Introduction

Only a few decades ago, computers were giant machines that were so expensive that they could only be acquired by large corporations and universities. Computer time was considered more valuable than the time of the human operators, economically speaking, and so this meant that users had to structure their work to conform to the needs of the computer.

In fact, during the early ages of mainframe computing, the interaction between users and computers was minimized to the point where most users never even got to touch the machine. You’d have to write out a program listing, encode it onto punched cards, and then hand your cards to an operator who would schedule an opportunity to feed your batch of cards into the machine. The next day, you’d stand in line to pick up your printout.

Needless to say, technological advancements have radically changed the way we interact with computing devices today. The inexpensiveness of computing power and the opportunities created by networking devices together have introduced computing and software into almost every facet of everyday life, changing the way we work, play, communicate, and socialize.

As technology and software have become pervasive, our expectations for how it should work have changed accordingly. Users must no longer be highly-trained specialists. We expect our gadgets and apps to continually surprise us with more and more magic, and
we expect do less and less manual work and thinking. We expect to be able to pick up a device or download an app and start using it right away without reading a manual. And we expect apps and websites to be visually appealing and fun to use.

In other words, we increasingly expect machines to conform to our natural human ways of thinking and working, rather than the other way around.

Whether you’re designing a desktop app, a mobile app, a tablet app, a website, a web application, or a large business enterprise system, creating a great experience for your users and customers is an important investment. Neglecting usability concerns is no longer a realistic option if you want your product to be commercially successful.

For consumer-oriented apps, games, and websites, the marketplace is becoming increasingly crowded. To attract and retain users and remain competitive, your product must provide a rich and compelling user experience and must be easy to learn and use.

For enterprise applications — the software that runs an organization’s operations — attention to usability can increase employees’ productivity, decrease error rates, reduce training costs, boost morale, reduce staff turnover, and minimize helpdesk and tech support costs.

Designing usable software products is more of an art than a science. Fortunately, it is an art that can be learned, and this book will help you learn how to do it.

**Who is this book for?**

If you’re involved in any way in the design and creation of software products or websites, and you want to learn how to make your product more enjoyable and efficient to use, then this book is for you.

You may have a job title such as product manager, project manager, developer, user interface designer, user experience designer, interaction designer, graphic designer, web designer, usability specialist, business analyst, requirements engineer, or QA specialist. Or you might even be a one-person startup exploring a market opportunity.

In many large organizations, the people who end up designing software applications are subject matter experts who know the business domain and business processes well, but don’t have a technical or software development background and may not be familiar with basic ideas and terminology involved in designing software applications and user interfaces. If you fall into this category, this book will serve as a useful introduction to software design and the principles of usability.
What is this book about?

In this book, you’ll learn about what makes software products easy and fun to learn and use, and what things can cause users to become frustrated.

You’ll learn about understanding your users and customers, and discovering what they want and need from your product.

You’ll learn how to investigate, plan, and design all of the key aspects of the user-facing part of a software product, including information architecture, data modelling, visual design, and interaction design. You’ll learn about exploring design alternatives, and you’ll learn recommended techniques for specifying and communicating your designs.

You’ll also learn techniques for evaluating and testing that your designs and your product are usable.

And you’ll learn how to integrate usability activities into a software project.

What is this book not about?

This is a book about designing software, but it doesn’t cover the technical aspects — the architectural design and programming — that are needed to make a design a reality.

And while this book is about designing software that meets market needs, it makes no attempt to be a comprehensive guide to software marketing.

Why this book?

There are plenty of other books on usability and software design on the market. Why read this one?

- This is the only book that I’m aware of that intentionally integrates data and domain modeling, information architecture, visual design, and interaction design together into a coherent approach to software product design.

- It’s practical and action-oriented. We’ll start by exploring some fundamental ideas and concepts, and then we’ll discover concrete techniques that you can use for planning and executing a software design project. It guides you through all of the aspects you need to consider and all of the techniques you’ll need to use when planning and designing a new software product.
• It's compact and to-the-point. The text has been aggressively edited and trimmed to be focused and relevant. The page count has intentionally been kept relatively low so that you'll be encouraged to read the whole book.

One of the main ideas of this book is that usability problems often emerge because designers don’t sufficiently think through all of the issues that need to be considered when creating a product that meets the needs of users and customers. This book can thus serve as a checklist of all of the various things you need to think about and decide on when creating and designing a new software product.

Let’s get started!