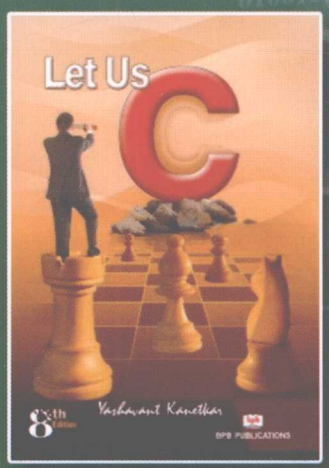
国外计算机科学教材系列

CENGAGE Learning

C程序设计基础教程

（第八版）

Let Us C，Eighth Edition



英文版

[印度] Yashavan P. Kanetkar 著

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内 容 简 介

本书是全球畅销的一本 C 语言编程经典教材，这一版本除了讲解 C 语言中基本的函数、指针、循环、控制、数据类型、数组、字符串、输入/输出、位操作等内容外，书中还用大量的篇幅和实例重点突出了 C 语言在 Internet 编程、Windows 编程以及 Linux 编程中的用法，使读者能尽快熟悉 C 语言的实际应用。

本书结构合理，内容深入浅出，适合用作高等学校本科和专科学习 C 语言编程的教材，也适合初学编程的自学者。

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出 版 说 明

21世纪初的5至10年是我国国民经济和社会发展的重要时期，也是信息产业快速发展的关键时期。在我国加入WTO后的今天，培养一支适应国际化竞争的一流IT人才队伍是我国高等教育的重要任务之一。信息科学和技术方面人才的优劣与多寡，是我国面对国际竞争时成败的关键因素。

当前，正值我国高等教育特别是信息科学领域的教育调整、变革的重大时期，为使我国教育体制与国际化接轨，有条件的高等院校正在为某些信息学科和技术课程使用国外优秀教材和优秀原版教材，以使我国在计算机教学上尽快赶上国际先进水平。

电子工业出版社秉承多年来引进国外优秀图书的经验，翻译出版了“国外计算机科学教材系列”丛书，这套教材覆盖学科范围广、领域宽、层次多，既有本科专业课程教材，也有研究生课程教材，以适应不同院系、不同专业、不同层次的师生对教材的需求，广大师生可自由选择和自由组合使用。这些教材涉及的学科方向包括网络与通信、操作系统、计算机组织与结构、算法与数据结构、数据库与信息处理、编程语言、图形图像与多媒体、软件工程等。同时，我们也适当引进了一些优秀英文原版教材，本着翻译版本和英文原版并重的原则，对重点图书既提供英文原版又提供相应的翻译版本。

在图书选题上，我们大都选择国外著名出版公司出版的高校教材，如Pearson Education培生教育出版集团、麦格劳－希尔教育出版集团、麻省理工学院出版社、剑桥大学出版社等。撰写教材的许多作者都是蜚声世界的教授、学者，如道格拉斯·科默（Douglas E. Comer）、威廉·斯托林斯（William Stallings）、哈维·戴特尔（Harvey M. Deitel）、尤利斯·布莱克（Uyless Black）等。

为确保教材的选题质量和翻译质量，我们约请了清华大学、北京大学、北京航空航天大学、复旦大学、上海交通大学、南京大学、浙江大学、哈尔滨工业大学、华中科技大学、西安交通大学、国防科学技术大学、解放军理工大学等著名高校的教授和骨干教师参与了本系列教材的选题、翻译和审校工作。他们中既有讲授同类教材的骨干教师、博士，也有积累了几十年教学经验的老教授和博士生导师。

在该系列教材的选题、翻译和编辑加工过程中，为提高教材质量，我们做了大量细致的工作，包括对所选教材进行全面论证；选择编辑时力求达到专业对口；对排版、印制质量进行严格把关。对于英文教材中出现的错误，我们通过与作者联络和网上下载勘误表等方式，逐一进行了修订。

此外，我们还将与国外著名出版公司合作，提供一些教材的教学支持资料，希望能为授课老师提供帮助。今后，我们将继续加强与各高校教师的密切联系，为广大师生引进更多的国外优秀教材和参考书，为我国计算机科学教学体系与国际教学体系的接轨做出努力。

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About the Author 关于作者

Through his books and Quest! Video Courses on C, C++, Data Structures, VC++, .NET, Embedded Systems, etc. Yashavant Kanetkar has created, moulded and groomed lacs of IT careers in the last decade and half. In recognition of his immense contribution to IT education in India, he has been awarded the "**Best .NET Technical Contributor**" and "**Most Valuable Professional**" awards by Microsoft. His current passion is Internet Technologies, Device Drivers and Embedded Systems. He is currently scripting a book titled "Go Embedded!". Yashavant holds a BE from VJTI Mumbai and M.Tech. from IIT Kanpur. Yashavant's current affiliations include being a Director of KICIT and KSET. He can be reached at *kanetkar@kicit.com* or through *www. kicit. com.*

Acknowledgments 致谢

Let Us C has become an important part of my life. I have created and nurtured it for last decade or so. While doing so, I have received, in addition to the compliments, a lot of suggestions from students, developers, professors, publishers and authors. So much have their inputs helped me in taking this book up to this eighth edition, that ideally I should put their names too on the cover page.

