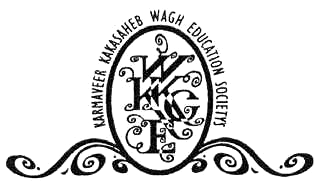
**K. K. Wagh Institute of Engineering Education and Research, Nashik.**

**Department of Computer Engineering**

**Academic Year 2022-23**

**Course: Seminar and Technical Communication Course Code: 310249**

**Name of Student:** Shirsath Sanket Dilip **Class:** TE

**Roll No.:** 69 **Div:**B

**Name of Guide:** Prof.J.R Mankar

**Title Of The Topic:** An Automated Framework for Migrating Java Applications to Ethereum Solidity Applications

**Area(Domain) Of Topic:** Blockchain, Java

**Abstract:**

With growing technology, the blockchain has created a great impact. Many organizations have started experimenting with blockchain for solutions to their operations. Blockchain technology offers innovative mechanisms for transparent transactions in various industries. The features of this technology enhance security through transparency and traceability of any transaction, whether data, assets, or financial resources. This increased traceability and transparency helps many businesses be successful, and this isn't just limited to businesses in finance or technology. Many industries, from healthcare to higher education, could benefit from the advantages of blockchain technology. This makes it an ideal technology for software development, as it can be used to create immutable audit trails and help ensure that data is accurate and consistent. But in this nascent stage, due to the scarcity of blockchain domain experts, there is a growing trend towards an automated conversion of legacy systems to blockchain-based systems. To this aim, this paper presents an automated framework that facilitates the migration of centralized Java-based applications to decentralized Solidity-based Ethereum applications. The experimental results are encouraging, demonstrating its ability to handle a large-scale Java codebase. To the best of our knowledge, this is the first proposal of its kind that enables the translation of Java source codes to Solidity source codes.

**Index Terms**—Blockchain, Ethereum, Smart Contract, Java, Solidity

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**Signature of Student Signature of Guide**