Checklist Driven Testing – An Overview

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Abstract:

This paper discusses about the various advantages and disadvantages related to checklist driven testing. While identifying problem areas in checklists, it also intends to supply work-around to attack these problems.

Introduction

Checklists are repositories of reusable test cases. One of the structured approaches to testing is using a predefined checklist. Just like any other methodology, checklist driven testing has its own advantages and has a set of staunch followers. Likewise, it suffers from its typical disadvantages, which keeps away many organizations from using them.

Checklist-Driven Testing

As the word itself suggests, a checklist is a list of items or tasks to be noted, checked or consulted. Checklist-driven testing is a strategy where a list of predefined tests and checks drives the process of testing.

Advantages

- Checklists are a predefined guideline to quality, which are created over time and are an investment both of time and energy. Reusing an existing quality regime can thus pay back significantly by economizing resources.

- Checklists draw on a range of issues that help in deciding where to concentrate efforts.

- Deadlines and resource limitations can heat up the environment and in the rush to deliver, testers are liable to miss on critical and important checks. Checklists act as an aid throughout the testing cycle but proves to be a boon when conducting last minute testing.

- It is necessary to have some structure to the testing pattern. This methodology offers a good structured base for testing.

- Checklists ensure that "on-the-spur" tricky ideas and innovative approaches in testing do not get limited to one project or specific tester. When reusable checks are added to checklists, it ensures that other testers use valuable tests across different projects.

- Checklists work as a reminder to testers. Important tests, which testers tend to forget, can be entered to checklists to ensure that these tests get executed.

- Checklists help guide developers in reducing the errors they generally make in their code. When shared with developers, checklists help in preventing errors in development stage itself thus saving the team's time.

- Checklists help new staff to pick up and run on the go. This provides flexibility in staffing patterns. Newer team members can be added at pressure times.

Disadvantages

- It depends heavily on the general test data in the checklist as opposed to in-context data, for practical evaluation.

- Testing of a product remains as good or as bad as the previous products, according to which the checklists were made

- Testers lose their independence and creativity if they keep following a predefined checklist. Autonomous testers provide better feedback.

- It's difficult to have a "One-size-fits-all" checklist.

- Often, to form a comprehensive checklist, non-verifiable and very general tests are added. For e.g. “Pages should load quickly” does not specify any quantitative measure to test the loading of pages.

- The unstructured review of an application/site more accurately "captures" the true essence of a typical user’s experience.

- Standards should keep evolving with time but generally they turn out to be rigid and unyielding in an organization with different levels of hierarchy.

- This method cannot verify accurately the desired functionality in the application neither is it a complete solution to testing needs.

- It is more useful in last minute testing than in comprehensive testing strategy spanning the entire software development life cycle.

In spite of these disadvantages, the benefits of checklist driven testing cannot be overlooked. Blind adoption of any strategy can prove to be disastrous. It is always advisable to alter the strategy according to the needs of the specific organization or the product. The disadvantages that scare off others from putting checklists into use can be smartly worked on towards your advantages.

Recommendations

- It is always difficult to have a “One-size-fits-all” checklist but it can always be tailored according to specific situations.

- Checklists need not be comprehensive but they should draw on a range of issues that help in deciding where to concentrate efforts. Additional issues not covered in checklist might be equally important but would generally be application specific.

- Considering the physiological impact on the testers, checklists should be incorporated in the daily use as an “aid”, instead of being enforced as a mandatory rule. This ensures that while following checklists, testers do not loose their usual exploratory approach to testing.

- Standards for checklists should not be a fixed entity. Though standards cannot be changed overnight but they need to be flexible in order to accommodate the required change with time. Every new assignment teaches new things. Every innovative check used to test an application should be thought upon and added to the checklist. Newer and applicable points should replace old and redundant checks. Thus a constant effort should be there to keep the checklists evolving.

Conclusion

Checklists built over time with daily inputs and hands-on experience of testers can be a useful repository of typical tests. Looking back on real life experiences go a long way in making a tester a test specialist, a development team less careless and above all more customer focus in the products for the consumers. Considering the many ways that checklists are beneficial to testers, efforts toward building good workable checklists cannot be ignored. All in all good testing checklists by the side makes the life of the tester much easier!!

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