DESCRIPTIVE ESSAY

The 4 agile testing quadrants

Q1 - Unit Testing (Automated) – This quadrant is Unit level and the main purpose is to develop quality software. Unit testing is a level of software testing where individual units/components of a software are tested. The main purpose is to validate that each unit of the software performs as designed. Generally, a unit test evaluates how software code compiles with the overall objective of the software application and how it affects other smaller units. While testing, each unit/component is isolated from the primary application. This testing technique is typically performed after development and before publishing.

Q2 - Functional Testing (Automated & Manual) – This Quadrant contains Functional testing, prototypes and simulations based on acceptance criteria, and the main purpose is to create value for the end-user/customer. Functional testing is a testing technique that is used to test the functionality of the software or system. It covers all the scenarios including boundary cases and failure paths. Functional testing is a way to ensure that the software has all the required functionality that's specified within its functional requirements. Primarily used to verify that a piece of software is providing the same output as required by the end-user. This testing technique involves comparing and evaluating each software function with the business requirements. Software is tested by providing some related input to evaluate the output and see how it conforms, varies or relates to its base requirements. It also checks software for usability.

Q3 - Exploratory Testing (Manual) – This quadrant involves Exploratory testing, scenarios, usability etc. The main purpose here is to see everything from the users' perspective and thereby test the usability. Exploratory software testing technique is about making testers explore and identify different means of evaluating and improving the quality of the software. ET is an unscripted approach, where the tester is free to choose any possible methodology to test the software. Its primarily about utilizing personal skills and abilities to test the software. Exploratory testing simultaneously tests the functionality and operations of the software while at the same time identifying any functional or technical problems in it. The goal behind exploratory testing is to optimize and improve the software in any way possible.

Q4 - Performance & Scalability (Tools) – This quadrant contains performance and scalability test and the main purpose is to hone the system and make it as stable as possible. Performance testing Is a non-functional testing technique performed to determine the system parameters in terms of stability, speed and responsiveness under various workloads. This technique primarily measures quality elements such as

reliability, scalability and memory/resource usage. Such shortcomings are better to reveal during system test, long before the system is placed into service. The system may run slowly or crash when subjected to a lot of traffic, which can result in loss of revenue. There are many consulting agencies offering performance testing services and there is also tools available.

System Testing

This testing technique is a black box testing technique performed to evaluate the compliance to the entire system with respect to the specified requirements. The primarily goals is to approve and check the functional, technical, business, and non-functional requirements of the application concerning the system as a whole. The scope is not limited to the architecture and design of the system, but also to the expectations of the business. Important aspects of system testing:

- Validation, verification and testing business requirements
- Proper evaluation of the system
- Testing in an environment which resembles the live environment.