

**Book title:** Foundations of Software Testing: ISTQB Certification

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This book covers the basics of good software testing, and supports the ISTQB Software Testing Foundation Qualification.

ISTQB stands for “International Software Testing Qualifications Board” and is an organization consisting of one software testing professional from each of the countries which are members of the ISTQB. Each country representative is a member of a Software Testing Board in their own country. The purpose of the ISTQB is to provide internationally accepted and consistent qualifications in software testing. ISTQB sets the syllabus and gives guidelines for each member country to implement the qualification in their own country. The Foundation Certificate was the first internationally agreed Syllabus, which this book supports.

Why is certification of testers important? The objectives of the qualification are listed in the syllabus. They include:

- recognition for testing as an essential and professional software engineering specialization
- enabling professionally qualified testers to be recognized by employers, customers and peers
- raising the profile of testers
- promoting consistent and good testing practices within all software engineering disciplines, internationally, for reasons of opportunity, communication, sharing of knowledge and resources internationally.

Information about ISTQB can be found on [www.istqb.org](http://www.istqb.org). This website describes the Foundation and other qualifications in software testing, and contains links to each of the countries that are members of the ISTQB.

There are training courses to support the Software Testing Foundation Qualification, available in many different countries. See [www.istqb.org](http://www.istqb.org) and follow the links to training providers from the relevant country's area. In addition, the Information Systems Examination Board (ISEB) accredits training providers in many different countries including the UK. ([www.iseb.org.uk](http://www.iseb.org.uk)) In the United States, the American Software Testing Qualifications Board accredits training providers ([www.astqb.org](http://www.astqb.org)). In India, the Indian Testing Board handles accreditation ([india.istqb.org](http://india.istqb.org)), and in Israel, the Israeli Testing Certification Board handles this role ([www.itcb.org.il](http://www.itcb.org.il)).

The four authors of this book are all accredited training providers for courses or classes in software testing. Each of the authors also offers other services in software testing and related areas. Their websites are:

Dorothy Graham, Grove Consultants, [www.grove.co.uk](http://www.grove.co.uk)

Erik van Veenendaal, ImproveQS, [www.improveqs.nl](http://www.improveqs.nl)

Isabel Evans, Testing Solutions Group (TSG), [www.testing-solutions.com](http://www.testing-solutions.com)

Rex Black, Rex Black Consulting, [www.rexblackconsulting.com](http://www.rexblackconsulting.com)

There are many useful and interesting websites for software testing. The best overall resource for software testing information is the Sticky Minds web site

[www.stickyminds.com](http://www.stickyminds.com). There are also links to other interesting sites from each of the author's websites.

There are a number of conferences and events for software testing, as listed in the table.

### **Summary of the content of the book:**

This book is divided into seven chapters. The first six chapters of the book each cover one chapter of the syllabus, and each has some practice exam questions.

Chapter 1 is the start of understanding; we'll look at some fundamental questions: what is testing and why is it necessary? We'll examine why testing is not just running tests. We'll also look at why testing can damage relationships and how bridges between colleagues can be rebuilt.

In chapter 2, we'll concentrate on testing in relation to the common software development models, including iterative and waterfall models. We'll see that different types of testing are used at different stages in the software development lifecycle.

In chapter 3, we'll concentrate on test techniques that can be used early in the software development lifecycle. These include reviews and static analysis – tests done before compiling the code.

Chapter 4 covers test design techniques. We'll show you techniques including equivalence partitioning, boundary value analysis, decision tables, state transition testing, use case testing and statement and decision testing. This chapter is about how to become a better tester in terms of designing tests.

There are exercises for the most significant techniques included in this chapter.

Chapter 5 is about the management and control of testing, including estimation, risk assessment, incident management and reporting. Writing a good incident report is a key skill for a good tester, so we have an exercise for that too.

In chapter 6, we'll show you tools that support all the activities in the test process, and how to select and implement tools for the greatest benefit.

Chapter 7 contains general advice about taking the exam and has the full 40-question sample paper. This is a key learning aid to help you pass the real exam.

*Dot Graham 19 May 2006*