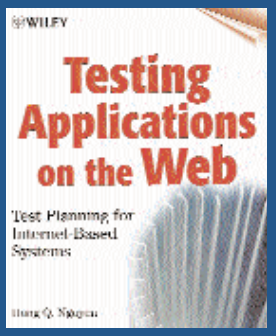

Testing Applications on the Web: Test Planning for Internet-Based Systems

by Hung Q. Nguyen

2000, John Wiley & Sons, Inc.

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Recommended by Danny R. Faught

Looking up at my bookshelf, I see several general books on software testing. Good books, full of ideas that can be applied to many different types of software. Yet I still often hear people ask, "Yes, but what do I need to know to be able to test my *specific* type of software?" Understanding general testing processes is important, but they know that in any domain there are useful approaches, hints, and tricks specific to that domain that will make them more effective. And books that describe testing in general terms don't offer many of these rules of thumb.

Testing Applications on the Web provides this domain-specific knowledge for people who plan testing efforts for Web-based software. The author is Hung Quoc Nguyen, President and CEO of LogiGear, and a co-author of the well-known book *Testing Computer Software*.

Nguyen draws from his experience in guiding the development of TRACKGEAR, a Web-based defect tracking tool. He uses examples from this application throughout the book, but doesn't tout the fact that he has a tool for sale—he usually refers to it as "the sample application."

Nguyen takes a gray box approach to testing. Gray box testing is similar to black box testing, but the tester uses information about the implementation of the software to guide the testing effort. He doesn't talk specifically about gray box testing after the introduction, but he uses a gray box approach throughout the book.

Nguyen's book opens with a brief introduction to testing and the unique characteristics of Web-based applications. The next section is devoted to methodology and technology. It covers some testing fundamentals, as well as introducing Nguyen's unique acronyms that are used later in the book. This section also includes a sample test plan that shows a work breakdown of a broad set of testing tasks for a Web testing project. (The appendix includes a complete test plan template, an item that testers often ask for.)

Mixed in with the testing fundamentals is some background information about networking and Web applications, including a description of TRACKGEAR. Having a basic understanding of the technology and the architecture of the system is a fundamental part of gray box testing. (While this section gives the reader enough background to understand the big ideas in the rest of the book, I would recommend that people who implement Web tests do further reading to get a more comprehensive and accurate picture of Web technology.)

The author gets into specific testing practices in the third major section of the book, with each chapter bullet-listing specific errors to look for and how to approach the testing task. Many of the items in the lists aren't discussed in the text, and some require some background knowledge about the technology in order to understand them. But that caveat aside, these bullet lists will come in handy the next time I plan a test for a Web application.

The chapter covering user interface testing delves into a good deal of detail about the Web browser user interface and how the server interacts with it. This chapter is accompanied by several reusable test matrices in the appendix.

The material on database testing shows how to dig into the underbelly of a Web application. Here the book offers a great example of a gray box technique: using single quotes in input data. If the application doesn't check for meta-characters like this, SQL errors can pop up in unexpected places.

The chapter on installation testing will be irrelevant to some Web testers, but it's useful for those who are testing a product that the customer will install on her own Web server, or in those cases where a user is required to install software to get the client side of a Web application to work. This is mostly standard Windows installation testing information.

If you thought you could handle all of your configuration and compatibility testing by playing with a few different versions of the Web browser, Nguyen's chapter on configuration and compatibility testing will set you straight. There are a huge array of options to consider.

You can't talk about the quality of a Web application without discussing security. I applaud the author for stressing that security experts should be involved in security testing. When listing security concerns in a book, it's important not to give a reader the impression that they'll be able to do a sufficient job of assuring

the security of an application after reading one chapter on the subject. Nguyen gives an overview of common security issues and protection mechanisms, so that testers understand the scope of software security.

Performance is also important to any Web testing effort. Nguyen covers the basics of performance testing and includes a sample user profile.

Other chapters cover functional testing and online help testing. There's a chapter on tools that includes a sampling of the tools available, and more importantly, the types of tools that you can expect to find in the marketplace.

Each chapter concludes with a nice bibliography, and many chapters also include useful Web links. These lists of resources give plenty of ideas for further reading, but they're not so exhaustive that you're left wondering which ones to start with.

Testing Applications on the Web does not attempt to be a general reference on software testing. What it provides, instead, is domain-specific information that helps the reader plan for testing a Web-based application. Its clear illustrations of important Web testing approaches and its extensive checklists give testers detailed suggestions for their testing, based on real Web development experiences. STQE

Danny R. Faught recently founded Tejas Software Consulting (http://tejasconsulting.com), *a one-man software quality consulting firm offering training services and consulting to help people manage software quality. Danny is a charter member of* STQE's *Practicality Gauntlet and a Technical Editor for StickyMinds.com.*

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