In particular I am indebted to Manish Jain who had a faith in this book idea, believed in my writing ability, whispered the words of encouragement and made helpful suggestions from time to time. I hope every author gets a publisher who is as cooperative, knowledgeable and supportive as Manish.

The seven editions of this book saw several changes and facelifts. During this course many people helped in executing programs, spotting bugs, drawing figures and preparing index. I trust that with their collective acumen, all the programs would run correctly in all situations. I value the work that they did a lot. Any errors, omissions or inconsistencies that remain are, alas, my responsibility.

I thank Seema, my wife, for enduring the late nights, the clicking keyboard and the noisy printer and mostly for putting up with yet another marathon book effort.

And finally my heartfelt gratitude to the countless students who made me look into every nook and cranny of C. I want to remain in their debt.

Preface to the Eighth Edition 第八版前言

The aim of "Let Us C" for its first few editions was to teach C programming in its entirety in as simple a manner as possible. From fifth edition onwards it took a slightly different turn. It started talking about use of C language in different programming environments like Windows and Linux. From this edition onwards I have

decided to also address the issues and topics where I find many students and professionals face difficulties while doing real-life programming. One topic that came to my mind immediately is Internet programming. So you will find in this edition a complete chapter devoted to it. It discusses the TCP/IP model and usage of different protocols like HTTP, Whois, Time, SMTP, POP3, etc. I sincerely believe that if you try programs in this chapter you will grow in confidence to do larger projects in Internet programming.

Preface to the Seventh Edition 第七版前言

"It all depends on how you C it".

Having spent a decade and a half in computing, working with tools and technologies that have evolved over the years, I am convinced that a programmer's life should begin with C. Unless he is comfortable with C, he would find it extremely difficult to master newer tools and technologies. With that motive, as promised last year, I am coming out with another edition of your favorite "Let Us C" with an updated view of how C is being used in practice today. I hope you would find this edition useful.

Countless Indians have relentlessly worked for close to two decades to successfully establish "India" as a software brand. At times, I take secret pleasure in seeing that a book that I have been part of, has contributed in its own little way in shaping so many careers that have made the "India" brand acceptable.

Computing and the way people use C for doing it keeps changing as years go by. So overwhelming has been the response to all the previous editions of "Let Us C" that to keep the readers abreast with the way C is being used today a new edition of "Let Us C" is now published every year.

There are two phases in every C programmer's life. In the first phase, he is a learner trying to understand the language elements and their nuances. At this stage, he wants a simple learning environment that helps him to master the language. In my opinion, even today there isn't any learning environment that can beat Turbo C/C++ for simplicity. Hence the first fifteen chapters are written keeping this environment in mind, though a majority of the programs in these chapters would work with any C compiler.

Armed with the knowledge of language elements, the C programmer enters the second phase. Here he wishes to use all that he has learnt to create programs that match the ability of programs that he comes across in today's world. I am pointing towards programs in Windows and Linux world. Chapters 16 to 20 are devoted to this. I would like to bring to your attention the fact that if you want to program Windows or Linux you need to have a very good grasp over the programming model used by each of these OS. Windows messaging architecture and Linux signaling mechanism are the cases in point. Once you understand these thoroughly, rest is just a matter of time. Chapters 16 to 20 have been written with this motive.

In Linux programming, the basic hurdle is in choosing the Linux distribution, compiler, editor, shell, libraries, etc. To get a headstart, you can follow the choices that I found most reasonable and simple. They have been mentioned in Chapter 20 and Appendix F. Once you are comfortable with Linux, you can explore the other choices on your own.

In fourth edition of Let Us C there were chapters on 'Disk Basics', 'VDU Basics', 'Graphics', 'Mouse Programming', 'C and Assembly'. Though I used to like these chapters a lot I had to take a decision to drop them since most of them were DOS-centric and would not be so useful in modern-day programming. Modern

counterparts of all of these have been covered in Chapters 16 to 20. However, if you still need the chapters from previous edition they are available at *www.kicit.com/books/letusc/fourthedition.*

Also, all the programs present in the book are available in source code form at *www.kicit.com/books/letusc/sourcecode.* You are free to download them, improve them, change them, do whatever with them. If you wish to get solutions for the Exercises in the book they are available in another book titled 'Let Us C Solutions'.

If you like 'Let Us C' and want to hear the complete video-recorded lectures created by me on C language (and other subjects like C++, VC++, .NET, Embedded Systems, etc.), then you can visit *quest. ksetindia. com* for more details.

'Let Us C' is as much your book as it is mine. So if you feel that I could have done certain job better than what I have, or you have any suggestions about what you would like to see in the next edition, please drop a line to *letuscsuggestions@kicit.com.*

All the best and happy programming!

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