

## Mastering Test Automation: Bridging Gaps for Seamless QA

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**Abstract :** The rapid evolution of software development practices has given rise to an increasing demand for efficient and effective test automation. The paper titled "Mastering Test Automation: Bridging Gaps for Seamless QA" delves into the crucial aspects of test automation, addressing the obstacles faced by organizations in achieving flawless quality assurance. The paper highlights the importance of bridging knowledge gaps within organizations, emphasizing the necessity for management to acquire a deeper comprehension of test automation scenarios, coverage, report trends, and the importance of communication. To tackle these challenges, this paper introduces innovative solutions, including the development of an automation framework that seamlessly integrates with test cases and reporting tools like TestRail and Jira. This integration facilitates the automatic recording of bugs in Jira, enhancing bug reporting and communication between manual QA and automation teams as well as TestRail have all newly added automated testcases as soon as it is part of the automation suite. The paper demonstrates how this framework empowers management by providing clear insights into ongoing automation activities, bug origins, trend analysis, and test case specifics. "Mastering Test Automation" serves as a comprehensive guide for organizations aiming to enhance their quality assurance processes through effective test automation. It not only identifies the common pitfalls and challenges but also offers practical solutions to bridge the gaps, resulting in a more streamlined and efficient QA process.

**Keywords :** automation framework, API integration, test automation, test management tools

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