DESIGN AND IMPLEMENTATION OF CHALLENGE RESPONSE BASED PROTOCOL FOR MOBILE VOTING SYSTEM

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Abstract

Traditionally, the electoral system in an organization is done by voting on a particular day and a particular place, as opposed to the mobile lifestyle of today's society. And also voting is still done using paper ballot that would add cost to the voting process. The spread of the internet access can be seen as an opportunity to handle mobility problems, ie by using Mobile Voting.

Mobile Voting is a mobile device that is used to vote in an election. Mobile Voting aims to increase participation, to decrease the cost of the election process, and to provide flexibility to the voters who are away from the polls.

Voting is developed on Mobile Application Android, because many people have been using Android mobile phone. It is therefore necessary that the Android SDK is a package to build Android applications. This application requires the development of server and client. The server has a database (MySQL) to store data from polling that has been done. And also, it uses a HTTP protocol as a method of communication between the mobile phone and the database server (MySQL). When the mobile phone users try to communicate with the database server, data transmission will be encrypted so that the data can’t be read by unauthorized peoples.
This final project is used for voting systems on a small scale by using a challenge response protocol to maintain the security of mobile devices on the system. The goals to be achieved are valid voters can vote without having to worry about their accounts being used by other peoples. In addition, the application can protect the ballots from changing and disclosing.

**Keywords:** Android, Challenge Response, Mobile Phone, Mobile Voting.