

## Uncovering Hidden Bugs: An Exploratory Approach

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**Abstract :** Exploratory testing is a dynamic and adaptable method of software quality assurance that is frequently praised for its ability to find hidden flaws and improve the overall quality of the product. Instead of using preset test cases, exploratory testing allows testers to explore the software application dynamically. This is in contrast to scripted testing methodologies, which primarily rely on tester intuition, creativity, and adaptability. The purpose of this abstract is to examine the nature and importance of exploratory testing in modern software development methods. It explores the fundamental ideas of exploratory testing, highlighting the value of domain knowledge and tester experience in spotting possible problems that may escape the notice of traditional testing methodologies. Throughout the software development lifecycle, exploratory testing promotes quick feedback loops and continuous improvement by giving testers the ability to make decisions in real-time based on their observations. This abstract also clarifies the unique features of exploratory testing, like its non-linearity and capacity to replicate user behavior in real-world settings. Testers can find intricate bugs, usability problems, and edge cases in software through impromptu exploration that might go undetected. Exploratory testing's flexible and iterative structure fits in well with agile and DevOps processes, allowing for a quicker time to market without sacrificing the quality of the final product.

**Keywords :** exploratory, testing, automation, quality

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