

The world is changing rapidly. Advancement in the information technology makes these changes so fast. Every field is looking ways to take advantage of technology. One of the fields that can be used with current technology is voting. Traditional way of voting does not answer the needs as desired. Combining traditional voting systems with technology in a secure manner provides efficient, flexible, and easy-to-access system called as e-voting. The main reason behind e-voting studies is to increase democracy. There are number of different voting procedures and these procedures must satisfy some requirements to make e-voting more democratic than traditional systems.

Some of the voting procedures are first-past-the-post, two-round-system, instant-runoff system, block voting, party block voting, single non-transferable, cumulative voting, party-list proportional representation, borda count. For example, while the winner of the first-past-the-post procedure is the candidate that gains most of the votes, the winner of instant-runoff procedure must gain some pre-determined proportion of the votes.

The essential requirements of a voting procedures are secrecy, receipt-freeness, coercion-resistance, integrity, authentication, identification, privacy, universal verifiability, individual verifiability, fairness, eligibility, non-reusability, inalterability.

All these requirements are important for a voting application. But some requirements are more important than the others according to the needs of the election. This study aims to provide an open platform to develop any kind of voting procedure. The platform will suggest tool sets to increase satisfaction level of selected requirements of the selected voting procedure, performance parameters of the tool sets will be involved. Suggested tool set will be provided in a modular manner which means steps of voting procedure will be executed using different services. Any developer can use suggested service, or she/he can develop her/his own service inside the platform.

Also, this study has educational objectives. Any person can examine the system to understand both how an e-voting procedure is executed, and which cryptographic tool is used for what purposes.