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A Blockchain Based Portal for Online E-Voting

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Abstract: *In place of traditional electoral systems, the implementation of e-voting systems is widely adopted which still has major problems in the results. Online voting is an alternative to the old paper voting system and today's popular Electronic Vote Machine (EVM). E-voting systems are very susceptible to manipulation issues, such as alteration of election results by hacking or by the manufacturer of the voting system. To solve this problem, we use distributed ledger technology to create a voting application that is accessible to everyone and everywhere. Blockchain, which is the technology behind the first Bitcoin cryptocurrency, has attracted a lot of attention globally in recent years. This paper proposes a blockchain-based voting system that removes some limitations of existing voting systems. The application is based on the Ethereum blockchain which makes the entire system secure and immutable in nature. The presented implementation is suitable for small-scale elections such as inside corporate homes, meeting rooms, and more.*

Keywords: Blockchain, Ethereum, Ganache, Metamask

REFERENCES

[1]. Review of Challenges and Opportunities of Blockchain for E-Voting", Symmetry 2020, 12, 1328;2020
[2]. David Khoury; Elie F. Kfoury; Ali Kassem; Hamza Harb "Decentralized Voting Platform Based on Ethereum Blockchain" In Proceedings of the IEEE Multidisciplinary Conference on Engineering Technology (IMCET), Beirut - Lebanon, 2018.
[3]. G. Wood, "Ethereum: a secure decentralised generalised transaction ledger", Ethereum Project Yellow Paper, vol. 151, pp. 1-32, 2014.
[4]. Kashif Mehboob Khan, Junaid Arshad and Muhammad Mubashir Khan. " Secure Digital Voting System based on Blockchain Technology" International Journal of Electronic Government Research. Vol. 14, No. 1, January 2018.
[5]. O. Cetinkaya and D. Cetinkaya, "Verification and validation issues in electronic voting," vol. 5, no. 2, p. 117-126, 2007.
[6]. U.C. Çabuk, A. Çavdar, and E. Demir, "E-Demokrasi: Yeni Nesil Do÷rudan Demokrasi ve Türkiye'deki Uygulanabilirli÷i", [Online] Available: https://www.researchgate.net/profile/Umut_Cabuk/ publication/30879 6230_E-Democracy_The_Next_Generation_ Direct_Democracy_and_Applicability_in_Turkey/links/5818a6d408a ee7cdc685b40b/E-Democracy-The-Next-Generation-DirectDemocracy-and-Applicability-in-Turkey.pdf.
[7]. "Final report: study on eGovernment and the reduction of administrative burden (SMART 2012/0061)", 2014, [Online]. Available: https://ec.europa.eu/digital-single-market/en/news/finalreport-study-egovernment-and-reduction-administrative-burdensmart-20120061
[8]. Ruhi Tas and Ömer Özgür Tanrıöver, "A Systematic Review of Challenges and Opportunities of Blockchain for E-Voting", Symmetry 2020, 12, 1328; doi:10.3390/sym12081328
[9]. Spurthi Anjan and Johnson P Sequeira. "Blockchain Based E- Voting System for India Using UIDAI's Aadhaar". Journal of Computer Science Engineering and Software Testing. e-ISSN:2581-6969, Volume 5 Issue 3.2019
[10]. Lalitha Devi, Devashish Kedar, Saurabh Kumar Malik and Kunal Dubey. "Decentralized Voting Application". International Journal of Engineering Science and Computing. Volume 8 Issue No.10, October 2018