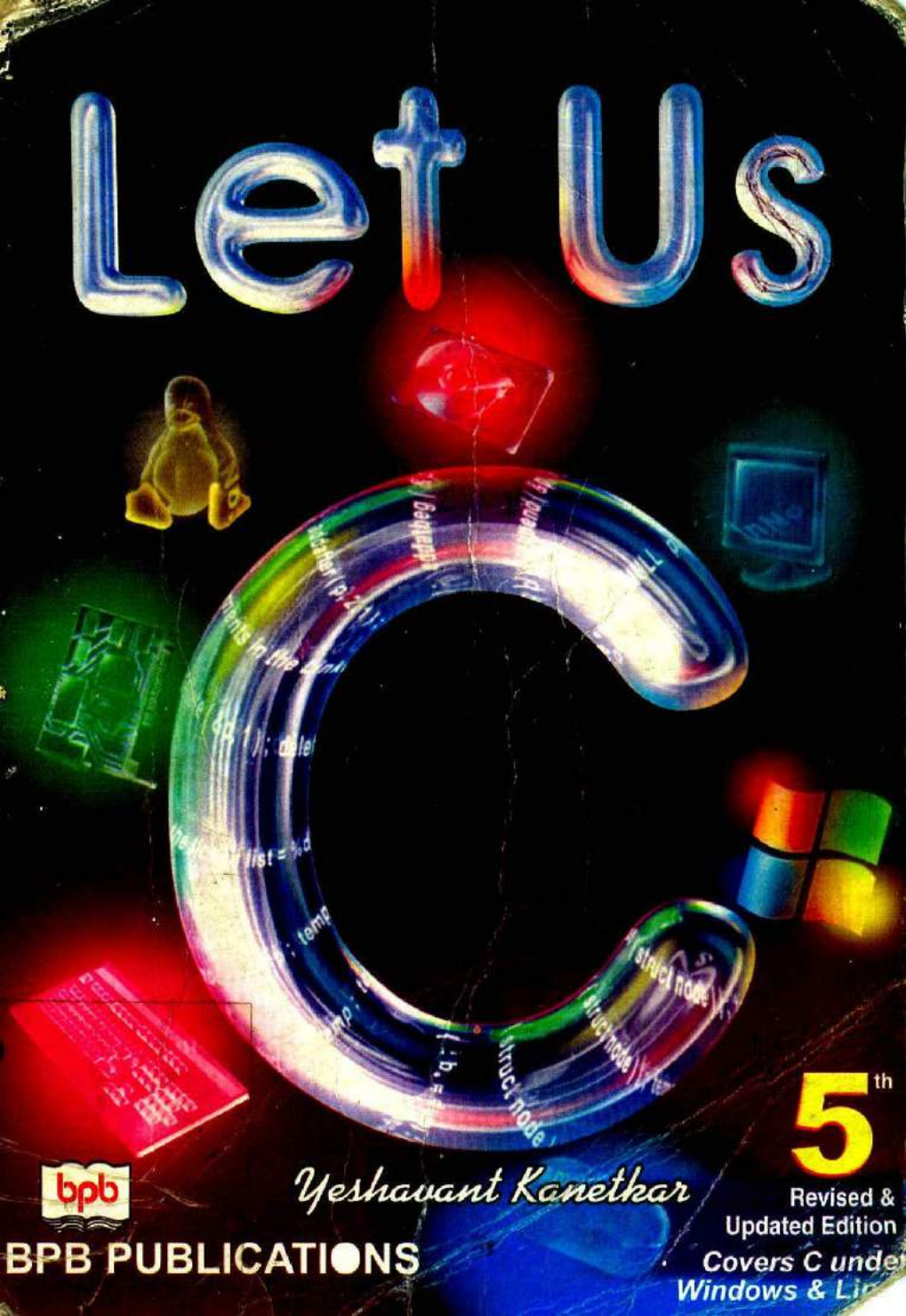
Let Us C



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By
Yashavant P. Kanetkar

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Dedicated to baba

Who couldn't be here to see this day...

About the Author

Destiny drew Yashavant Kanetkar towards computers when the IT industry was just making a beginning in India. Having completed his education from VJTI Mumbai and IIT Kanpur in Mechanical Engineering he started his training company in Nagpur.

Yashavant has a passion for writing and is an author of several books in C, C++, VC++, C#, .NET, DirectX and COM programming. He is a much sought after speaker on various technology subjects and is a regular columnist for Express Computers and Developer 2.0. His current affiliations include being a Director of KICIT, a training company and DCube Software Technologies, a software development company. In recognition to his contribution Microsoft awarded him the prestigious ***"Best .NET Technical Contributor"*** award recently. He can be reached at kanetkar@kicit.com.

Acknowledgments

It has been a journey of almost a decade from the stage the book idea of "Let Us C" was conceived up to the release of this Fifth Edition. During this journey I have met so many students, developers, professors, publishers and authors who expressed their opinions about Let Us C. They have been the main motivators in my effort to continuously improve this book.

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.

The five editions of this book saw several changes and facelifts. During this course people like Ajay Joshi, Amol Tambat, Ajay Daga, Nandita Shastri, Mrunal Khandekar and Rahul Bedge helped in writing programs, spotting bugs, drawing figures and preparing index. I trust that with their collective acumen all the programs would run correctly in all situations.

Anup Das, my colleague has a lot of influence on this Fifth Edition. He helped my clarify my thoughts and pointing me in the direction of Windows and Linux. He sincerely wanted this edition to offer "C, in today's perspective". I am hopeful that his dream has been realized.

I thank Seema, my wife, for her friendship and for her contributions in everything that I do in IT in ways more than she could ever guess. Though she is a Gynecologist by profession she has the uncanny ability to come up with suggestions that make me feel "Oh, why didn't it occur to me".

And finally my heartfelt gratitude to the countless students who made me look into every nook and cranny of C. I would forever remain indebted to them..

Preface to the Fifth Edition

It is mid 2004. World has left behind the DOTCOM bust, 9/11 tragedy, the economic downturn, etc. and moved on. 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 budding 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 I have now decided that each year I would come up with a new edition of it so that I can keep the readers abreast with the way C is being used at that point in time.

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 these 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 see in today's world. I am pointing towards programs in Windows and Linux world. Chapters 16 to 21 are devoted to this. I would like 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 21 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 head-start you can follow the choices that I found most reasonable and simple. They have been mentioned in Chapter 20 and Appendix H. Once you are comfortable you can explore other choices.

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 21. 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'.

'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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