Most effective QA & Testing Types

Quality assurance (QA) is key in modern software development. That's because poor quality software can tank software sales, harm a company's reputation, and expose sensitive consumer data to malicious hackers.

1. Functional Testing

Determines whether all of the components of a piece of software operate according to its functional requirements. It involves verifying user interface and workflows and ensuring that data is correctly stored in databases.

-Black box testing: inspects the functionality of software without considering the software's internal code.

-White box testing: verifies the internal code, data structure, and internal design

2. Performance Testing

It measures how a piece of software functions under a high workload of real-world conditions and identifies potential bottlenecks before the networ is placed under real stress.

It is useful to look at processing speed, workload efficiency, reliability, and data transfer rates.

-Stress and load testing: it evaluates how the system deals with increasing workloads.

-Endurance testing: looks at how a system respond to high workloads over an extended period of time.





5. Security Testing

Groups of programmers, security experts, design specialists, and testers work together to check each other's work and fix coding mistakes that could compromise software security.

They ensure that data privacy is included in the early requirements analysis and design phases — and all the way into the deployment and maintenance phases as well.

It ensures that the software is protected against common threats such as SQL injections, spoofing, fishing, and more.

Designed to simulate the end-user experience and ensure that the software works as advertised. It typically involves inviting select customers to participate in a usability test under controlled conditions.

-Hallway testing: It involves selecting several potential end users at random.

-Expert review: It involves bringing in external software experts to evaluate the product and offer suggestions.

3. Automated Testing

It helps businesses identify more vulnerabilities than manual testing alone can find and makes testing multilingual software much easier.

Software developer engineers in test write programs that actively seek out vulnerabilities and offer solutions to these problems.

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