



# Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture

*Igor Zhirkov*

Download now

[Click here](#) if your download doesn't start automatically

# Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture

Igor Zhirkov

**Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture** Igor Zhirkov

This book teaches programmers and programming students how to use x64 assembly to write low-level code in C for performance-critical programs and how to compile and execute it inside the Intel 64 hardware and OS framework.

*Low-Level Programming* presents Intel 64 architecture as a development of von Neumann architecture featuring protection mechanisms and performance amplifiers such as caches and branch predicting. It proceeds to investigate the compilation cycle and ELF object files. Elucidating a structured approach to C with code examples, exercises, and a companion annex of source code, the book models best coding practices for implementing language abstractions on top of assembly. The author examines the optimization capabilities and limits of modern compilers, and he demonstrates the use of various performance-gain techniques, such as specialized instructions and prefetching.

## What Readers Will Learn

*Low-Level Programming* teaches programmers how to use assembly language and C to write code for Intel 64 platforms and to look under the hood for various purposes, including the following:

- Making code more performant on the assembly level
- Debugging compiler and optimizer errors in native code
- Fixing executables by disassembly in the absence of source code
- Diagnosing malware

## Who This Book Is For

Intermediate-to-advanced programmers and programming students.

 [Download Low-Level Programming: C, Assembly, and Program Ex ...pdf](#)

 [Read Online Low-Level Programming: C, Assembly, and Program ...pdf](#)

## **Download and Read Free Online Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture Igor Zhirkov**

---

### **From reader reviews:**

#### **Scott Roche:**

The book Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture gives you the sense of being enjoy for your spare time. You may use to make your capable considerably more increase. Book can to get your best friend when you getting stress or having big problem with your subject. If you can make reading a book Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture for being your habit, you can get more advantages, like add your personal capable, increase your knowledge about a few or all subjects. You may know everything if you like open up and read a reserve Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture. Kinds of book are several. It means that, science publication or encyclopedia or other people. So , how do you think about this guide?

#### **Robert Alcock:**

Book is to be different for each grade. Book for children until adult are different content. As it is known to us that book is very important usually. The book Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture had been making you to know about other know-how and of course you can take more information. It doesn't matter what advantages for you. The reserve Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture is not only giving you a lot more new information but also being your friend when you truly feel bored. You can spend your current spend time to read your reserve. Try to make relationship with the book Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture. You never truly feel lose out for everything when you read some books.

#### **William Burmeister:**

The book with title Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture possesses a lot of information that you can discover it. You can get a lot of profit after read this book. This kind of book exist new knowledge the information that exist in this reserve represented the condition of the world at this point. That is important to yo7u to learn how the improvement of the world. That book will bring you inside new era of the globalization. You can read the e-book on your own smart phone, so you can read the idea anywhere you want.

#### **Jennifer Evans:**

A lot of e-book has printed but it is different. You can get it by online on social media. You can choose the most effective book for you, science, amusing, novel, or whatever through searching from it. It is known as of book Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture. You can contribute your knowledge by it. Without making the printed book, it might add your knowledge and make anyone happier to read. It is most important that, you must aware about guide. It can bring you from

one spot to other place.

**Download and Read Online Low-Level Programming: C, Assembly,  
and Program Execution on Intel x86-64 Architecture Igor Zhirkov  
#QRYEZMWVG9D**

## **Read Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture by Igor Zhirkov for online ebook**

Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture by Igor Zhirkov Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture by Igor Zhirkov books to read online.

## **Online Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture by Igor Zhirkov ebook PDF download**

**Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture by Igor Zhirkov Doc**

**Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture by Igor Zhirkov Mobipocket**

**Low-Level Programming: C, Assembly, and Program Execution on Intel x86-64 Architecture by Igor Zhirkov EPub**