaknesses are identified, they create payloads to launch attacks to exploit the weaknesses found.

5. Authors should also focus on providing the test environment on which they extracted the results. How does the proposed method perform better than the existing ones and why, as a researcher, the authors should establish these facts. Their analysis should be fact-based. If the authors use a mobile and a server to verify the results, then the details of these must be provided. Hardware specifications like CPU cycle, RAM size, network bandwidth, OS version, turn-around time of authentication, and constraints of the test environment can be used to extract and analyze the results.

6. Grammar must be improved. A lot of grammatical errors exist, and writing skills also need to be focused. Authors are wayward in their explanation.

7. Abstract and conclusion must have the results.

8. Conclusion is missing completely.

9. Overall, a poorly written paper that needed a lot of correction.